Intended for

Hydro Aluminium Kurri Kurri Pty Ltd

Document type

**Revised Plan** 

Date

August, 2023

# KURRI KURRI ALUMINIUM SMELTER DECOMMISSIONING, DEMOLITION AND REMEDIATION ABORIGINAL HERITAGE MANAGEMENT PLAN



#### ABORIGINAL HERITAGE MANAGEMENT PLAN

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Made by B Sinclair/ T Jackson/ C Lawrence

Checked by **S Taylor**Approved by **F Robinson** 

Description Ramboll was engaged by Hydro Aluminium Kurri Kurri Pty Ltd to

prepare a Remediation Works Environmental Management Plan (RWEMP) to describe how environmental management will be undertaken at the former Hydro Aluminium Kurri Kurri aluminium smelter at Hart Road Loxford, NSW and the surrounding land owned

by Hydro. This Aboriginal Heritage Management Plan forms a

component of the RWEMP.

#### **Document Revision history**

Final Rev 0 23/12/2020 Final AHMP document submitted to the Department of

Planning, Industry and Environment on 23 December

2020.

Final Rev 1 10/08/2023 AHMP revision in response to Modification 1 (MOD 1) and

Modification 2 (MOD 2) to SSD 6666.

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#### **APPENDICES**

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Due Diligence Flowchart (Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales, DECC 2010)

#### Appendix 2

Addendum Aboriginal Cultural Heritage Assessment Report

#### **ACRONYMS AND ABBREVIATIONS**

AHCAR Aboriginal Heritage Cultural Assessment Report (AECOM, 2015)

AHIMS Aboriginal Heritage Information Management System

AHMP Aboriginal Heritage Management Plan

DGA Data Gap Analysis Report (Ramboll, 2021)

EIS Environmental Impact Statement

EMP Environmental Management Plan

EP&A Act Environmental Planning and Assessment Act 1979

Hydro Hydro Aluminium Kurri Kurri Pty Ltd

OEH Office of Environment and Heritage

WHS Workplace Health and Safety

RAP Registered Aboriginal Party/ Parties

RWEMP Remediation Works Environmental Management Plan

#### **GLOSSARY**

Council Cessnock City Council

Hydro Aluminium Kurri Kurri Pty Ltd

Department Department of Planning, Industry and Environment

Hydro Land The land owned by Hydro Aluminium Kurri Kurri Pty Ltd which

includes the Smelter and surrounding land.

Remediation Remediation of contaminated land and soils at the Smelter and

on Hydro Land, including the construction of a Containment Cell as addressed in the State Significant Development application to the Department of Planning and Environment SSD 6666.

Stage 1 Demolition Demolition of Smelter buildings addressed in the development

application 8/2015/399/1.

Stage 2 Demolition Demolition of Smelter buildings, three concrete stacks, one

water tower, subsurface structures to 1.5m below ground surface and operation of a concrete crushing plant addressed in

the development application to Cessnock City Council

8/2018/46/1.

The Smelter The former Hydro Aluminium Kurri Kurri Pty Ltd aluminium

smelter at Hart Road, Loxford.

#### 1. INTRODUCTION

#### 1.1 Background

This Aboriginal Heritage Management Plan (AHMP) has been prepared by Ramboll Australia Pty Ltd on behalf of Hydro Aluminium Kurri Kurri Pty Ltd (Hydro) to support the Remediation Works Environmental Management Plan (RWEMP) which addresses the decommissioning, demolition and remediation activities at the former Hydro Aluminium Kurri Kurri Smelter (the Smelter) at Hart Road Loxford and the management of the surrounding land owned by Hydro (the Hydro Land).

#### 1.2 Objectives

The objectives of this AHMP are to:

- Outline relevant legislation and guidelines.
- Identify known Aboriginal heritage items within the buffer lands.
- Identify measures to minimise impacts to Aboriginal heritage items within the buffer lands.
- Establish the roles and responsibilities of all parties involved in Aboriginal heritage management.
- Establish supervision, monitoring, auditing and reporting framework for the AHMP.

#### 1.3 Purpose and Scope

The purpose of the AHMP is to specify procedures for management of Aboriginal heritage issues and impacts during activities at the Smelter and on the Hydro Land.

The AHMP has been developed with reference to the following legislation and guidelines:

- Environmental Planning and Assessment Act 1979 (EP&A Act)
- National Parks and Wildlife Act 1974
- Heritage Act 1977
- Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales (DECCW, 2010)

#### 1.4 Regulatory Requirements

A list of the development consent conditions related to management of Aboriginal archaeology and where they are addressed in this document are outlined in **Table 1-1**.

**Table 1-1: Project Approval Conditions** 

No.	Condition	Location in		
SSD 6666	SSD 6666			
	Unexpected Finds Protocol			
B39	If any previously unidentified item or object of Aboriginal heritage significance is identified on site:	Section 4		
B39(a)	all work in the immediate vicinity of the suspected Aboriginal item or object must cease immediately;	Section 4		
B39(b)	a 10 m wide buffer area around the suspected item or object must be cordoned off; and	Section 4		
B39(c)	Biodiversity and Conservation Division, Environment, Energy and Science Group of the Department must be contacted immediately.	Section 4		
B40	Work in the immediate vicinity of the Aboriginal item or object may only recommence in accordance with the provisions of Part 6 of the <i>National Parks and Wildlife Act 1974</i> (NSW).	Section 4		
DA 8/2015/399/1				
	No specific conditions pertaining to Aboriginal Archaeology.	N/A		
DA 8/2018/46/1				
Advisory	As required by the National Parks and Wildlife Act 1974 and the Heritage Act 1977, in the	Section 4		

No.	Condition	Location in
Note 4	event that Aboriginal cultural heritage or historical cultural fabric or deposits are encountered/discovered where they are not expected, works must cease immediately and Council and the Heritage Division of the Office of Environment and Heritage (OEH) must be notified of the discovery.  In the event that archaeological resources are encountered, further archaeological work may be required before works can re-commence, including the statutory requirement under the Heritage Act 1977 to obtain the necessary approvals/permits from the Heritage Division of the OEH.	

#### 2. EXISTING ENVIRONMENT AND POTENTIAL IMPACTS

#### 2.1 Existing Environment

An Aboriginal Cultural Heritage Assessment Report (AECOM, 2015) (ACHAR) was undertaken to identify Aboriginal archaeological sites, areas of potential archaeological significance and any areas of cultural significance within the Smelter and the Hydro Land.

The assessment was undertaken in accordance with the NSW Office of Environment and Heritage Draft Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation (DEC, 2005) and with reference to the NSW Office of Environment and Heritage's Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (DECCW 2010b) and Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW (OEH 2011). Aboriginal community consultation for the assessment was conducted in accordance with OEH's Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW 2010). A total of 32 Registered Aboriginal Parties were involved in the assessment.

**Figure 2-1** shows the locations of recorded Aboriginal relics and areas of potential archaeological deposits within the Smelter and surrounds.

#### 2.2 Potential Impacts

The majority of the Project Site has been significantly disturbed through development of the Smelter. However, there are areas of minimally to moderately disturbed terrain in the northern and western portions of the Project Site. One new Aboriginal archaeological site (an isolated stone artefact, Hydro-IA35-15) was identified during survey.

The ACHAR initially identified an area of high archaeological sensitivity within the northern section of the Containment Cell material stockpile area, which previously served as the location for the Clay Borrow Pit (**Figure 2-1**). The area was registered on the Aboriginal Heritage Information System (AHIMS) as "Hydro PAD 1" with a Site ID of 17-6-3872.

Further investigation of contamination within the Site, including the area east of the Containment Cell found that the northern area of the area east of the Clay Borrow Pit had been significant disturbed by earthworks (excavation and filling) in the early 1980's, and that earthworks are required to remove the fill material, including areas of waste and contaminated materials. As such, it was found that the area possessed negligible potential for subsurface Aboriginal archaeological deposits.

An ACHAR Addendum was prepared by AECOM (AECOM, 2021) based on this additional information and encompasses follow up consultation with registered Aboriginal stakeholders. The ACHAR Addendum is presented in **Appendix 2** with key findings summarised in the following **Section 2.2.1**. A modification ('MOD 2') to SSD 6666 was sought to reflect the updated information and was approved by the Department on 4 March 2022. The consolidated consent SSD 6666 removed the requirement for Condition B38 and as such removed any requirements around the incorrectly identified area of archaeological sensitivity.

Activities within the Hydro Land (such as contamination remediation) also have the potential to impact on previously unidentified Aboriginal heritage relics where the activity requires works in relatively undisturbed areas.

#### 2.2.1 Additional Heritage Studies

Hydro PAD1 occupies an area of approximately 0.24 hectares in the north-western portion of the 2015 ACHAR study area. Since approval was gained by the Department, more detailed information has become available relating to the soil profile in this location and the historical activities that occurred as part of the operation of the Smelter which has revealed a low potential for Aboriginal artefacts to occur in this location.

The additional information that was reviewed to make this conclusion was:

 Subsurface soil data for land within and surrounding Hydro PAD1, forming part of a Data Gap Assessment (DGA) report prepared by Ramboll (Ramboll, 2021) for several Areas of Environmental Concern (AECs) at the Site • An updated analysis of 13 historical aerial photographs of Hydro PAD1. In particular, a 1983 aerial photograph of the then partially completed pot line of the Smelter, showing part of Hydro PAD1. Significant ground disturbance (excavation and filling) is clearly evident on the 1983 and 1984 historical aerials for Hydro PAD1 and its environs (refer to Figure 7 and 8 in **Appendix 2**).

From the DGA, it was found that two test pits (TP14 and TP15) excavated within the PAD area and a third (TP13) that was excavated immediately adjacent to the PAD contained fill deposits from the surface, extending to depths of up to 2.5m below ground level. This information correlates with the aerial analysis relating to the historical use of the site, especially land within and around Hydro PAD1. Around 1983, land within and to the south of Hydro PAD1 was extensively disturbed and/or filled. As noted, this disturbance appears associated with the construction of the Smelter's third potline.

