

**ABORIGINAL CULTURAL
HERITAGE MANAGEMENT
PLAN**

Austar Coal Mine

FINAL

June 2021



ABORIGINAL CULTURAL HERITAGE MANAGEMENT PLAN

Austar Coal Mine

FINAL

Prepared by
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on behalf of
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Acknowledgement

Umwelt and Austar Coal Mine would like to acknowledge the traditional custodians of the Quorrobolong Valley and pay respect to their cultural heritage, beliefs and continuing relationship with the land.

Umwelt and Austar Coal Mine would also like to acknowledge the post-contact experiences of Aboriginal people who have attachment to the Quorrobolong Valley.

We pay our respect to the elders – past, present and future – for they hold the memories, traditions, culture and hopes of Aboriginal people in the area.

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1.0 Introduction

Austar Coal Mine Pty Ltd (Austar) owns the Austar Coal Mine near Cessnock in the lower Hunter Valley of New South Wales (NSW) (refer to **Figure 1.1**). The Austar Coal Mine incorporates the former Pelton, Ellalong, Southland and Bellbird South Collieries and includes coal extraction, handling, processing and rail and road transport facilities.

Extensive longwall mining has been undertaken within the Austar Coal Mine in accordance with a number of approvals. Mining within the Bellbird South area (including Austar Stage 1 and Stage 2) was approved by the Minister for Urban Affairs and Planning under DA 29/95, mining of the Stage 3 area was approved by the Minister for Planning under Project Approval 08_0111. Recent modifications to DA 29/95 have permitted additional longwall mining within the Bellbird South area, with the mining of three additional longwall panels, LWB1-B3, approved by the Minister for Planning on 29 January 2016 (MOD 6), and a further four longwall panels, LWB4-B7, approved on 25 August 2017 (MOD 7).

Mining within the Bellbird South, Stage 1 and Stage 2 areas has been completed and these areas no longer form part of the 'active mining area' as defined in DA 29/95. Mining in the Stage 3 area commenced in 2013 and progressed to the end of LWA8 in mid-2015 before being suspended.

On 30 March 2020, the Austar Coal Mine transitioned to care and maintenance, with cessation of mining and coal processing activities. On 26 February 2021, a decision was made by the Yancoal board to transition the Austar Coal Mine from care and maintenance to closure. Nevertheless, active water management, mine ventilation and mine inertisation remain key activities and this revision of the Aboriginal Cultural Heritage Management Plan (ACHMP) has been updated to reflect the closed status of the site.

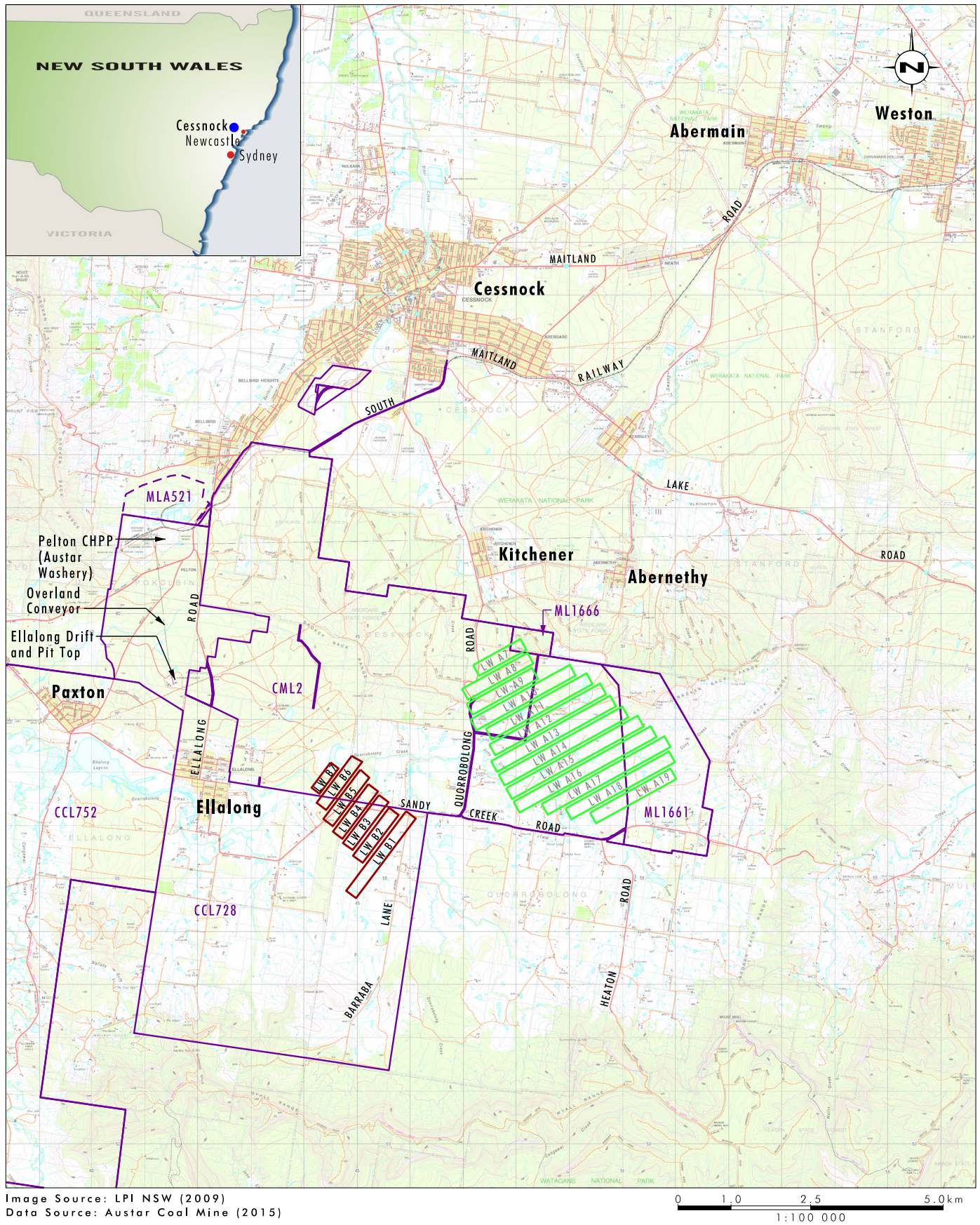
The approved and active mining areas and surface facilities within the Austar Coal Mine are shown on **Figure 1.2**. This ACHMP applies to all works undertaken within the Austar Coal Mine, including all approved active mining areas and surface facilities shown in **Figure 1.2**.

1.1 Purpose and Objective

The purpose of this ACHMP is to provide a consolidated framework and process for managing Aboriginal cultural heritage responsibilities within the Austar Coal Mine in compliance with all Aboriginal cultural heritage management requirements under legislation, guidelines and existing consents.

The objective of this ACHMP is to document protocols, procedures, time frames and responsibilities for the implementation of the ACHMP.

The previous version of the ACHMP was prepared by suitably qualified archaeologists at Umwelt (Australia) Pty Limited (Umwelt), in consultation with the registered Aboriginal parties and the NSW Office of Environment and Heritage (OEH), now Heritage NSW. It was prepared with reference to the relevant conditions of approval, as outlined in **Section 2.0**.



Legend

- ▬ LWB1-B3 and LWB4-B7 Extraction Plan Longwall Panels (DA29/95)
- ▬ Stage 3 Longwall Panels (PA08_0111)
- ▬ Mining Lease Boundary
- - - Mining Lease Application Boundary

FIGURE 1.1
Locality Plan

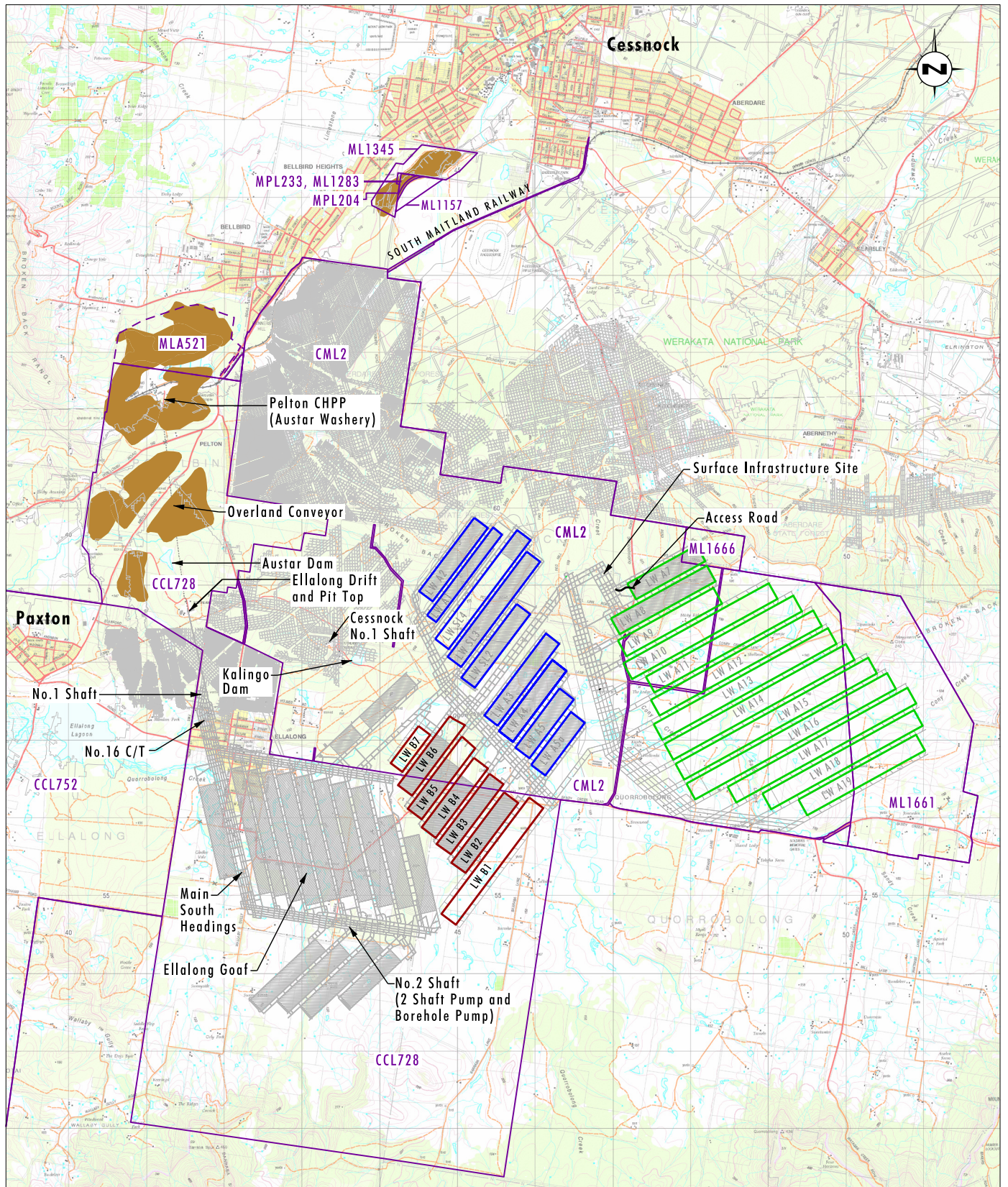


Image Source: LPI NSW (2009)
Data Source: Austar Coal Mine (2017)

Legend

- LWB1-B3 and LWB4-B7 Extraction Plan Longwall Panels (DA29/95)
- Bellbird South, Stage 1, Stage 2 and Southland Longwall Panels (DA29/95)
- Stage 3 Longwall Panels (PA08_0111)
- Approved Reject Emplacement Areas
- Completed Underground Workings
- Mining Lease Boundary
- Mining Lease Application Boundary

FIGURE 1.2

Austar Coal Mine

2.0 Regulatory Requirements

2.1 Development Consent and Project Approval Conditions

The conditions from DA29/95 and PA08_0111 relevant to the ACHMP are reproduced in **Table 2.1** and **Table 2.2**.

Table 2.1 Relevant DA 29/95 Conditions of Consent

Schedule 3 Condition No.	Condition Requirement	Relevant ACHMP section
24	Six months prior to commencing activities in undisturbed reject emplacement areas to use Cessnock No. 1 Colliery surface facilities, the Applicant must undertake additional Aboriginal heritage surveys to the satisfaction of the OEH.	Section 5.3.1
24A	The Applicant must prepare an Aboriginal Cultural Heritage Management Plan for the development to the satisfaction of the Secretary. The plan must:	Whole document
	(a) be prepared by a suitably qualified archaeologist in consultation with OEH and the Registered Aboriginal Parties, and be submitted to the Secretary for approval prior to the commencement of extraction of longwall A5a; and	
	(b) include a program/procedures for:	Section 5
	salvage and management of Aboriginal sites within active mining areas¹;	
	monitoring and management of Aboriginal sites within active mining areas;	Section 5
	managing the discovery of any new Aboriginal objects or skeletal remains discovered during the project;	Section 5
	undertaking additional archaeological surveys on any areas subject to extensive remediation activities; and	Section 5
	ongoing consultation with and involvement of the Registered Aboriginal Parties in the conservation and management of Aboriginal cultural heritage on the site.	Sections 3 & 5
	training personnel on Aboriginal cultural heritage awareness	Section 5.1
	undertaking recording of Aboriginal site impacts	Section 5.7

¹ Active mining areas is defined by DA 29/95 as: Approved mining areas of the development where underground mining is active or proposed including Longwalls B1 – B3 as defined in EA (MOD 6) and Longwalls B4 – B7 as defined in EA (MOD 7).

Table 2.2 Relevant PA 08_0111 Conditions of Approval

Condition No.	Condition	Relevant ACHMP Section
Schedule 4 Condition 10	The Proponent shall prepare and implement an Aboriginal Cultural Heritage Management plan for the project to the satisfaction of the Director-General. The plan must:	Whole document
	(a) be prepared by an archaeologist in consultation with DECCW and the relevant Aboriginal groups, and be submitted to the Director General for approval prior to the commencement of second workings in Stage 3 and construction of the Surface Infrastructure Site (other than shaft construction referred to in condition 1 above); and	
	(b) include, in addition to the standard requirements for management plans (see condition 2 of schedule 7), a program/procedures for:	Section 5
	salvage and management of Aboriginal sites within the Surface Infrastructure Site disturbance area;	
	monitoring and management of Aboriginal sites within the mining area;	Section 5
	managing the discovery of any new Aboriginal objects or skeletal remains discovered during the project;	Section 5.4 and 5.5
	undertaking additional archaeological surveys on any areas subject to extensive remediation activities;	Section 5
	undertaking additional archaeological surveys to the satisfaction of the Director-General, prior to commencing activities in the undisturbed reject emplacement areas (as shown on the figure in Appendix 4); and	Section 5.3.1
	ongoing consultation with and involvement of the Aboriginal communities in the conservation and management of Aboriginal cultural heritage on the site. <i>Note: The Proponent has committed to a \$100,000 contribution to Aboriginal projects to offset the potential impact on an axe grinding groove.</i>	Whole document
Schedule 7 Condition 2	Management Plan Requirements The Proponent shall ensure that the management plans required under this approval are prepared in accordance with any relevant guidelines, and include:	
	(a) detailed baseline data;	Section 4.0
	(b) a description of: - the relevant statutory requirements (including any relevant approval, licence or lease conditions); - any relevant limits or performance measures/criteria; - the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the project or any management measures;	Section 2.0

Condition No.	Condition	Relevant ACHMP Section
	(c) a description of the measures that would be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria;	Section 5.0
	(d) a program to monitor and report on the: - impacts and environmental performance of the project; - effectiveness of any management measures (see (c) above);	Section 5.2
	(e) a contingency plan to manage any unpredicted impacts and their consequences;	Section 5.0
	(f) a program to investigate and implement ways to continually improve the environmental performance of the project over time;	Section 5.9
	(g) a protocol for managing and reporting any: - incidents; - complaints; - non-compliances with statutory requirements; and - exceedances of the impact assessment criteria and/or performance criteria; and	Section 5.10
	(h) a protocol for periodic review of the plan.	Section 5.11

The relevant Statement of Commitments as listed in Project Approval 08_0111 is provided in **Table 2.3**.

Table 2.3 Relevant Commitments under PA 08_0111

Commitment No.	Statement of Commitments (Project Approval 08_0111)	ACHMP Section
1.5.1	An ACHMP will be prepared for the Austar Mine Complex to outline all Aboriginal heritage management strategies for the project, responsibilities of all parties and the timeframe for required heritage works.	Whole document
1.5.2	Austar will make a monetary contribution of \$100,000 to an Aboriginal project or program (to be decided by Aboriginal Stakeholders) as an offset for any subsidence impacts that affect the grinding groove site. Austar will make this contribution when all necessary government approvals for the Project have been obtained.	Section 5.11
1.5.3	No Aboriginal archaeological site is to be visited, or have works done there, without registered Aboriginal parties being in attendance.	Section 5
1.5.4	Known sites on accessible properties will be included in a monitoring program. This will involve recording each site before and after subsidence to identify any impacts. This will be done by an archaeologist and Aboriginal stakeholders.	Section 5.2
1.5.5	Aboriginal stakeholders (and an archaeologist if requested by Aboriginal stakeholders) will provide relevant Austar personnel with a cultural heritage awareness training session.	Section 5.1
1.5.6	If any additional sites are found within the Project area, these will be inspected by an archaeologist and Aboriginal stakeholders where access is granted to assess the site and decide on how it should be managed.	Section 5.3 and 5.4

Commitment No.	Statement of Commitments (Project Approval 08_0111)	ACHMP Section
1.5.7	If remediation works are required on any of the creek-lines within the Stage 3 area, an archaeological survey with Aboriginal stakeholders will be undertaken prior to commencement of any works where access is granted.	Section 5

2.2 Relevant Cultural Heritage Legislation

Two pieces of legislation provide the primary context for Aboriginal heritage management in NSW; the *National Parks and Wildlife Act 1974* (NPW Act) and the *Environmental Planning and Assessment Act 1979* (EP&A Act). While the NPW Act provides statutory protection for all Aboriginal Objects (archaeological sites) and Aboriginal Places, the EP&A Act sets out the framework for Aboriginal heritage values to be formally assessed in land use planning and development consent processes.

2.2.1 Environmental Planning and Assessment Act 1979

The EP&A Act regulates development activity in NSW. Project Approval PA 08_0111 was granted under the now repealed Part 3A of the EP&A Act. Development consent DA 29/95 was granted pursuant to section 91 of the EP&A Act, however, is now classed as a transitional Part 3A Project and may be modified under Section 75W of Part 3A. While DA 29/95 may be modified under Part 3A, it is not an Approved Part 3A Project.

A number of provisions of Part 3A continue to apply to PA 08_0111 as an Approved Part 3A Project. Under Section 75U of the EP&A Act, it is not necessary to obtain an Aboriginal heritage impact permit under Section 90 of the NPW Act (refer to **Section 2.2.2**) in relation to activities approved under Part 3A of the EP&A Act. Projects approved under Part 3A of the EP&A Act are subject to conditions of approval issued by the Department of Planning and Environment (DPE) and (where relevant) Aboriginal cultural heritage is addressed by appropriate conditions. Furthermore, Section 75J (5) of the EP&A Act states that conditions of approval for the carrying out of a project may require the proponent to comply with obligations made in a statement of commitments submitted by the proponent as part of the development approval process.

The provisions of Section 75U and 75J (5) do not apply to DA 29/95 as it is not an Approved Part 3A Project. Therefore, the requirement to obtain a permit under Section 90 of the NPW Act prior to undertaking activities that result in an impact to Aboriginal objects continues to apply to activities undertaken in accordance with DA 29/95 (refer to **Section 2.2.2**).

2.2.2 National Parks and Wildlife Act 1974

The OEH is primarily responsible for regulating the management of Aboriginal cultural heritage in NSW under the NPW Act. The NPW Act is accompanied by the *National Parks and Wildlife Regulation 2009* (the NPW Regulation), the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* (OEH 2010) and other industry-specific codes.

The objectives of the NPW Act include:

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

The NPW Act defines an Aboriginal object as:

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.

In accordance with Section 86(1) of the NPW Act, it is an offence to harm or desecrate a known Aboriginal object, whilst it is also an offence to harm an Aboriginal object under Section 86(2). Similarly, Section 86(4) states that a person must not harm or desecrate an Aboriginal place. Harm to an object or place is defined as any act or omission that:

- a) destroys, defaces or damages an object or place, or
- b) in relation to an object – moves the object from the land on which it had been situated, or
- c) is specified by the regulations, or
- d) causes or permits the object or place to be harmed in a manner referred to in paragraph (a), (b) or (c), but does not include any act or omission that:
- e) desecrates the object or place (noting that desecration constitutes a separate offence to harm), or
- f) is trivial or negligible, or
- g) is excluded from this definition by the regulations.

Section 87 (1) of the NPW Act specifies that it is a defence to prosecution under Section 86 (1) and Section 86 (2) if the harm or desecration of an Aboriginal object was authorised by an Aboriginal heritage impact permit (AHIP) and the activities were carried out in accordance with that permit. As discussed in **Section 2.2.1**, the provisions of Part 3A of the EP&A Act provide an exemption from the requirement for an AHIP under the NPW Act for activities approved under PA 08_0111. However, the other provisions of the NPW Act are still applicable. This exemption does not apply to activities approved under DA 29/95.

Consultation with the Aboriginal community is an integral part of identifying and assessing the significance of Aboriginal objects and/or places and determining and carrying out appropriate strategies to mitigate impacts upon Aboriginal heritage. Section 80C (1) of the NPW Regulation establishes that, prior to making an application for an AHIP, the applicant must undertake Aboriginal community consultation in accordance with Section 80C(2-11).

Consultation in relation to the Stage 3 project commenced in 2007 under the *Interim Community Consultation Requirements for Applicants*, however, in recognition of the change in consultation expectations, all consultation undertaken after November 2010 was generally in accordance with Section 80C (2-11) of the NPW Regulation.

3.0 Aboriginal Party Consultation

Consultation with Aboriginal parties in relation to approved activities at Austar Coal Mine and the development of prior ACHMPs has been undertaken in accordance with all relevant requirements and to the satisfaction of the regulatory authorities. The registered Aboriginal parties for the Austar Coal Mine are listed in **Table 3.1** below.

Table 3.1 Registered Aboriginal Parties

Stakeholder
Aboriginal Native Title Consultants
Wonn1 Consulting
Giwiirr Consultants
Hunter Valley Cultural Surveying
Lower Hunter Wonnarua Council
Lower Wonnarua Tribal Consultancy Pty Ltd
Mindaribba Local Aboriginal Land Council (for sections of the Austar Coal Mine within their specified boundaries)
Mingga Consultants
Tracey Skene (Culturally Aware)
Wanaruah Custodians
Wattaka Wonnarua Cultural Consultants Services
Wonnarua Culture Heritage
Upper Hunter Heritage Consultants
Yarrowalk/Tocomwall/Plains Clan of the Wonnarua People Native Title Claim Group
Hunter Valley Cultural Consultants
Yinarr Cultural Services
Deslee Talbott Consultants
Wonnarua Elders Council
Awabakal and Guringai Native Title Claim Group
Awabakal Local Aboriginal Land Council (for sections of the Austar Coal Mine within their specified boundaries)

3.1 Native Title

A search of the NNTTs National Native Title Register, Register of Native Title Claims, Unregistered Claimant Applications and Register of Indigenous Land Use Agreements was undertaken in November 2017 with the geographic parameters set to the Cessnock LGA. The search identified that there is one registered Native Title claim NC2013/006 (Scott Franks and Anor on behalf of the Plains Clan of the Wonnarua People) that applies to the Austar Coal Mine. Mr Franks has been consulted in relation to this ACHMP via his business Tocomwall. A search of the NNTT's website in March 2021 found that this claim has been discontinued.

3.1.1 Consultation during Update of ACHMP

Consultation in relation to prior approved versions of the ACHMP was undertaken in accordance with all relevant requirements and to the satisfaction of OEH/DPE.

Consultation for the Aboriginal Cultural Heritage Assessment submitted prior to approval of the most recent modification to DA 29/95 (MOD 7) was also undertaken in accordance with relevant requirements and included the provision of the draft assessment for review and comment by Aboriginal parties. Aboriginal parties that provided a response to the draft assessment report indicated they were generally satisfied with the assessment.