As land within Hydro PAD1 has historically been severely disturbed, natural soil profiles within bounds of Hydro PAD1 are likely to have been heavily modified. With this evidence, AECOM concluded that historical site activities remove the likelihood of potential archaeological deposits (PAD). Eleven registered Aboriginal stakeholders provided a response to the draft Addendum ACHAR (as noted in **Appendix 2**), and all agreed with the conclusion of the assessment.

No heritage items of local or state significance have been identified within the Site boundary.

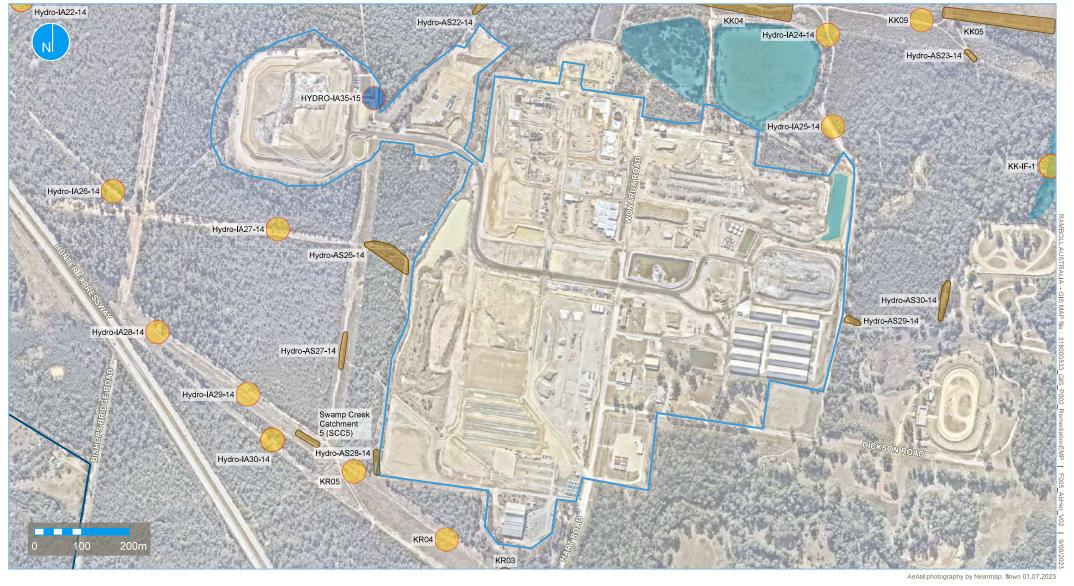




Figure 2-1 | Aboriginal Archaeological Sites - Smelter Site and Surrounds

Position

#### 3. IMPLEMENTATION

#### 3.1 Roles and Responsibilities

Key personnel responsible for implementation of this AHMP are in **Table 3-1** and consistent with the overall RWEMP.

Table 3-1: Hydro Personnel and Environmental Management Responsibilities

Responsibilities

· osition	Responsionates
OVERALL SITE MA	ANAGEMENT
Managing Director	Make certain that the Hydro Team and contractors are implementing this plan and associated plans and procedures; and have attained and are complying with applicable development approvals and permits.
	Provide adequate resources and funding for the implementation of this plan.
	Review and approve RWEMP (including this AHMP).
Principal Environmental	Provide advice in relation to environmental management and performance.
Consultant	Review and modify the RWEMP (including this AHMP) as directed by the Managing Director/Project Manager.
Principal Communications Consultant	Manage the mechanisms available for the community to receive information and to make enquiries or complaints about activities
SMELTER DECOM	ISSIONING, DEMOLITION AND REMEDIATION ACTIVITIES
Project Manager	Make certain that any proposed works or changes to existing activities, that may have an impact on the environment or the community (including areas with known or potential Aboriginal heritage significance), have the necessary legislative approval prior to the commencement of works.
	Make certain that the environmental aspects and issues, associated with proposed works or changes to existing activities, are adequately addressed in the EMP and sub plans (including this AHMP).
	Review and approve the EMP and sub-plans on an annual basis or when changes to activities at the Smelter occur.
	Facilitate implementation of the RWEMP and sub-plans (including this AHMP).
Construction Manager	Verify that the work of contractors and Hydro personnel on the Project are undertaken in accordance with this RWEMP (including this AHMP).
	Provide appropriate training to contractors and Hydro personnel on the Project regarding environment and community requirements and responsibilities.
	Review and approve the contractors' environmental management documentation prior to commencement of activities and inform contractors of changes to the RWEMP.
Contract Administrator	Provide relevant environmental legislative, regulatory and management requirements in tender documentation.
	Verify that the work of contractors is undertaken in accordance with the EMP (including this AHMP) and other relevant environmental procedures and standards.
Workplace Health and Safety (WHS)	Provide Hydro personnel with the necessary tools and training to enable effective implementation of the RWEMP (including this AHMP).
Manager	Implement and maintain an induction package to be provided to all personnel working at the

Smelter and Hydro Land, which will include information relevant to the environmental and

community management.

#### Position Responsibilities CARE, MAINTENANCE AND HYDRO LAND MANAGEMENT ACTIVITIES Demolition Comply with the requirements of the AHMP as it applies to Smelter demolition activities. Contractor Implement the measures and actions as described in the AHMP through a Demolition EMP and supporting sub-plans and specific procedures that comply with this AHMP. Develop and implement procedures for self-checking environmental management compliance with the Demolition Contractor's procedures and this AHMP. Report potential or actual environmental incidents associated with demolition activities at the Smelter, and assist as required in the investigation, implementation of corrective actions and recording of the incident. Remediation Comply with the requirements of the AHMP as it applies to Smelter and relevant Hydro Land Contractor remediation activities. Specifically, the appropriate management of the Hydro-IA35-15 and Hydro PAD 1 as identified in **Section 2.1** of this AHMP. Implement the environmental measures and actions as described in the AHMP through a Remediation EMP and supporting sub-plans and specific procedures that comply with this AHMP. Develop and implement procedures for self-checking management compliance with the Remediation Contractor's procedures and this AHMP. Report potential or actual environmental incidents associated with remediation activities at the Smelter and relevant Hydro Land, and assist as required in the investigation, implementation of corrective actions and recording of the incident. Environmental Verify that the work of contractors and Hydro personnel on Hydro Land are undertaken in Officer/ Hydro accordance with this EMP (including this AHMP). Land Manager Undertake a weekly inspection of activities on the Hydro Land that will occur for two weeks or more. **ALL AREAS AND ACTIVITIES** Contractors Comply with the requirements of the EMP (including this AHMP) as it applies to site environmental management and control. Implement the environmental measures and actions as described in the EMP and the relevant subplans (including this AHMP) through procedures and management plans that comply with this EMP and the relevant sub-plans. Develop and implement procedures for self-checking environmental management compliance with Contractor's procedures and the EMP. Report potential or actual environmental incidents associated with activities at the Smelter or on Hydro Land, and assist as required in the investigation, implementation of corrective actions and recording of the incident. All Personnel Implementation of the relevant environmental measures described in the RWEMP (including this AHMP) applicable to their activities. Stop work in the event of an actual or potential environmental incident After ceasing the activity that is the known or potential source, report potential or actual environmental incidents associated with activities at the Smelter or on Hydro Land, and assist as

#### 3.2 Management Measures

Hydro will implement a number of controls to manage Aboriginal heritage impacts that may be generated from activities at the Smelter and the Hydro Land. The Aboriginal heritage management measures are outlined in **Table 3-2**.

required in the investigation, implementation of corrective actions and recording of the incident.

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**Table 3-2: Aboriginal Heritage Management Measures** 

Management Measures	Action	Timing / Frequency	Responsibility	Further Detail
The known artefact is to be collected prior to undertaking remediation activities that would have a direct impact	Surface collection and relocation of the identified isolated artefact Hydro-IA35-15.	Prior to remediation	Project Manager/ Principal Environmental Consultant Qualified Archaeologist and/or RAP field representative	Section 2.2 (potential impacts)
Prior to undertaking activities within the Hydro Land, the potential impacts on known Aboriginal heritage relics are to be considered.	<b>Figure 2-1</b> will be reviewed to identify if any mapped Aboriginal heritage sites are within or adjoining the proposed activity location.	Prior to activities	Environment Officer	Figure 2-1
	The proposed activity methodology will avoid disturbance of Aboriginal heritage items. This includes review of the mapping and ground truthing recorded Aboriginal heritage items.	Prior to activities	Environment Officer Remediation Contractor	<b>Section 2.2</b> (potential impacts)
	In the event that disturbance of an Aboriginal heritage item is required, the approval requirements for disturbance are to be identified and approval obtained.	Prior to activities	Environment Officer Remediation Contractor Principal Environmental Consultant	
Prior to undertaking activities within the Hydro Land, the potential to encounter previously unidentified Aboriginal heritage relics are to be considered.	An assessment is to be undertaken in accordance with <i>Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales</i> (DECCW, 2010).	Prior to activities	Environment Officer	Refer to <b>Appendix 1</b> and the known Aboriginal heritage sites and potential archaeological deposits shown in <b>Figure 2-1</b>
	In the event that the assessment identifies the potential for Aboriginal heritage relics to be disturbed, further investigations will be undertaken by a qualified archaeologist to determine if relics will or could be disturbed.	Prior to activities	Environment Officer Qualified Archaeologist	Refer to <b>Appendix 1</b> and the known Aboriginal heritage sites and potential archaeological deposits shown in <b>Figure 2-1</b>