The previous version of the ACHMP was updated to reflect the modified approval and incorporates management strategies previously endorsed by registered Aboriginal parties as part of previously approved ACHMPs.

A draft of the updated ACHMP was provided to all registered Aboriginal parties on 29 March 2018 for review and comment. No comments on the updated ACHMP were provided by the Aboriginal parties.

As no material changes have been made to this 2021 revision of the ACHMP, additional consultation has not been undertaken.

A copy of this revised version of the ACHMP has been provided to the registered Aboriginal parties.

3.2 Government Agency Consultation

A copy of the final draft of the previously approved version of the ACHMP was sent to OEH for review and comment on 22 May 2018. A response was received from Steven Cox, Senior Team Leader Planning (Hunter Central Coast Branch Regional Operations Division) on 22 May 2018 noting that:

At the moment we do not have capacity to review your management plan and will not be providing comment.

Please provide the management plan to DPE without our review of the management plan.

OEH comments are found in **Appendix 1**.

As no material changes have been made to this 2021 revision of the ACHMP, additional consultation has not been undertaken.

A copy of this revised version of the ACHMP has been provided to Heritage NSW.

4.0 Archaeological Sites and Potential Impacts

A total of 54 archaeological sites are located within the area approved for impact by underground mining and in association with surface infrastructure within Austar Coal Mine as shown in **Figure 4.1** and listed in **Table 4.1**. Archaeological sites in the region are depicted in **Figure 4.1**, with archaeological sites recorded in association with the LWB1-B7 and Stage 3 areas shown in detail in **Figure 4.2** and **Figure 4.3** respectively. The majority of these sites have been identified over the course of inspections and assessments undertaken in relation to Austar Coal Mine.

It is noted that one site (AHIMS 37-6-0422) is located above the former Stage 2 mining area. Mining is no longer active in this area and monitoring requirements for this site have been satisfied.

Mining is also no longer active in the Bellbird South or Stage 3 areas.

In addition to the recorded sites, during the survey of LWB4-B7, the valley flats bordering Quorrobolong Creek were identified as being of moderate archaeological potential, while the slopes within 100 metres of the main channel of Quorrobolong Creek and identified overflow channels and the spur crest within the LWB4-B7 area were identified as having low to moderate archaeological potential. These areas of archaeological potential are shown on **Figure 4.2**. Management of these areas will be undertaken consistently with the AHIMS registered PADs listed in **Table 4.1**.

Potential impacts to sites as a result of Austar Coal Mine activities will primarily result from the establishment/maintenance/decommissioning of surface infrastructure/facilities (including geotechnical testing works) or from subsidence and associated subsidence remediation. These are discussed below.

4.1 Subsidence Impacts

Subsidence predictions have been established for all approved longwall mining areas (refer to MSEC 2009, 2011, 2015 and 2017) and are reviewed in **Table 4.1** with reference to likely impacts to identified archaeological sites. Subsidence impacts are considered both in terms of primary impact (cracking) and secondary impacts (such as increased erosion). Based on current subsidence predictions, subsidence impacts are not expected to have a significant impact on the archaeological values of the area. In addition, it is predicted that surface mitigation works along drainage channels will not be required and hence disturbance of these areas is not likely to be necessary.

As mining has ceased at the site, no further subsidence impacts from longwall mining activities are predicted.

4.2 Surface Infrastructure/Facilities

The Austar Coal Mine includes a range of existing surface infrastructure/facilities. To date, all surface infrastructure/facilities have been located in areas that do not contain recorded archaeological sites or places of cultural significance and/or it has been possible to avoid all identified sites in undertaking surface activities such as bushfire hazard reduction. However, it may be necessary to establish and/or decommission surface infrastructure/facilities to carry out activities approved under DA 29/95 and PA 08_0111 and required for completion of closure works.

The need to undertake surface works will be identified throughout the closure process. The impact of such works on Aboriginal archaeological and cultural values will be assessed at such time when proposed locations have been identified. Any such works will follow the management strategy for future surface works established in **Section 5.3**, including provision for the assessment of likely impacts.

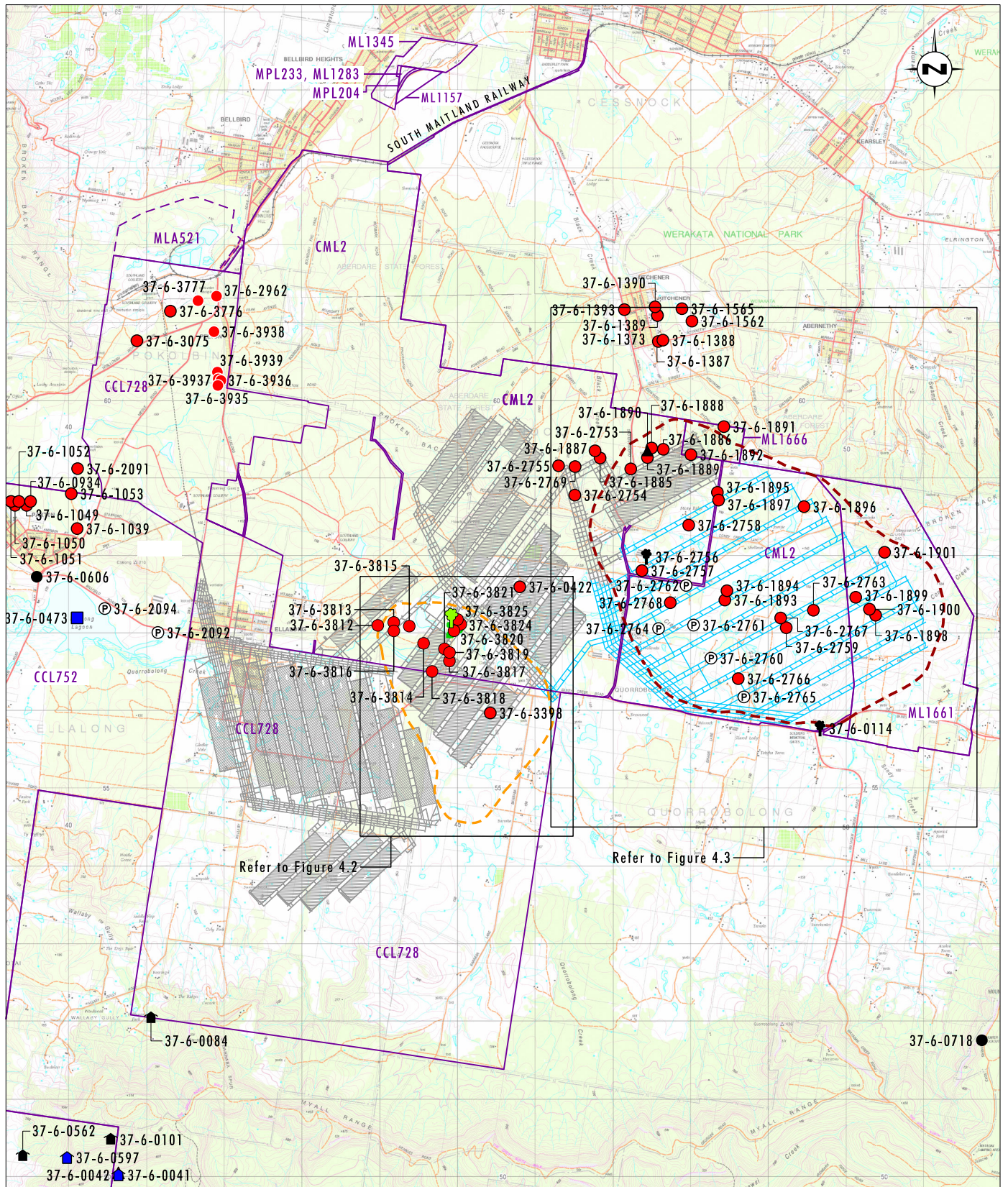


Image Source: LPI NSW (2009)
Data Source: Austar Coal Mine (2015)

Legend

- 20mm Subsidence Contour for Bellbird South LWB1-B3 and LWB4-B7 Longwall Panels (DA29/95 MOD 7)
- 20mm Subsidence Contour for Stage 3 Longwall Panels (PA 08_0111 MOD3)
- Mining Lease Boundary
- Mining Lease Application Boundary
- Completed Longwall Mining
- Approved Longwall Mining not completed
- PAD
- Scarred Tree
- Grinding Groove, Rock Engraving, Shelter with Art, Shelter with Deposit

- Artefact Scatter
- Isolated Find
- Grinding Groove
- Shelter with Art
- Shelter with Deposit
- Natural Mythological (Ritual)
- Tree with Non-cultural Scarring
- Archaeological Site Area

FIGURE 4.1

Location of AHIMS Sites



Image Source: Nearmap (2017)
Data Source: Austar Coal Mine (2017)
Note: Contour Interval 2m

0 250 500 750m
1:15 000

Legend

- 20mm Subsidence Contour for Bellbird South LWB1-B3 and LWB4-B7 Longwall Panels (DA29/95 MOD 7)
- Valley Flat (Moderate)
- Minor Spur Crest (Low to Moderate)
- 100 metre Buffer at Edge of Creek
- Archaeological Site Area
- Artefact Scatter
- 🌳 Tree with Non-cultural Scarring

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FIGURE 4.2

Location of AHIMS Sites and
Areas of Archaeological Sensitivity LWB1-B7

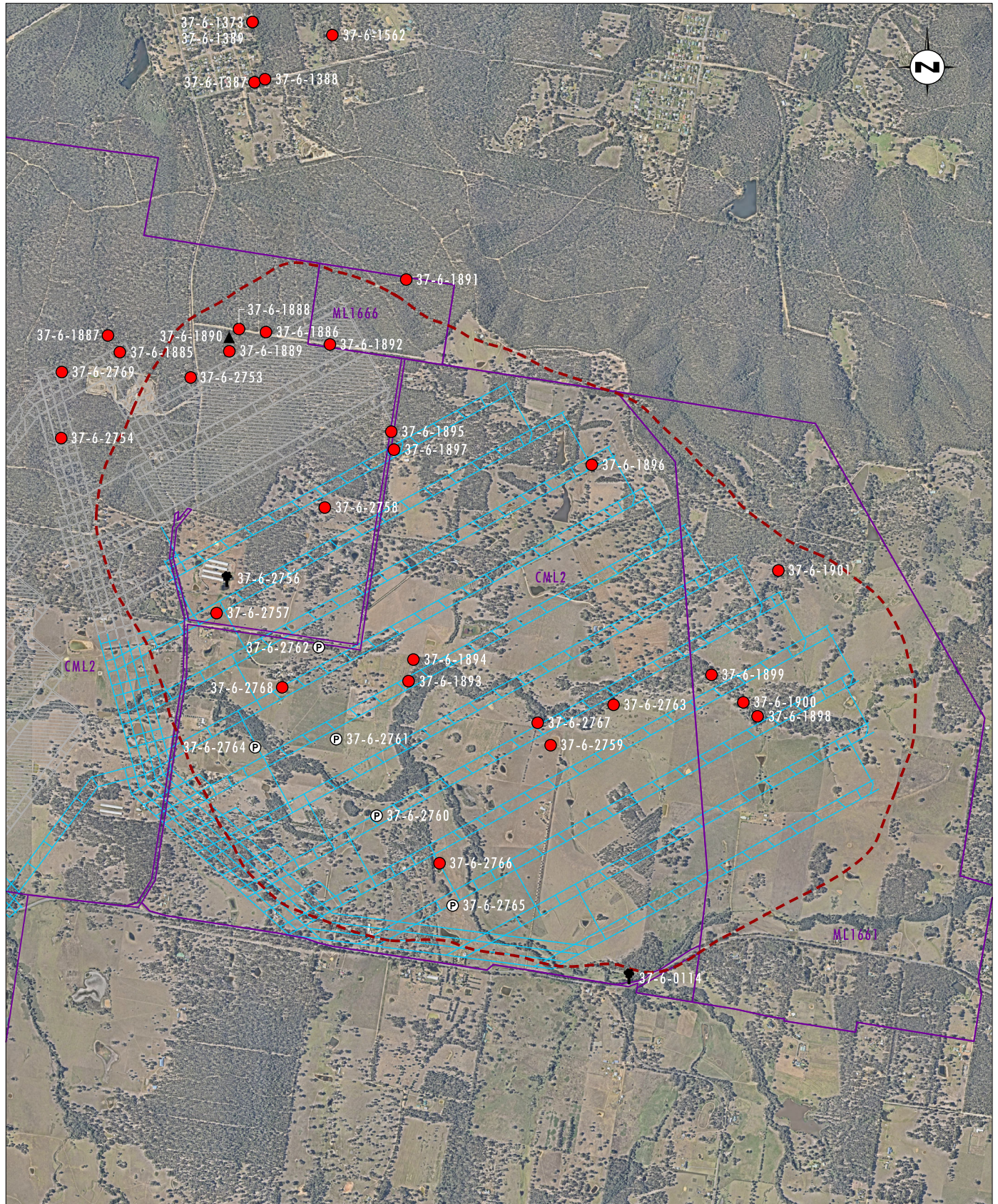


Image Source: Nearmap (Dec 2017)
Data Source: AHIMS (2018)

0 0.5 1.0 1.50km
1:30 000

Legend

- 20mm Subsidence Contour for Stage 3 Longwall Panels (PA 08_0111 MOD3)
- Mining Lease Boundary
- Completed Longwall Mining
- Approved Longwall Mining but not yet completed
- Artefact Scatter
- ▲ Grinding Groove
- Ⓟ PAD
- 🌳 Scarred Tree

FIGURE 4.3

Location of AHIMS Sites in Stage 3 Longwall Panels (PA 08_0111 MOD3)

Table 4.1 Archaeological Sites within Approved Mining Areas: Potential Impacts and Management Recommendations (as previously approved)

AHIMS #	Site Name	Type	Archaeological Significance	Potential Impact (as previously approved)	Management Recommendation (as previously approved)
37-6-1885	ACM1 (Quorrobolong)	Artefact Scatter	Low	Little or no impact from potential surface cracking. Potential for increased erosion of the landform is expected to be minimal.	- manage in situ - undertake baseline monitoring where access is approved by landholder - subsidence monitoring inspection where access is approved by landholder - mitigate potential damage from maintenance or remediation works if required (refer to protocol for mitigation/management in Section 5.2.2 and 5.2.2.1).
37-6-1887	ACM2 (Quorrobolong)	Artefact Scatter	Low	As above	As above
37-6-1886	ACM3 (Quorrobolong)	Isolated Find	Low	As above	As above
37-6-1888	ACM4 (Quorrobolong)	Isolated Find	Low	As above	As above
37-6-1889	ACM5 (Quorrobolong)	Isolated Find	Low	As above	As above
37-6-1890	ACM6 (Quorrobolong)	Grinding Groove & Isolated Find	Low-moderate (high cultural)	Subsidence impacts possible (in the range of 10–30% likelihood of occurrence). Possible cracking of rock shelf.	- manage <i>in situ</i> - undertake baseline monitoring - subsidence monitoring inspections - mitigate potential damage from maintenance or remediation works (to protocol for mitigation/management in Section 5.2.2) - complete offset program.

AHIMS #	Site Name	Type	Archaeological Significance	Potential Impact (as previously approved)	Management Recommendation (as previously approved)
37-6-1891	ACM7 (Quorrobolong)	Isolated Find	Low	Little or no impact from potential surface cracking. Potential for increased erosion of the landform is expected to be minimal.	manage in situ undertake baseline monitoring where access is approved by landholder subsidence monitoring inspection where access is approved by landholder mitigate potential damage from maintenance or remediation works if required (to protocol for mitigation/management in Section 5.2.2).
37-6-1892	ACM8 (Quorrobolong)	Artefact Scatter	Low	As above	As above
37-6-1893	ACM9 (Quorrobolong)	Isolated Find	Low-moderate	As above	As above
37-6-1894	ACM10 (Quorrobolong)	Artefact Scatter	Low-moderate	As above	As above
37-6-1895	ACM11 (Quorrobolong)	Isolated Find	Low	As above	As above
37-6-1896	ACM12 (Quorrobolong)	Artefact Scatter	Low	as above	As above
37-6-1897	ACM13 (Quorrobolong)	Isolated Find	Low	As above	As above
37-6-1898	ACM14 (Quorrobolong)	Artefact Scatter	Low-moderate	As above	As above
37-6-1899	ACM15 (Quorrobolong)	Isolated Find	Low	As above	As above

AHIMS #	Site Name	Type	Archaeological Significance	Potential Impact (as previously approved)	Management Recommendation (as previously approved)
37-6-1900	ACM16 (Quorrobolong)	Artefact Scatter	Low	As above	As above
37-6-1901	ACM17 (Quorrobolong)	Isolated Find	Low	As above	As above
37-6-2753	ACM18 (Quorrobolong)	Artefact Scatter	Low	As above	As above
37-6-2754	ACM19 (Quorrobolong)	Isolated Find	Low	As above	As above
37-6-2755	ACM20 (Quorrobolong)	Isolated Find	Low	As above	As above
37-6-2756	ACM21 (Quorrobolong)	Scarred tree	Low (High cultural)	No impact on tree due to subsidence, however, some impact is possible if location (dam wall) requires remediation works.	• manage <i>in situ</i> • undertake baseline monitoring where access is approved by landholder • subsidence monitoring inspection where access is approved by landholder • mitigate potential damage from maintenance or remediation works if required (refer to protocol for mitigation/management in Section 5.2.2).
37-6-2757	ACM22 (Quorrobolong)	Isolated find	Low	Little or no impact from potential surface cracking. Potential for increased erosion of the landform is expected to be minimal.	As above
37-6-2758	ACM23 (Quorrobolong)	Isolated find	Low	As above	As above

AHIMS #	Site Name	Type	Archaeological Significance	Potential Impact (as previously approved)	Management Recommendation (as previously approved)
37-6-2759	ACM24 (Quorrobolong)	Artefact scatter	Low	As above	As above
37-6-2760	ACM25 (Quorrobolong)	PAD	Not yet established. Can only be based on results of subsurface testing if mitigation required following subsidence.	As above	As above
37-6-2761	ACM26 (Quorrobolong)	PAD	Not yet established. Can only be based on results of subsurface testing if mitigation required following subsidence.	As above	As above
37-6-2762	ACM27 (Quorrobolong)	Isolated find	Low	As above	As above
37-6-2763	ACM28 (Quorrobolong)	Artefact scatter	Low	As above	As above

AHIMS #	Site Name	Type	Archaeological Significance	Potential Impact (as previously approved)	Management Recommendation (as previously approved)
37-6-2764	ACM29 (Quorrobolong)	PAD*	Not yet established. Can only be based on results of subsurface testing if mitigation required following subsidence.	Little or no impact from potential surface cracking. Potential to increase erosion of the landform in the vicinity of confluence of Sandy Creek and Cony Creek is expected to be minimal.	- manage <i>in situ</i> - undertake baseline monitoring where access is approved by landholder - subsidence monitoring inspection where access is approved by landholder - mitigate potential damage from maintenance or remediation works if required (refer to protocol for mitigation/management in Section 5.2.2).
37-6-2765	ACM30 (Quorrobolong)	PAD*	Not yet established. Can only be based on results of subsurface testing if mitigation required following subsidence.	As above	As above
37-6-2766	ACM31 (Quorrobolong)	Isolated find	Low	Little or no impact from potential surface cracking. Potential for increased erosion of the landform is expected to be minimal.	As above
37-6-2767	ACM32 (Quorrobolong)	Artefact scatter	Low	As above	As above
37-6-2768	ACM33 (Quorrobolong)	Artefact scatter	Low	As above	As above

AHIMS #	Site Name	Type	Archaeological Significance	Potential Impact (as previously approved)	Management Recommendation (as previously approved)
37-6-2769	ACM34 (Quorrobolong)	Isolated find	Low	As above	As above
37-6-3075	Wollombi Rd AS1	Artefact scatter	Low	None proposed (associated with reject emplacement area but not subject to impact)	- manage <i>in situ</i> - should impacts be required in future, mitigate potential damage (refer to protocol for mitigation/management in Section 5.3)
37-6-3398	ACM35 (Quorrobolong)	Artefact scatter	Low	As above	As above
37-6-3776	ACM36	Isolated find	Low	None proposed (associated with reject emplacement area but not subject to impact)	- manage <i>in situ</i> - should impacts be required in future, mitigate potential damage (refer to protocol for mitigation/management in Section 5.3)
37-6-3777	ACM37	Artefact scatter	Low	Little or no impact from potential surface cracking. Potential for increased erosion of the landform is expected to be minimal.	- manage <i>in situ</i> - undertake subsidence monitoring inspection where access is approved by landholder - mitigate potential damage from maintenance or remediation works if required (refer to protocol for mitigation/management in Section 5.2.2).
37-6-3824	ACM38	Artefact scatter	Low to moderate	As above	As above
37-6-3825	ACM39	Isolated find	Low	As above	As above
37-6-3820	ACM40	Artefact scatter	Low-moderate	As above	As above
37-6-3821	ACM41	Isolated find	Low	As above	As above
37-6-3817	ACM42	Artefact scatter	Low	As above	As above

AHIMS #	Site Name	Type	Archaeological Significance	Potential Impact (as previously approved)	Management Recommendation (as previously approved)
37-6-3819	ACM43	Artefact scatter	Low	As above	As above
37-6-3818	ACM44	Artefact scatter	Low	As above	As above
37-6-3813	ACM46	Isolated find	Low	As above	As above
37-6-3814	ACM47	Artefact scatter	Low	As above	As above
37-6-3815	ACM48	Isolated find	Low	As above	As above
37-6-3816	ACM49	Isolated find	Low	As above	As above
37-6-3939	ACM50	Isolated find	Low	As above	• manage <i>in situ</i> • should impacts be required in future, mitigate potential damage (refer to protocol for mitigation/management in Section 5.3)
37-6-3938	ACM51	Isolated find	Low	As above	As above
37-6-3937	ACM52	Artefact scatter	Low	As above	As above
37-6-3936	ACM53	Artefact scatter	Low	As above	As above
37-6-3935	ACM54	Artefact scatter	Low	As above	As above

*Although not recorded sites, management of the areas of low to moderate and moderate archaeological potential within the LWB4-B7 area will be consistent with those for the recorded PADs

5.0 Aboriginal Cultural Heritage Management Strategy

The management strategies for Aboriginal cultural heritage at Austar Coal Mine are as outlined below.

5.1 Aboriginal Cultural Heritage Awareness Training

Austar currently includes a section within the site induction that includes information on Aboriginal cultural heritage to ensure that mining personnel and contractors understand that an Excavation and Clearing Permit is required for any excavation or ground disturbance, and that the ACHMP is available for consultation. In addition, a training package on the ACHMP aimed at Austar personnel that may manage ground disturbing works includes the principles behind the ACHMP, how it is implemented, and how it relates to them and the tasks they will be undertaking within the Austar Coal Mine. This information was developed in consultation with registered Aboriginal parties and includes:

- information related to the types of Aboriginal cultural heritage sites that are known within the Austar Coal Mine
- information related to the Aboriginal cultural heritage value and archaeological significance of the known sites/artefacts/Potential Archaeological Deposits (PAD)
- the provision of maps detailing the location of known sites, PADs and areas where ground disturbance for remediation is not allowed without further consultation with the registered Aboriginal parties. This should form part of the Ground Disturbance Permit (GDP) process
- procedures for contacting the Austar Environment and Community Manager who will then contact the registered Aboriginal parties should remediation work be required within proximity of a known site
- procedures for contacting the Austar Environment and Community Manager who will then contact the registered Aboriginal parties in the event a previously unknown site is located during ground disturbing activities associated with remediation activities
- information related to the relevant legislation for the protection of Aboriginal sites.

Only information endorsed for sharing by the registered Aboriginal parties has been included in the Aboriginal Cultural Heritage Awareness Training package.

5.2 Archaeological Site Monitoring Program

Austar has committed to monitoring and reporting of subsidence impacts on Aboriginal cultural heritage sites and PADs recorded within the Stage 3 and the LWB1-B3 and LWB4-B7 mining areas. Monitoring incorporates baseline monitoring and post-subsidence monitoring. The ability of Austar to undertake monitoring will however depend in some instances on obtaining permission to access private land. Austar cannot guarantee that permission for access will be provided.

It is proposed that prior to and following the cessation of subsidence related to each longwall, inspection will be undertaken of the known Aboriginal cultural heritage sites and PADs on accessible properties in order to collect detailed baseline data regarding the current condition of the sites (pre-subsidence monitoring) and the condition of the sites following subsidence (post subsidence monitoring) and to determine if there are any requirements for subsidence mitigation measures.