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Management Measures	Action	Timing / Frequency	Responsibility	Further Detail
	In the event that disturbance of an Aboriginal heritage item is	Prior to activities	Environment Officer	
	required, the approval requirements for disturbance are to be		Remediation	
	identified and approval obtained.		Contractors	
			Demolition Contractors	
			Principal Environmental	
			Consultant	
Previously unidentified Aboriginal heritage items	All personnel required to undertake earthworks within the Project	Prior to and during	Project Manager	Section 3.3.2 of the
encountered during activities are not to be damaged or	Site outside of the Smelter will be informed during the site	activities	Environmental Officer	RWEMP (inductions and
disturbed.	induction of Aboriginal cultural heritage issues.		Remediation Contractor	training)
	In the event that a potential Aboriginal heritage item is	As required	Project Manager	Section 4
	unearthed, the unexpected finds procedure in <b>Section 4</b> of this		Environmental Officer	
	AHMP will be implemented.		Remediation Contractor	
Management of any potential human skeletal remains	Implement the standard procedure detailed in $\textbf{Section 4}$ of this	As required	Project Manager	Section 4
identified during the Works.	AHMP.		Environmental Officer	
			Remediation	
			Contractors	
			Demolition Contractors	
Record any incidents by Hydro or its contractors that	Record Aboriginal heritage related incidents in the incident	As required	Environment Officer	Section 3.5.4 of the
cause impacts to Aboriginal heritage items and the	register and implement corrective actions.		Remediation	RWEMP (incidents)
action taken to resolve the situation.			Contractors	Section 5.4 of the
			Demolition Contractors	RWEMP (corrective
				action)
	Report any disturbance of Aboriginal sites to the Office of	If required	Environment Officer	
	Environment and Heritage			
	Review corrective actions	Monthly	Environment Officer	Section 5.4 of the
				RWEMP (corrective
				action)

#### 4. FINDS PROCEDURE

#### 4.1 Skeletal Remains Finds

A standard procedure will be implemented for the management of any potential human skeletal remains identified throughout the demolition and remediation activities. In the event that potential human skeletal remains are identified the following procedure will be followed:

- 1) All work in the vicinity of the remains will cease immediately.
- 2) The location will be cordoned off and the NSW Police notified.
- 3) A physical or forensic anthropologist should be commissioned to inspect the remains *in situ* and make a determination of ancestry (Aboriginal or non-Aboriginal) and antiquity (precontact, historic or modern).

Following completion of task three, the applicable action/s listed below will be implemented:

- If the remains are identified as non-human, work can recommence immediately.
- If the remains are identified as modern and human, the area will become a crime scene under the jurisdiction of the NSW Police.
- If the remains are identified as pre-contact or historic Aboriginal, the site will be secured and OEH and all RAPs notified in writing. Where impacts to exposed Aboriginal skeletal remains cannot be avoided, remains will be retrieved via controlled archaeological excavation and reburied outside of the Disturbance Boundary in a manner and location determined by RAPs.

If the remains are identified as historic non-Aboriginal, the site will be secured, and the OEH contacted.

#### 4.2 Unexpected Finds Procedure

An unexpected finds procedure will be implemented in the event that a potential Aboriginal site was identified during demolition and remediation activities. This procedure will include:

- 1) All works would cease immediately in the area to prevent any further impacts to the site.
- 2) Notify the Hydro Environment Officer.
- 3) Engage a suitably qualified archaeologist and RAP representative to determine the nature, extent and significance of the Aboriginal site and provide appropriate management advice. Management action(s) would vary according to the type of evidence identified, its significance (both scientific and cultural) and the nature of potential impacts.
- 4) Prepare and submit an AHIMS site card for the Aboriginal site.

#### 5. MONITORING AND REVIEW

#### 5.1 Monitoring

Hydro will undertake regular monitoring to ensure the site activities are not causing a detrimental environmental or community impact and to maintain compliance with relevant approvals and licences.

All internal and external environmental reporting requirements will be undertaken in accordance with the RWEMP.

Reporting will also be undertaken in accordance with relevant legislation, guideline and notification requirements, as outlined in **Section 1.3**.

#### 5.2 Non-conformances

The need for preventative or corrective action arises from the identification of non-conformance with environmental legal requirements, Hydro environmental requirements or the potential for non-conformances to occur.

Non-conformances will be resolved, reported and recorded in accordance with Section 3.5.5 of the RWEMP.

#### 5.3 Complaints

Community Complaints are considered environmental incidents and are investigated and documented accordingly. This will include any complaints relating to Aboriginal heritage at the Smelter.

Investigations will be conducted by relevant personnel, including provision of feedback to the complainant. Corrective actions will be documented and regularly reviewed until completion and signed off.

Handling of complaints will be undertaken in accordance with Section 3.5.6 of the RWEMP.

#### 5.4 Review and Improvement

Continual improvement of the AHMP will be achieved by the continual evaluation of environmental management performance against environmental policies, objectives and targets for the purpose of identifying opportunities for improvement.

The Managing Director is responsible for ensuring that a regular review of the RWEMP and specialist management plans (including this AHMP) is undertaken.

#### 6. REFERENCES

AECOM. 2015. Former Hydro Aluminium Smelter: Aboriginal Cultural Heritage Assessment.

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Ramboll Environ. 2016. Environmental Impact Statement: Former Hydro Aluminium Kurri Kurri Smelter Demolition and Remediation.

SMEC. 2011. Hydro Aluminium Kurri Kurri Property Management Plan Annual Report 2010.

#### 7. LIMITATIONS

Ramboll Australia Pty Ltd prepared this report in accordance with the scope of work as outlined in our proposal to Hydro Aluminium Pty Ltd dated 20 July 2018 and in accordance with our understanding and interpretation of current regulatory standards.

Site conditions may change over time. This report is based on conditions encountered at the site at the time of the report and Ramboll Australia Pty Ltd disclaims responsibility for any changes that may have occurred after this time.

The conclusions presented in this report represent Ramboll Australia Pty Ltd's professional judgment based on information made available during the course of this assignment and are true and correct to the best of Ramboll Australia Pty Ltd's knowledge as at the date of the assessment.

Ramboll Australia Pty Ltd did not independently verify all of the written or oral information provided to Ramboll Australia Pty Ltd during the course of this investigation. While Ramboll Australia Pty Ltd has no reason to doubt the accuracy of the information provided to it, the report is complete and accurate only to the extent that the information provided to Ramboll Australia Pty Ltd was itself complete and accurate.

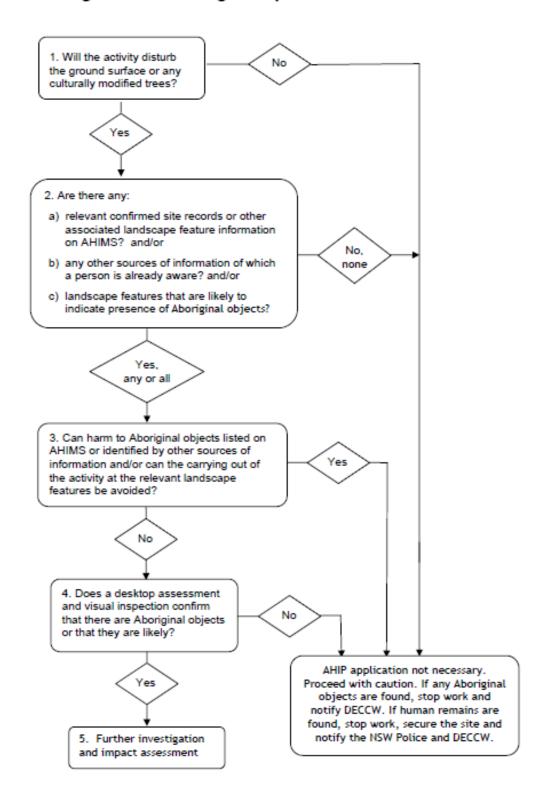
This report does not purport to give legal advice. This advice can only be given by qualified legal advisors.

#### 7.1 User Reliance

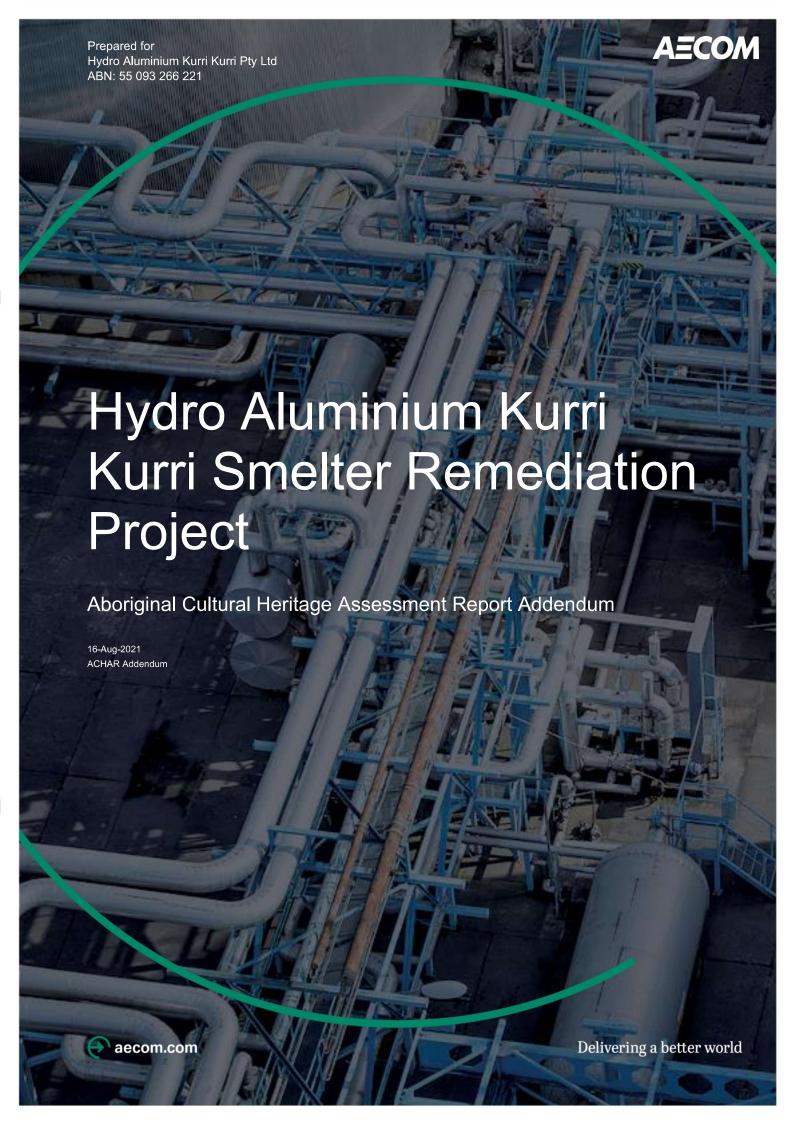
This report has been prepared exclusively for Hydro Aluminium Pty Ltd. It may not be relied upon by any other person or entity without Ramboll Australia Pty Ltd's express written permission.

# APPENDIX 1 DUE DILIGENCE FLOWCHART (DUE DILIGENCE CODE OF PRACTICE FOR THE PROTECTION OF ABORIGINAL OBJECTS IN NEW SOUTH WALES, DECC 2010)

# 8 The generic due diligence process



APPENDIX 2 ADDENDUM ABORIGINA	L CULTURAL HER	ITAGE ASSESSMI	ENT REPORT



# Hydro Aluminium Kurri Kurri Smelter Remediation Project

Aboriginal Cultural Heritage Assessment Report Addendum

Client: Hydro Aluminium Kurri Kurri Pty Ltd

ABN: 55 093 266 221

#### Prepared by

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Aboriginal and Torres Strait Islander peoples are advised that this report contains references to people who have passed away.

# **Quality Information**

Document Hydro Aluminium Kurri Kurri Smelter Remediation Project

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version\hydro\_achar\_addendum\_2021\_08\_16\_fnl.docx

Date 16-Aug-2021

Prepared by A.McLaren

Reviewed by G.Oakes

#### **Revision History**

Rev	Revision Date	Details	Authorised		
T(CV	TOVISION Date	Betails	Name/Position	Signature	
A	02-Jul-2021	Draft #1	G.Oakes/Principal Archaeologist & Heritage Specialist	4. Cast	
В	08-Jul-2021	Draft #2	G.Oakes/Principal Archaeologist & Heritage Specialist	4. Casi	
С	16-Aug-2021	Final	G.Oakes/Principal Archaeologist & Heritage Specialist	4. Casi	

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## **Executive Summary**

AECOM Australia Pty Ltd (AECOM) was commissioned by Hydro Aluminium Kurri Kurri Pty Ltd (Hydro) to prepare an Addendum Aboriginal Cultural Heritage Assessment Report (Addendum ACHAR) for the approved Hydro Kurri Kurri Aluminium Smelter Remediation Project (SSD-6666) (the Project). This Addendum ACHAR has been prepared to address a recently identified issue pertaining to AHIMS registered Aboriginal site Hydro PAD1 (37-6-3872), an area of Potential Archaeological Deposit (PAD) identified as part of AECOM's 2015 Aboriginal cultural heritage assessment for the Project. At the time, Hydro PAD1 was identified as an area of high Aboriginal archaeological sensitivity on the basis of its landform context, as well as then examined historical aerial photographs and field observations, which suggested that this area retained a moderate degree of ground integrity. In order to avoid any impacts to potential subsurface deposits within its bounds, AECOM's (2015) ACHAR recommended that Hydro PAD1 should, in the event of its use for stockpiling, be protected through geo-matting. This recommendation was subsequently formalised in the Conditions of Approval (CoA) for SSD6666 as Condition B38 and included as management measure in the Project's Aboriginal Heritage Management Plan (AHMP).

Presented in this report are the results of a reassessment of Hydro PAD1(37-6-3872), made on the basis of a desktop review of 13 historical photographs for the site, spanning the years 1954 to 2019, as well as recently obtained subsurface soil profile data for land within and surrounding the PAD, generated as part of a broader contamination investigation across the Smelter site. Registered Aboriginal Parties (RAPs) involved in AECOM's 2015 Aboriginal cultural heritage assessment for the Project (n = 34) have also been consulted regarding the results of the current assessment.

Contra AECOM's (2015) earlier assessment of Hydro PAD1, this Addendum ACHAR finds that:

- Land within Hydro PAD1 was severely disturbed in or around 1983 as a result of heavy earthworks linked to the construction of the Smelter's third potline;
- Natural soil profiles within and to the south of Hydro PAD1 have been radically altered as a result
  of the above. For Hydro PAD1, a complete loss of potential artefact-bearing topsoils is inferred;
  and
- Land within Hydro PAD1 retains negligible potential for subsurface Aboriginal archaeological deposits and, as such, does not comprise an area of PAD.

In view of these findings, the following recommendations are made regarding Hydro PAD1:

- Hydro should lodge a request with the AHIMS Registrar to have the status of Hydro PAD1 in the AHIMS database changed from 'Valid' to 'Not a Site', thereby removing it as a development constraint. A copy of this Addendum ACHAR should be submitted in support of Hydro's request.
- 2. The AHMP for the Project should be updated to reflect the results of this Addendum ACHAR; and
- 3. Once finalised, all RAPs for the Project should be provided with a copy of this Addendum ACHAR.

1

# 1.0 Introduction and Background

#### 1.1 Introduction

AECOM Australia Pty Ltd (AECOM) was commissioned by Hydro Aluminium Kurri Kurri Pty Ltd (Hydro) to prepare an Addendum Aboriginal Cultural Heritage Assessment Report (Addendum ACHAR) for the approved Hydro Kurri Kurri Aluminium Smelter Remediation Project (SSD-6666) (the Project). This Addendum ACHAR has been prepared to address a recently identified issue pertaining to AHIMS registered Aboriginal site Hydro PAD1 (37-6-3872), an area of Potential Archaeological Deposit (PAD) identified as part of AECOM's 2015 Aboriginal cultural heritage assessment for the Project (AECOM, 2015). At the time, Hydro PAD1 was identified as an area of high Aboriginal archaeological sensitivity on the basis of its landform context, as well as then examined historical aerial photographs and field observations, which suggested that this area retained a moderate degree of ground integrity. In order to avoid any impacts to potential subsurface deposits within its bounds, AECOM's (2015) ACHAR recommended that Hydro PAD1 should, in the event of its use for stockpiling, be protected through geomatting. This recommendation was subsequently formalised in the Conditions of Approval (CoA) for SSD6666 as Condition B38 and included as management measure in the Project's Aboriginal Heritage Management Plan (AHMP) (Hydro, 2020).

In April 2021, Ramboll Australia Pty Ltd (Ramboll), acting on behalf of Hydro, notified AECOM that additional information concerning Hydro PAD1's status as an area of PAD had become available. This information comprised an oblique, 1983 aerial photograph of the then partially completed smelter, encompassing Hydro PAD1 in part, as well as subsurface soil data for land within and surrounding the PAD, obtained a part of a broader contamination assessment across the Smelter site. To this end, Hydro commissioned AECOM to undertake a reassessment of Hydro PAD1 and to document this in an Addendum ACHAR for the Project. Accordingly, this Addendum ACHAR presents the results of AECOM's reassessment of Hydro PAD1 and provides appropriate management advice.

#### 1.2 Background to this Addendum ACHAR

In 2015, AECOM was commissioned by Hydro to prepare an Aboriginal Cultural Heritage Assessment Report (ACHAR) for the Project. AECOM's ACHAR formed part of an Environmental Impact Statement (EIS) prepared for the Project by Ramboll ENVIRON Australia Pty Ltd (Ramboll Environ). AECOM's assessment involved a combination of background research, Aboriginal community consultation and field survey. Aboriginal community consultation for AECOM's assessment was conducted in accordance with the then NSW Office of Environment and Heritage's (now Heritage NSW) Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW, 2010). A total of 34 Registered Aboriginal Parties (RAPs) were consulted for the assessment, with key consultation activities including RAP review of the draft assessment methodology and ACHAR, as well as the participation of RAP representatives in an archaeological survey of the EIS project area.

Archaeological survey of the EIS project area was undertaken on Friday 10 April 2015 by a combined field team of two AECOM archaeologists and two RAP field representatives. Survey resulted in the identification of one Aboriginal archaeological site within the EIS project area - an isolated stone artefact designated as Hydro-IA35-15 (37-6-3969) - as well as one area of high subsurface sensitivity, subsequently registered as Hydro PAD1 (37-6-3872). Hydro PAD1, comprising a cleared section of elevated low gradient terrain overlooking an unnamed 2<sup>nd</sup> order tributary of Black Waterholes Creek, was assessed in the field as retaining a moderate degree of ground integrity. This assessment was supported by an analysis of then examined historical aerial photographs.

For Hydro PAD1, an assessment of the potential impacts of the Project on this site identified it as being located in an area earmarked for stockpiling, with impacts potentially arising from sediment deposition and removal activities (AECOM, 2015: 97). To mitigate this risk, AECOM recommended that Hydro PAD1 should, in the event of its use for stockpiling, be protected through the use of geo-matting. This recommendation was subsequently formalised in the CoA for SSD6666, with Condition B38 stating that:

B38. To prevent impacts to subsurface archaeological deposits, stockpiles in the area of high archaeological sensitivity, as shown in Figure 23 of the Aboriginal Cultural Heritage Assessment and titled Archaeological Sensitivity Figure, must be placed on geo-matting.

To satisfy Condition B38, the requirement for the geo-matting of Hydro PAD1 was included as a management measure in the Project's AHMP (Hydro, 2020: Table 1-1), which formed part of the Remediation Works Environmental Management Plan (RWEMP) approved by the Department of Planning Industry and Environment (DPIE) on 25 January 2021. As indicated in Section 1.1, in April 2021, Ramboll notified AECOM that additional information concerning Hydro PAD1's status as an area of PAD had become available. This information comprised an oblique, 1983 aerial photograph of the then partially completed smelter, encompassing part of Hydro PAD1, as well as subsurface soil data for land within and surrounding the PAD. To this end, Hydro commissioned AECOM to undertake a reassessment of Hydro PAD1.

#### 1.3 Scope of this Addendum ACHAR

This Addendum ACHAR has been prepared to document the results of a reassessment of AHIMS registered Aboriginal site Hydro PAD1 (37-6-3872). Tasks undertaken as part of AECOM's reassessment of this site included:

- A desktop review of AECOM's (2015) ACHAR for the Project, as well as the Project's AHMP and CoA:
- A desktop review of 13 historical aerial photographs for Hydro PAD1 and its environs, spanning the years 1954 to 2019;
- A desktop review of the results of contamination test pitting within and surrounding Hydro PAD1, documented in Ramboll (2021); and
- Consultation with the 34 RAPs involved in AECOM's 2015 EIS assessment.