The inspection and reporting will be undertaken by representatives of the registered Aboriginal parties and a suitably qualified archaeologist. The purpose of the monitoring is to observe:

- Pre-subsidence monitoring (baseline recording):
 - What is the current condition of the site/PAD and the nature of any pre-subsidence impacts?
- Post-subsidence monitoring:
 - What have been the changes to the site following subsidence?
 - What are the requirements (if any) for subsidence remediation works (as indicated by Austar/landowner)?
 - What will be the nature of the remediation works?
 - Are there requirements for site/PAD salvage/investigation prior to subsidence remediation works?

Where rehabilitation works are required, an assessment will be undertaken by an archaeologist and registered Aboriginal parties regarding:

- the suitability of the remediation works undertaken
- the success of remediation works
- compliance with this ACHMP.

5.2.1 Baseline Monitoring

At least four weeks prior to subsidence impacts for any Aboriginal heritage site/PAD within the longwall extraction subsidence impact area, baseline recording of known archaeological sites on accessible properties will be conducted.

Baseline monitoring of known archaeological sites and PADs will use a standardised baseline monitoring system that can be used to compare post-subsidence monitoring results. The methodology for baseline recording is included in **Appendix 2 (Reference Sheets 1 to 3)**.

The registered Aboriginal parties requested that a database of sites be prepared by Austar to be added to over time. Registered Aboriginal parties also requested that a photographic record be made of significant artefacts and attached to the database. This information is included as part of the baseline monitoring records.

5.2.2 Post-Subsidence Monitoring Inspections

To ensure that any impacts to known Aboriginal cultural heritage sites/PADs from subsidence are identified and appropriately managed, Aboriginal cultural heritage sites on accessible properties will be included in a post-subsidence monitoring program. The baseline recording of sites prior to commencement of subsidence impacts (as described in **Section 5.2.1**) will be compared with this second round of monitoring to determine subsidence impacts. The required post subsidence monitoring inclusions are detailed within **Reference Sheet 4 in Appendix 2**

The timing of post subsidence monitoring of known sites/PADs on accessible properties will be determined by the mining schedule, with monitoring of sites within the angle of draw of individual longwalls able to begin when subsidence has ceased (to be determined by subsidence monitoring surveyor's data).

The post-subsidence monitoring will involve the completion of the tasks identified on **Reference Sheet 4 in Appendix 2**.

Should any site changes be detected that require subsidence remediation works, the field team (archaeologist and registered Aboriginal party representatives) will determine how these works may affect the integrity of the site/PAD. Based on the proposed impacts of the remediation works and the scientific and cultural value of the site, the need for archaeological/cultural salvage and the nature of that salvage will be determined.

A brief letter report on the inspection and discussion results will be provided to all registered Aboriginal parties, with 14 days allowed for review and return of comments, providing the works are not classified as urgent (i.e., that would affect landholder/stock safety) in which case a shorter period for comment would be specified.

Where it is determined that it is appropriate to undertake a surface collection of artefacts within a site, this will be conducted in accordance with the methodology outlined in **Reference Sheet 5 in Appendix 2**. Where test or salvage excavation is deemed appropriate, these will be conducted in accordance with the methodology outlined in tasks numbers 8-13 of **Reference Sheet 6 in Appendix 2**. It is noted that it will be necessary to obtain an AHIP prior to commencing salvage works for sites located within the DA 29/95 area. All salvage works will be completed in consultation with Aboriginal party representatives.

Sites/PADs that require remediation works will be subject to a third round of monitoring as discussed in **Section 5.2.3**.

5.2.3 Monitoring of Subsidence Remediation within Aboriginal Cultural Heritage Sites/PADs

Where remediation of subsidence impacts has been carried out by Austar within accessible Aboriginal cultural heritage sites/PADs, but where the site/PAD was not destroyed by the works, a further round of monitoring will be required by representatives of the registered Aboriginal parties and an archaeologist to assess the success and suitability of the remediation works and if further remediation is required to stabilise the site/PAD.

5.3 Mitigation of Potential Impacts from Future Surface Works

Mining operations may entail future surface disturbance works which have potential to impact Aboriginal cultural heritage sites/PADs within the Austar Coal Mine. The following sections outline required actions for properties not previously surveyed, those surveyed where archaeological sites/PADs were not found, and those surveyed where archaeological sites/PADs were found.

5.3.1 Properties Not Previously Surveyed

On properties within the Austar Coal Mine that were not surveyed as part of previous cultural heritage assessments (including any approved reject emplacement areas which are undisturbed), an archaeologist and registered Aboriginal party representative(s) will be required to inspect the works location to identify any potential impacts to Aboriginal cultural heritage and any proposed management strategies if surface works are proposed (pending landholder approval). Previously surveyed properties are identified in **Figure 5.1** however it is noted that this does not include small areas previously inspected outside the relevant subsidence contours.

Where sites are identified within areas not previously surveyed, these will be managed in accordance with the methodology provided in **Section 5.4**.

5.3.2 Properties Previously Surveyed Where Sites Were Not Found

If future surface works are proposed on a property that has been previously surveyed and within which no archaeological sites/PADs were identified in the proposed works location, no further Aboriginal heritage works will be required.

5.3.3 Properties Previously Surveyed Where Sites Were Found

If future surface works are proposed on a property that has been previously surveyed and within which an archaeological site/PAD was identified in the proposed works location, an archaeologist and registered Aboriginal party representative(s) will be required to inspect the works location to identify any potential impacts to Aboriginal heritage and any proposed management strategies pending landholder approval.

Where the proposed surface works relate to erosion control works, mechanical erosion control works should not be undertaken within known sites or their near environs if they can be avoided (within 20 metres of the area assessed as the site or PAD). Erosion control works within sites/PADs should be restricted to practices that do not impact the ground surface wherever possible (e.g., dumping of topsoil over site and seeding with native species; sediment control measures such as hay bales placed on the ground surface etc.). If the nature of the erosion control works required means that ground disturbance will be necessary, the need for archaeological/cultural salvage and the nature of that salvage will be determined.

Where it is determined that it is appropriate to undertake a surface collection of artefacts within a site, this will be conducted in accordance with the methodology outlined in **Reference Sheet 5 in Appendix 2**. Where test or salvage excavation is deemed appropriate, these will be conducted in accordance with the methodology outlined in tasks numbers 8-13 of **Reference Sheet 6 in Appendix 2**. It is noted that it will be necessary to obtain an AHIP prior to commencing salvage works for sites located within the DA 29/95 area. Any salvage works will be completed in consultation with Aboriginal party representatives.

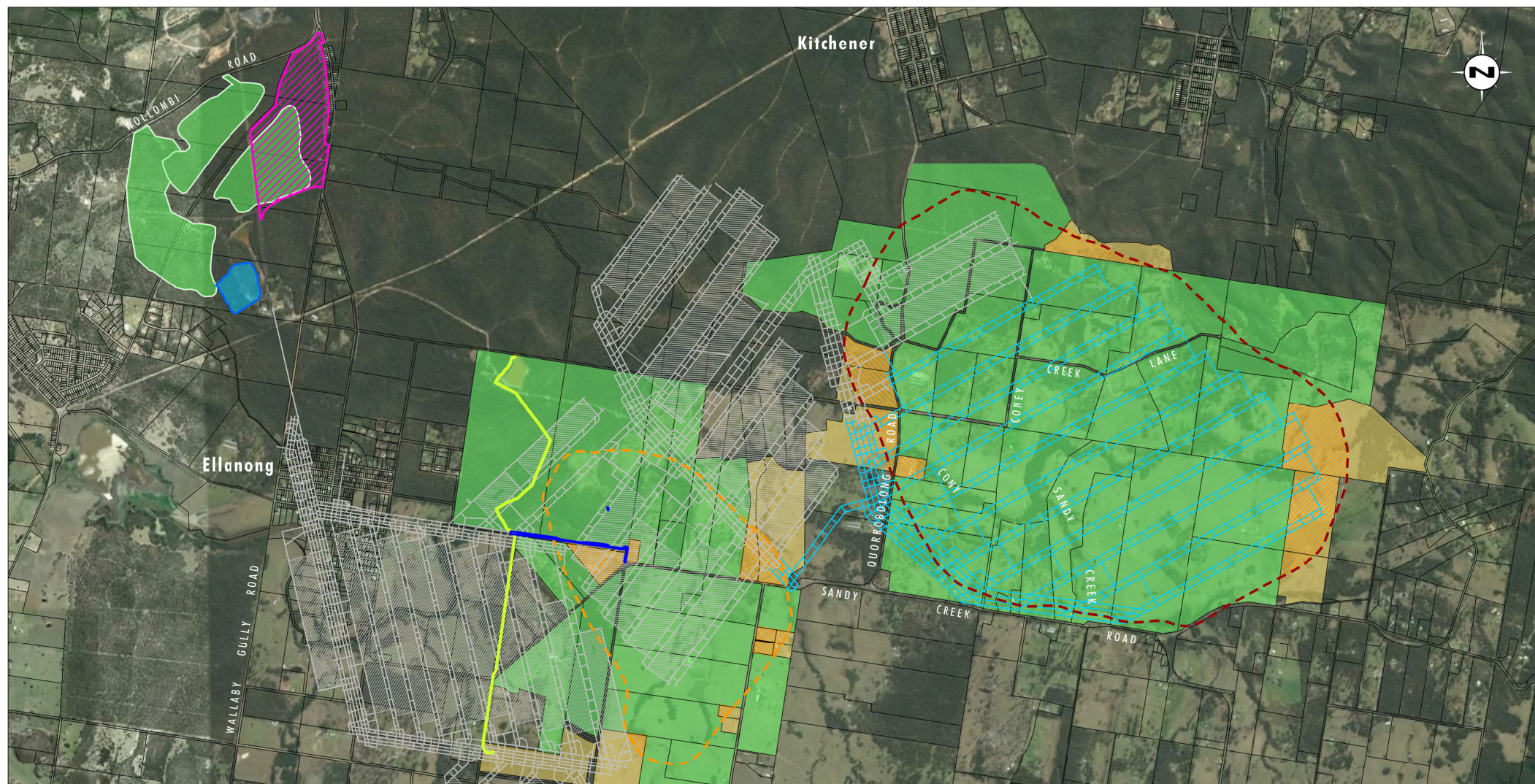


Image Source: Google Earth (2015)

Data Source: LPI NSW (2009)

Legend

— 20mm Subsidence Contour for Bellbird South LWB1-B3 and LWB4-B7 Longwall Panels (DA29/95 MOD 7)

— 20mm Subsidence Contour for Stage 3 Longwall Panels (PA 08_0111 MOD3)

■ Properties Previously Surveyed

■ Inaccessible Properties

■ Areas not surveyed within Subsidence Contours

■ Completed Longwall Mining

■ Approved Longwall Mining but not yet completed

■ Additional Areas Subject to Survey:

■ Kalingo pipeline

■ LWB4-B6 Subsidence Inspection Area and Due Diligence Assessment for Proposed Access Tracks

■ Hazard Reduction Burn Area

■ Strategic Fire Advantage Zone Works

0 0.5 1.0 2.0 km
1:50 000

FIGURE 5.1

Location of Previously Surveyed Areas

5.4 Protocol for Previously Unidentified Aboriginal Objects/Features Located During Ground Disturbing Works

In the event that previously unidentified Aboriginal objects are located during subsidence remediation works (requiring ground disturbance) or during activities related to surface infrastructure/facilities, the protocol in **Figure 5.2** and detailed within **Reference Sheet 6** in **Appendix 2** will be followed. This protocol includes an option for avoidance of further impact to the previously unidentified object if it is deemed to be of high archaeological or cultural significance. It is noted, however, that this option may not always be feasible.

5.5 Protocol for Human/Possibly Human Skeletal Remains Located During Ground Disturbing Works

If suspected human remains are identified during subsidence remediation works (requiring ground disturbance) or during activities related to surface infrastructure/facilities, the protocol depicted in **Figure 5.3** will be followed.

5.6 Recording of Salvaged Artefacts

All artefacts salvaged as a result of activities undertaken under this ACHMP will be recorded in accordance with the methodology provided in **Appendix 2**.