#### 1.4 Description of Project

Current and scheduled care and maintenance, decommissioning, demolition and remediation activities at the former Hydro Kurri Kurri Aluminium Smelter ('the Smelter') include:

- Management and maintenance of the existing infrastructure (such as the drainage and stormwater management infrastructure;
- Waste management (including waste oils, wastewater, hazardous materials and non-reusable materials, machinery and equipment);
- The removal of Smelter process materials from the Smelter to an approved facility;
- Use of some remaining buildings as temporary storage areas for waste materials;
- Transport of stored spent pot lining for off-site processing;
- Stockpiling of contaminated soils (from the Hydro Land);
- Completion of Stage 2 demolition activities;
- Containment Cell construction, material emplacement and capping of the cell;
- Capped Waste Stockpile removal and management;
- Removal of known contaminated soils within the Smelter to the Containment Cell;
- Leachate treatment and management;
- Rehabilitation and stabilisation of disturbed areas; and
- Hydro land management (such as weed control, waste management, management of leased residences).

#### 1.5 Project Approvals

In 2015, a Statement of Environmental Effects (SEE) was prepared to support a Development Application (DA) to Cessnock City Council (Council) for 'Stage 1 Demolition' of the Site (DA

8/2015/399/1). Council granted development consent for Stage 1 Demolition in March 2016. Stage 1 Demolition commenced in July 2017.

In 2016, an EIS was prepared to assess the remediation of contaminated soils and waste management, including a Containment Cell and 'Stage 2 Demolition' (subject of SSD 6666). Due to delays to the approval of SSD 6666, a separate application (DA 8/2018/46) for Stage 2 Demolition was submitted to Cessnock City Council in January 2018 and was approved on 9 May 2018.

Activities associated with Stage 2 Demolition were subsequently withdrawn from SSD 6666. However, the remediation of contaminated soils, the Containment Cell construction and acceptance of waste remained the subject of SSD 6666. SSD 6666 was approved on 23 December 2020, with an associated Remediation Works Environmental Management Plan (RWEMP) approved by DPIE on 25 January 2021.

#### 1.6 Hydro PAD1 (37-6-3872)

Hydro PAD1 occupies an area of approximately 0.24 hectares in the northwestern portion of the 2015 ACHAR study area (Figure 1 and Figure 2). Land within the site comprises part of Lot 319 on DP755231 and is Hydro-owned and managed. As defined by AECOM (2015), the PAD encompasses a section of cleared elevated terrain overlooking an unnamed 2<sup>nd</sup> order tributary of Black Waterholes Creek. In general terms, the PAD is bounded to the east by this tributary, to the west by an unsealed light vehicle track, to the south by an artificial bank and to the north by remnant native vegetation. Hydro PAD1 sits at an elevation of approximately 14 m AHD. Land within the site slopes eastward and is predominantly very gently inclined (1-3%).

Hydro PAD1 is registered on the AHIMS database under AHIMS ID 37-6-3872. The PAD's associated site card is attached as Appendix A.

#### 1.7 Relevant Statutory Controls

#### 1.7.1 National Parks and Wildlife Act 1974

The *National Parks and Wildlife Act 1974* (NPW Act), administered by Heritage NSW, is the primary legislation for the protection of Aboriginal cultural heritage in NSW. The NPW Act gives the Secretary of the Department of the Premier and Cabinet responsibility for the proper care, preservation and protection of 'Aboriginal objects' and 'Aboriginal places', defined under the Act as follows:

- An Aboriginal object is any deposit, object or material evidence (that is not a handicraft made for sale) relating to Aboriginal habitation of NSW, before or during the occupation of that area by persons of non-Aboriginal extraction (and includes Aboriginal remains).
- An Aboriginal place is a place declared so by the Minister administering the NPW Act because the
  place is or was of special significance to Aboriginal culture. It may or may not contain Aboriginal
  objects.

Part 6 of the NPW Act provides specific protection for Aboriginal objects and places by making it an offence to harm them and includes a 'strict liability offence' for such harm. A 'strict liability offence' does not require someone to know that it is an Aboriginal object or place they are causing harm to in order to be prosecuted. Defences against the 'strict liability offence' in the NPW Act include the carrying out of certain 'Low Impact Activities', prescribed in Clause 58 of the *National Parks and Wildlife Amendment Regulation 2019* (NPW Regulation), and the demonstration of due diligence.

An Aboriginal Heritage Impact Permit (AHIP) issued under Section 90 of the NPW Act is required if impacts to Aboriginal objects and/or places cannot be avoided. An AHIP is a defence to a prosecution for harming Aboriginal objects and places if the harm was authorised by the AHIP and the conditions of that AHIP were not contravened.

Applications for AHIPs must be supported by an ACHAR compiled in accordance with Section 3 of Heritage NSW's *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH, 2011) and an Aboriginal Archaeological Report (AAR) compiled in accordance with Section 2.3 of Heritage NSW's *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW, 2010b). A process of Aboriginal community consultation carried out in accordance with Heritage NSW's *Aboriginal Cultural Heritage Consultation Requirements for* 

*Proponents* (DECCW, 2010a) must also be demonstrated. AHIPs may be issued in relation to a specified Aboriginal object, Aboriginal place, land, activity or person or specified types or classes of Aboriginal objects, Aboriginal places, land, activities or persons.

Pursuant to Section 4.41 of the *Environmental Planning and Assessment Act 1979* (EP&A Act), AHIPs are not required for approved SSD projects. Impacts to Aboriginal heritage values associated with such projects are typically managed under AHMPs, which are statutorily binding once approved by DPIE.

Aboriginal heritage values within the Project's EIS study area are managed under a Project-specific AHMP (Hydro, 2020) (Appendix B). The AHMP comprised part of the RWEMP approved by DPIE on 25 January 2021. With respect to potential impacts to Hydro PAD1, the AHMP contains the following management measure:

Where possible, avoid the need to stockpile material in the area of high archaeological sensitivity [Hydro PAD1]. In the event that stockpiling in this area is required, geo-matting will be placed on the surface of the area prior to stockpiling.

Responsibility for the implementation of this measure is assigned to Hydro's Environment Officer and the Remediation Contractor (refer to Table 3-2 in Appendix B).

#### 1.8 Authorship

This report was prepared by AECOM Principal Aboriginal Heritage Specialist Dr Andrew McLaren, with technical review provided by Geordie Oakes (Principal Archaeologist and Heritage Specialist).

AECOM

Figure 1 Location of Hydro PAD1 (37-6-3872) within former Hydro Kurri Kurri Aluminium Smelter complex

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Figure 2 Hydro PAD1 (37-6-3872)

# 2.0 Historical Aerial Analysis

#### 2.1 Introduction

Alongside field observations and subsurface soil profile data, historical aerial photographs provide an avenue for assessing levels of past ground disturbance within the boundary of Hydro PAD1. As indicated in Section 1.1, Hydro PAD1 was identified by AECOM (2015) as an area of high Aboriginal archaeological sensitivity on the basis of its landform context, as well as then examined historical aerial photographs and field observations, which suggested that this area retained a moderate degree of ground integrity.

In this section, we present the results of an updated analysis of 13 historical aerial photographs of Hydro PAD 1 and its environs; specifically, aerials from 1954, 1961, 1971, 1975, 1983 1984, 1994, 1998, 2004, 2010, 2015, 2017 and 2019 (Figure 3 to Figure 15 respectively). With the exception of a single oblique example (1983), provided to AECOM by Ramboll, all are vertical aerials. For ease of reference, results are presented in tabular format (Table 1), with key observations provided in Section 2.3.

#### 2.2 Results

Table 1 presents the results of the historical aerial photograph analysis undertaken for Hydro PAD1.

Table 1 Historical aerial photograph analysis

Photograph details	Status of Hydro PAD1
1954 (black and white, vertical)	Land within PAD has been cleared of all native vegetation. No other ground disturbance phenomena are evident.
1961(black and white, vertical)	Land within PAD remains essentially unchanged from 1954 aerial. Some patchy regrowth is evident.
1971 (black and white, vertical)	Land within PAD remains essentially unchanged from 1961 aerial. Regrowth appears more established in places.
1975 (black and white, vertical)	Land within PAD remains essentially unchanged from 1975 aerial.
1983 (colour, oblique)	PAD partially encompassed by photo. Land within visible extent of PAD has been stripped and/or filled. Land to the south has likewise been stripped and/or filled.
1984 (black and white, vertical)	Disturbance visible on 1983 aerial extends across the entirety of PAD. Some patchy grass re-growth is visible. Stockpiles are evident to the south of PAD.
1994 (colour, vertical)	Land within PAD is now extensively grassed. A single tree is visible in the southwestern corner of the PAD.
1998 (colour, vertical)	Land within PAD remains essentially unchanged from 1994 aerial. Tree visible in 1994 aerial appears to have been removed.
2004 (colour, vertical)	Land within PAD remains essentially unchanged from 1998 aerial.
2010 (colour, vertical)	Land within PAD remains essentially unchanged from 2004 aerial. Patchy regrowth visible along northern boundary. Two small erosion scours also visible.
2015 (colour, vertical)	Land within PAD remains essentially unchanged from 2010 aerial.
2017 (colour, vertical)	Land within PAD remains essentially unchanged from 2015 aerial.
2019 (colour, vertical)	Land within PAD remains essentially unchanged from 2017 aerial.

### 2.3 Key Observations

Key observations to be drawn from the historical aerial analysis described in this section are as follows:

- Prior to *c*.1983, ground disturbance within Hydro PAD1 appears to have been limited to native vegetation removal;
- In or around 1983, land within and to the south of Hydro PAD1 was extensively stripped and/or filled. This disturbance, ostensibly associated with the construction of the Smelter's third potline, is clearly visible on the 1983 (Figure 7) and 1984 (Figure 8) aerials;
- Post-1984, no major, additional ground disturbance phenomena are evident within Hydro PAD1.
   Land within the site appears to have been left vacant and unused; and
- Aerials examined for this assessment suggest that, contra AECOM's 2015 assessment, land within Hydro PAD1 has been severely disturbed. Natural soil profiles within bounds of the PAD are likely to have been radically modified via heavy earthworks.

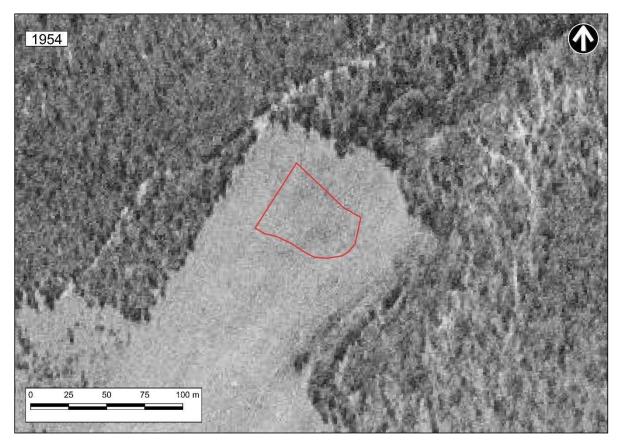


Figure 3 1954 aerial of Hydro PAD1 and environs

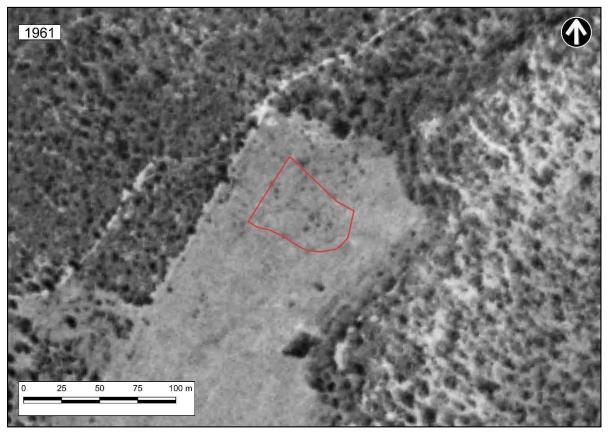


Figure 4 1961 aerial of Hydro PAD1 and environs

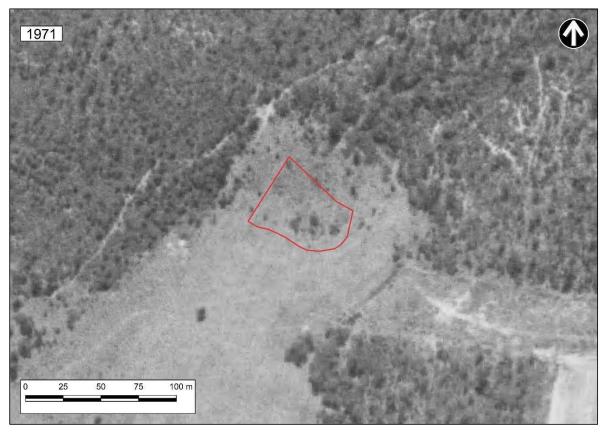


Figure 5 1971 aerial of Hydro PAD1 and environs

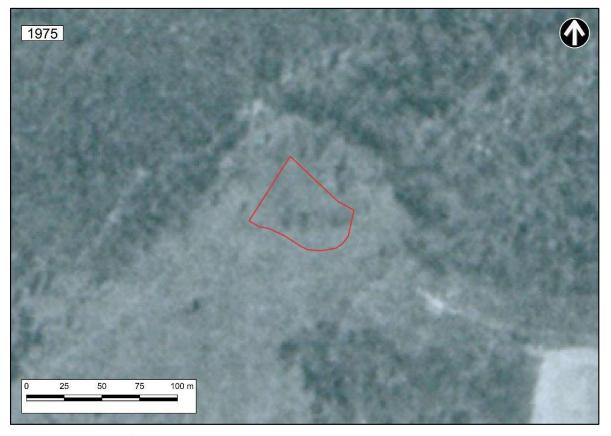
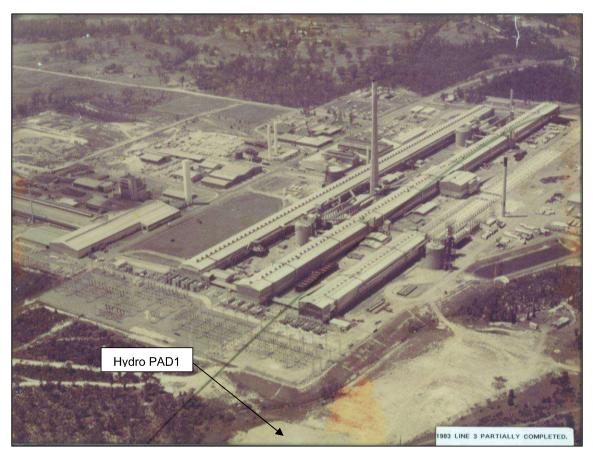
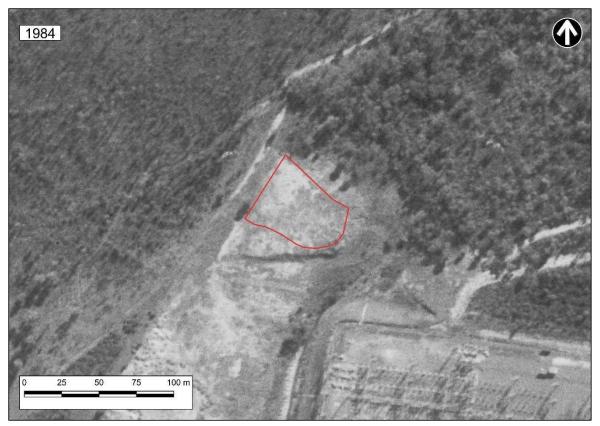


Figure 6 1975 aerial of Hydro PAD1 and environs



Oblique 1983 aerial of the Smelter site with location of Hydro PAD1 indicated.



1984 aerial of Hydro PAD1 and environs Figure 8



Figure 9 1994 aerial of Hydro PAD1 and environs



Figure 10 1998 aerial of Hydro PAD1 and environs



Figure 11 2004 aerial of Hydro PAD1 and environs

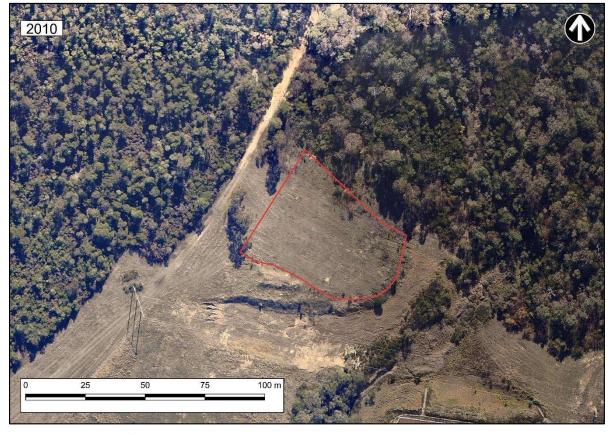


Figure 12 2010 aerial of Hydro PAD1 and environs



Figure 13 2015 aerial of Hydro PAD1 and environs

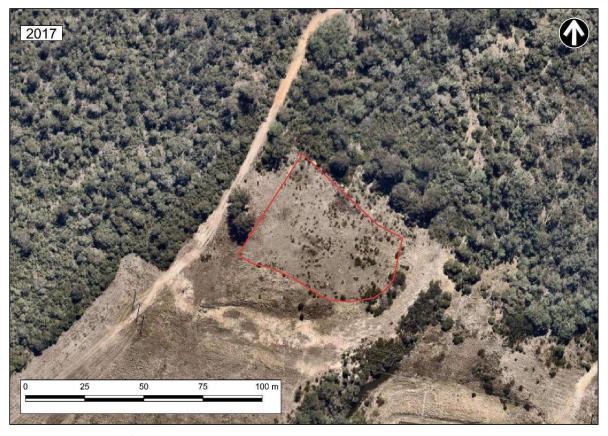


Figure 14 2017 aerial of Hydro PAD1 and environs

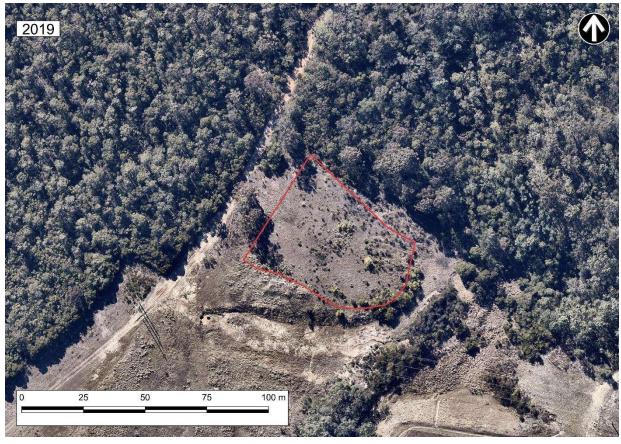


Figure 15 2019 aerial of Hydro PAD1 and environs

#### 3.0 Contamination Investigation (2020)

#### 3.1 Introduction

In 2021, Ramboll was engaged by Hydro to prepare a Data Gap Assessment (DGA) report for several Areas of Environmental Concern (AECs) at the Smelter site. Phase 2 Environmental Site Assessment (ESA) investigations at the Smelter, undertaken in 2012 and 2014, resulted in the identification and assessment of a total of 31 AECs within the Smelter site and its associated Buffer Zone. At the completion of ESA works, it was determined that data gaps remained at five of these areas (AEC 2, AEC 15, AEC 18, AEC 30 and AEC33), generally due to access constraints. The focus of the DGA report, therefore, was to close out data gaps associated with AEC 2, AEC 15, AEC 18, AEC 30 and AEC33. As shown on Figure 16, Hydro PAD1 falls wholly within AEC30, described by Ramboll (2021) as the "Area East of the Clay Borrow Pit". As part of Phase 2 ESA works at the Smelter site, AEC30 was identified as requiring further investigation on the basis of historical aerial photographs, which showed disturbance of surface soils across this area.