5.7 Aboriginal Site Impact Recording Forms

It is a requirement of OEH that an Aboriginal Site Impact Recording (ASIR) form is submitted after authorised impact to an Aboriginal site to ensure that information about the status of AHIMS sites is maintained. ASIR forms will be submitted to OEH within a reasonable timeframe for any sites subject to impact as a result of activities undertaken for Austar Coal Mine.

5.8 Care and Control of Artefactual Material

All salvaged artefacts will be temporarily stored on the Austar premises while they are analysed and then securely stored until they can be returned to Country or potentially retained for display purposes. It is noted that the registered Aboriginal parties have stipulated that the artefacts should remain on Country at all times. The only exception would be for any artefacts selected for residue and use-wear analysis (if any). It was recognised that this non-invasive form of analysis could add much to the knowledge of the ways in which Aboriginal people were using the Quorrobolong valley landscape and thus removal of artefacts from Country would be allowed for this purpose. Upon return from residue and use-wear analysis the artefacts would be returned to Country.

The methodology for care and control of salvaged artefacts is detailed in **Reference Sheet 7** in **Appendix 2**

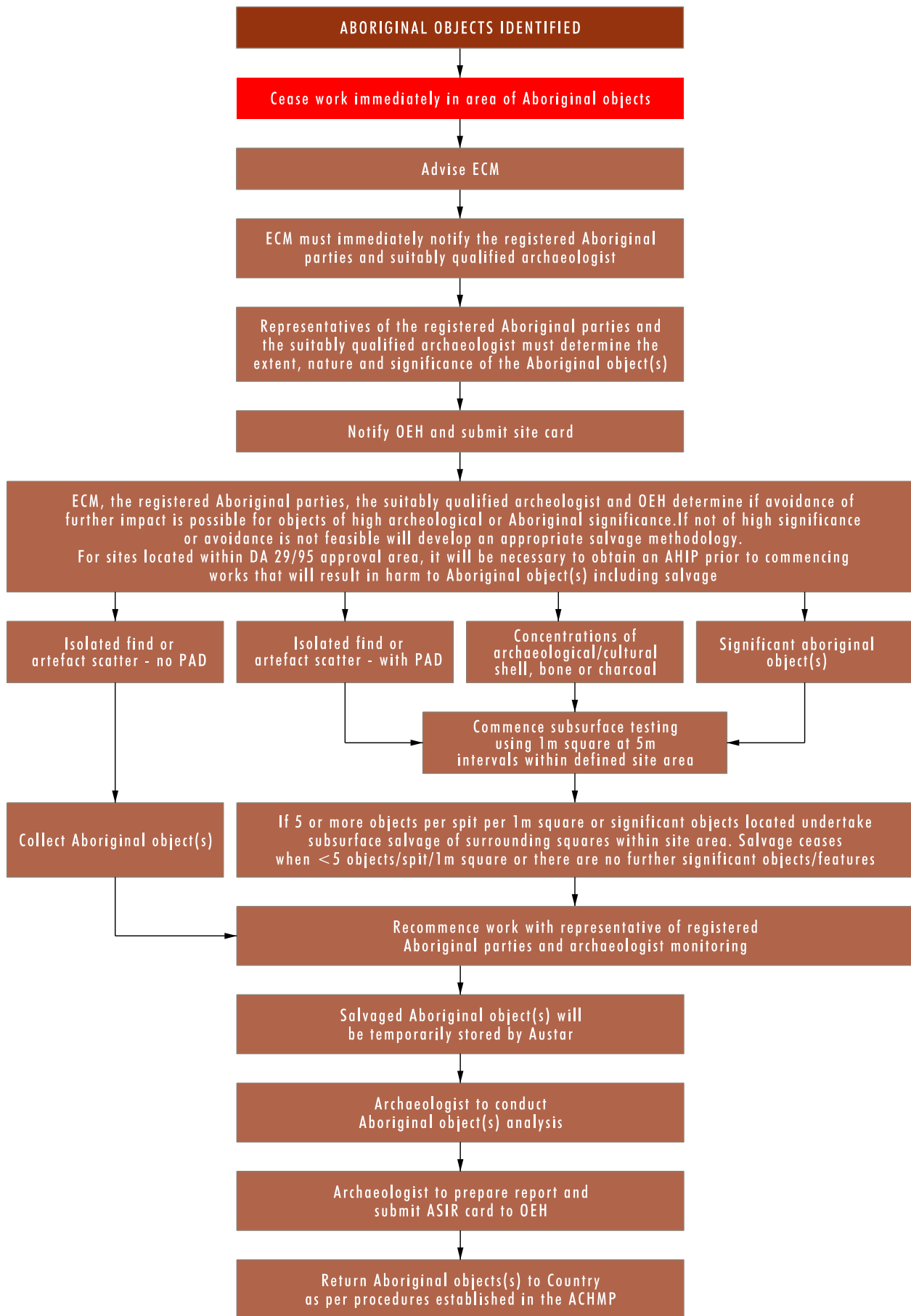


FIGURE 5.2

Protocol for Previously Unidentified Aboriginal Objects/Features located during Ground Disturbance Works

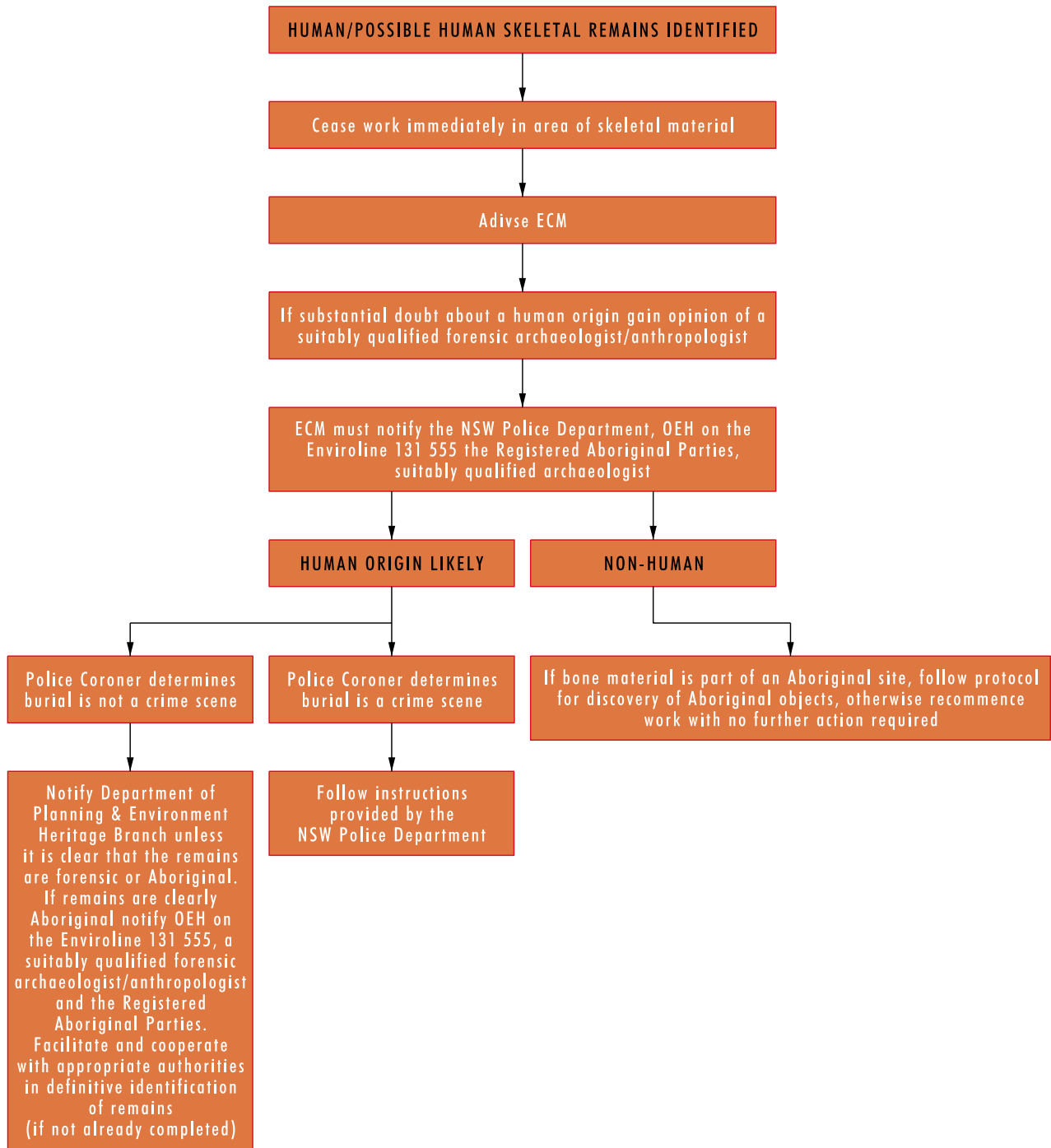


FIGURE 5.3

Protocol for Human Skeletal Remains
Located During Ground Disturbing Works

5.9 Continual Improvement

Austar will implement reasonable and feasible best practice Aboriginal cultural heritage management measures as appropriate for a closed site. The basis for continuous improvement will be through ongoing monitoring and the contingency response and adaptive management processes outlined in this plan.

5.10 Complaints, Incidents and Reporting

5.10.1 Community Complaints

Community complaints are to be managed in accordance with the requirements of the Environmental Management Strategy.

A complaints register will be published on the Austar Coal Mine website, which will be updated monthly, and a summary of complaints will be provided in the Annual Review.

5.10.2 Incident Reporting

Schedule 7 Condition 6 of PA 08_0111 and Schedule 5 Condition 4 of DA 29/95 specify the requirements for incident reporting. An incident is defined as a set of circumstances that causes or threatens to cause material harm to the environment, and/or breaches or exceeds the limits or performance measures/criteria in the approval.

There is inconsistency between the wording of the conditions, however the following protocol addresses the requirements of both conditions.

Austar will notify the Department and any other relevant agencies, of any incident associated with the mine complex as soon as practicable after Austar becomes aware of the incident.

Within 7 days of the date of the incident, Austar will provide a detailed report on the incident to the Department and any other relevant agencies. The report will include the following details:

- The date, time and nature of the exceedance/incident;
- Identify the cause (or likely cause) of the exceedance/incident;
- Describe what action has been taken to date; and
- Describe the proposed measures to address the exceedance/incident.

Further investigation may be required beyond the 7 days depending on the nature of the incident.

5.10.3 Information Dissemination

A summary of monitoring results will be presented at Austar Community Consultative Committee (CCC) meetings.

Information will also be made available on the Austar website in accordance with the requirements of Schedule 7 Condition 9 of PA 08_0111 and Schedule 5 Condition 12 of DA 29/95.

5.10.4 Annual Review

In accordance with Schedule 7 Condition 3 of PA 08_0111 and Schedule 5 Condition 5 of DA 29/95, Austar will prepare an Annual Review for submission to the Department.

5.11 Document Review and Revision

Schedule 7 Condition 4 of PA 08_0111 and Schedule 5 Condition 8 of DA 29/95 specify the requirements for revision of strategies plans and programs. There is inconsistency between the wording of the conditions, however, both require that within 3 months of:

- The submission of an Annual Review;
- The submission of an incident report;
- The submission of an audit report; or
- The approval of a modification to the conditions of consent;

Austar shall review the strategies, plans and programs required by the approval/consent to the satisfaction of Department.

DA 29/95 requires Austar to notify the Department in writing of any such review being undertaken.

Where a review leads to revision of a document, the revised document must be submitted to the Department for approval. The timing for submission of revised plans differs between the consents, being 4 weeks in PA 08_0111 and 6 weeks in DA 29/95. Given this, the 4-week requirement in PA 08_0111 will prevail.

5.12 Grinding Groove Offset Strategy

As Stage 3 underground mining may impact ACM6, a grinding groove site of high cultural significance, Austar and registered Aboriginal parties developed an appropriate grinding groove offset strategy. Analysis of the axe grinding groove site and the rock strata on which it is located indicated there is potential for the site to be damaged as a result of subsidence (SCT Operations P/L 2008). Registered Aboriginal parties have requested that no engineering works be conducted at the grinding groove site.