For AEC30, the data gap investigation was completed between 13 and 14 May 2020 and included:

- Mechanical excavation of 16 test pits (TP1 to TP16) on a systematic grid to a maximum depth of approximately 5 m below ground level (b.g.l);
- Collection of soil samples from a range of depths from fill and underlying natural material, with at least two sample collected per test pit. Soil samples were collected from the excavator bucket or spoil piles using dedicated disposable gloves;
- Test pit locations were recorded on a marked-up plan in the field and the coordinates recorded;
   and
- Laboratory analysis was completed for TRH, BTEX, PAH, soluble fluoride, free cyanide and heavy metals was completed on 14 selected samples targeting the fill.

Cross-referencing Ramboll's 2020 test pits against the mapped boundary of Hydro PAD1 indicates that two pits (TPs 14 and 15) were excavated within the PAD area and a third (TP13), immediately adjacent to it (Figure 16). All remaining test pits were located to the south of the artificial bank that borders Hydro PAD1 to the south.

#### 3.2 Results

#### 3.3 AEC30

Reference to Ramboll's test pit logs for AEC30, attached as Appendix C, indicates that all but one pit (TP1) were recorded as containing fill deposits from the surface (Table 2). These extended to a maximum depth of 4.8 m b.g.l (range: 0.5-4.8 m), with an average thickness of 2.5 m. Extant fill deposits contained a variety of foreign materials such as concrete, brick, metal and plastic. Summary information on intercepted fill deposits within TPs 1 to 16 is provided in Table 2.

Laboratory analysis of soil samples collected from AEC30 identified two 'hot spots' where concentrations of Contaminants of Concern were found to exceed human health criteria by more than 2.5 times. These occurred as TPs 12 and 13.

Table 2 Summary of Ramboll's 2020 test pit results within AEC30

Test pit	Depth terminated (b.g.l)	Fill present?	Depth of fill	Foreign materials
1	2 m	None cited	-	None cited
2	2.7 m	Yes, from surface.	1.8 m	Large concrete boulder

Test pit	Depth terminated (b.g.l)	Fill present?	Depth of fill	Foreign materials
3	2.5 m	Yes, from surface.	1.8 m	Large concrete boulders, corrugated metal, plastic and cloth
4	1 m	Yes, from surface.	0.5 m	None cited
5	4 m	Yes, from surface.	3 m	Steel pole, metal
6	2.2 m	Yes, from surface.	1.9 m	None cited
7	4.2 m	Yes, from surface.	2.5 m	Concrete boulder, rubber tube
8	5.2 m	Yes, from surface.	4.8 m	Large concrete boulders, minor metal and reinforcing bar
9	5 m	Yes, from surface.	2.4 m	None cited
10	3 m	Yes, from surface.	2.7 m	Concrete, rope, brick and rio
11	5 m	Yes, from surface.	3.5 m	Rubber and concrete
12	2.7 m	Yes, from surface.	2.1 m	None cited
13	3.7 m	Yes, from surface.	2.2 m	Wire, cables, reinforcing bar, PVC, concrete, terracotta, plastic
14	3	Yes, from surface.	2.5 m	Concrete, reinforcing bar, brick and asphalt
15	1.7	Yes, from surface.	0.7 m	None cited
16	5	Yes, from surface.	4.5 m	Concrete, reinforcing bar and rusted metal, plastic, brick

#### 3.4 Hydro PAD1

Of particular relevance to the current assessment are Ramboll's (2020) observations for TPs 13, 14 and 15. As indicated in Table 2, soil profiles in all three of these pits were found to contain fill deposits from the surface, with those in TPs 13 and 14, located within the boundary of Hydro PAD1, extending to depths of 0.7 m and 2.5 m b.g.l respectively. In TP13, fill materials extended to a depth of 2.2 m b.g.l. Fill deposits in TPs 13 and 14 included foreign materials, while that in TP15 did not.

Reference to Ramboll's soil descriptions for TPs 13, 14 and 15 suggest that, in all three instances, natural topsoils have been removed, with fill deposits directly overlying high plasticity sandy clays consistent with locally occurring subsoil units. As in other parts of AEC30, the removal of topsoils in these specific contexts appears to have occurred as part of the ground disturbance works evident on the 1983 and 1984 historical aerials for Hydro PAD1 and its environs, which clearly involved major stripping and filling works.

#### 3.5 Key Observations

Key observations to be drawn from a review of Ramboll's (2021) contamination investigation works across AEC30 are as follows:

- Natural soil profiles across AEC30, including Hydro PAD1, were severely disturbed as a result of the ground disturbance works evident on the 1983 and 1984 historical aerials for this area; and
- Logs for TPs 13, 14 and 15 suggest that natural topsoils within Hydro PAD1 have been removed, with fill deposits overlying high plasticity sandy clays consistent with locally occurring subsoils.

AECOM

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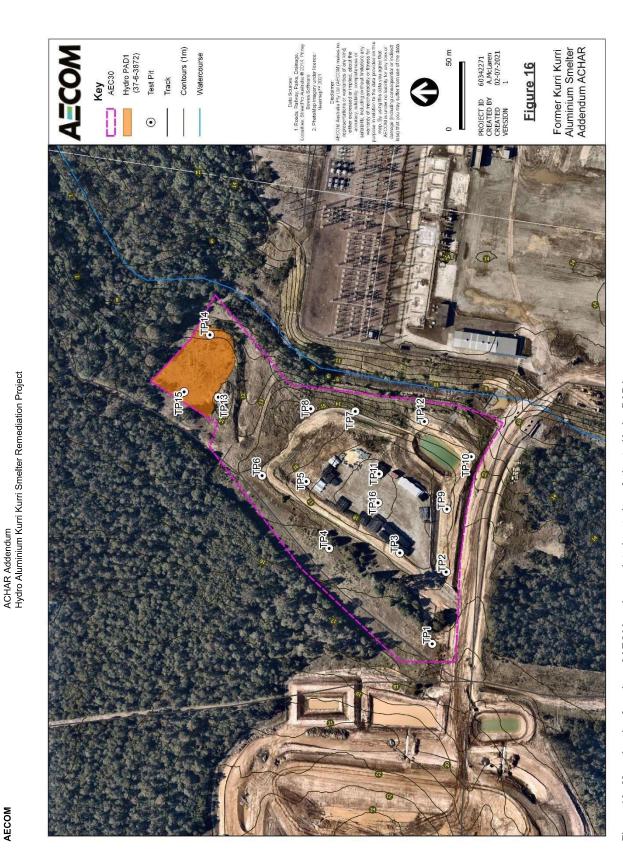


Figure 16 Map showing location of AEC30 and associated test pits relative to Hydro PAD1

#### 4.0 RAP Consultation

Aboriginal community consultation acknowledges the right of Aboriginal people to be involved, through direct participation, on matters that directly affect their heritage. Involving Aboriginal people in all facets of the assessment process ensures that they are given adequate opportunity to share information about cultural values, and to actively participate in the development of appropriate management and/or mitigations measures. The successful identification, assessment and management of Aboriginal cultural heritage values are dependent on an inclusive and transparent consultation process.

#### 4.1 RAP Consultation for Project EIS

As indicated in Section 1.2, RAP consultation for AECOM's (2015) Aboriginal cultural heritage assessment for the Project was undertaken in accordance with Heritage NSW's *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (DECCW, 2010) (the Consultation Requirements). Ultimately, a total of 34 RAPs were consulted for the assessment, with key consultation activities including RAP review of the Project's draft assessment methodology and ACHAR, as well as the participation of RAP representatives in an archaeological survey of the EIS study area.

RAPs for AECOM's 2015 assessment are listed in Table 3 below.

Table 3 RAPs for AECOM's 2015 Aboriginal cultural heritage assessment

RAP	Primary contact person(s) - 2015
Steven Talbott	Steven Talbott
Amanda Heard	Amanda Heard
	Kerrie Slater
Wurrumay Consultant	
Tocomwall Pty Ltd	Danny Franks
Wallangan Cultural Services	Maree Waugh
Yinarr Cultural Services	Kathie Kinchela
Hunter Valley Cultural Consultants	Christine Archbold
Upper Hunter Heritage Consultants	Darrel Matthews
Giwiirr Consultants	Rodney Matthews/Michele Stair
Aboriginal Native Title Elders Consultants	Wonnarua Elders
Kawul Cultural Services (now Wurrumay Pty Ltd)	Vicky Slater
Wonn1 (Kauwul Pty Ltd)	Arthur Fletcher
Gidawaa Walang Cultural Heritage Consultancy	Ann Hickey
Wanaruah Local Aboriginal Land Council	Suzie Worth
Wonnarua Culture Heritage	Shannon Griffiths
Lower Hunter Wonnarua Cultural Services	Wonnarua Elder
Culturally Aware	Tracey Skene
Smith Dhagaans Cultural Group	Timothy Smith
Wattaka Wonnarua Cultural Consultancy Services	Des Hickey
Widescope Indigenous Group	Steven Hickey
A1 Indigenous Services	Carolyn Hickey
Amanda Hickey Cultural Services	Amanda Hickey

RAP	Primary contact person(s) - 2015
HTO Environmental Management Services	Paulette Ryan
Murrawan Cultural Consultants Pty Ltd	Robert Smith
Awabakal Traditional Owners Aboriginal Corporation	Kerrie Brauer
Lower Hunter Aboriginal Incorporated	David Ahoy
Cacatua General Services	Donna Sampson
AGA Services	Adam Sampson
Jarban and Mugrebea	Les Atkinson
Awabakal Descendants Traditional Owners Aboriginal Corporation	Peter Leven
Mindaribba LALC	Lea-Anne Ball
Guringai Traditional Owners	Todd Heard
Crimson Rosie	Jeff Matthews
Kauma Pondee Inc	Jill Green

#### 4.2 RAP Consultation for this Addendum ACHAR

Consistent with Section 4 of the Consultation Requirements, on 8 July 2021, a draft of this Addendum ACHAR was issued to all RAPs for their review. The closing date for comments was 6 August 2021. However, responses were actively sought up to Friday 13 August 2021.

Ultimately, a total of 11 RAPs provided responses to the draft Addendum ACHAR, nine in writing and two verbally. Responses are summarised in in Table 4, with written responses provided in Appendix D. Where appropriate, AECOM has provided responses to RAP comments.