During consultation with registered Aboriginal stakeholders for the original Stage 3 project, Austar agreed to make a monetary contribution of \$100,000 to an Aboriginal project or program (to be decided by Aboriginal stakeholders) as an offset for any subsidence impacts that affect the grinding groove site. In 2011 Austar placed \$100,000 into a trust account and facilitated workshop consultation between registered Aboriginal parties to assist selection of an appropriate project or program. The stakeholders decided that the funds should be used for projects or programs of each stakeholder's choice. Austar has administered the Grinding Groove Offset strategy in consultation with the stakeholders since that time, and commenced distributing funds in 2013 for use in Aboriginal projects or programs proposed by the relevant applicant stakeholder.

6.0 Timeframes and Responsibilities

This section presents a timeframe for the necessary tasks in regards to Aboriginal cultural heritage management procedures and indicates the roles and responsibilities of Austar Mine management and employees to ensure the appropriate management of Aboriginal cultural heritage within the Austar Coal Mine (refer to **Table 6.1**).

Table 6.1 Timeframes and Responsibilities

Management Strategy	Timing	Responsibility	Relevant Parties
Prepare cultural heritage awareness training package.	Complete.	Austar Environment and Community Superintendent in consultation with registered Aboriginal parties and a qualified archaeologist.	Registered Aboriginal parties and a qualified archaeologist.
Provide cultural heritage awareness training.	Ongoing.	Austar Environment and Community Superintendent.	Registered Aboriginal party representative and an archaeologist if required (for relevant Austar personnel) or by the Austar Environment and Community Superintendent/Training provider for all other inductions.
Baseline recording of sites/PADs.	At least four weeks prior to impact by subsidence.	Austar Environment and Community Superintendent. Access approval from landowners required.	Registered Aboriginal party representatives and a qualified archaeologist.
Site/PAD subsidence monitoring program.	To be undertaken at the cessation of subsidence in the relevant site/PAD areas. Cessation of subsidence to be determined by surveyor subsidence surveys.	Austar Environment and Community Superintendent. Access approval from landowners required.	Registered Aboriginal party representatives and a qualified archaeologist.
Inspection of locations of proposed surface works and recommendation of Aboriginal heritage works.	Prior to undertaking surface disturbance works on properties that have not been previously inspected and on properties where sites/PADs have been located in the proposed works location.	Austar Environment and Community Superintendent. Access approval from landowners required.	Registered Aboriginal party representatives and a qualified archaeologist.
Subsidence remediation monitoring.	Only required for sites/PADs where subsidence remediation is required and where the site/PAD was not destroyed. Six months after subsidence works completed.	Austar Environment and Community Superintendent. Access approval from landowners required.	Registered Aboriginal party representatives and a qualified archaeologist.

Management Strategy	Timing	Responsibility	Relevant Parties
Surface artefact collection.	Ahead of site impact where this management strategy is deemed appropriate and AHIP obtained (where works are within DA 29/95 area).	Austar Environment and Community Superintendent. Access approval from landowners required.	Registered Aboriginal party representatives and a qualified archaeologist.
Subsurface testing.	Ahead of site impact where this management strategy is deemed appropriate and AHIP obtained (where works are within DA 29/95 area).	Austar Environment and Community Superintendent. Access approval from landowners required.	Registered Aboriginal party representatives and a qualified archaeologist(s).
Salvage excavations.	Ahead of site impact where this management strategy is deemed appropriate and AHIP obtained (where works are within DA 29/95 area).	Austar Environment and Community Superintendent. Access approval from landowners required.	Registered Aboriginal party representatives and a qualified archaeologist(s).
Recording and analysis of salvaged artefacts.	As required after salvage.	Austar Environment and Community Superintendent.	Registered Aboriginal Party representatives and a qualified archaeologist.
Procedure for new finds/skeletal material.	After discovery of a previously unknown Aboriginal object (not within a registered site) or skeletal material.	Austar Environment and Community Superintendent.	NSW Police, OEH, DPE, registered Aboriginal party representatives, forensic anthropologist and a qualified archaeologist.
Evaluation and reporting.	Annually – Annual Review Report. ACHMP revisions.	Austar Environment and Community Superintendent.	Austar Environment and Community Superintendent with assistance of qualified archaeologist if required. Registered Aboriginal party representatives and a qualified archaeologist.

7.0 References

Department of Environment and Conservation 2004a. *Interim Community Consultation Requirements for Applicants*.

Mine Subsidence Engineering Consultants Pty Ltd (MSEC), 2009. The Prediction of Subsidence Parameters and the Assessment of Mine Subsidence Impacts on the Natural Features and Surface Infrastructure Resulting from the Extraction of the Proposed Longwall A5a in Stage 2 at the Austar Coal Mine. Report to Austar Coal Mine Pty Ltd.

Mine Subsidence Engineering Consultants (MSEC) 2011. The Prediction of Subsidence Parameters and the Assessment of Mine Subsidence Impacts on Natural Features and Surface Infrastructure resulting from the Extraction of the Proposed Longwalls A7 to A19 in Stage 3 of the Austar Coal Mine. Report prepared for Austar Coal Mine Pty Limited.

Mine Subsidence Engineering Consultants (MSEC) 2015. Subsidence Predictions and Impact Assessments for the Natural and Built Features in support of the Environmental Assessment for the Section 75W Modification Application for the inclusion of the Proposed Longwalls B1 to B3 at the Austar Coal Mine. Report prepared for Austar Coal Mine Pty Limited.

Mine Subsidence Engineering Consultants (MSEC) 2017. Subsidence Predictions and Impact Assessments for the Natural and Built Features in support of the Modification Application for Longwalls B4 to B7 at the Austar Coal Mine. Report prepared for Austar Coal Mine Pty Limited.

OEH 2010. Due Diligence Code of Practice for Protection of Aboriginal Objects in NSW.

SCT Operations P/L (2008). Site Inspection Report for Aboriginal grinding Groove Site D6.

Umwelt (Australia) Pty Limited 2012. Aboriginal Cultural Heritage Management Plan: Austar Mining Complex.

8.0 Abbreviations

ACHMP	Aboriginal Cultural Heritage Management Plan
AHIP	Aboriginal Heritage Impact Permit
ASIR	Aboriginal Site Impact Recording
Austar	Austar Coal Mine Pty Ltd
DA	Development Approval
DPE	Department of Planning and Environment
EA	Environmental Assessment
ECM	Environment and Community Manager
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
NSW	New South Wales
NPW Act	<i>National Parks and Wildlife Act 1974</i>
NPW Regulation	National Parks and Wildlife Regulation 2002
OEH	Office of Environment and Heritage
PAD	Potential Archaeological Deposit
Umwelt	Umwelt (Australia) Pty Limited



APPENDIX 1

OEH Comments on Previous Iteration of
ACHMP

Hi Josh,

At the moment we do not have capacity to review your management plan and will not be providing comment.

Please provide the management plan to DPE without our review of the management plan.

Regards
Steven

Steven Cox

Senior Team Leader Planning
Hunter Central Coast Branch
Regional Operations Division
Office of Environment & Heritage

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From: Joshua Madden [<mailto:jmadden@umwelt.com.au>]
Sent: Tuesday, 22 May 2018 8:46 AM
To: OEH ROD Hunter Central Coast Mailbox <rog.hcc@environment.nsw.gov.au>
Cc: Nicola Roche <nroche@umwelt.com.au>
Subject: 3900_ACMP for OEH Review and Comment_Austar Coal Mine

To The Cultural Heritage Team

Umwelt (Australia) Pty Ltd (Umwelt) on behalf of Austar Coal Mine (the client), is submitting a FINAL DRAFT of the Aboriginal Cultural Heritage Management Plan (ACHMP) for the project to the Office of Environment and Heritage (OEH) for review and comment in accordance with the conditions of approval. Upon receipt of OEH comments Umwelt on behalf of the client, will submit the FINAL ACHMP to the EPA.

Is it possible to receive an acknowledgement of receipt and if possible, be provided with an estimated time frame the comments are likely to be sent through?

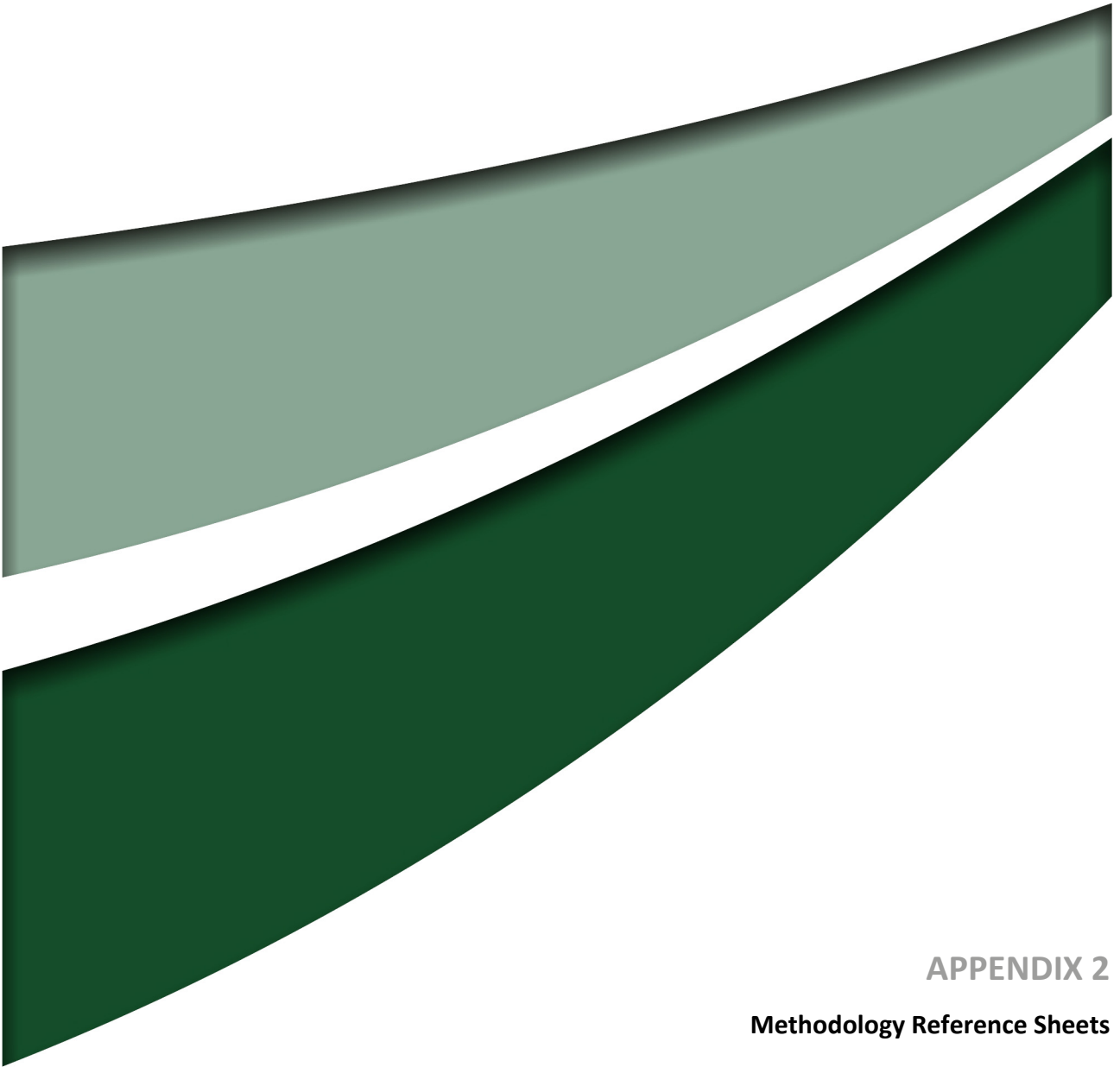
Please do not hesitate to contact me if you require any further information.

Cheers
Josh

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APPENDIX 2

Methodology Reference Sheets

Appendix 2 – Methodology Reference Sheets

The Reference Sheets included within this Appendix detail methodologies, protocols and actions to be taken in circumstances discussed within Section 5.0 of the Aboriginal Cultural Heritage Management Plan: Austar Coal Mine (ACHMP). The main text of the ACHMP provides the context and scenarios for the included methodologies, as well as further circumstances not referenced within this Appendix. The Reference Sheets included within this Appendix are:

Reference Sheet 1:	Baseline Recording of Site/PAD Condition
Reference Sheet 2:	Baseline Recording of Artefacts/Extent of Artefacts in Isolated Finds and Artefact Scatter Sites
Reference Sheet 3:	The Baseline Recording of the AMC6 Grinding Groove Site
Reference Sheet 4:	Post Subsidence Monitoring Requirements
Reference Sheet 5:	Methodology for Surface Collection for Known Sites/PADs Impacted by Remediation Works
Reference Sheet 6:	Protocol for Previously Unidentified Aboriginal Objects/Features Located During Ground Disturbing Works
Reference Sheet 7:	Care and Control of Artefactual Material for Aboriginal Objects Kept or Returned to Country

Reference Sheet 1: Baseline Recording of Site/PAD Condition

The following actions must be read with reference to Section 5.2.1 of the ACHMP.

Task Number	Task Description
1	Recording of the site/PAD will be undertaken by a field team consisting of an archaeologist and at least two Registered Aboriginal Party representatives on a rotation basis.
2	Recording the area of site/PAD or location of object with GPS using MGA 56 coordinate system.
3	Recording all site features in detailed photographs using photo-point monitoring methods that would require recording of: photographer; date and MGA 56 coordinates; wide view environmental context; ground surface contexts and from centre of site from all compass directions.
4	Photograph and describe prior impacts from agricultural land use.
5	Where relevant describe creekline morphology.
6	Describe and photograph dominant vegetation including native or noxious weed/pest weed species and ground cover.
7	Describe, measure and photograph any visible signs of erosion (including the width and estimated depth of cracks in soil surface or gullying etc.).
8	Describe and photograph any visible signs of bioturbation (ants, wombats, stock etc.).
9	Describe impediments to ground surface visibility.
10	Provide a sketch map and notes about site access to assist with ease of future monitoring.

Reference Sheet 2: Baseline Recording of Artefacts/Extent of Artefacts in Isolated Finds and Artefact Scatter Sites

The following actions must be read with reference to Section 5.2.1 of the ACHMP.

Task Number	Task Description
1	Inspection of the site area by a field team consisting of an archaeologist and at least two Registered Aboriginal Party representatives on a rotation basis. To ensure thorough coverage, the area should be inspected by systematic transects with survey team members no more than five metres apart.
2	Flagging of all surface artefacts with high visibility survey markers (where relevant).
3	Recording of surface artefact locations using a handheld GPS, with a record of each exposed artefact (this will be restricted to artefact type and raw material type). Photographs and observations of artefacts/the site area in relation to erosion scours, creek banks, areas of disturbance.
4	Production of a sketch map identifying the location of surface artefacts and where relevant estimated extent of associated PAD.
5	Photographic records of the site/PAD location, with artefact locations/area of the PAD identified by high visibility survey markers.

Reference Sheet 3: The Baseline Recording of the AMC6 Grinding Groove Site

The following actions must be read with reference to Section 5.2.1 of the ACHMP.

Task Number	Task Description
1	Recording of the site will be undertaken by a field team consisting of an archaeologist and at least two Registered Aboriginal Party representatives on a rotation basis.
2	Recording the area of site with GPS using MGA 56 coordinate system.
3	Prepare a scale drawing of the grinding groove and an area 1 metre either side of the groove.
4	Record detailed measurements and scale plan of the groove (length, width, depth).
5	Recording and inclusion in the scale plan of any existing cracking/exfoliation of the sandstone bench surface within this area.
6	Recording of the level of sedimentation present across the sandstone bench.
7	Recording all site features in detailed photographs using photo-point monitoring methods that would require recording of: photographer; date and MGA 56 coordinates; wide view environmental context; sandstone bench condition and from centre of site from all compass directions.

Reference Sheet 4: Post Subsidence Monitoring Requirements

The following requirements must be read with reference to Section 5.2.2 of the ACHMP.

Task Number	Task Description
1	Monitoring will be undertaken by a field team consisting of an archaeologist and at least two Registered Aboriginal Party representatives on a rotation basis.
2	Recording any visible subsidence/cracking of the ground surface (or in the case of AMC6 the sandstone bench within 1 metre of the grinding groove).
3	Recording any changes to the level of erosion attributable to subsidence.
4	Recording any changes in vegetation attributable to subsidence.
5	For sites/PADs near creeks record changes in drainage patterns, ponding or loss of water from drainage channels.
6	Where subsidence remediation works are required, record if any subsurface testing/salvage is required.

Reference Sheet 5: Methodology for Surface Collection for Known Sites/PADs Impacted by Remediation Works

The following requirements must be read with reference to Section 5 of the ACHMP.

Task Number	Task Description
1	The surface collection will be undertaken by at least two representatives of the Registered Aboriginal Parties and a suitably qualified archaeologist.
2	All identified surface artefacts will be marked by high visibility flags.
3	A photographic record will be undertaken of the Aboriginal heritage site, with artefact locations identified by high visibility flags.
4	A photographic record will be undertaken of the impacts to the site from subsidence (if any), with any artefacts exposed identified by the high visibility flags.
5	Recording of surface artefact locations using a handheld GPS.
6	Preparation of a sketch plan of the site. Detailed site plans are not thought warranted for the majority of the sites due to their location within disturbed and/or eroded contexts, however, a GPS recording will be made of the location and distribution of the artefacts so that this information will be available for spatial analysis.
7	Further details of the local environment will be recorded as part of the collection process to provide a more detailed context for the assemblages.
8	The artefacts will be collected.
9	All artefacts will be placed in individual bags and labelled with the date of collection, the mine name, the site name, artefact number and MGA grid coordinate and incorporated into a larger clip seal bag marked with the mine name, site name, date of collection and participants in the collection.
10	Detailed attribute recording and analysis will be undertaken of all collected artefacts (refer to Appendix 2 of the ACHMP for details of the methodology for the artefact analysis and the research design).

Reference Sheet 6: Protocol for Previously Unidentified Aboriginal Objects/Features Located During Ground Disturbing Works

The following protocols must be read with reference to Section 5 of the ACHMP.

Task Number	Task Description
1	The discoverer of the object(s) will notify machinery operators in the immediate vicinity of the Aboriginal object so that work can be suspended.
2	The Austar Environment and Community Manager (ECM) will be informed of the presence of the Aboriginal object(s).
3	The ECM will immediately notify the following people of the presence of Aboriginal object(s) (if not already informed):
	(a) The Registered Aboriginal Parties; and
	(b) a suitably qualified archaeologist.
4	The approximate areal extent of the Aboriginal object(s) and nature of the Aboriginal object(s) will be determined by at least two Registered Aboriginal Party representatives and a suitably qualified archaeologist. That is:
	(a) Is it an isolated find or artefact scatter with no potential for subsurface artefactual deposit? or
	(b) Is it an isolated find or artefact scatter with potential for subsurface artefactual deposit?; and
	(c) Are there additional types of find, such as concentrations of archaeological/cultural shell, bone or charcoal?
5	The site will be recorded including GPS coordinates for any observed objects and for the assessed extent of the site area.
6	Notify the OEH of the discovery of the object(s) and submit an AHIMS site card.
7	The ECM, the Registered Aboriginal Parties, OEH and the suitably qualified archaeologist will discuss the salvage requirements for the objects. Note that for salvage of any sites within the DA 29/95 consent area, it will be necessary to obtain an AHIP prior to the commencement of work that may result in harm to Aboriginal objects(s), including salvage. Salvage options include:
	(a) Where possible, avoidance of any further impact to the site area and culturally appropriate remediation as required; or
	(b) Surface collection and monitoring of the remainder of the ground disturbing works in that area; or
	(c) Surface collection and subsurface testing to more accurately determine the extent and nature of the Aboriginal objects (only where a potential for further subsurface objects is identified): and
	(d) Subsurface salvage if testing locates 20 or more objects in any spit of the 1 metre square and/or if a culturally significant object or feature is located (culturally significant objects are defined as axes, hatchets, chisels, grindstones, backed artefacts, hammerstones, scrapers - culturally significant features are defined as bones, shell, ochre, charcoal associated with ground ovens, camp fire (hearth), heat treatment pit);
	(e) Subsurface salvage will continue until less than 20 objects are located in all spits of the 1 metre square or culturally significant objects or features are no longer present; and

Task Number	Task Description
	(f) Following cessation of subsurface testing/salvage, the monitoring of the remainder of the ground disturbing works in that area; (g) The initially exposed Aboriginal object(s) will be recorded and collected using the surface collection methodology set out in the ACHMP and analysed using the methodology provided in the ACHMP.
8	Subsurface testing will be carried out using the following methodology: (a) A series of 1 metre squares will be excavated manually (spade and trowel) across the area proposed for impact that is assessed as having the potential for subsurface objects; (b) The 1 metre squares will be placed at 5 m intervals; (c) The 1 metre squares will be excavated as 50 centimetre quadrats and in 5 centimetre spits (or following the stratigraphy where present and where units are less than 5 centimetre); (d) The excavation will cease when the clay, bedrock or decomposed bedrock is reached; (e) XYZ coordinates will be recorded for any objects located in-situ during the testing; (f) All deposits removed will be sieved using nested 5 millimetre and 2 millimetre sieves (where feasible – it is noted that the soil in this area can be quite coarse and may not go through the 2 millimetre sieve); (g) One soil sample will be collected from each spit and samples subject to Munsell and pH testing and geomorphic analysis (as required); (h) Squares that are found to contain objects/features will have their stratigraphic profiles drawn (one wall/square unless there are significant features noted in more than one wall); (i) All objects recovered will be individually bagged and labelled and all objects will be subject to artefact analysis using the methodology provided in the ACHMP.
9	Manual subsurface salvage will be carried out using the following methodology: (a) Any square found to contain 5 or more objects within a spit or culturally significant objects/features will be expanded so that all adjacent 1m squares are excavated; (b) The methodology for the excavation will be as described in dot points 8.a. to 8.i. (above); and (c) Manual excavation will cease if excavated squares have less than 5 objects in all spits or no longer contain significant objects/features.
10	Where features (hearth, heat treatment pit, ground oven, knapping floor) are found during subsurface testing or salvage the following methodology will be implemented: (a) the surface of the feature will be cleaned back (using trowels and brushes as required) to allow the edges of the feature to be identified; (b) the top of the feature will be photographed and a plan drawn; (c) the feature will then be excavated in cross-section (half-sectioned) to investigate the dimensions and orientation of the feature; (d) the deposits from the feature will be excavated separately to the surrounding deposit to avoid contamination;

Task Number	Task Description
	(e) the feature will be photographed in cross-section and a stratigraphic profile of the cross-section will be recorded;
	(f) all excavated materials from the feature will be retained for analysis and samples of relevant materials will be sent for additional analysis, including radiocarbon dating and/or thermoluminescence where applicable; and
	(g) following the removal of the entire feature the excavation can resume using the methodology outlined in dot point 9.
11	All Aboriginal object(s) recovered will be managed according to the care and control procedures set out in the ACHMP.
12	The Registered Aboriginal Parties and the suitably qualified archaeologist will monitor topsoil removal from the works area once works have recommenced, to allow for further cultural salvage.
13	Following completion of salvage/works OEHL will be provided with an Aboriginal Site Impact Recording (ASIR) form.

Reference Sheet 7: Care and Control of Artefactual Material for Aboriginal Objects Kept or Returned to Country

The following methodology must be read with reference to Section 5 of the ACHMP.

Task Number	Task Description
1	A full catalogue, of stone artefacts, must be prepared.
2	The catalogue will be in printed form, but may also include an electronic database in the form of a table containing all records.
3	All stone artefacts will be either individually bagged or bagged in appropriate and identifiable units (e.g. excavation or collection units) that can be referenced back to the catalogue.
4	That stone artefacts will be stored in good quality, double-bagged plastic zip-lock bags.
5	The bags will be externally labelled using permanent marker, and an 'independent' label on robust material (e.g. tyvek) is included and written with permanent marker that must be placed inside each bag.
6	The collection will be placed in a suitable impervious and permanent container, which must be labelled as above, or engraved.
7	Where artefacts are reburied, a full record of the final location of the collection will be made, including:
	(a) grid coordinates;
	(b) a site plan or mud map referring to permanent features;
	(c) depth of burial, if buried; and
	(d) full photographic record of the disposition.
8	The record must be submitted to AHIMS with an ASIR card for the site (see OEHL 2010, <i>Code of Practice for Archaeological Investigations of Aboriginal Objects in NSW</i>).