AECOM

Table 4 RAP responses to draft Addendum ACHAR

RAP (Contact Person)	Date	Type	Summary of response	AECOM response
Steven Talbott	20-07-21	Written (e-mail)	Topsoils have, of course, been removed. However, there are still areas within the broader project area that are untouched. Has any consideration been given to these areas? Do decisions regarding future works in these areas rest solely with archaeologists?	As indicated in Section 1.3, this Addendum ACHAR deals specifically with Hydro PAD1. Existing data sources for this particular area, as noted by Mr Talbott, indicate that potential artefact-containing topsoils have been removed. Land outside of Hydro PAD1 but within the EIS project area was the subject of a full Aboriginal cultural heritage assessment in 2015 (see Section 1.2). Potential impacts to Aboriginal heritage values outside of Hydro PAD1 were addressed as part of this assessment and are the subject of an approved AHMP (Appendix B).
HTO Environmental Management Services (Paulette Ryan)	02-08-21	Written (e-mail)	Evidence of Aboriginal peoples' use of the Hunter Valley can be found everywhere. Changing things can be hard as we no longer have any control. We thank you for your support. Future methodologies should state that Aboriginal people be given the opportunity to view artefacts prior to bagging and/or be involved in the bagging process.	AECOM acknowledges HTO's concerns regarding the difficulties of change. AECOM's recommendations regarding Hydro PAD1 have been made on the basis of a thorough review of all existing data sources for the site, which clearly indicate the removal of potential artefact-containing topsoils. HTO's comments regarding future methodologies for artefact collection and bagging are noted. However, it is noted that these fall outside of the scope of this Addendum ACHAR. Additionally, AECOM notes that no test or salvage excavations were proposed as part of AECOM's 2015 Aboriginal cultural heritage assessment for the Project.
Widescope Indigenous Group (Steven Hickey)	10-08-21	Written (e-mail	I have reviewed the Addendum ACHAR and support the recommendations therein.	
Culturally Aware (Tracey Skene)	10-08-21	Written (e-mail)	Sensitivity and respect is required regarding Wonnarua Elders who have passed away since 2015. I agree with the Addendum ACHAR for this development. My family lived in this town and know the cultural landscapes and stories of this area. Consideration should be given to engaging local Indigenous individuals and businesses in the broader remediation project to assist with Closing the Gap and	AECOM acknowledges the sensitivity regarding Elders who have passed away since 2015 and has modified this ACHAR accordingly.

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#### 5.0 Key Findings and Recommendations

#### 5.1 Key Findings

The key findings of the current assessment are as follows:

- Land within Hydro PAD1 was severely disturbed in or around 1983 as a result of heavy earthworks linked to the construction of the Smelter's third potline. On current evidence, both stripping and filling are inferred;
- Natural soil profiles within and to the south of Hydro PAD1 have been radically altered as a result
  of the above. For Hydro PAD1, a complete loss of potential artefact-bearing topsoils is inferred;
- Contra AECOM's (2015) initial assessment, land within Hydro PAD1 retains negligible potential for subsurface Aboriginal archaeological deposits and, as such, does not comprise an area of PAD;

#### 5.2 Recommendations

In view of the key findings above, the following recommendations are made regarding Hydro PAD1:

- Hydro should lodge a request with the AHIMS Registrar to have the status of Hydro PAD1 in the AHIMS database changed from 'Valid' to 'Not a Site', thereby removing it as a development constraint. A copy of this Addendum ACHAR should be submitted in support of Hydro's request.
- 2. The AHMP for the Project should be updated to reflect the results of this Addendum ACHAR; and
- 3. Once finalised, all RAPs for the Project should be provided with a copy of this Addendum ACHAR.

#### 6.0 References Cited

- AECOM Australia Pty Ltd. (2015). Former Hydro Aluminium Smelter: Aboriginal Cultural Heritage Assessment. Unpublished report for Hydro Aluminium Kurri Kurri Pty Ltd.
- Hydro Aluminium Kurri Kurri Pty Ltd. (2020). *Kurri Kurri Aluminium Smelter Decommissioning, Demolition and Remediation: Aboriginal Heritage Management Plan*. Unpublished AHMP.
- NSW Department of Environment Climate Change & Water. (2010a). *Aboriginal Cultural Heritage Consultation Requirements for Proponents*. Department of Environment, Climate Change and Water.
- NSW Department of Environment Climate Change & Water. (2010b). Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales. Department of Environment, Climate Change and Water.
- NSW Office of Environment & Heritage. (2011). Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW. Office of Environment and Heritage.
- Ramboll Australia Pty Ltd. (2021). *Data Gap Assessment: Hydro Aluminium Smelter Site, Lozford, NSW*. Unpublished report for Hydro Aluminium Kurri Kurri Pty Ltd.

## Appendix A

Hydro PAD1 (37-6-3872)
- AHIMS Site Card

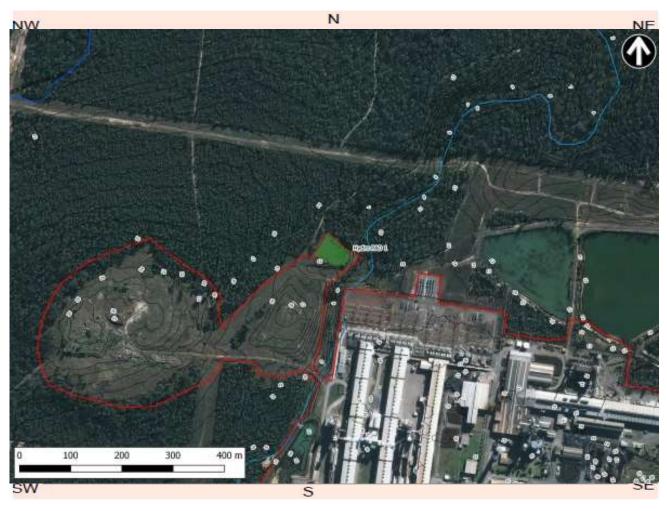


#### **Aboriginal Site Recording Form**

AHIMS Registrar PO Box 1967, Hurstville 2220 NSW

AHIMS site II	<b>)</b> : 37-6-3872				Date recorded:	08-03-2018
Site Location	n Information	n				
	357445		Northing:	6371592	Coordinates must b	e in GDA (MGA)
Horizontal A Zone: 56	ccuracy (m):	Locatio	on method:	Differential GP	S	
Recorder Info		and submis	ssion of this form)			
Title	Surn	iame			First name	
Dr. McLa	ren			Andrev	V	
Organisation:	AECOM Austra	lia Pty Lto	b			
Address:	Level 8, 420 Ge	eorge Stre	eet, Sydney, N	SW 2000		
<b>Phone:</b> 02893	340547 E-mail: andrew.mclaren@aecom.com					
Site Context	Information	1				
Land Form Pattern:	Rolling Hills			Land Use:	Service Corridor	
Land Form Unit:	Terrace			Vegetation:	Cleared	
Distance to Water (m):		rimary leport:	AECOM. 201	5. Former Hydro	Aluminium Smelter: ACHA.	Unpublished.
How to get to the site:	Site located within former Hydro Aluminium Smelter Site, off Hart Road, in Kurri (private property). Contact Hydro Aluminium Kurri Kurri Pty Ltd for access. See attached location map.					
Other site information:						

#### Site location map



1. Potential Archaeological Deposit  Description:  Cleared section of elevated low gradient terrain (left bank terrace) overlooking unnamed 2nd order tributary of Black Waterholes Creek. Field observations and historical aerial photographs suggest that this area retains moderate GI.  Scarred Trees  Features:  Length of Width of Scar Donth Bogrouth	Site contents information	open/closed site: Open	Site condition: Good
Number of features sextent (m) features sextent (m) feature (s) extent (m) (cm) (cm) (cm) (cm) (cm) (cm) (cm)			Scarred Trees
Potential Archaeological Deposit  Description:  Cleared section of elevated low gradient terrain (left bank terrace) overlooking unnamed 2nd order tributary of Black Waterholes Creek. Field observations and historical aerial photographs suggest that this area retains moderate GI.  Scarred Trees  Features:  Number of feature(s) feature(s) feature(s) extent (m) extent (m)  Scar Shape Tree Species  2.	Features:	features feature(s) feature	e (s) (cm) (cm) Scar shape Tree Species
Cleared section of elevated low gradient terrain (left bank terrace) overlooking unnamed 2nd order tributary of Black Waterholes  Creek. Field observations and historical aerial photographs suggest that this area retains moderate GI.  Scarred Trees  Number of feature(s) feature(s) extent (m) extent (m)  Scar Depth Regrowth (cm) (cm) Scar shape Tree Species		60 50	
Creek. Field observations and historical aerial photographs suggest that this area retains moderate GI.  Scarred Trees  Number of features  Number of feature(s) feature(s) extent (m)  Scar Depth Regrowth (cm) (cm)  Scar shape Tree Species	Description:		
Number of features feature(s) feature (s) extent (m)  Scar shape Tree Species			
			Scarred Trees
Description:	Features:	features feature(s) feature	of Scar Depth Regrowth e (s) (cm) (cm) Scar shape Tree Species
	2.	features feature(s) feature	of Scar Depth Regrowth e (s) (cm) (cm) Scar shape Tree Species

	Scarred Trees
Features:	Number of feature(s) feature (s) feature (s) extent (m) extent (m)  Scar Depth Regrowth (cm) (cm)  Scar shape Tree Species
3.	
Description:	
Features:	Number of feature(s) feature (s) extent (m) extent (m)  Scarred Trees  Scarred Trees  Scar Depth Regrowth (cm) (cm) (cm)
4.	
Description:	
	Scarred Trees
Features:	Number of feature(s) feature (s) feature (s) extent (m) extent (m)  Length of Width of feature (s) feature (s) (cm) (cm)  Scar Depth Regrowth (cm) (cm)
5.	
Description:	
Other Site Info:	
Site plan	N
NW	N NE

# W T

SW

SE

### Site photographs View across Hydro PAD 1 Description: Description: Description: Description: **Site restrictions** Gender General Location Do you want to Restriction type: Restrict this site?: Why is this site restricted?: **Further information contact** Title **Surname** First name Organisation: Address: Phone: E-mail: