Balranald Project

Aboriginal Cultural Heritage Management Plan

Prepared for Iluka Resources Limited

18 May 2023

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Cover photograph: Aboriginal heritage survey with the Registered Aboriginal Parties, 2014

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1. Project Details

1.1 Project background

This Aboriginal Cultural Heritage Management Plan (ACHMP) has been prepared for Iluka Resources Limited (Iluka) to satisfy the requirements of Schedule 3, Condition 20 under the conditions of the NSW Development Consent (SSD-5285) and has been developed in broad accordance with Heritage NSW guidelines.

Iluka Resources Limited (Iluka) have approval to develop a mineral sands mine in south-western New South Wales (NSW), known as the Balranald Mineral Sands Project (the Project). The Project includes construction, mining and rehabilitation of two linear mineral sand deposits, known as West Balranald and Nepean, located approximately 12 kilometres (km) and 66 km north-west of the town of Balranald, respectively (Figure 1).

An environmental impact statement (EIS) was prepared and submitted in 2015 to accompany a State Significant Development (SSD-5285) application under Part 4, Division 4.7 of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act) for an open cut, truck and shovel mining method (EIS 2014). Development consent was granted by the NSW Department of Planning, Infrastructure and Environment (now Department of Planning and Environment [DPE]) under Part 4 of the EP&A Act on 5 April 2016. The Balranald Project also included undertaking some of the bulk sampling activity at the West Balranald mine to test the removal of up to 100,000 tonnes (t) of ore using underground mining methods.

The project EIS was supported by an Aboriginal Cultural Heritage Assessment (EIS ACHA) prepared by Niche Environment and Heritage Pty Limited in 2015 (Niche 2015), which identified and assessed the Aboriginal cultural heritage values across the project area in consultation with RAPs. In 2016, an Aboriginal Cultural Heritage Management Plan (ACHMP) (Niche 2016) was developed in consultation with the RAPs and approved in accordance with Condition #20 of the development consent. The ACHMP broadly sets out management for individual Aboriginal sites, but also includes mapped 'archaeological risk layers' (classed as low, moderate and high) that guide the future identification, assessment and management of Aboriginal cultural values within the approved project boundary.

Since development consent was granted in April 2016, Iluka has obtained approval to modify the Balranald Mineral Sands Project (SSD-5285) to enable:

- underground mining within a portion of the approved disturbance footprint of the West Balranald deposit pursuant to the consent (i.e. mining area)
- development of approved mineral processing infrastructure within a proposed new area of disturbance (i.e. surface infrastructure).

As a result of the modification, some parts of the proposed activities while encompassed by the approved footprint are outside of the areas currently considered by the approved ACHMP.

This updated ACHMP includes Aboriginal cultural heritage within this additional area, and direction on their management, as identified in the Balranald MOD1 Aboriginal Cultural Heritage Assessment (MOD1 ACHA) prepared by EMM in 2022 (EMM 2022).

1.2 Project Details

Activities associated with the Project are illustrated in Figure 1a-c and described below.

1.2.1 West Balranald and Nepean Mines

The West Balranald mine and Nepean mines will include:

- open cut mining areas (i.e. pit/mine void) that would be developed using conventional dry mining methods to extract the ore
- underground mining within a portion of the approved disturbance footprint of the West Balranald deposit pursuant to the consent (i.e. mining area)
- soil and overburden stockpiles
- ore stockpiles and mining unit plant (MUP) locations
- a processing area (at the West Balranald mine), including a mineral processing plant, tailings storage facility (TSF), maintenance areas and workshops, product stockpiles, truck load-out area, administration offices and amenities
- development of approved mineral processing infrastructure within a proposed new area of disturbance (i.e. surface infrastructure)
- groundwater management infrastructure, including dewatering, injection and monitoring bores and associated pumps and pipelines
- surface water management infrastructure
- services and utilities infrastructure (e.g. electricity infrastructure)
- haul roads for heavy machinery and service roads for light vehicles
- other ancillary equipment and infrastructure.

The location of infrastructure at the West Balranald and Nepean mines would vary over the life of the Project according to the stage of mining.

1.2.2 Injection bore fields

The Project requires a network of injection bore fields in the Project Area for the return of hyper-saline groundwater to the Loxton Parilla Sands aquifer. Within each bore field, infrastructure is generally located in two 50 m wide corridors (approximately 350 metres (m) apart) and typically comprises:

- a network of pipelines with a graded windrow on either side
- access roads for vehicle access during construction and operation
- rows of injection wells, with wells spaced at approximately 100 m intervals
- a series of water storage dams to store water during well development.

1.2.3 Access roads

There are two primary access roads within the Project Area to provide access to the Project:

- West Balranald access road – a private access road to be constructed from the Balranald Ivanhoe Road to the West Balranald mine.
- Nepean access road – a route comprising private access roads and existing public roads. A private access road would be constructed from the southern end of the West Balranald mine to the Burke and Wills Road. The middle section of the route would be two public roads, Burke and Wills Road and Arumpo Road. A private access road would be constructed from Arumpo Road to the Nepean mine.

The West Balranald access road would be the primary access point to the Project Area and would be used by heavy vehicles transporting HMC and ilmenite. The Nepean access road would primarily be used by heavy vehicles transporting ore mined at the Nepean mine to the processing area at the West Balranald mine.

During the initial construction phase, existing access tracks through the Project Area from the local road network may also be used temporarily until the West Balranald and Nepean access roads and internal access roads within the project are established.

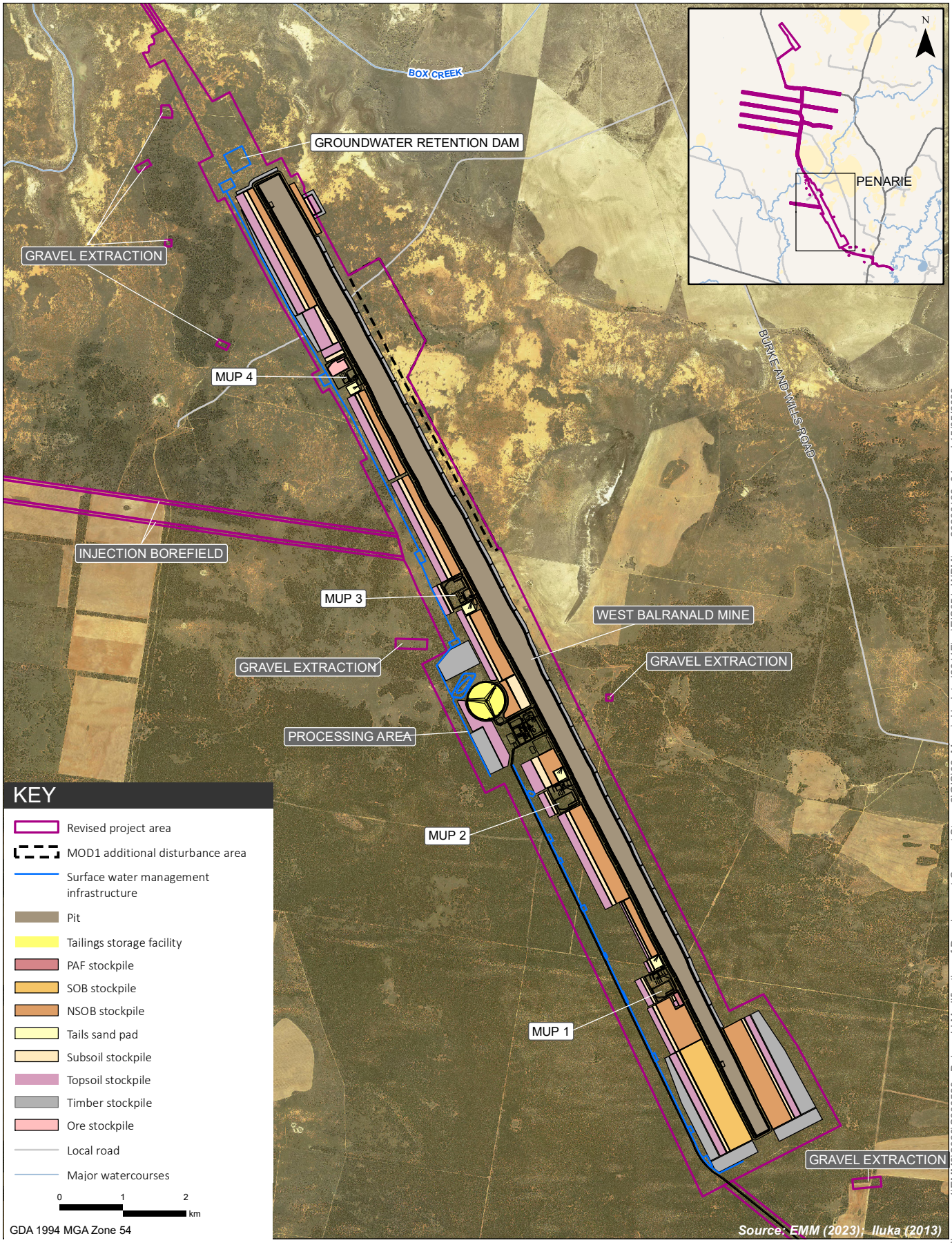
1.2.4 Water supply pipeline

A water supply pipeline would be constructed to supply water from the Murrumbidgee River for operation of the Project.

1.2.5 Gravel extraction

Gravel would be required during the construction and operational phases of the Balranald Project. Local sources of gravel (borrow pits) have been included in the Project Area to provide gravel during the construction phase. During the construction phase, gravel would be required for the construction of the West Balranald access road, internal haul roads and service roads, and hardstand areas for infrastructure. Processing operations, such as crushing and screening activities (if required) would also be undertaken at the borrow pits. Gravel for the operational phase would be obtained from external sources.

The proposed activities will result in impact to Aboriginal heritage values within the Project Area.



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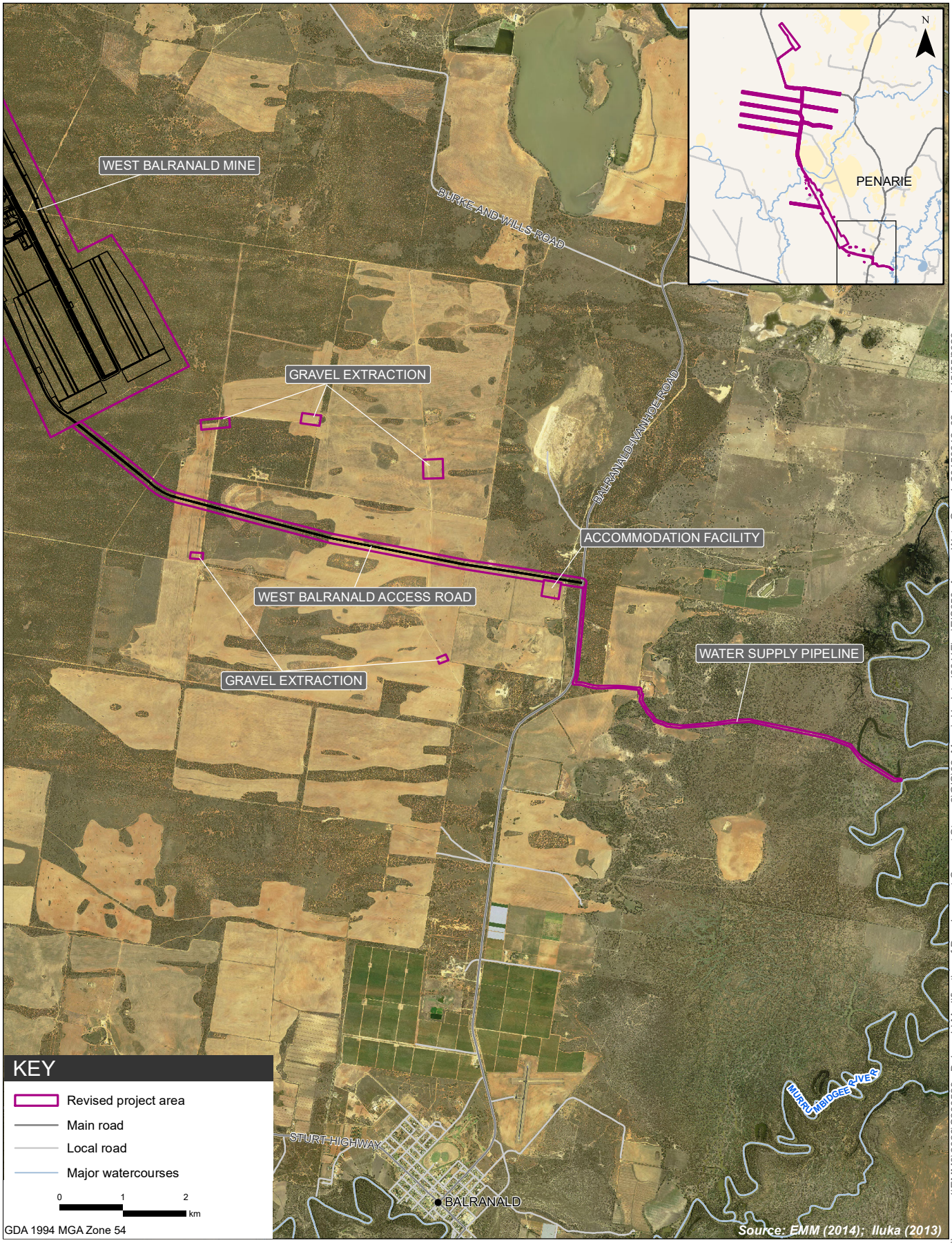
West Balranald mine and gravel extraction areas

Balranald Mineral Sands Project
Environmental Impact Statement
Figure 1a



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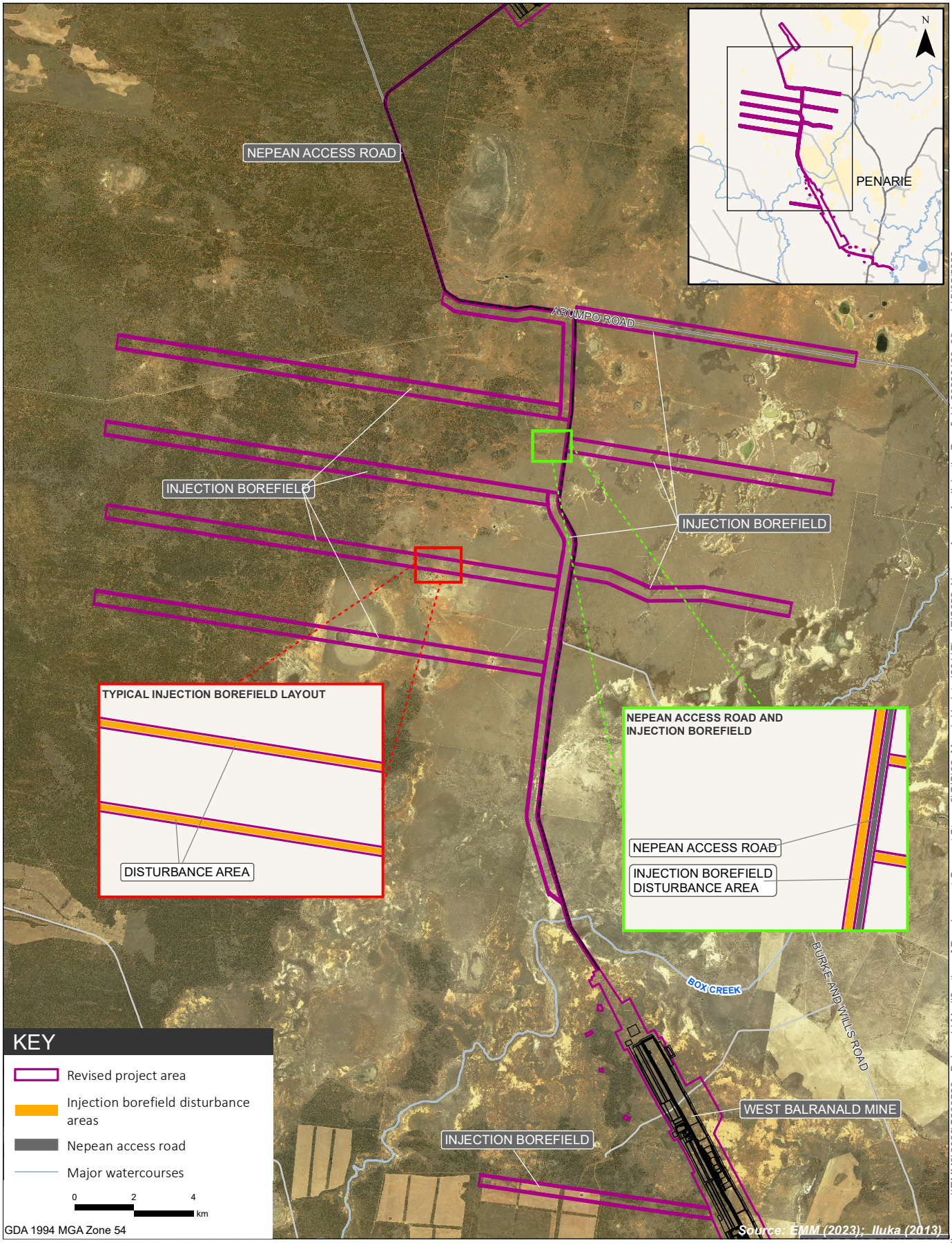
West Balranald access road, water supply pipeline and gravel extraction areas

Balranald Mineral Sands Project
Environmental Impact Statement
Figure 1b



Nepean access road and injection borefields

Balranald Mineral Sands Project
Environmental Impact Statement
Figure 1c

1.3 Environmental Policy

The Iluka HSEC policy is publicly available at http://www.iluka.com/ and provides a declaration of the importance Iluka places on conducting its business safely, without detrimental health effects and with regard to the community and the value of the natural environment. In publishing the HSEC policy, Iluka sends a clear message that it has a commitment to proactive HSEC management and its application throughout the organisation. It is important that policy and supporting standards be regularly reviewed, specifically in the context of shareholder and community expectations.

This management plan is a part of a larger suite of operational environmental management documents for the Balranald Mineral Sands Project developed as part of Iluka's environmental management system which has been designed to be generally consistent with IS0 14001:2015 – Environmental Management Systems.

The overarching document in the environmental management system is Iluka's Environmental Management Strategy (EMS). The EMS has been developed to provide a framework to ensure activities are undertaken in an environmentally responsible manner. The EMS forms part of the hierarchy of documents that enables Iluka to establish and sustain a high level of environmental performance in all facets of its business. The structure of the EMS is summarised in Figure 2.

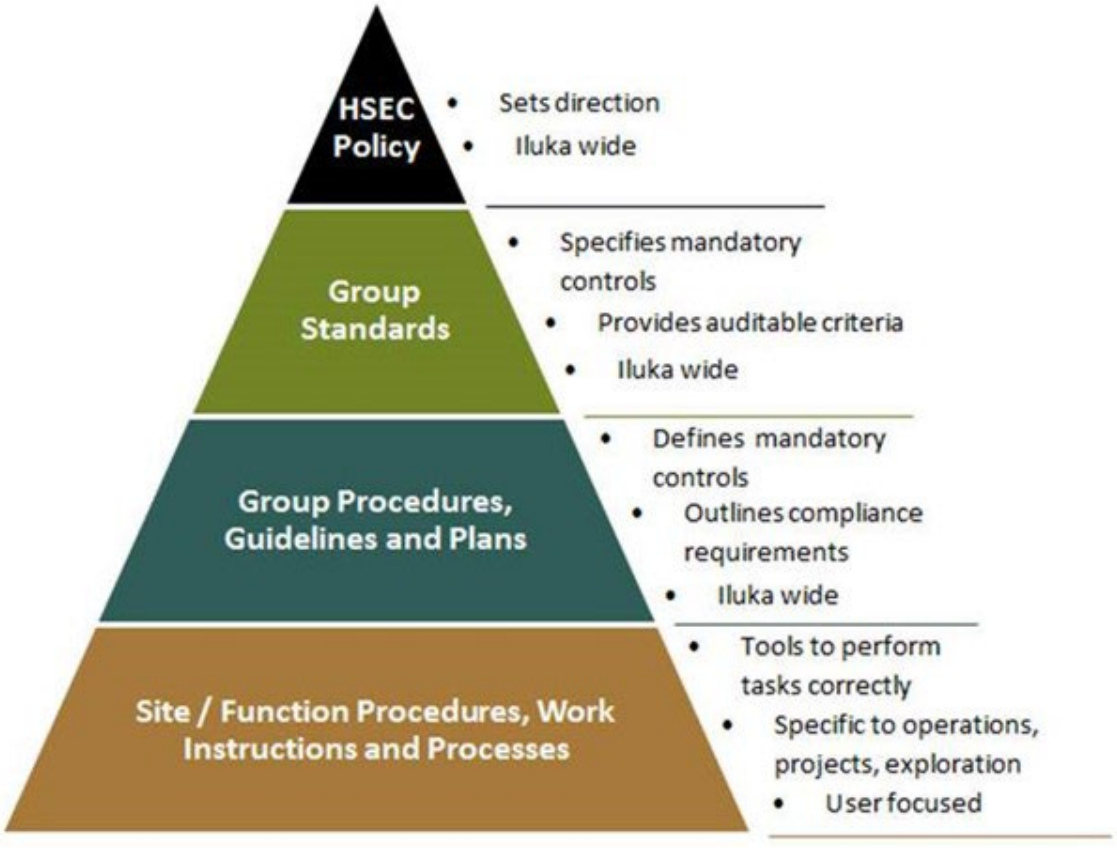


Figure 2 - EMS structure

2. Management Plan Details

2.1 Introduction

The ACHMP has been prepared following the completion of the EIS Aboriginal Cultural Heritage Assessment (ACHA) and MOD1 ACHA which detail the measures to be taken to protect and manage Aboriginal cultural heritage in the Project area.

2.2 Scope and Area of Applicability of the Aboriginal Cultural Heritage Management Plan

The ACHMP will apply for the life of the Project until superseded by any subsequent ACHMP. The ACHMP will apply to Iluka's activities within the approved Project Area as presented in Figure 1.

The ACHMP specifically details the heritage management measures to be taken before, during and after activities associated with the Project are completed. The ACHMP incorporates specific requirements as detailed in the Conditions of Consent, technical environmental assessment reports and Statements of Commitments, as outlined in Section 3.

2.3 Objectives of the Aboriginal Cultural Heritage Management Plan

The ACHMP is a living document. The aims of the ACHMP are to achieve the following:

- implement the commitments in the Balranald Environmental Impact Assessment
- ensure compliance with the requirements of relevant cultural heritage legislation and Conditions of Consent
- minimise disturbance to existing cultural resources within the ACHMP area
- retrieve cultural and archaeological information from those Aboriginal cultural sites that will be impacted by the Project and produce an analysis that improves the pre-project understanding of the cultural resource in the project area
- provide an avenue for continued consultation/participation with the Registered Aboriginal Parties (RAPs) throughout the construction and operational phases of the mine
- consider and assess management and mitigation measures with respect to the *Burra Charter* (Australia ICOMOS 2013).

This ACHMP has been prepared to specifically address the Project impacts and regulatory requirements (Section 3) and to be consistent with the following regulation and guidelines:

- *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (NSW Department of Environment, Climate Change and Water [DECCW] 2010a) (the Code)
- *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW (NSW Office of Environment and Heritage* [OEH] 2011)
- *Draft Guidelines for Aboriginal Cultural Heritage Assessment and Community Consultation* (NSW Department of Environment and Conservation, 2005)
- *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (the ACHCRs) (DECCW 2010b).

The ACHMP also articulates the mitigation and management measures presented in the ACHA for the development and construction of the Project.

2.4 Consultation

This ACHMP was developed in consultation with the Registered Aboriginal Parties (RAPs) identified during the environmental impact assessment activities (and in accordance with Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (DECCW 2010), with former the former NSW Department of Planning and Environment (DP&E), former NSW Office of Environment and Heritage (OEH), Heritage NSW and NSW Department of Planning and Environment (DPE).

Consultation undertaken during the EIS and MOD1 environmental assessment processes is documented in the relevant Aboriginal Cultural Heritage Assessments for the Project. For the EIS a consultation meeting was held with the RAPs on 26 February 2015. Niche Environment and Heritage (Niche) presented the results of the draft Aboriginal Cultural Heritage Assessment and provided a hard copy and digital copy of the draft report to all RAPs with a 28 day timeframe for written responses. A digital copy of the presentation was also provided to RAPs. The meeting included discussions on:

- the draft management and mitigation measures
- a description of the proposed surface collection of the Aboriginal heritage research program
- the justification and proposed locations of the proposed archaeological subsurface excavation program.

As a result of the above consultation process written and verbal feedback on the draft report was provided by:

- Balranald Local Aboriginal Land Council (BLALC)
- Balranald Aboriginal Health Service (BAHS): Mutthi Mutthi people
- National Koori Site Management
- Kullila Site Consultants.

A meeting was held with Iluka, the NSW Department of Planning and Environment (DP&E) and NSW Office of Environment and Heritage (OEH) on 7 August 2015 to discuss Reponses to Submissions and the staging for the preparation of the Aboriginal Cultural Heritage Management Plan and subsurface archaeological testing program recommended in the EIS and Trigger Action Response Plans (TARPs).

A more detailed Aboriginal heritage research program including a sub-surface archaeological testing program was developed that incorporated feedback from the 26 February 2015 meeting and was presented to OEH on the 16 September 2015. Feedback from OEH was incorporated into the archaeological subsurface excavation program (refer section 6.2). Additional advice was sought from RAPs via telephone and email regarding aspects of the Aboriginal heritage research program; such as how burials might be managed if they were located in the Project Area.

In order to ensure that the TARPs are fit for purpose and project specific:

- An Aboriginal cultural heritage risk register (TRIM ref 1789922) was established: compiled by Iluka, the register identifies the Aboriginal cultural heritage related risks associated with the next phases (salvage and subsurface investigations and construction and operational activities) of the project.
- A meeting with RAPs was held in Balranald on 14 October 2015. The purpose of the meeting was to discuss the key issues (from the risk register) and seek RAP input and agreement with regard to how these issues should be managed in the event they occur on site. Relevant discussions from the meeting have informed the development of the Aboriginal heritage research program, TARPs and this ACHMP. A copy of the presentation and minutes were provided to the RAPs on 29 October 2015.
  Other issues and discussions raised were incorporated (as relevant) into the ACHMP for the project. The Iluka risk register was also updated to incorporate comments raised by the RAPs during the meeting.
- A copy of a draft ACHMP was provided to the RAPs on the 20 November 2015 and 28 days provided for responses from the RAPs. An invitation to attend a consultation meeting to discuss the draft ACHMP was also provided on 20 November 2015. All parties confirmed the receipt of draft ACHMP and invitation.

- A consultation meeting was held on 3 December 2015 to discuss the draft ACHMP. A copy of the presentation and minutes were sent to all RAPs on 9 December 2015.
- On 21 December 2015, BAHS: Mutthi Mutthi Nations, National Koori Site Management. Kullila Site Consultants advised by phone that they were happy with the ACHMP and had no comments. Balranald Local Aboriginal Land Council advised by phone that they had no comments. No response was received from Cynthja Pappin.
- No additional comments were received prior to the finalisation and approval of the ACHMP in 2016.

For the MOD1 consultation the Aboriginal consultation documentation for the proposed modification is summarised in Balranald Mineral Sands Project Modification 1 Aboriginal Cultural Heritage Assessment (ACHA) and included as Appendix B of the ACHA (EMM 2022a).

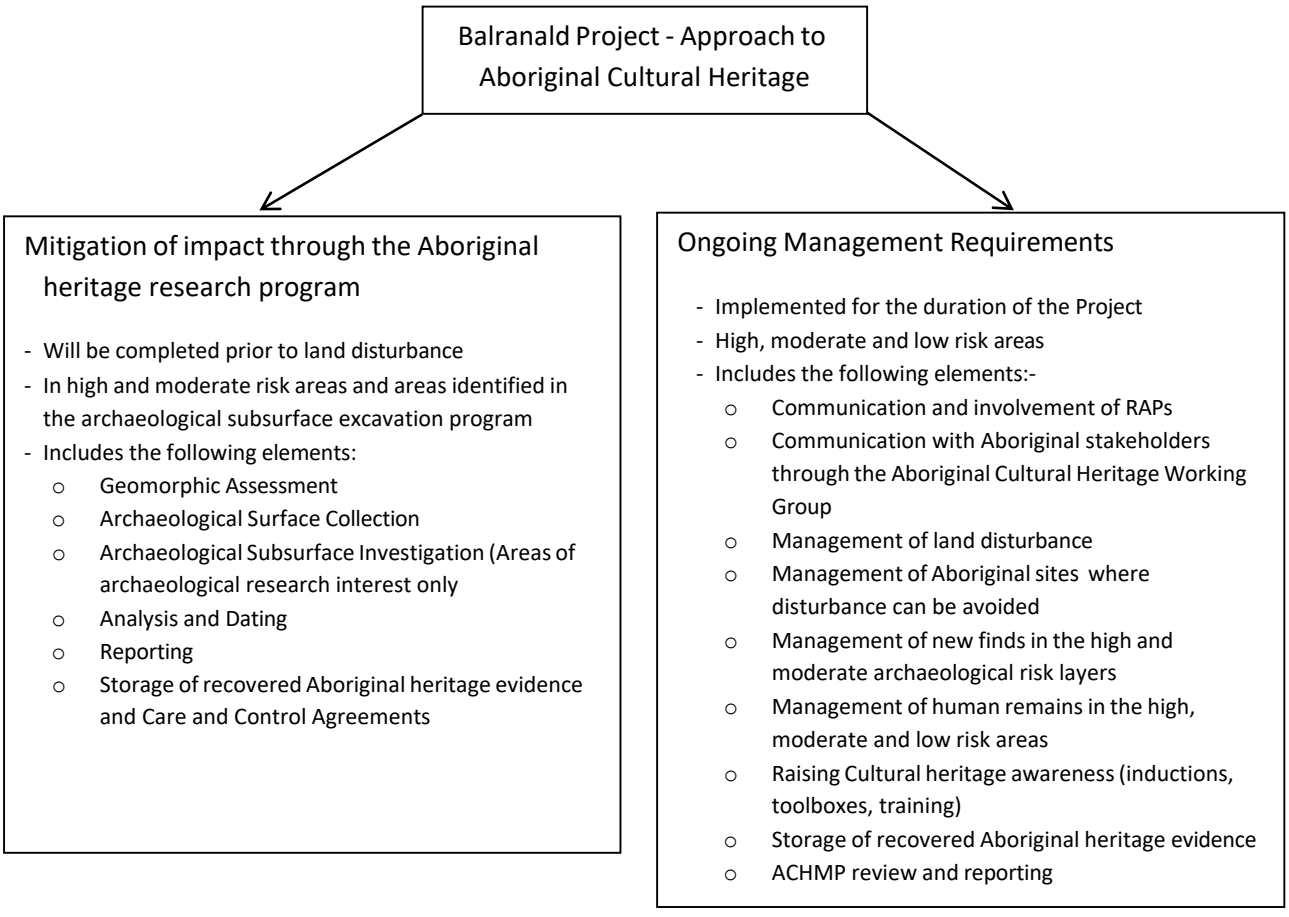
The RAPs were notified about the proposed modification on 25 November 2021 via email with a letter that provided an overview of the proposed modification, the proposed assessment approach, and requested any cultural information about the MOD1 areas.

A draft version of the ACHA was issued to RAPs on 28 February 2022 accompanied by a cover email with guiding notes proposing a 28-day timeframe for review. The draft report included highlighted text indicating sections where RAP input was sought regarding Aboriginal heritage values, significance assessment and management measures. No responses were received during this review period.

No comments requesting amendments to this ACHMP were received from RAPs during the consultation period.

2.5 Structure of the ACHMP

The ACHMP has been structured around the management activities that will be undertaken for the Project to manage Aboriginal heritage. A summary of these activities is illustrated below:



This document is structured as follows:

- **Section 1 -** provides a summary of project details.
- **Section 2** – provides details of the management plan including the scope, area of applicability, objectives, consultation undertaken and structure of the ACHMP.
- **Section 3** – provides a legislative framework for the management of Aboriginal heritage items for the Project.
- **Section 4** –details the Aboriginal Heritage Sites and Heritage Values within the Project Area.
- **Section 5** – summarises the Project approach to the management of Aboriginal heritage.
- **Section 6** – Aboriginal Heritage Research Program and the processes for managing Aboriginal heritage values and items that will be impacted by the Project.
- **Section 7** – details the ongoing Aboriginal Heritage Management Requirements for the project including consultation requirements, management of Aboriginal sites and unexpected finds and reporting procedures and management of Aboriginal heritage items.
- **Section 8** – details incident reporting and investigation protocols and grievance resolution mechanisms.
- **Section 9** – identifies the need for review of the ACHMP and certain triggers for review.

3. Statutory Requirements and Legislative Context

The planning approval process for the Balranald Project is complex as it required a number of approvals in NSW and Victoria, as well as approval from the Commonwealth.

A summary of the key statutory approval requirements for the NSW elements of the project is provided below.

3.1 Commonwealth Requirements

The project was referred to the federal Department of Sustainability, Environment, Water, Population and Communities (SEWPaC), now the Department of the Environment, under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act). SEWPaC provided a response to the referral identifying the following key assessment requirements relevant to Aboriginal cultural heritage:

- impacts on world heritage values of a declared World Heritage property listed under Section 12 and 15A of the [EPBC Act]
- impacts on the national heritage values of a National Heritage place listed under section 15B and 15C of the [EPBC Act].

The EIS ACHA and MOD1 ACHA for the project determined no impact to world heritage values of a declared World Heritage property or impacts on the national heritage values of a National Heritage place.

3.2 Environment Planning and Assessment Act and the National Parks and Wildlife Act

In NSW, the Project requires development consent under Part 4, Division 4.1 of the EP&A Act. Part 4 of the EP&A Act relates to development assessment. Division 4.1 specifically relates to the assessment of development deemed to be significant to the state, known as State Significant Development (SSD). The Project is a mineral sands mining development which meets the requirements for SSD.

Section 89J of the *Environmental Planning and Assessment Act 1979* (EP&A Act) lists the approvals that are not required for approved developments under Division 4.1 of Part 4. In this regard section 89J provides that an Aboriginal Heritage Impact Permit (AHIP) under the *National Parks and Wildlife Act 1974* (NPW Act) is not required for any SSD that has been granted Development Consent.

Under Section 89A of the NP&W Act, a person who is aware of the location of an Aboriginal object that is the property of the Crown or, not being the property of the Crown, is real property, and does not, in the prescribed manner, notify the Director-General thereof within a reasonable time after the person first becomes aware of that location is guilty of an offence against this Act unless the person believes on reasonable grounds that the Director-General is aware of the location of that Aboriginal object.

Under section 85 of the National Parks and Wildlife Act 1974, the Chief Executive of the NSW Office of Environment and Heritage (OEH) (as the delegate of the Director-General of the Department of Premier and Cabinet) is the authority for the proper care, preservation and protection of Aboriginal objects and Aboriginal places in New South Wales. This legislative responsibility applies to Aboriginal objects and Aboriginal places as defined under the NP&W Act. The NP&W Act (NPW Act) allows the transfer of Aboriginal objects to an Aboriginal person or Aboriginal organisation for safekeeping. The person or organisation must enter into a care agreement with OEH.

Aboriginal heritage values within the Project area are to be managed in accordance with the Conditions stipulated as part of the Project Approval. The conditions of the Project Approval relevant to protection and management of Aboriginal cultural heritage aspects of the project are summarised in Section 3.3.

3.3 Relevant Approvals and Conditions

A register of environmental approvals and licenses (conditions and commitments) for the Project has been established and will be maintained for the life of the Project (TRIM reference 1848089).

Conditions of approval relevant to the ACHMP are summarised in Table 1, and provided in full Appendix 11.

Table 1: Summary of Relevant Approval Conditions

Approval	Approval Condition #	Requirement	Relevant Section of the ACHMP
NSW Government Department of Planning and Environment Development Consent SSD-5285	18	**Protection of Aboriginal Sites**	Section 7.8
	19(a)–(d)	**Aboriginal Cultural Heritage Working Group**	Section 7.1.4 Table 12 & Table 13
	20	**Aboriginal Cultural Heritage Management Plan**	This document
05/04/2016 MOD1 Consolidated Conditions 21/12/2022	20(a)	- Prepared in consultation with Heritage NSW and local Aboriginal stakeholders and approved by the Secretary prior to the undertaking of any development on site	Section 2.4
	20(b) (i)	- Include a Geomorphic Assessment	Section 6.1
	20(b) (ii)	- Include a Subsurface Archaeological Testing Program	Sections 6.2, 7.4, 7.6
			Appendix 6 & 7
			Table 13
	20(b) (iii)	- Include an Archaeological Salvage Program	Sections 6.3, 6.5, 7.2, 7.7
			Table 10
			Appendix 7
	20(b) (iv)	- Include Trigger Action Response Plans	Sections 7.3, 7.4, 7.5,
			Figure 3- Figure 5
	20(b) (v)	- Include a Cultural Heritage Management Program	Sections 5, 6.5, 7.1, 7.2, 7.6, 7.8, 7.9
			Table 12 & Table 16
	20A	The Applicant must not commence any surface disturbance until the Aboriginal Cultural Heritage Management Plan is approved by the Secretary	Whole ACHMP
	20B	The Applicant must implement the Aboriginal Cultural Heritage Management Plan as approved by the Secretary	Whole ACHMP
	21(a) – (d)	**Additional Aboriginal Heritage Approval** Disturbance to additional site/s to those identified in the EIS of high or very high cultural heritage significance	Figure 3 - Figure 5 TARPs

3.4 Statements of Commitments

In addition to the above approval conditions a number of commitments were made in the ACHA and have been incorporated in the ACHMP. Details of these commitments are provided in Table 2.

Table 2: Statements of Commitments

Commitment	Commitment Origin	Relevant Section of the ACHMP
Protocols that prescribe the involvement of the RAPs in the preparation, implementation and ongoing review and maintenance of the ACHMP.	ACHA	Section 7.1
Protocols that prescribe the involvement of the RAPs in cultural heritage works conducted under the ACHMP.	ACHA	Section 7.1
A communications protocol that describes clear methods of communication, including expectations of suitable notification and response times, between Iluka and the RAPs.	ACHA	Section 7.1
Provisions for the management of culturally sensitive information.	ACHA	Section 7.1
Protocols for heritage awareness training to be incorporated into the mine site inductions for both employees and sub-contractors who may be conducting works within the Project Area which have the potential to impact on any Aboriginal heritage site or are working in areas of moderate to high archaeological risk.	ACHA	Section 7.1
Procedures to establish and maintain (via frequent scheduled updates) a GIS database of Aboriginal heritage sites, their boundaries, their management status and archaeological risk identified within the Project Area (i.e. the Balranald Aboriginal Heritage Database).	ACHA	Section 7.2
Procedures for activities when working in moderate and high archaeological risk layers, including but not limited to: • Constraining vehicle and people movements to defined disturbance footprints (to minimize the risk of disturbance outside of the footprints) Implement controls for project induced sedimentation, erosion and water flow. • Avoidance of known sites and areas of high risk (via temporary fencing, signage etc.)	ACHA	Section 7.3 and Section 7.7
Procedures for the preparation and staged implementation of the archaeological research and salvage programs.	ACHA	Section 6
A protocol for the discovery and management of human remains within the Project Area, including stop work provisions and notification protocols.	ACHA	Section 7.5
Procedures for the management and reporting of previously unknown Aboriginal heritage sites that may be identified during the life of the Project, consistent with the management measures described in the ACHA (i.e. Management measures should give consideration to the site's heritage values).	ACHA	Section 7.4
A procedure for documenting, communicating and incorporating into the ACHMP a record of authorised impacts to sites, and a record of sites avoided (through detailed design for example).	ACHA	Section 7.7
A protocol for the protection, storage, management and access arrangements for salvaged Aboriginal objects informed by the wishes of the RAPs.	ACHA	Section 6.5

Commitment	Commitment Origin	Relevant Section of the ACHMP
A regular review process for the ACHMP that: • Considers operational adequacy and efficacy. • Updates the management detail of the ACHMP as the project progresses. Reviews the compliance of the ACHMP outcomes against the Project approval. • Initiates a mechanism for amendment in accordance with the above protocols.	ACHA	Section 9

4. Aboriginal heritage sites and heritage values within the Project area

4.1 Previous Aboriginal Heritage Assessments

Aboriginal heritage values and Aboriginal heritage sites have been identified in the Project area through a series of Aboriginal heritage surveys, assessments, and consultation with the RAPs. A schedule of previous Aboriginal heritage assessments is kept in Appendix 1. The core heritage values for the Project have identified as part of the Balranald Project EIS ACHA (Niche 2015) and Balranald MOD1 ACHA (EMM 2022).

4.2 Identified Heritage Values and Sites

4.2.1 The Cultural Heritage Landscape

The region in which the Project Area is situated contains a rich historical and archaeological record of past and present Aboriginal settlement/occupation during changing environments from the terminal Pleistocene to the present. The land within the Project forms a part of this record.

The Project Area has social value to the Aboriginal community because it contains archaeological sites and traditional resources that establish a link between the past and present Aboriginal use of the land. The Registered Aboriginal Parties have indicated a cultural and spiritual responsibility to participating in the management of Country, cultural knowledge, Aboriginal heritage values and Aboriginal heritage evidence for the health and social wellbeing of current and future generations. The continued experience and interaction of the Aboriginal community with the Project Area through the Project forms part of the social value of the Project Area for the Aboriginal community.

The Project Area has scientific value as parts of the Project Area may reveal important details about how and when Aboriginal people lived in this area, and how Aboriginal settlement of the area relates to, and informs what is known of Aboriginal history in nearby areas such as the Willandra Lakes Region World Heritage Area. In particular, the areas and sites of high and moderate significance within the Project Area may provide a story of how people have utilised the area, and how this utilisation relates to the active and inactive phases of Box Creek's history and the episodic filling history of the lakes as the availability of water changed from the terminal Pleistocene to the present. As well as providing information about the chronology and nature of Aboriginal settlement of the region, the Project Area may also provide additional information on the local and regional use and distribution of resources, such as raw materials for making stone tools.

In summary, the Project Area can be considered a cultural heritage landscape with a range of heritage values. The cultural heritage landscape within the Project Area consists of:

- Aboriginal Objects and Aboriginal Sites (the visible material evidence)
- landforms and landscapes where Aboriginal objects and evidence of past Aboriginal settlement in a changing environment do and are likely to occur, communicated through the Project's management Aboriginal archaeological risk layer, archaeological subsurface excavation program locations and significance assessments
- ecological values (for example, flora and fauna species, water use and environmental management practices) that have associations with cultural knowledge held by the Aboriginal community
- the continued experience and interaction of the Aboriginal community with the Project Area through the Project (as documented through ongoing consultation and cultural significance assessments).

4.2.2 Aboriginal Objects and Aboriginal Sites

Aboriginal objects are the physical evidence of the use of an area by Aboriginal people. They are also referred to as 'Aboriginal sites', 'relics' or 'cultural material'.

Aboriginal objects include (but are not limited to):

- physical objects, such as stone tools, fireplaces, Aboriginal-built fences and stockyards, scarred trees, and the remains of fringe camps
- material deposited on the land, such as middens
- the ancestral remains of Aboriginal people.

Aboriginal sites have been identified in the Project area as a result of survey and past archaeological assessment.

As of February 2015, the EIS identified over 383 Aboriginal sites recorded within 10 m of the Project Area. As of August 2022, MOD1 identified an additional 20 Aboriginal sites recorded within 10 m of the additional disturbance area.

The number of Aboriginal sites recorded in the Project area will increase as management and mitigation measures are implemented in accordance with this ACHMP.

Current Status of Aboriginal Sites in the Project Area

A record of Aboriginal heritage sites and their visible extent in the Project area is kept in the Balranald Aboriginal Heritage Database (BAHD) and the Balranald Geographic Information System (GIS) Database (Section 7.2).

A dated schedule of the Aboriginal sites in the Balranald Aboriginal Heritage Database is presented in Appendix 2. A dated schedule of Aboriginal Objects contained within Aboriginal sites within the Balranald Aboriginal Heritage Database is presented in Appendix 3.

Note: If the BAHD indicates that there aren't Aboriginal sites recorded it's important to remember that this doesn't mean they are not there. Aboriginal sites recorded in the BAHD are just the visible evidence of Aboriginal objects identified during cultural heritage surveys. Further Aboriginal objects can and will occur on the surface and be buried below the surface both within and outside the boundaries of a recorded Aboriginal site, especially in the moderate and high risk archaeological zones.

4.2.3 Aboriginal Archaeological Risk Layer and Archaeological Potential

The archaeological resource in the Project area is not limited to Aboriginal objects or sites that were visible at the time of past Aboriginal heritage assessments. The Project area also contains areas which are likely to contain subsurface Aboriginal objects – Aboriginal objects that have been buried by the accumulation of soil over time. Environmental processes such as erosion through wind, water or even vehicle traffic can also act to uncover previously buried Aboriginal objects. As a result, even if no Aboriginal heritage sites are recorded in a portion of the Project Area, there is the potential for previously unidentified Aboriginal objects to be present on the surface and below the ground surface.

The potential for Aboriginal objects within the Project Area has been captured through the development of an Aboriginal archaeological risk layer. The Aboriginal archaeological risk layer identifies areas of high, moderate, and low archaeological risk based on the presence of landscape features associated with the presence of Aboriginal objects. Table 3 defines the character of each of the levels of archaeological risk (i.e. the risk/likelihood that Aboriginal objects are present in the area). Table 4 provides additional information about the predicted average surface artefact density per hectare of a Western NSW land system (Niche 2015).

To read more about the process undertaken to the development of the Aboriginal archaeological risk layer refer to the Balranald Project Aboriginal Cultural Heritage Assessment (Niche 2015).

Table 3: Aboriginal Archaeological Risk Layer

Risk Layer Rating	Character of Risk Layer Rating
High	Landscape features associated with sites of moderate to high significance and frequent low density sites of low significance. These landscape features may be lunettes, dunes, scalds, and pans associated with depressions, relict lakes, relict creeks and vegetation suggesting shallow water tables. Land systems such as Marma, Hatfield, Youhl, Rata and Peretkin frequently contain these features.
Moderate	Landscape features associated with frequent isolated and low density sites, often of low significance. The landscape features may be dunes, scalds or pans and differ from the high risk rating due to their increasing distance from water or resource and/or the limited nature of that resource. Land systems such as Marma, Hatfield, Youhl, Rata and Peretkin frequently contain these features.
Low	Landscape features associated with low archaeological potential or infrequent, isolated Aboriginal objects of low significance. These landscape features are typically characterised by disturbed land or limited temporary or permanent water sources, mallee dunefields, calcareous rises or saltbush plains with few pan, scalds, soaks and depressions. Land systems such as Arumpo, Bulgamarra, Condoulpe and Gulthul often contain these landscape features.

Table 4: Visible surface artefact density per hectare of surveyed Western NSW land system in the Project Aboriginal Heritage Database

Land system	Artefacts per hectare of land system surveyed
Arumpo	0.1
Bulgamurra	0.5
Condoulpe	0.1
Gulthul	1.0
Hatfield	4.7
Marma	7.1
Perekertin	2.3
Rata	2.7
Riverland	0.1
Wilkurra	2.0
Youhl	4.5

Current Status of the Aboriginal Archaeological Risk Layer

The status of the areas of Aboriginal archaeological risk layer is kept in the Balranald Aboriginal Heritage database (Appendix 4).

4.2.4 Archaeological Subsurface Excavation Program Location

The significance assessment undertaken as part of the Aboriginal cultural heritage assessment for the Project identified that the primary research question and scientific value of the archaeological resource in the project area was the story of the Box Creek distributary streams of the Lachlan River and how people have utilised it and the nearby lakes as the availability of water changed from the terminal Pleistocene to the present. Of particular interest was whether people were using this area at different times and in different ways to the WLRWHA and the Lachlan River.

As areas within the moderate and high Aboriginal archaeological risk layer have a near continuous distribution of Aboriginal objects and Potential Archaeological Deposit (PAD), the Aboriginal cultural heritage assessment also identified a series of areas of archaeological research interest. These areas were identified on the basis that:

- Collectively they formed a sample of all landforms and landscapes within the moderate and high archaeological risk layer.
- They contained a greater likelihood of intact subsurface archaeological deposit.
- They contained potential greater than the background distribution of Aboriginal objects to provide information that may assist in understanding the key scientific and heritage values of the Project Area.

A selection of these areas of research interest became the archaeological subsurface excavation program locations.

Subsurface Excavation Program Locations

The status of the areas that form part of the subsurface excavation program is kept in the Balranald Aboriginal Heritage database. A copy is presented in Appendix 5. These areas identify where there are archaeological subsurface excavation commitments as part of the Aboriginal heritage research program to be completed prior to impact in these areas, further details are provided in Section 6.2 and Appendix 5.

5. Balranald Aboriginal Heritage Management Strategy

The emphasis of the Project heritage management strategy is to quantify and understand the heritage values of a place, a site, or an object and to minimise harm to heritage values where possible. If harm cannot be avoided then there must be consideration and implementation of strategies to minimise and mitigate harm (OEH 2011: 13).

The Project's hierarchy for the consideration of management strategies for surface stone artefacts and subsurface stone artefacts and areas of archaeological potential, fall into four general categories, in order of preference from a conservation perspective:

- avoidance and in-situ conservation
- partial avoidance and partial in-situ conservation (includes partial harm)
- harm caused with mitigating circumstances such as collection or salvage
- unmitigated harm.

The overall management strategies for the Project are as per Table 5.

Table 5 Summary of management strategies

Management Strategies	Section of the ACHMP
Ongoing involvement, communication and consultation with the Registered Aboriginal Parties and the Aboriginal Cultural Heritage Working Group	Section 7.1
Aboriginal heritage research program to mitigate harm in the moderate and high archaeological risk layer	Section 6
A geomorphic assessment to mitigate harm by providing additional information about the context of Aboriginal heritage	Section 6.1
An archeological subsurface excavation program to mitigate harm in specifically identified locations within the moderate and high archaeological risk layer	Section 6.2
Archaeological surface collection of Aboriginal objects to mitigate harm in the moderate and high archaeological risk layer	Section 6.3
Unmitigated harm in the low archaeological risk layer with the exception of culturally modified trees and suspected human remains	Section 7.4
Storage of Aboriginal artefacts	Section 6.5
Recording of Aboriginal sites in the Balranald Aboriginal Heritage Database and the Balranald Geographic Information System (GIS) Database	Section 7.2
Land disturbance procedure	Section 7.3
Management of new Aboriginal sites or finds of high heritage value	Section 7.4
Management of suspected and confirmed Aboriginal remains	Section 7.5
Management of Aboriginal sites where disturbance can be avoided	Section 7.7
Communication and raising cultural heritage awareness through inductions, training and toolboxes	Section 7.9
Incident Reporting	Section 8
Review of the ACHMP	Section 9

6. Aboriginal Heritage Research Program

The scale and geographical dispersal of the archaeological resource within the project area is large. In the areas that have been classified as high archaeological risk layers, there is a near continuous distribution of both surface and likely subsurface Aboriginal objects. These objects are located in a challenging depositional context affected by changing climate, environmental conditions, drainage regimes and landscape formation. As a result of the scale and geographic dispersal of surface and subsurface Aboriginal heritage evidence, it was necessary to distinguish between what was likely PAD and what was likely to contain elevated archaeological or research value.

The significance assessment undertaken as part of the Aboriginal cultural heritage assessment for the Project identified that the primary research question and scientific value of the archaeological resource in the project area was the story of the Box Creek distributary streams of the Lachlan River and how people have utilised it and the nearby lakes as the availability of water changed from the terminal Pleistocene to the present. Of particular interest is whether people were using this area at different times and in different ways to the WLRWHA and the Lachlan River.

The following sub research questions were identified based on the significance assessment and primary research question:

- How and when was the landscape formed?
- When was water available in the landscape?
- Are there buried and dateable archaeological deposits in the project area?
- How have site formation processes affected the archaeological deposits?
- When were people occupying the landscape?
- How were people utilising the landscape and what activities were they undertaking?
- How were people utilising stone raw materials in the project area and is there a connection to the stone sources in the WLRWHA?
- Do the contents and spatial patterning of sites within the project area demonstrate any relationships between the availability of resources within the landscape in the project area over time and how people were utilising the landscape within the project area and what activities they were undertaking over time?

Not all locations within the project area's disturbance area have the ability to answer these questions. Locations within the current disturbance area which have the potential to provide the most relevant information to the above questions include:

- Relict lake beds, wetlands, dunes and lunettes which can be sampled for changes in soil conditions and other environmental proxies.
- Sites which contain dateable hearths.
- Sites which contain artefact assemblages with a diverse range of artefact types and a high number of artefacts to inform how people were utilising the landscape and what activities they were undertaking – typically sites of moderate to high archaeological significance.
- Sites which contain dateable archaeological deposits and information about how the landscape was formed during the time people were utilising the landscape.

As a result, eight locations were selected that were considered to have the greatest potential to provide information that related to the above questions.

A sample of sandplain and drainage line features were also selected to form part of the landscape characterisation. These are presented in Table 8 and Appendix 6 and form the archaeological subsurface excavation program locations for the Project Area.

In order to manage and mitigate the impacts of the Project on the scientific and cultural values of the identified Aboriginal heritage evidence, Iluka has committed to an Aboriginal heritage research program in specifically identified areas where impact cannot be avoided within the moderate and high archaeological risk layers prior to disturbance of the areas. The aim being that a representative sample of artefacts and evidence can be collected before disturbance of the area, which will help answer the questions posed above.

The Aboriginal heritage research program consists of a number of components including:

- geomorphic assessment
- surface collection program of a sample of Aboriginal objects
- an archaeological subsurface excavation program in select locations
- the dating of selected samples recovered from the surface collection and subsurface excavation programs
- analysis of selected samples of Aboriginal objects recovered from the surface collection and subsurface excavation programs
- updated significance assessments of identified sites
- reporting on the results of the surface collection and subsurface excavation programs.

Details of each element of the research program are outlined in Sections 6.1– 6.5. A summary of the research program activities in each risk area is outlined in Table 6 below.

Table 6: Summary of the Research Program Activities by the Archaeological Risk Layer and Archaeological Subsurface Excavation Program Locations

Risk Layer	Unsurveyed Areas and K Sites identified in ACHA	Area of Research Interest
High	Aboriginal heritage research program (surface collection of artefacts)	Aboriginal heritage research program (surface collection and archaeological subsurface excavation commitments)
Moderate	Aboriginal heritage research program (surface collection of artefacts)	Aboriginal heritage research program (surface collection and archaeological subsurface excavation commitments)
Low	No management and mitigation measures	-

6.1 Geomorphic Assessment

As part of the Aboriginal heritage research program, Iluka has committed to a geomorphic assessment to be undertaken by a qualified geomorphologist. Table 7 summarises the triggers, commitments, and timeframes for the geomorphic assessment.

Table 7: Geomorphic Assessment Commitments

Triggers for geomorphic assessment	Commitments, Aims and Objectives of the Geomorphic Assessment	Timeframes	Roles and Responsibilities
Prior to or at the beginning of the archaeological subsurface excavation program	A geomorphologist to assist, if required, in the refinement of any archaeological subsurface excavation methodologies (such as, if required, providing guidance on the final placement of archaeological stratigraphic trenches).	To be completed as part of the Aboriginal heritage research program	The geomorphologist is to work in consultation with the heritage consultant to meet the objectives of the geomorphic assessment
Commencement of the Aboriginal heritage research program	Utilise existing available soil information to help characterise the stratigraphy of the Project Area and the chronology of Aboriginal occupation of the landscape Assist in the interpretation of stratigraphic trenches during the archaeological subsurface excavation program.	To be completed by the end of the Aboriginal heritage research program	

Triggers for geomorphic assessment	Commitments, Aims and Objectives of the Geomorphic Assessment	Timeframes	Roles and Responsibilities
Commencement of the archaeological subsurface excavation program	Assist in the collection of samples from the archaeological subsurface excavation program that may help characterise the stratigraphy of the Project Area and the chronology of Aboriginal occupation of the landscape.	To be completed during the subsurface Aboriginal heritage research program	
Completion of the archaeological subsurface excavation program	Utilise the material and information gathered from the archaeological subsurface excavation program and other sources to provide a geomorphic assessment which improves the pre-approval understanding of the terminal Pleistocene and Holocene landscape within the Project Area as it relates to Aboriginal occupation.	Within 6 months of the completion of the Aboriginal heritage research program	

6.2 Archaeological Subsurface Excavation Program

The aims and objectives of the archaeological subsurface excavation research program are:

- Mitigate harm in areas proposed for disturbance by collecting a representative sample of subsurface environmental data and Aboriginal cultural materials in a controlled way.
- Obtain better resolution on nature, distribution, and state of preservation of subsurface deposits in the landscape.
- Provide a sample of dating samples (such as Optically Stimulated Luminescence (OSL), charcoal, shell or other) and soil samples, subject to the Procedures outlined in Section 6.4 and Appendix 6 and in consultation with the RAPs, to improve the understanding of the chronology of Aboriginal occupation in the Project Area.
- Provide a sample of artefacts and other cultural materials (if present) to, subject to the Procedures outlined in Appendix 6 and in consultation with the RAPs, to improve the understanding Aboriginal occupation and land use in the Project Area.
- Provide a representative sample of Aboriginal objects which may be utilised, subject to the procedures outlined in Section 6.4 and Appendix 6 and in consultation with the RAPs, for educational purposes or for additional analysis.
- Capture a sample of archaeological and heritage values which may improve our understanding of the story of the Box Creek distributary streams of the Lachlan River and how people have utilised it and the nearby lakes as the availability of water changed from the terminal Pleistocene to the present.
- An improved assessment of the archaeological resources and Aboriginal heritage values of the Project Area based on subsurface excavation data to inform the ACHMP and management of Aboriginal heritage values in the Project Area.

The scope of the subsurface excavation program will include the:

- collection of charcoal, OSL and other dateable samples (if present)
- collection of soil samples
- collection of artefacts and other cultural materials (if present)
- assessment and reporting on the results of subsurface excavation program, including updating of the archaeological risk layer and significance assessments of sites, based on the results of the subsurface excavation program.

The EIS ACHA identified eight locations to be targeted by the archaeological subsurface excavation program, should those areas be proposed for disturbance. The scale of the subsurface excavation to be undertaken at each of the locations if impacts cannot be avoided is shown in Table 8 below. The archaeological subsurface excavation program locations (unless avoided) are depicted in Figure 31 to Figure 35.

An additional twelve locations within the moderate and high archaeological risk layer have been included to provide data on the sand plain landform and to provide additional information regarding dune and drainage line features. Seven of these locations occur within the West Balranald Mine, while five of these locations will be placed within the disturbance area of the high risk archaeological layer within the Injection borefield and Haul Road infrastructure.

Table 8: Locations and commitments for the subsurface excavation program

Location	Landform Samples	Commitment in areas where impact cannot be avoided	Volume of soil to be excavated
Location 1	Low and eroding source bordering dunes in Injection Borefield 8 associated with wetland features and Aboriginal sites TO 2 / TO 20 and W 2	2 stratigraphic trenches Exploratory test pits with targeted open area salvage excavation	Up to 11 m3 (11 cubic metres)
Location 2	Series of dunes and swales in injection Borefield 5 (BWR 32, BWR 44, B 81)	2 stratigraphic trenches Exploratory test pits with targeted open area salvage excavation	Up to 15 m3 (15 cubic metres)
Location 3	A series of sand hills and source bordering dunes in Injection Borefield 5 and Injection Borefield 4 associated with alluvial plains and known Aboriginal sites UD 81 to UD 106	2 stratigraphic trenches Exploratory test pits with targeted open area salvage excavation	Up to 15 m3 (15 cubic metres)
Location 4	Relict lunette, lake bed source bordering dunes associated with relict lakes in Injection borefield 3 and associated with known Aboriginal sites UD 34 to UD 80	2 stratigraphic trenches Exploratory test pits with targeted open area salvage excavation	Up to 16 m3 (16 cubic metres)
Location 5	Relict lunette, lake bed source bordering dunes associated with relict lakes in Injection borefield 3 and associated with known Aboriginal sites UD 34 to UD 80	1 stratigraphic trench Exploratory test pits with targeted open area salvage excavation	Up to 6 m3 (6 cubic metres)
Location 6	Relict lunette, lake bed source bordering dunes associated with relict lakes in Injection borefield 3 and associated with known Aboriginal sites UD 34 to UD 80	1 stratigraphic trench Exploratory test pits with targeted open area salvage excavation	Up to 6 m3 (6 cubic metres)
Location 7	Western shoreline and source bordering dunes of Tin Tin Lake, in proximity to overflows of Box Creek, within Injection Borefield 5 and associated with known Aboriginal sites WB 107 and Karra 33	2 stratigraphic trenches Exploratory test pits with targeted open area salvage excavation	Up to 20 m (20 cubic metres)3
Location 8	Margins of the western lunette and dune deposit of Muckee Lake, within West Balranald mine, and associated with WB 40 and WB 67 to WB 81	2 stratigraphic trenches Exploratory test pits with targeted open area salvage excavation	Up to 20 m3 (20 cubic metres)
West Balranald	Sandplains/drainage features within the moderate or high risk archaeological layer	Exploratory test pitting at 7 locations	Up to 19 m3 (19 cubic metres)
Injection Borefields and Haul Roads	Sandplains/drainage features to the north of West Balranald mine within the high archaeological risk layer	Exploratory test pitting at 5 locations	Up to 7 m3 (7 cubic metres)

The proposed subsurface excavation will be undertaken in accordance with the procedures described in below and in Appendix 6.

It is anticipated that within the scope of works up to 135 m3 (135 cubic metres) of subsurface excavation may be achieved. In reality the sample size may be more or less than this. The amount achieved will depend on a number of variables, including:

- the final placement of infrastructure and whether subsurface excavation Locations 1 -7 can be avoided
- the depth of the proposed impacts in an investigation area
- whether stratigraphic trenches indicate likely subsurface cultural deposits
- whether exploratory test pitting triggers open area salvage excavation
- the depth of any cultural deposits
- the depth of the water table
- the structure of the soil (whether it is cemented, for example).

The extent of the salvage excavation must take into consideration the excavation volumes commitments identified in Table 8. Where the extent of the anticipated excavation volumes exceed that amounts identified in Table 8 and/or the upper limiting 135 m3 (135 cubic metres) of excavated archaeological sample, further salvage will be at the discretion of Iluka with advice from a suitably qualified and experienced archaeologist and RAPs.

6.3 Archaeological Surface Collection

In areas where impacts cannot be avoided, Iluka will undertake an archaeological surface collection of Aboriginal objects within land that falls within the moderate and high archaeological risk layers.

The key aims and objectives of the surface collection will be to:

- Mitigate harm by collecting a representative sample of Aboriginal objects in a controlled way.
- Provide a representative sample of Aboriginal objects which may be utilised, subject to the procedures outlined in below and in consultation with the RAPs, for educational purposes or for additional lithic analysis.
- Provide a representative sample of dateable material which may be dated to provide additional chronological information regarding Aboriginal occupation of the Project Area.
- Improve survey coverage in areas of moderate to high archaeological risk layers to be disturbed thereby mitigating operational risk of high value unexpected heritage finds.

Where impacts cannot be avoided in the moderate to high archaeological risk layer, an archaeological surface collection will:

- Be undertaken by appropriately qualified and experienced archaeologists and representatives of the Registered Aboriginal Parties, where available.
- Be undertaken prior to any activities or impact occurring in that area.
- Define collection areas that:
    - are based on impact footprints with a suitable buffer, if required
    - consider previously surveyed areas. For instance, in areas that have previously been surveyed, surface collection should be defined by both the impact footprint and the boundaries of known Aboriginal sites

- in areas that have not previously been surveyed, surface collection will occur across the entirety of unsurveyed land to be impacted within the moderate to high risk layers. Defining collection areas will consider site photography and site recording to a minimum of the standards outlined in the *Code of Practice for Archaeological Investigation in NSW* (or as per the most current regulation) and could consider using a gridded system (eg.100 m x 100 m areas).

- Involve a systematic collection of a representative sample [1]of surface Aboriginal heritage evidence with respect to the nature and extent of heritage evidence and that delineates collection areas, takes site and site feature photographs and records the provenance of each Aboriginal object or site feature (such as hearth or shell deposit):
  - This process may take the form of flagging all Aboriginal objects.
  - Each Aboriginal object will be point provenanced using methods which achieve +/- 3 m or better accuracy[2], collected and labelled a Unique Reference Number (URN).
  - Where intact hearths or intact suspected hearths are present, hearths will be will be point provenanced using methods which achieve +/- 3m or better accuracy[3] and the hearth will be excavated using a 0.5 m x 0.5 m test pit to take bulk samples to confirm cultural or natural origins and dating samples collected. Collected material will be bagged and labelled with a URN in accordance with current archaeological practice and standards.
  - Where shell is present and indicative of cultural use and in sufficient quantities to suggest a midden, dating samples will be collected or a 0.5 m x 0.5 m test pit will be excavated targeting the feature to confirm cultural or natural origins and dating samples collected. The test pit and extent of the shell deposit will be point provenanced using methods which achieve +/- 3 m or better accuracy[4], collected and labelled a Unique Reference Number (URN).
  - In delineated collection areas, the archaeologist will do a preliminary in field assessment of the heritage evidence against the guideline for significance (Appendix 7) and TARPs (Section 7.4). The archaeologist will then follow the TARP and notify Iluka immediately if any further actions are triggered.
  - Where Aboriginal objects in previously recorded sites cannot be identified after a reasonable search[5], the surface collection for that site will be considered to be complete.
- The attending archaeologist will provide written notification to Iluka of the completion of the surface collection in a designated collection area.
- Collected spatial data will be provided to Iluka.
- Iluka (or a consultant engaged on their behalf) will update the Project Aboriginal Heritage Database to reflect the completed surface collection works.
- Collected Aboriginal objects will be entered into the Project Aboriginal Heritage Database on a progressive basis.
- Recovered archaeological material will be stored in accordance with the Temporary Storage Protocol in Section 6.5.

- A representative sample of Aboriginal objects may be selected for further lithics analysis and attribute recording.

[1] For the purposes of this document and the surface collection protocol, a representative sample and reasonable search is defined as those Aboriginal objects that are identified as a result of a systematic pedestrian walk over of the site with participants spaced 2m or less apart. This participant spacing may be greater if agreed to by the representatives of the Registered Aboriginal Parties during the collection and documented.
[2] Such methods, for instance, may involve the use of differential GPS and/or total station etc.
[3] Such methods, for instance, may involve the use of differential GPS and/or total station etc.
[4] Such methods, for instance, may involve the use of differential GPS and/or total station etc.
[5] For the purposes of this document and the surface collection protocol, a representative sample and reasonable search is defined as those Aboriginal objects that are identified as a result of a systematic pedestrian walk over of the site with participants spaced 2m or less apart. This participant spacing may be greater if agreed to by the representatives of the Registered Aboriginal Parties during the collection and documented.

6.4 Analysis, Dating and Reporting for the Aboriginal heritage research program

Post salvage analyses for material recovered from the archaeological surface collection and subsurface excavation program will include:

- basic attribute recording and cataloguing of recovered lithic material by a suitably qualified individual (s)
- excavated and surface collected stone artefacts will be considered by a qualified archaeologist for detailed technological analysis by a lithic specialist and a representative sample of collected material analysed
- the submission where available and deemed appropriate by a suitably qualified and experience archaeologist of excavated dating samples (such as charcoal, OSL).

Post excavation analysis will not delay mining or associated activities within the boundaries of any salvaged sites.

Analysis of collected and salvaged artefacts will seek to improve our understanding of past Aboriginal land use and occupation in the Project Area. If the analysis would not significantly further this knowledge, then it is not warranted.

Analysis commitments for the Aboriginal heritage research program are summarised in Table 9. Reporting requirements for the Aborginal heritage research program are summarised in Table 10.

6.5 Temporary storage of recovered Aboriginal heritage evidence

Any Aboriginal objects salvaged under the Project may be temporarily stored in a secure facility either in Balranald town or at the Project office, prior to transfer to their final destination. A Care and Control Agreement under Section 85 of the National Parks and Wildlife Act will be obtained for their temporary storage.

Aboriginal objects requiring analysis and recording may be temporarily stored at the office of the Iluka's Aboriginal heritage consultant. Such objects will be stored in a secure location and returned to Iluka as soon as practical after analysis and recording is completed. Aboriginal cultural material that is suitable for dating may be submitted to a laboratory and used for dating purposes.

Iluka is committed to working with the RAPs to identify suitable long term locations for recovered Aboriginal heritage evidence and identifying any requirements for Care and Control Agreements under Section 85 of the *National Parks and Wildlife Act*. Options being explored include the reburial of Aboriginal objects on country.

A summary of commitments regarding temporary and long term storage of recovered Aboriginal heritage evidence is presented in Table 11.

Table 9: Commitments for the analysis and dating of Aboriginal heritage evidence recovered by the Aboriginal heritage research program

Triggers	Commitments	Timeframes	Responsibility
Recovery of stone artefacts	Basic attribute recording for all stone artefacts recovered	Within 12 months of the completion of an Aboriginal heritage research program activity	Iluka to engage a qualified archaeologist or lithic specialist to undertake the attribute recording
Recovery of Aboriginal heritage evidence	Curation of recovered Aboriginal heritage evidence To store any samples that are not dated as part of the archaeological site record in accordance with the protocols for temporary curation of Aboriginal heritage evidence (Section 6.5)	Within 12 months of the completion of an Aboriginal heritage research program activity unless otherwise negotiated	Iluka to facilitate
Collection of a representative sample of archaeological material and contexts that have good potential to provide dates to inform Aboriginal occupation in the Project Area	To date a representative sample of Aboriginal heritage evidence recovered from the surface collection and archaeological subsurface excavation program	Within 12 months of the completion of the Aboriginal heritage research program	Iluka and /or Iluka's delegated representative
Collection of a representative sample of archaeological material and contexts that may inform the primary research questions for the Project Area	If applicable and if assessed to be informative, a selected number of additional technical studies that will inform the primary research questions for the Project Area on a representative sample of recovered material. Such studies may include, for example: • use, wear, and residue analysis • refitting studies • more detailed lithic analysis • environmental analysis (e.g. pollen counts, fire history etc).	As required	Iluka and/or Iluka's delegated representative

Table 10: Summary of reporting commitments for the Aboriginal heritage research program

Reporting Triggers	Reporting Commitments	Reporting Timeframes	Reporting Responsibility
Completion of a surface collection over a defined collection area or subsurface excavation in an area that forms part of the archaeological subsurface excavation program	Notification of the completion of a surface collection or subsurface excavation location	Within 28 days of the completion of a collection area	Iluka's delegated representative such as the archaeologist/ heritage consultant
	Provision of all spatial data collected	Within 28 days of the completion of the collection area	Iluka's delegated representative such as the archaeologist/ heritage consultant
	Update the BAHD and submit any AHIMS site cards or AHIMS Site Impact Recording Forms	Within 28 days of the completion of a collection area	Iluka to update the BAHD

Reporting Triggers	Reporting Commitments	Reporting Timeframes	Reporting Responsibility
	An interim salvage report that identifies the location of any recovered Aboriginal objects, includes any relevant draft significance assessment and gives consideration of the results as they relate to the statements of significance and cumulative impact assessments for the Project Area.	Within 12 weeks of the completion of the surface collection area	Iluka to provide the opportunity for the RAPs to review the interim salvage reports in accordance with the Ongoing Communication Protocols
	Utilise the material and information gathered from the archaeological subsurface excavation program and other sources to provide a geomorphic assessment which improves the pre-approval understanding of the terminal Pleistocene and Holocene landscape within the Project Area as it relates to Aboriginal occupation and that gives consideration of the results as they relate to the significance and cumulative impact assessments for the Project Area.	Within 6 months of the completion of the Archaeological subsurface excavation program	The geomorphologist is to work in consultation the heritage consultant to meet the objectives of the geomorphic assessment
	A final salvage report that includes any dating and analysis of recovered material, incorporates a geomorphic assessment, significance assessments and considers the cumulative significance and cumulative impact against the statement of significance and cumulative impact for the project area	Within 12 months of the completion of the component of the Aboriginal heritage research program unless otherwise negotiated with the RAPs	A suitably qualified individual such as an archaeologist Iluka to provide the opportunity for the RAPs to review the interim salvage reports in accordance with the Ongoing Communication Protocols
Completion of the final salvage report	Update the ACHMP as required	As required	Iluka or Iluka's delegated representative

Table 11: Commitments regarding temporary storage for recovered Aboriginal heritage evidence

Commitments	Timeframes	Considerations	Roles and Responsibilities
Iluka to provide an appropriate secure temporary storage facility on country for recovered Aboriginal heritage evidence	Prior to the commencement of the Aboriginal heritage research program until such time as the Aboriginal objects can be moved to a permanent repatriation location		Iluka will be responsible for controlling and monitoring access to the temporary storage facility
			RAPs will provide Iluka with a list of authorised individuals who can access the temporary storage facility
Iluka to provide appropriate secure temporary, temperature controlled storage facility on country for any recovered human skeletal material	As required until such time as the recovered human skeletal material is repatriated to a permanent resting place		Iluka will be responsible for controlling and monitoring access to the temporary storage facility RAPs will provide Iluka with a list of authorised individuals who can access the temporary storage facility
In order to complete analysis and attribute recording of Aboriginal heritage evidence, some Aboriginal objects may be temporarily stored in Off-country temporary storage	As required	Minimise time of Aboriginal objects off country	Iluka or delegate (such as heritage specialist) will be responsible for the safe keeping of the Aboriginal objects until such time as they can be returned to the temporary storage facility
Determine a permanent repatriation location for the reburial of Aboriginal Heritage evidence on country	By rehabilitation and closure	The specific location for the reburial of the Aboriginal cultural heritage material is currently unknown but locations on country will be considered RAPs may wish to work together towards a Care and Control Agreement for any alternate permanent repatriation locations including, but not limited to keeping places, museums, teaching collections etc.	RAPs and Iluka will work together to identifying viable reburial location(s) for Aboriginal heritage evidence RAPs will be responsible for identifying, negotiating and managing any alternate permanent repatriation locations including, but not limited to keeping places, museums, teaching collections etc. This process will require a Care and Control Agreement with OEH.
Determine a permanent repatriation location place for any Aboriginal human remains, as required	As required, by rehabilitation and closure	Reburial of human remains is to be undertaken within approximately 25 km of the location they were discovered, on country and in consultation with RAPs	Iluka to work with RAPs to identify a suitable permanent repatriation location for Aboriginal human remains

7. Ongoing Management of Aboriginal Heritage at Balranald

7.1 Communication, Consultation, and involvement of Registered Aboriginal Parties

7.1.1 Primary Aims and Objectives

Iluka is committed to act in accordance with its Stakeholder Relations Policy and Intellectual Property Policy. The primary aims and objections of ongoing consultation with Registered Aboriginal Parties is to:

- Acknowledge that Aboriginal people are a primary source of information and determinants about the value of their heritage and how this is best protected and conserved by:
    - facilitating the continued experience and interaction of the RAPs with the Project Area through the Project as an important aspect of cultural heritage values of the Project Area
    - providing the opportunity for the RAPs to have an active role in any Aboriginal cultural heritage planning process
    - providing the opportunity for RAPs to have input into the assessment of the cultural significance of their heritage and its management so they can continue to fulfil their obligations towards their heritage.
- Manage the way in which cultural knowledge and other information relating specifically to Aboriginal heritage is used, as this may be an integral aspect of its heritage value.
- Ensure employees engage with stakeholders in a manner that reflects industry leading practice and which fosters mutual respect and trust.

7.1.2 Registered Aboriginal Parties

The RAPs for the Project are:

- the Balranald Local Aboriginal Land Council
- the descendants of Alice Kelly, the Muthi Muthi people, represented by Mr. Daniel Kelly through the Balranald Aboriginal Health Service
- Paul Charles Kullila Site Consultants
- National Koori Site Management
- Kay Dowdy.

Iluka acknowledges the above groups as the primary stakeholders to be consulted in relation to the ongoing management of Aboriginal heritage associated with the Project and this ACHMP. RAPs will have a primary consulting role in reviewing draft reports, participating in the Aboriginal heritage research program and providing input on the cultural significance of Aboriginal heritage in the Project Area.

Iluka is committed to maintaining ongoing consultation with all RAPs throughout the life of the Balranald Project. It is the responsibility of RAPs to ensure that up-to-date contact details (full name, postal address, telephone number, and where possible, email address) are provided to Iluka.

7.1.3 Interested Aboriginal Parties

Interested Aboriginal Parties are local Aboriginal stakeholders, groups and individuals who have indicated a later interest in the Aboriginal cultural heritage activities at the Balranald Project following the 2012 date for registering Aboriginal parties. Cynthja and Gary Pappin contacted Iluka in May 2015 indicating an interest. Cynthja and Gary Pappin were invited to consult on the development of the ACHMP and invited to participate in fieldwork activities for the first phase salvage of artefacts on the Balranald site.

Following the completion of the ACHMP, Aboriginal parties or individuals showing a later interest in the Balranald Project (post 2012) will:

- receive project updates in accordance with Table 12
- be invited to participate in fieldwork activities when opportunities become available in accordance with the ongoing communication and consultation protocols outlined in Table 12 and Table 13 Aboriginal Cultural Heritage Working Group

An Aboriginal Cultural Heritage Working Group (working group) will be established prior to the commencement of construction activities at the West Balranald mine. The working group will consist of a representative of each existing RAP listed in 7.1.2, Iluka's appointed Aboriginal Cultural Heritage experts, government (if available), and Iluka. One to two places will be available on request on a case by case, meeting by meeting basis to Interested Aboriginal Parties. The working group will meet at least twice a year, and be an advisory committee which Iluka will work with in relation to the ongoing management of Aboriginal heritage associated with the Balranald Project. Iluka will:

- call for expressions of interest from Aboriginal stakeholders
- ensure a Charter for the working group is developed once the group is established.

7.1.4 Protocols for Ongoing Communication and Consultation

Actions, commitments, timeframes and roles and responsibilities to meet the aims and objectives for ongoing communication and consultation with the RAPs and interested Aboriginal stakeholders are identified in Table 12, Table 13, Table 14, Table 15, Table 16 and Table 17.

Table 12: Ongoing Communication and Consultation Protocols

Actions/triggers	Commitments	Timeframes	Roles and Responsibilities
Consultation meetings with the RAPs	Iluka to facilitate consultation meetings as required. Decisions pertaining to the ACHMP will be based on the opinions of RAP participants who attend meetings and any written comments provided subsequently within an identified timeframe.	Provide RAPs at least 5 working days notification of any meetings.	Iluka to contact the RAPs and facilitate meetings
Meetings with the Aboriginal Cultural Heritage Working Group (the working group)	Iluka to facilitate project update meetings at least twice a year (additional meetings as required).	Provide working group members at least 5 working days notification of any meetings.	Iluka to contact the Aboriginal Cultural Heritage Working Group and facilitate meetings. Iluka to provide notification to Interested Aboriginal Parties.

Actions/triggers	Commitments	Timeframes	Roles and Responsibilities
Project updates to the Project that have implications for Aboriginal cultural heritage management	Iluka to notify RAPs, Interested Aboriginal Parties and working group of any project updates that have implications for Aboriginal cultural heritage management in a timely manner and identify a timeframe for the RAP and Interested Aboriginal Parties to respond within.	In a timely manner and at the biannual working group meetings.	RAPs, Interested Aboriginal Parties and working group to respond to any relevant requests for information regarding the project updates within the identified timeframe.
A need to vary the methodologies for the Aboriginal heritage research program	Where a methodology is different from that already approved by the RAPs or in the ACHMP Iluka will provide the RAPs with a copy of the Proposed Methodology and the opportunity to provide input into the final methodology.	Provide a minimum of 21 days for RAPs to review methodology changes, unless otherwise negotiated with the RAPs.	RAPs to provide feedback on the proposed methodology within 21 days, including the identification of issues ort areas of cultural significance that might affect, inform or allow refinement of the methodology.
Major revisions to the ACHMP	Iluka to provide a draft copy of any updated ACHMPs to the RAPs and working group and allow 21 days for responses. Iluka will document and consider all comments received from the RAPs and working group in the finalisation of the ACHMP. Iluka will inform the working group and interested parties of any updates to the ACHMP.	Provide a minimum of 21 days for RAPs and working group to review the revised ACHMP, unless otherwise negotiated with the RAPs and working group Provision of the final version of any updates of this ACHMP to RAPs and the working group and interested parties within 30 working days of its completion.	RAPsand working group to provide feedback to any updates to the ACHMP within 21 days. RAPs and working group to Identify any cultural heritage issues within updates to the ACHMP. Where necessary, Iluka will engage relevant specialists to provide input on managing heritage resources (such as an archaeologist on archaeological resources).
Draft Reports pertaining to Cultural Heritage Activities (such as the Aboriginal heritage research program activities, cultural heritage surveys) and Significance Assessment	Iluka's designated heritage consultant to produce an interim draft report within 12 weeks of the completion of any cultural heritage activity and a final report within 12 months of the completion of the cultural heritage activity. Provide RAPs with draft report and identify a timeframe for RAPs to provide a response.	Iluka to provide a minimum of 21 days for RAPs to review draft reports	RAPs to provide feedback on draft reports, significance assessments within the identified timeframe for response.
Identification of new Aboriginal sites (excluding suspected human remains)	Iluka to provide notification to RAPs of the identification of new sites and to identify a timeframe for RAPs to provide any additional information. Iluka to provide the opportunity for RAPs to provide input on the cultural significance of Aboriginal sites identified. Iluka to inform and update the working group.	Provide notification to RAPs within 28 days of a new site being identified. Inform the working group within 28 days and provide an update at the biannual meetings.	All to follow the TARP for the Identification of an Aboriginal Site. (Section 7.4) Iluka to identify a timeframe to receive input from the RAPs RAPs to provide input into cultural significance of the site in the identified timeframe. Iluka to inform and update the working group and interested parties.

Actions/triggers	Commitments	Timeframes	Roles and Responsibilities
Identification of new Aboriginal site – culturally modified tree	Iluka to provide notification to RAPs of the identification of new sites and to identify a timeframe for RAPs to provide any additional information. Iluka to provide the opportunity for RAPs to provide input on the cultural significance of Aboriginal sites identified Iluka to consult with RAPs and engage relevant specialists (for example an archaeologist and arborist) to assist in the development of management and mitigation strategies to remove and conserve the culturally modified tree if disturbance cannot be avoided.	Provide notification to RAPs within 28 days. Inform the working group within 28 days and provide an update at the biannual meetings.	All to follow the TARP for the Identification of an Aboriginal Site. (Section 7.4) Iluka to identify a timeframe to receive input from the RAPs. RAPs to provide input into cultural significance of the site in the identified timeframe. RAPs to provide input into management and mitigation measures in the identified Timeframe.
	Iluka to inform and update the working group.		Iluka to inform and update the working group and interested parties.
Discovery of suspected human remains	Iluka to notify RAPs of the discovery of suspected human remains. Iluka to provide the opportunity for RAPs to monitor the investigation process for the suspected human remains. Iluka to provide the opportunity for RAPs to have input on the cultural significance of any Aboriginal heritage remains. Iluka to consult with the RAPs on the management and mitigation strategies for any Aboriginal human remains, including any further investigation for multiple burials and reburials. Iluka to work with RAPs to develop a protocol and timeframes for undertaking smoking ceremonies that relate to the discovery of suspected human remains. Iluka to inform and update the working group and Interested Aboriginal Parties.	Iluka to provide RAPS with notification of the discovery suspected human remains within 24 hours. Inform the working group and Interested Aboriginal Parties within 28 days and provide an update at the biannual meetings.	All to follow the TARP for the Discovery of Suspected Human Remains (Section 7.5) All to follow Iluka Media Protocol. RAPs to provide input on: the management and mitigation measures of the treatment of any Aboriginal human remains. The cultural significance of any Aboriginal human remains and the landscape they are in. To work with and complete any cultural ceremonies (including but not limited to smoking ceremonies) with Iluka in a timely manner.
			Iluka to inform and update the working group and Interested Aboriginal Parties.
Unauthorised Ground Disturbance Resulting in disturbance to Suspected Aboriginal Human remains	Iluka to notify RAPs of the disturbance of suspected human remains	Iluka to notify RAPs within 24 hours	All to follow Iluka Incident Reporting and Investigation procedure and Iluka TARP for the Discovery of Suspected Human Remains (Section 7.5).
Unauthorised land disturbance and other incidents resulting in unauthorised disturbance to Aboriginal objects	Iluka to notify RAPs of any incidents that result in the unauthorised disturbance of Aboriginal objects	Iluka to notify RAPs within 7 days	All to follow the TARP for unauthorised land disturbance (Section 7.3.5) and TARP for the Identification of an Aboriginal Site (Section 7.4)

Actions/triggers	Commitments	Timeframes	Roles and Responsibilities
ACHMP Procedures and Protocols not followed	All personnel will work together to ensure compliance with project requirements	-	All to follow Iluka Incident Reporting and Investigation procedure (See Section 9)
Discovery of multiple Aboriginal human remains	Iluka will undertake significance and cumulative impact assessments in accordance with relevant guidelines, the TARP for the Identification of an Aboriginal Site (Section 7.4) and the TARP for the Discovery of Suspected Human Remains (Section 7.5)		All to follow Iluka Media Protocol RAPs to provide input on: • the management and mitigation measures of the treatment of any Aboriginal human remainsThe cultural significance of and the cumulative impact to any Aboriginal human remains and the landscape they are in • To work with and complete any cultural ceremonies (including but not limited to smoking ceremonies) with Iluka in a timely manner Iluka to inform and update the working group
Disputes or Concerns (including but not limited to any disputes relating to significance assessments or cumulative impact assessments)	RAPs and Iluka will engage in a dispute resolution process if and where required. Iluka will consult with the working group if and where required. Any disputes with the working group that cannot be resolved will be arbitrated by the Secretary in accordance with the Conditions of Consent		RAPs and / or working group will notify Iluka as soon as practical regarding any potential heritage concerns. All will follow Incident Reporting and Investigation (TRIM reference STD1354) and Grievance management processes (Section 8) RAPs will consult with suitable Elders to assist to resolve any disputes between Iluka or other stakeholder groups as required.

Table 13: Fieldwork commitments

Commitments	Timeframes	Roles and Responsibilities
Iluka will provide the opportunity for at least one representative from each of the RAP groups to participate in the fieldwork team for the Aboriginal heritage research program activities. Iluka may fill vacant positions on a fieldwork team with other RAP representatives, a representative from an interested Aboriginal party, or an	Iluka to provide RAPs with no less than 4 day's notification of any cultural heritage activities to occur, unless otherwise agreed with all the RAPs.	RAPs will ensure that all individuals engaged in cultural heritage activities have completed the Iluka pre-placement medical and inductions unless otherwise granted approval from Iluka in writing. Iluka or Iluka's designated representative, RAPs and interested Aboriginal parties will ensure that all contract agreements have been met RAPs and interested Aboriginal parties will ensure that all field workers have the necessary skills, equipment and qualifications to complete the work

Commitments	Timeframes	Roles and Responsibilities
archaeologist if an invited participant is unable to attend.[6]		
Iluka may provide the opportunity for at least one representative of a single RAP group to undertake other additional any smaller cultural heritage activities where required.	As required	RAPs will comply with all employment, work health and safety and ACHMP requirements for the activity Iluka or Iluka's designated representative and RAPs will ensure that all contract agreements have been met. RAPs will ensure that all individuals engaged in cultural heritage activities have completed the Iluka pre-placement medical and inductions unless otherwise granted approval from Iluka in writing. RAPs will ensure that all field workers have the necessary skills, equipment and qualifications to complete the work
Iluka or its nominated representative will provide a logbook to provide members of the fieldwork team with an opportunity to communicate any cultural heritage issues or cultural heritage significance identified during fieldwork	As required	Members of the fieldwork team will complete the logbook as required to communicate any cultural heritage issues or identified objects/sites/areas of cultural significance

Table 14: Culturally sensitive dates during which activities requiring Aboriginal heritage inputs/participation should be avoided

Dates	Activity	Description
26 January	Australia Day	This public holiday, and surrounding days, are increasingly seen as a time of trauma for Aboriginal people, and any work activities will be re-scheduled to avoid this date.
27 May – 3 June	National Reconciliation Week, includes Sorry Day	A week during which Australians are encouraged to learn about shared histories, cultures, and achievements, and to explore how one can contribute to achieving reconciliation in Australia. Aboriginal people are often committed to activities during this week and will often be unavailable.
First Sunday – Second Sunday July	NAIDOC week	A week during which Australians are encouraged to celebrate Aboriginal history, cultural and achievements. Aboriginal people are often committed to activities during this week and will often be unavailable.
-	Sorry business	Sorry business is when a member of the Aboriginal community has passed away, and includes the funeral, mourning period and other related associated activities. The timing for these is unknown and can be variable, but when advised that there is Sorry business, the project activity should be postponed.

Table 15: Intellectual property and media protocol consultation commitments

	Commitments	Timeframes	Roles and Responsibilities
Intellectual Property and Privacy	To identify and communicate any restrictions on the communication of intellectual property, privacy or the communication of cultural knowledge. To manage intellectual property in a way that is respectful and enables Iluka to meet its project objectives and project approval conditions.	As early as possible during: Notification periods Fieldwork Report review periods Meetings	RAPs, Interested Aboriginal Parties the working group and Iluka are to follow Iluka's Intellectual Property policies and media protocol. RAPs are responsible for identifying and communicating any restrictions on intellectual property, privacy or the communication of cultural knowledge. Iluka and RAPs will work together to develop intellectual property strategies that enable Iluka to meet its project objectives and project approval conditions.
Intellectual Property, Privacy and Media Protocol in relation to Aboriginal remains	Once Aboriginal remains are confirmed, an agreement must be reached between the RAPs and Iluka prior to any additional studies being undertaken No information is to be provided to the media without consent from the RAPs and Iluka Any contact with the media must be conducted through Iluka's media protocol No reports on the finding are to be released publically without the consent of the RAPs Iluka is to provide timely updates to the working group		All to to follow the TARP for the Discovery of Potential Human Remains. All are to follow Iluka's policies for intellectual property and privacy. RAPs are responsible for identifying and communicating any restrictions on intellectual property, privacy or the communication of cultural knowledge in a timely manner. Iluka is the sole party responsible for media releases, in accordance with Iluka's media policies. Iluka and RAPs will work together to develop intellectual property strategies that enable Iluka to meet its approval conditions and commitments (i.e. compliance).

[6] Field activities may proceed with appropriately qualified individuals such as archaeologists if no RAPs or other interested Aboriginal parties are available on the day.

Table 16: Commitments to access of temporary storage facilities and project area

	Commitments	Timeframes	Roles and Responsibilities
Access to temporary storage facilities for Aboriginal objects	Access to recovered Aboriginal heritage evidence will be restricted and require approval from Iluka and the RAPs Iluka will: • provide RAPs with notification of any requests to access to Aboriginal objects • manage access to temporary storage facilities of Aboriginal objects with respect to the list of authorised people advised by the RAPs.		Iluka will be responsible for managing and approving access to temporary storage of recovered Aboriginal heritage evidence. RAPs will provide Iluka with a list of authorised people who can access Aboriginal objects and/or human remains. Any third parties wishing to access the collection to provide written request to Iluka requesting access to temporary storage including the duration and nature of that visit. See Section 6.5.
Access to the Project Area	Iluka will facilitate reasonable access consistent with operational conditions and the mine's Workplace Health and Safety Requirements. Access, in all instances, will be subject to the relevant operational and safety considerations of the mine and cannot be guaranteed. Access to some areas will be restricted during periods of construction, operation or closure. There will be no unauthorised access to the Project Area.	RAPs and /or working group to provide Iluka with any requests for access a minimum of 5 working days.	Access will be dependent on an agreement being reached between the party seeking access and Iluka regarding the conditions of access. There will be no unauthorised access to the Project Area.

Table 17: Commitments for RAP consultation in regards to training, inductions and fostering cultural heritage awareness in the project area

	Commitments	Timeframes	Roles and Responsibilities
Toolbox sessions, Welcome to Country and smoking ceremonies	Iluka to provide opportunities for RAPs to attend toolbox sessions during construction and operations (as may be relevant) to provide updates on the Aboriginal heritage resources aspects of the Project. Iluka to provide opportunity for RAPs to undertake Welcome to Country Ceremony as part of the official opening of the mine. Iluka to provide opportunity for RAPs to undertake smoking ceremonies during construction and operations (as appropriate situations are identified) with mine personal in attendance.		RAPS to provide a list of suitable individuals to be contacted to attend tool box sessions and undertake Welcome to Country and smoking ceremonies
Cultural Heritage Awareness Training	Iluka will work with suitable Aboriginal training provider(s) to develop and implement Cultural Heritage Awareness Training for the life of the project	Ongoing during the life of the project	Iluka to engage suitable Aboriginal training provider(s)

	Commitments	Timeframes	Roles and Responsibilities
Use of Aboriginal names and words within the project	Iluka to consider naming buildings and other permanent features within the project area using Aboriginal names and words	During final design activities associated with the Project	Iluka to provide the opportunity for RAPs to provide a list of suitable names and words for naming
Participate in additional roles such as artefact cataloguing	Iluka to consider providing opportunities for RAPs to gain experience in cataloguing artefacts	During the Aboriginal heritage research program	Iluka to investigate opportunity

7.2 Recording of Aboriginal heritage in the Balranald Aboriginal Heritage Database and the Balranald Geographic Information System (GIS) Database

The Balranald Aboriginal Heritage Database and the Balranald Geographic Information System (GIS) Database will be maintained by Iluka or any delegated officer of Iluka.

The purpose of the database is to:

- Record and monitor the Aboriginal heritage resources within the Project Area.
- Provide a tool to mitigate the risk of unauthorised ground disturbance to Aboriginal objects in the Project Area.
- Assist Iluka in meeting its requirements under Section 89A of the NP&W Act to notify the Aboriginal Heritage Information Management System (AHIMS) in a reasonable time of any Aboriginal objects.
- Collect and maintain records in accordance with current regulation and guidelines for archaeological investigation in NSW.

The GIS database will be updated as and when required. Events that trigger updates to the database are presented in Table 18.

The database must include:

- a record of the current management status, location and boundaries of Aboriginal objects and sites
- a record of Aboriginal heritage survey coverage
- a record of Aboriginal Cultural Heritage Assessments
- the Aboriginal archaeological risk layer and any changes to it
- a record of progress on the Aboriginal heritage research program.

Table 18: Triggers and commitments for updating the Project Aboriginal Heritage GIS Database

Triggers for Updating the BAHD	Timeframes and Commitments for BAHD Updates
Discovery of a new Aboriginal site	Within 28 days of the discovery
Changes or incidents to existing Aboriginal site	Within 28 days of the incident
Changes to the archaeological risk layer	Within 28 days of notification that the risk layer has been amended
Changes to the management status of the objects, sites, management zones	Within 28 days of notification that the management status has changed
The completion of any Aboriginal heritage activities such as heritage survey, excavation, surface collection, site visitation	Within 28 days of notification of these activities being completed
The completion of any Aboriginal Cultural Heritage Assessment reports	Within 28 days of receipt of the final report being received by Iluka

Triggers for Updating the BAHD	Timeframes and Commitments for BAHD Updates
Changes to the Aboriginal Cultural Heritage Management Plan	During the update of the ACHMP

7.3 Land Disturbance within the Project Area

Internal Iluka management procedure requires an approved Iluka Land Disturbance Permit (TRIM ref: FRM6126) prior to any ground disturbance within the Balranald Project area. Ground disturbance may include but is not limited to drilling, vegetation clearing/grubbing, trenching, creation of access roads and excavation works. There will be no disturbance outside of the approved disturbance area.

The Balranald Project Site Disturbance Clearance Procedure (TRIM ref: PRC7931) includes a review of the Balranald Aboriginal Heritage Database and the Balranald Geographic Information System (GIS) Database prior to the approval of any Land Disturbance Permit. This ensures any management commitments to be completed prior to the commencement of activities are identified (such as Aboriginal heritage research program including the archaeological subsurface excavation program activities), as well as any heritage constraints or management and mitigation measures to avoid Aboriginal heritage values such as adjacent areas of moderate or high archaeological risk. The procedure ensures site clearing of vegetation and topsoil is planned and carried out in a manner which minimises impacts and with consideration of Section 7.6.

Until Iluka's Environmental Department is satisfied that the proposed work activity complies with the site approval conditions and the Land Disturbance Permit requirements, the proposed work cannot commence.

Refer to Appendix 9 for a summary of the Balranald Project Site Disturbance Clearance Procedure Process.

7.3.1 Unauthorised Land Disturbance - Trigger Action Response Plan

The TARP to be followed in the event of unauthorised land disturbance that results in the disturbance of an Aboriginal object is presented in Figure 3.

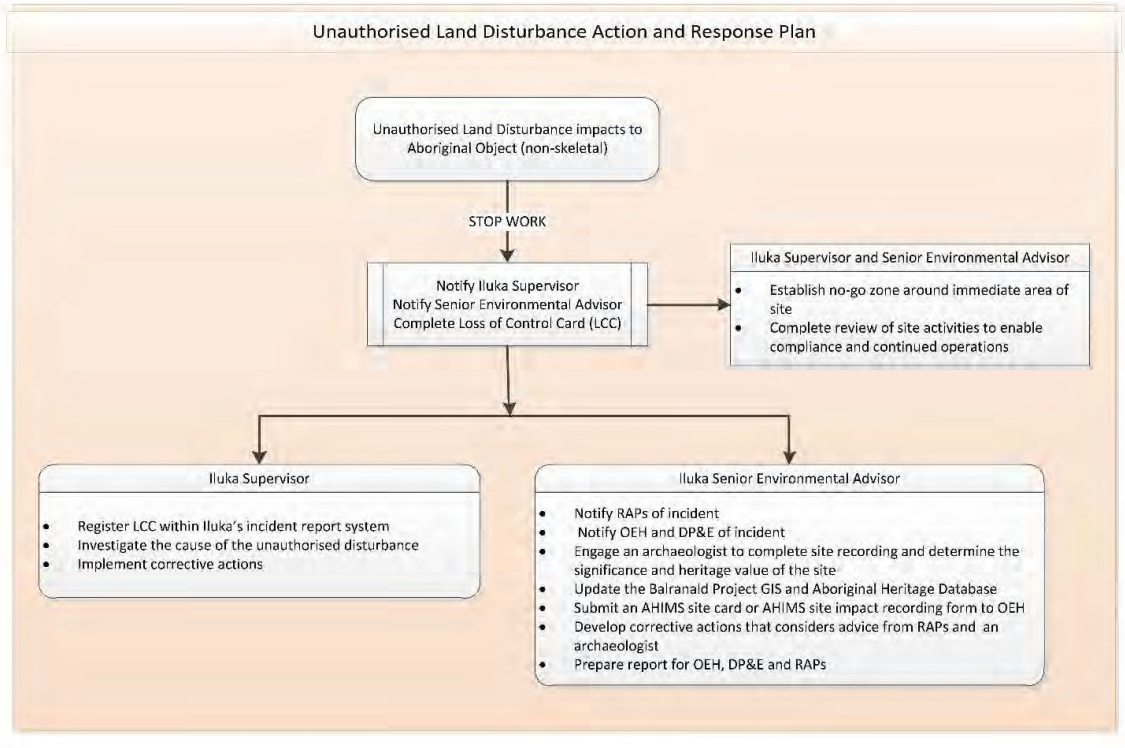


Figure 3: Trigger Action Response Plan for Unauthorised Land Disturbance resulting in disturbance of an Aboriginal object

7.4 Discovery of an Aboriginal site and significance assessments

When an Aboriginal site is identified within the moderate or high archaeological risk layer prior to the completion of the Aboriginal heritage research program commitments, the TARP for the discovery of an Aboriginal site must be followed (see **Figure 4**). There are additional requirements if the site identified is a culturally modified tree (Section 7.4.1), if megafaunal remains are present (Section 7.4.2) or potential human remains (Section 7.5). There may also be requirements to update the cumulative impact assessment for the project if the site is found to be of high or very high significance (**Figure 4**, Section 7.6, Appendix 8)

In the low archaeological risk layer only, the proposed management strategy is unmitigated harm and there are no requirements to follow the TARP for the discovery of an Aboriginal site (Figure 4) unless that site is suspected of being a culturally modified tree (Section 7.4.1), or potential human remains (Section 7.5). Iluka may choose to undertake a site recording and significance assessment of any site identified in the low archaeological risk layer at its discretion.

All Aboriginal site recordings must be undertaken:

- by an appropriately qualified archaeologist experience in the detailed recording of the relevant site type
- in consultation with the RAPs
- meet the standards in current regulation and archaeological practice.

Once the recording is complete:

- The BAHD will be updated to include relevant site data.
- All data collected will be submitted to OEH for inclusion in the Aboriginal Heritage Information Management System (AHIMS) site record.
- A 'significance assessment' of the site will be undertaken, or reassessment of site significance if warranted. Guidance for the assessment of significance is provided in Appendix 7.

An update to the cumulative impact assessment may be undertaken if triggered by the TARP (Figure 4, Section 7.5, Appendix 8).

In the event that any unexpected finds of specific artefacts or objects is encountered within a Low Risk Archaeological Area, Iluka will:

- Establish protective temporary fencing around the item.
- Consult with appropriately qualified and experienced archaeologists and RAPs to determine its archaeological significance.
- If deemed to be of high or moderate significance follow the steps for archaeological surface collection (Section 6.3).
- If deemed not to be of significance, then no management measures are required.

7.4.1 Additional requirements: culturally modified trees

The MOD1 ACHA identified the presence of culturally modified trees in the areas previously not assessed by the EIS ACHA. Iluka have undertaken measures to avoid all culturally modified trees where possible. At the request of RAP representatives, stake and wire fencing will be erected prior to construction occurring in the vicinity of any culturally modified tree at risk of impacts. Fencing will accommodate enough space to include the entirety of the crown so that no underlying root systems are affected by construction (which could affect the structural integrity of the tree). These boundaries will be marked by a suitably qualified person and at least one RAP representative.

Long term preservation options for in situ culturally modified trees will be developed in consultation with RAPs and include regular monitoring to assess the condition of the tree and its fencing; and mitigation measures if harm cannot be avoided.

If, during future works, harm to a culturally modified tree cannot be avoided, the following steps will be taken in consultation with DPE and RAPs prior to any works commencing:

- detailed recording of the tree;
- removal of the scarred section of tree and collection of timber for sample laboratory analysis;
- storage in the Balranald Keeping Place; and
- treatment for preservation – e.g. mildew and termite mitigation measures.

If required, Iluka may consult with a professional conservator for guidance on appropriate long-term preservation techniques of in-situ culturally-modified trees, and material retained and preserved following unavoidable clearance.

The AHIMS site impact recording form should be submitted to Heritage NSW to document the removal and current location of the tree. Further details to the Heritage NSW files on the site should be updated with the results of laboratory analysis of the tree sample when available.

7.4.2 Additional requirements: megafauna assemblages in conjunction with Aboriginal objects

Where megafauna assemblages are identified in conjunction with Aboriginal objects, an appropriate specialist such as a palaeontologist or paleozoologist will be utilised to assist in significance assessments of the Aboriginal site. Refer also to Figure 4 and Figure 5.

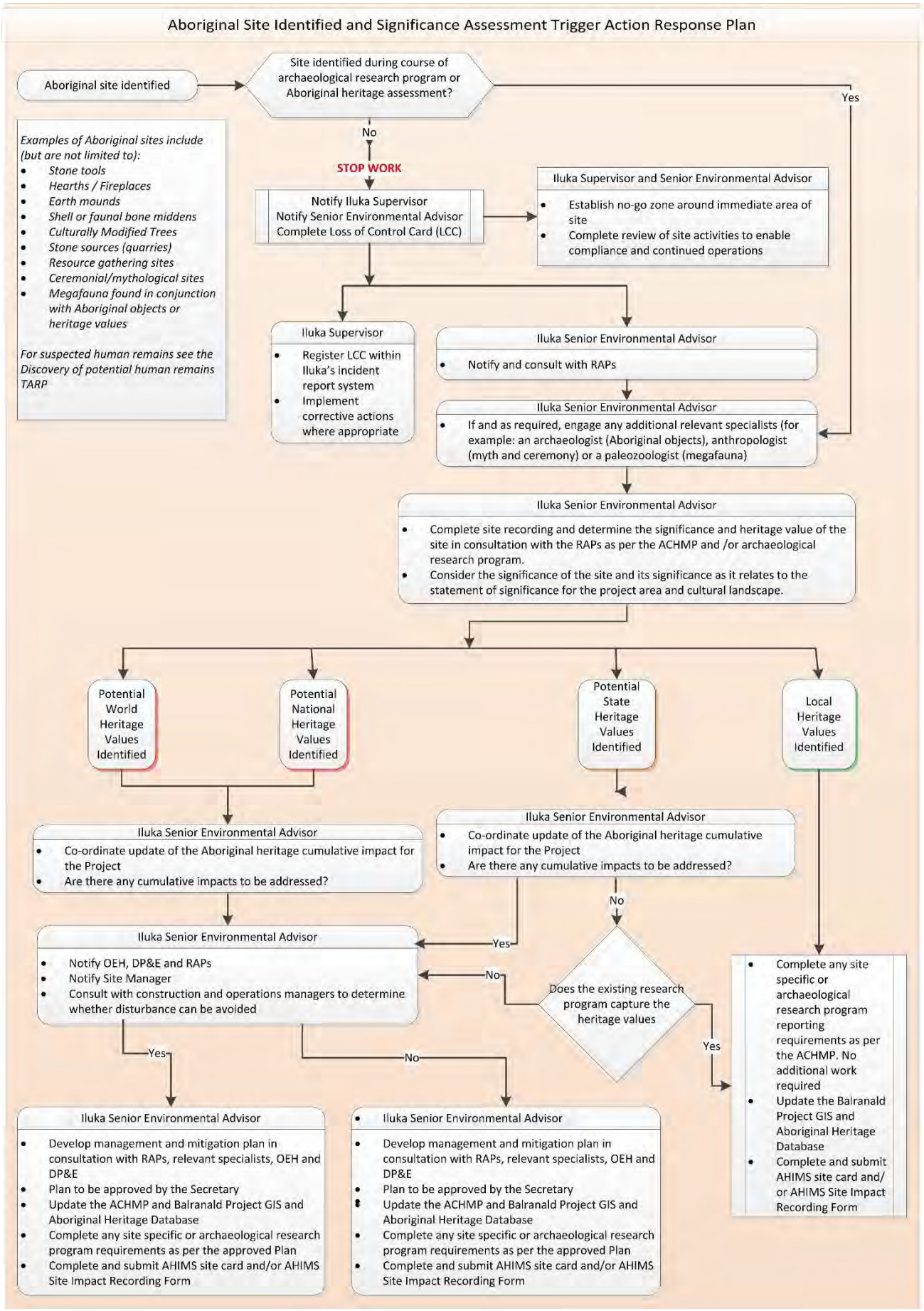


Figure 4: Aboriginal Site Identified and Significance Assessment Trigger Action Response Plan

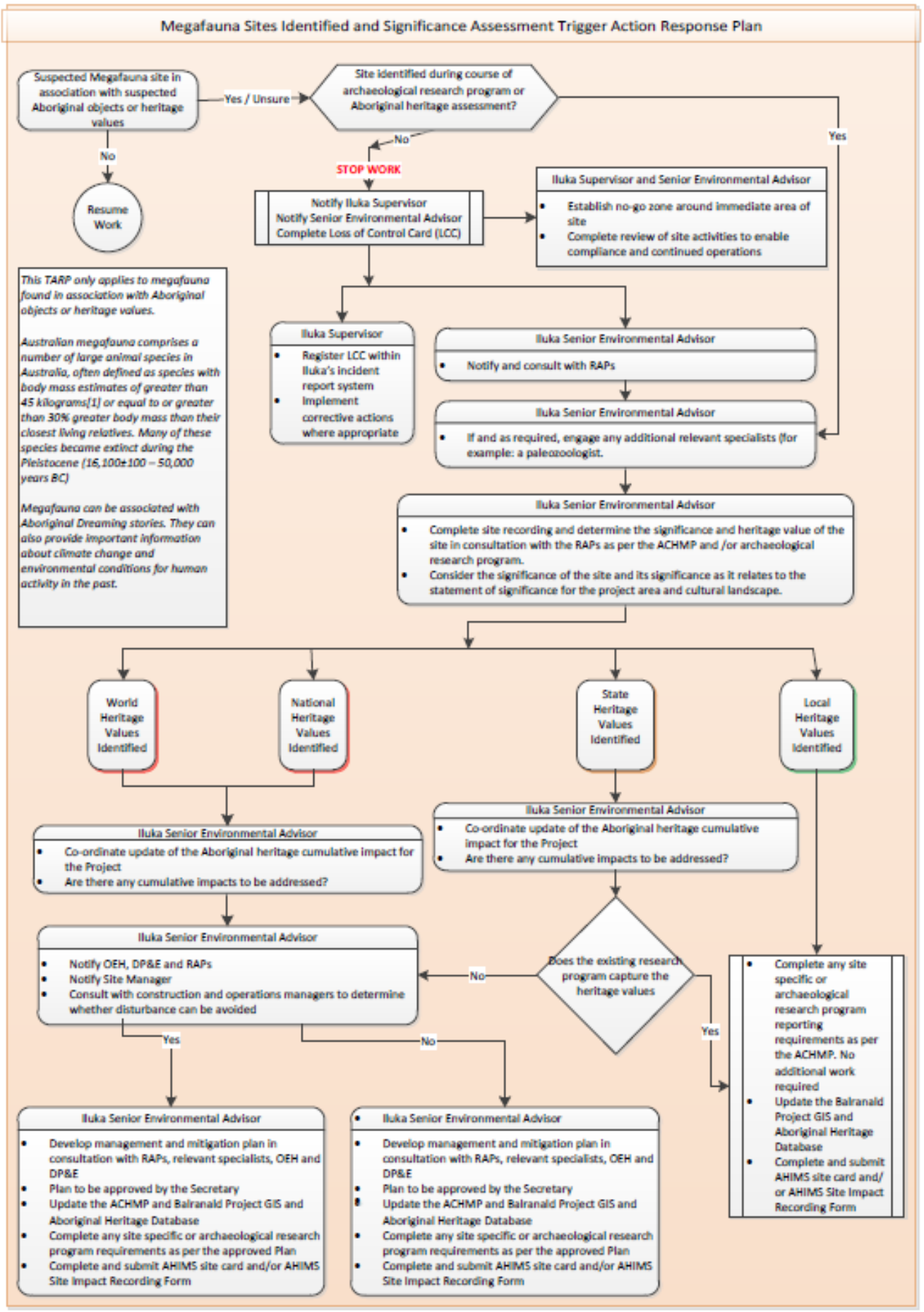


Figure 5: Megafauna and Significance Assessment Trigger Action Response Plan

7.5 Management of potential and confirmed Aboriginal Human Remains

Though no burials have been identified in the Project Area prior to approval, Aboriginal burials are not uncommon in the local area and there is the potential for Aboriginal burials to be present in the Project Area. Aboriginal remains are of deep spiritual and cultural significance to the Aboriginal community and it is crucial in the management of Aboriginal remains to work closely with the RAPs.

7.5.1 Discovery of potential human remains

In the event that potential human remains are identified, the TARP for the Discovery of Potential Human Remains must be followed. (Figure 6). Where human remains are identified:

- An anthropologist with skillsets in the identification of Aboriginal human remains may be required to assist Police in the identification of the skeletal material.
- After confirming the skeletal material are Aboriginal human remains, an Aboriginal skeletal remains certificate will be submitted to the Police/Coroner to address the Coroners Act
- After confirming the skeletal material are Aboriginal human remains a suitable method will be developed by the archaeologist in consultation with Iluka to establish whether any other burials are within or likely to occur nearby[7].
    - Where mechanical excavation is utilised, work will proceed slowly with a supervisor monitoring the progress of the machinery.
- Work may continue outside of this area so long as there is no risk of disturbing or interfering with the human remains.
- In consultation with the RAPs, undertake significance and impact assessment (including consideration of cumulative impact) of the remains and context.
    - The human remains will be excavated using controlled archaeological techniques and all excavated soil will be sieved.
    - Site drawings, site photography and site recording will be undertaken.
    - Additional technical studies and samples may be taken with the consent of the RAPs to establish characteristics such as the age of the archaeological deposit, the biological age, sex and health of the deceased etc.
- Develop a site specific management and mitigation strategy in consultation with the RAPs.
- Determine if the human remains can be left in situ; if not the protocol for the recovery of human remains will be initiated (7.5.2 below).

7.5.2 Protocol for the recovery of Aboriginal human remains

Section 7.1.3 outlines a number of consultation and communication requirements should Aboriginal human remains be identified. Where human remains cannot be left in situ:

- The Aboriginal human remains will be exhumed in a controlled archaeological manner and in consultation with the RAPs and placed into a secure, temperature controlled storage location until such time as they can be returned to a permanent resting place.
- Access to the secure storage location containing any human remains will be managed and facilitated by Iluka, and in consultation with the RAPs.

[7] Suitable methods could include, for example, mechanical excavation and/or non-invasive techniques such as geophysical techniques.

- No studies or reports are to be undertaken without prior consultation with and approval from the RAPs.
- Information to the media must only occur using Iluka's media protocol and with the approval from the RAPs.
- Where required, Iluka will help facilitate ceremonial practices such as smoking ceremonies.

7.5.3 Confirmed non-Aboriginal human remains

If the police confirm that the human remains are historical (non-Aboriginal) the Iluka site supervisor and Senior Environmental advisor will co-ordinate further actions with NSW Heritage in line with the following NSW Heritage Council guidelines:-

- *Conservation Management Documents: Guidelines on Conservation Management Plans and other Management Documents.*
- *Skeletal Remains; Guidelines for Management of Human Skeletal Remains.*

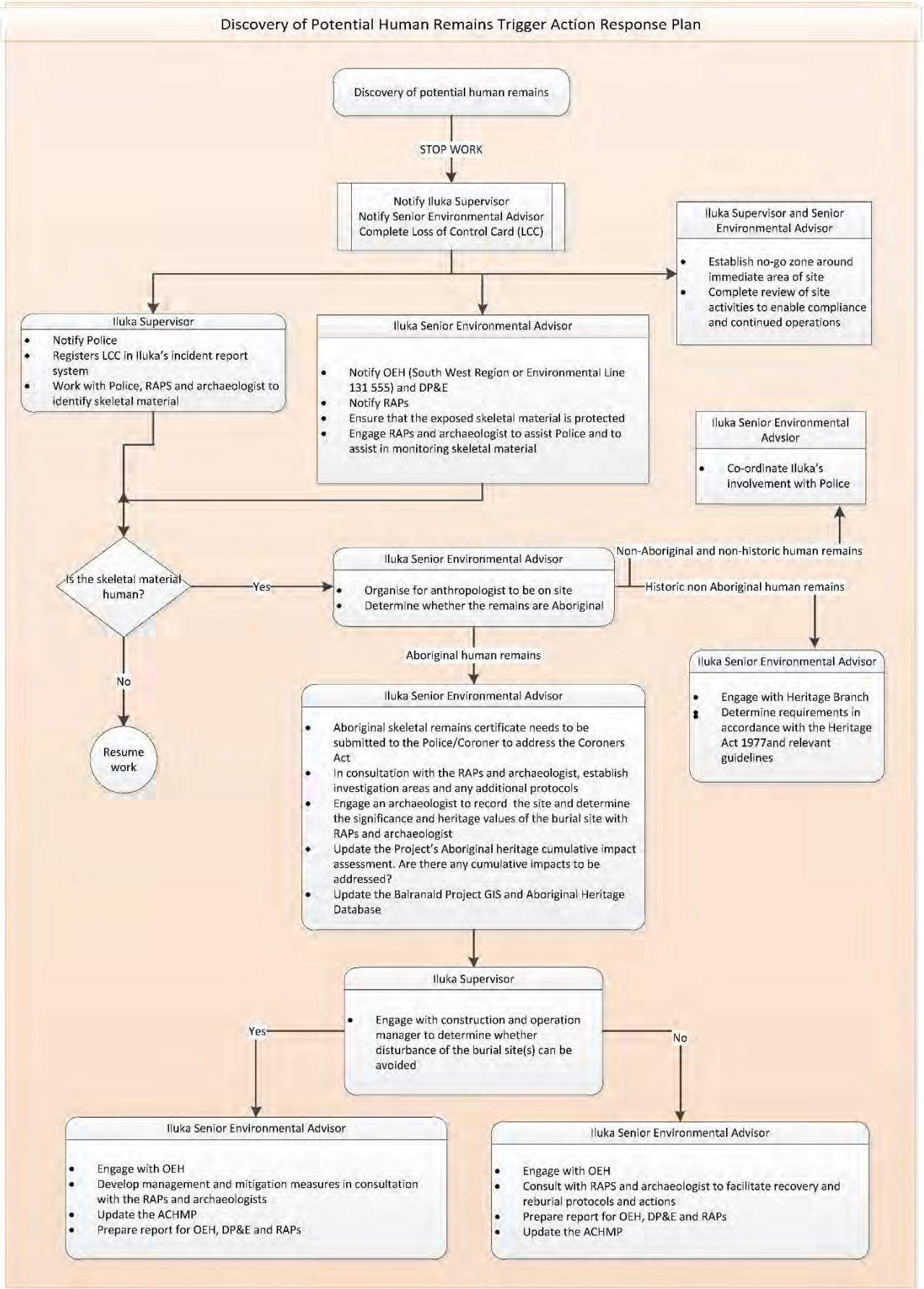


Figure 6: Trigger Action Response Plan for the Discovery of Potential Human Remains

7.6 Cumulative Impact Assessment

An adaptive management approach requires trigger points to consider cumulative impact against baseline data, evaluate whether the existing management measures are still fit for purpose and adapt as required.

Throughout this ACHMP there are trigger points to reconsider the cumulative impact of the Project on Aboriginal heritage values. A summary of this process is presented in Figure 7. The framework for cumulative impact assessment for the Project is provided in further detail in Appendix 8.

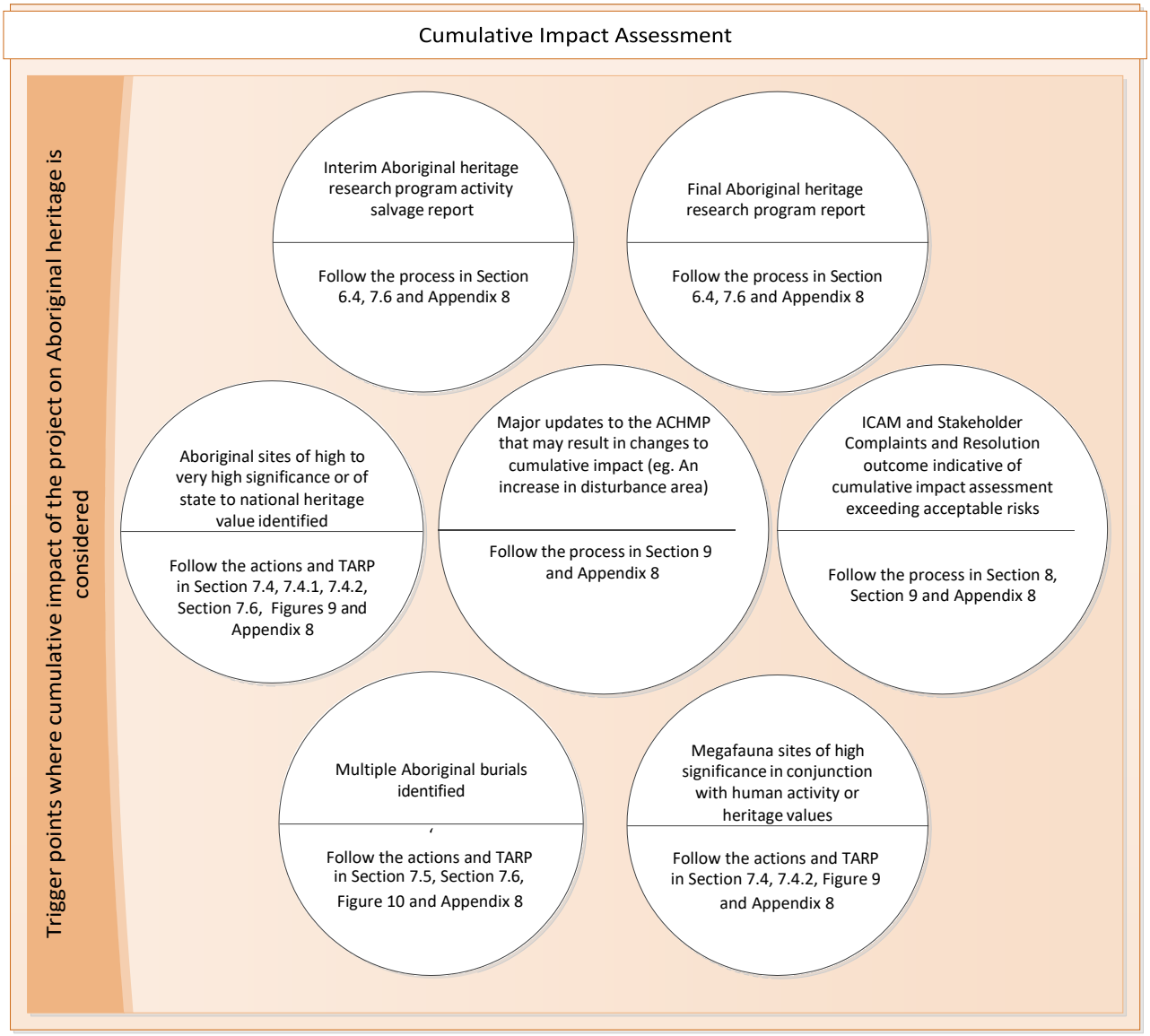


Figure 7: Trigger points and process for cumulative impact to be considered

7.7 Management of Aboriginal sites and areas of the moderate and high archaeological risk layer where disturbance can be avoided

Where works are proposed in the Project Area in close proximity to Aboriginal sites that have been surveyed and/or salvaged to the standards identified in this ACHMP, and disturbance to the site can be avoided, Iluka will implement measures to avoid inadvertent impacts occurring to the heritage evidence. This will vary on a site by site basis with consideration of the nature of the proposed activity, the location and nature of the heritage site, and may include:

- protective fencing and/or signage (temporary or permanent)

- provision of additional information to relevant employees, contractors and other landowners and land users
- GPS identification of the site boundaries and object locations in the field
- control of impacts from sediment, erosion and water flow
- restricting vehicle use to designated access tracks where practical
- controlled or restricted access to certain areas.

The MOD1 ACHA has been prepared based on the assumption that all land within the proposed MOD1 additional disturbance area will be disturbed and therefore no site avoidance measures are currently proposed, however, such measures will be adopted for the proposed MOD1 area, where relevant.

7.8 Cultural Heritage Awareness Training and Inductions

7.8.1 Site Inductions

Aboriginal objects and heritage values are a significant part of the environmental management program for the Balranald Project. All site inductions for site visitors, contractor and employees will include at a minimum:

- a statement of the value of Aboriginal heritage within the Balranald Project Area
- a statement regarding the statutory and legislative protection for Aboriginal objects and a statement regarding the penalties for non-approved harm to Aboriginal objects
- a description of a ground disturbance process and relevant protocols prior to any surface disturbance activities
- a description and images of the kind of Aboriginal objects that could reasonably be expected to be found in the project area and why they and the location they are found in is important
- protocol on what to do if Aboriginal objects are located in the course of works.

Site access requirements.

Induction records of all site personnel will be maintained as per Ilukas site access procedures.

7.8.2 Toolbox Meetings

Iluka will utilise toolbox meetings to provide regular updates to its staff, contractors and site visitors regarding the status and management of Aboriginal heritage values within the Project Area and to foster cultural heritage awareness. Iluka may invite a representative of RAPs to assist in this process.

7.8.3 Cultural Heritage Awareness Training

During all phases of the project (i.e. construction, operations and closure and rehabilitation) relevant contractors and employees (as identified by Iluka through a risk-based assessment), will receive Cultural Heritage Awareness Training Program specific to the project area and local region to broaden general awareness and understanding of Aboriginal culture and heritage:

- Iluka will engage an appropriately qualified expert to prepare a heritage awareness training package, components of which will include the presentation of information about the Aboriginal culture and history of the locality, nature of the identified and potential Aboriginal heritage evidence within the Project area, heritage management measures required under this Plan, and legal obligations.
- the training package will be formulated in consultation with the RAPs, including the provision of a draft for review and minimum 21 working days for comment.
- Iluka will give consideration to the involvement of a representative.
- Records of employees and contractors that have undertaken the Cultural Heritage Awareness Training Program will be maintained.

7.8.4 Naming of Facilities and Features in the Project Area

Iluka will undertake to name facilities and features within the accommodation facility in consultation with the Registered Aboriginal Parties.

Iluka may also consider naming other facilities and features in the Project Area in consultation with the Registered Aboriginal Parties.

8. Incidents and Complaints

8.1 Compliance and auditing

8.1.1 Measuring performance

Compliance with the ACHMP will be measured by standard environmental auditing procedures undertaken at regular intervals for the project. The audit will include an assessment of compliance with SSD-5285 conditions and will include auditing the following measures:

- protection of all nominated sites
- surface salvage
- inductions are taking place and include appropriate material
- reporting and managing any unexpected finds in accordance with this ACHMP.

The contractor may engage a heritage consultant to assist with reporting compliance as part of an Independent Environmental Audit.

Any incidents and non-compliance notifications will follow requirements set out in Development Consent SSD-5285 and as per the broader EMS.

8.1.2 Complaints

Iluka will maintain an enquiries and community complaints hotline for the Balranald Project (Phone 1800 305 993 or email balranald.community@iluka.com). The community hotline will be publicly advertised on the Iluka website Balranald engagement hub.

Community complaints will be managed in accordance with Iluka's Social Management Plan and Social Performance standard (Group Standard 02 – Social Performance).

Iluka's Social Management Plan for the Balranald operation provides additional requirements regarding stakeholder engagement and consultation.

As per Iluka's EHS Group Standard 12 – Incident Reporting and Investigation (TRIM reference STD1354), any incident, hazard, activity or near miss with the potential to effect the environment or health and safety of personnel will be reported using the Iluka internal Loss Control Card (LCC). Incidents include any unplanned event where control is lost such as dangerous occurrences, negative impacts to the environment, cultural heritage, property or equipment, and accidents or impairments to employees and contractors.

Incidents are classified according to the Iluka risk matrix and incident classification system; the level of which will determine corrective actions and whether contact with relevant regulatory authorities and/or an internal ICAM investigation (Incident Cause Analysis Method) is required.

TARPs have been developed as presented in Sections 8.3 – 8.5, which include the stages at which LCCs would be raised with regards to unauthorised land disturbance, discovery of Aboriginal sites or the discovery of suspected human remains.

Prior to commencing work on site all employees and contractors receive information on the Loss Control Reporting System, including instructions on how to complete LCC cards.

Incidents regarding cultural heritage that are not the discovery of suspected human remains will be reported to the RAPs by the Iluka Senior Environment Advisor within 7 days of the incident.

Any incidents regarding suspected human remains will be reported to the RAPs within 24 hours.

Incidents and any investigation outcomes regarding Aboriginal cultural heritage will be reported to the Aboriginal Cultural Heritage Working Group during the biannual consultation meetings.

Iluka also maintains a grievance mechanism, which allows external stakeholders to formally raise concerns with the company. All complaints are recorded, investigated and responded to in line the Iluka's Stakeholder Complaint Reporting and Resolution Procedure. Those grievances of a specific risk classification are reported through to the executive and Iluka Board as part of monthly sustainability reports.

Iluka strives to contribute positively to the communities in which it operates. It recognises that, at times, its activities can impact upon the lives of its neighbours and some groups. Iluka monitors its operations for potential issues or matters of local concern and has site-based personnel able to respond to stakeholder concerns.

8.1.3 Non conformance

Any non-conformance will be subject to a detailed investigation by Iluka and heritage consultant in consultation with the RAPs. The investigation will include:

- a clear description of the non-conformance, and its actual/potential harm to cultural materials
- all personnel involved in the non-conformity, their organisation and contact details
- any corrective actions undertaken to address the non-conformity
- next steps, including the need for additional heritage activities and/or requirements to contact DPIE/Heritage NSW to advise them of the non-conformity.

Any non-conformance will be used in improvement of the ACHMP.

9. Review and Updates of ACHMP

In accordance with Schedule 5, Condition 5 of Development Consent (SSD-5285), the ACHMP will be reviewed within 3 months of the submission of:

- the Annual Review
- an incident report
- an Independent Environmental Audit
- any modification to the conditions of the Consent.

  Where the review leads to revisions in any document a revised document will be submitted to the Secretary of the DPE within 4 weeks of the revision occurring.

Aboriginal consultation for any updates and/or changes should be undertaken in accordance with Chapter 7.

The ACHMP is a working document and will be updated as required during the Project.

9.1 Adaptive management

In accordance with Schedule 5, Condition 2 of NSW Development Consent (SSD-5285), over the life of the Project Iluka will assess and manage risks to ensure that there are no exceedances of the criteria and/or performance measures outlined in Schedules 3 of NSW Development Consent (SSD-5285). Where any exceedance of these criteria and/or performance measures occurs, at the earliest opportunity Iluka will:

- take all reasonable and feasible measures to ensure that the exceedance ceases and does not recur
- consider all reasonable and feasible options for remediation and a submit a report to the DPE describing these options and preferred remediation measures
- implement remediation measures as directed by the Secretary of the DPE.

9.2 Continual improvement

Continual improvement of this ACHMP Addendum will be achieved by the ongoing evaluation of environmental management performance against environmental policies, objectives and targets for the purpose of identifying opportunities for improvement. The continual improvement process will be designed to:

- identify areas of opportunity for improvement of environmental management which leads to improved environmental performance
- determine the root cause or causes of non-conformances and deficiencies
- develop and implement a plan of corrective and preventative action to address non-conformances and deficiencies
- verify the effectiveness of the corrective and preventative actions
- document any changes in procedures resulting from process improvement.

10. References

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11. Glossary

Table 19: Glossary

Term	Definition
Aboriginal cultural heritage	The tangible (objects) and intangible (dreaming stories, legends and places) cultural practices and traditions associated with past and present day Aboriginal communities.
Aboriginal object(s)	The legal definition for tangible aspects of Aboriginal cultural heritage under the NSW *National Parks and Wildlife Act 1974.*
Aboriginal stakeholders	Members of a local Aboriginal land council, registered holders of Native Title, Aboriginal groups or other Aboriginal people who may have an interest in the Project.
ACHA	Aboriginal Cultural Heritage Assessment.
ACHMP	Aboriginal Cultural Heritage Management Plan.
ACHCRs	*Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010.*
Adze	A retouched artefact used to process wood/bone. Australian Aboriginal adzes are often called Tula.
AHIMS	NSW Aboriginal Heritage Information Management System.
Angular Fragment	An artefact clearly derived from cultural activity that lacks diagnostic features used to classify into core, flake or retouched flake categories.
Anvil	A stone (fixed or portable) used to stabilise a core during manufacture.
Archaeological deposit	A layer of sediment known to contain archaeological material.
Archaeological investigation	The process of assessing the archaeological potential of an area by a qualified archaeologist.
Archaeological risk layer	A GIS dataset designed to predict the likelihood of the presence of Aboriginal objects in a landscape.
Archaeological site	A location preserving material evidence of past human activity.
Archaeology	The scientific study of human history, particularly the cultural remains of the distant past.
Artefact	Any object made by humans (e.g. stone artefacts).
Assemblage	Assemblage can be used to define: ▪ A group of stone artefacts found in close association with one another; or ▪ Any group of items designated for analysis - without any assumptions of chronological or spatial relatedness.
Avoidance	A management strategy which protects Aboriginal sites within an impact area by avoiding them totally in development.
Axe Fragment	A stone fragment detached from an axe identified by the presence of a ground surface
Backed Artefact	A retouched artefact with steep bidirectional retouch along one margin. This retouch, called backing creates a greater surface area on the flake, assisting hafting mastic (resins) in composite tool technologies.

Term	Definition
BAHD	The Balranald Aboriginal Heritage Database, a set of Geographic Information System (GIS) layers that identify areas where Aboriginal archaeological objects may be present on the surface and subsurface, the boundaries of known surface Aboriginal objects and where areas have previously been surveyed for Aboriginal archaeological objects.
BAHS	Balranald Aboriginal Health Service.
Bora Rings	Sites of Aboriginal cultural significance, containing a ring of depressed/raised earth or stone. Used for ceremonial activities. Multiple rings can occur in one place.
Borehole	A hole produced in the ground by drilling for the investigation and assessment of soil and rock profiles.
Burial	Location of human burial.
Burin	A technological class of artefact, a burin is created by striking a flake from each margin of a flake (resulting in Burin Spalls) that creates a stout edge suitable for drilling.
Burin Spall	A flake detached from the margin of the flake during production of a burin.
Burren	A retouched artefact with steep stepped retouch around all flake margins. Retouch is generally unifacial and the artefact is generally rectangular in shape.
Catchment	The area from which a surface watercourse or a groundwater system derives its water.
Cemetery	Location of multiple human burials.
Continuous Scatter	Aboriginal objects present (either surface or subsurface) separated by less than 40 m.
Core	An artefact from which flakes are detached that preserves only negative flake scars. Core types can include Single Platform, Muliplatform, Bipolar etc.
Core Tool	A core that has been used as a tool.
Culturally Modified Trees	Trees preserving evidence of human alteration. Examples include bark removal for: ▪ shelters ▪ canoes ▪ shields ▪ coolamons ▪ food ▪ grub or possums hunting ▪ burial huts etc.
Cumulative impacts	Combination of individual effects of the same kind due to multiple actions from various sources over time.
DECCW	NSW Department of Environment Climate Change and Water.
Discontinuous	Areas with diameters of 50 m or greater that do not contain Aboriginal objects. This definition is further divided into two categories: Frequent but discontinuous artefact scatters: The occurrence of many sites that are more than 40 m apart and have definable boundaries and are unlikely to be connected by buried artefacts Infrequent and discontinuous artefact scatters: The occasional occurrence of a site with clearly definable boundaries.
Disturbance Area	Land directly disturbed for the Balranald Project.
Drainage	Natural or artificial means for the interception and removal of surface or subsurface water.

Term	Definition
EIS	Environmental Impact Statement.
EP&A Act	*Environment Planning and Assessment Act 1979.*
EP&A Regulation	*Environment Planning and Assessment Regulation 2000.*
EPBC	*Environment Protection and Biodiversity Conservation Act 1999.*
Flake	A piece of stone detached from a core by human action. Diagnostic features include a bulb of percussion, ripples and fissures on the ventral surface, a striking platform and dorsal features that may include evidence of prior flake removal.
GIS	Geographic Information System.
Grinding (stone)	A stone preserving evidence of grinding (processing plant material, grinding ochre, production of edge ground axes etc.)
Hammerstone	A stone used to detach flakes from a core.
Harm	With regard to Aboriginal objects this has the same meaning as the NSW *National Parks and Wildlife Act 1974*.
Hearth	Material evidence of surface fire features and fires that were dug into the ground. Hearths were recorded using the definition by Fanning, Holdaway and Phillips in "*Heat-retainer hearth identification as a component of archaeological survey in western NSW, Australia*"
Heat Fragment	Stone (artefact) broken by heat. Can be intentionally heated (heat treatment) or accidental (bushfire; artefact thrown into fire etc.)
HMC	Heavy Mineral Concentration.
IBRA	Interim Biogeographic Regionalisation of Australia.
ICOMOS	International Council on Monuments and Sites.
Iluka	Iluka Resources Limited.
Impact	Influence or effect exerted by a project or other activity on the natural, built and community environment.
In situ	Latin words meaning 'on the spot, undisturbed'.
Isolated find	A single artefact found in an isolated context, being at least 40 m from other artefacts.
LALC	Local Aboriginal Land Council.
Land unit	An area of common landform, and frequently with common geology, soils and vegetation types, occurring repeatedly at similar points in the landscape over a defined region. It is a constituent part of a land system.
Landform	Any one of the various features that make up the surface of the earth.
Landscape character	The aggregate of built, natural and cultural aspects that make up an area and provide a sense of place. Includes all aspects of a tract of land – built, planted and natural topographical and ecological features.
Management plans	Conservation plans which identify short and long term management strategies for all known sites recorded within a (usually approved) Study area.
Manuport	An unmodified non local stone transported to a location by human activity.
Methodology	The procedures used to undertake an archaeological investigation.
Midden	The accumulation of shell, bone, stone artefacts and other materials related to selection of, cooking and disposal of food.
Mitigation	To address the problem of conflict between land use and site conservation.
MOD1	Modification of consent (MOD1) to Balranald Project (SSD-5285)

Term	Definition
Mounds	The accumulation of debris from cooking ovens, habitation site, plant processing etc.
Muller	Interchangeable with top stone: a hand held stone used during grinding activities.
MUP	Mining Unit Plan.
Mythological Sites	Sites of cultural significance that may or may not contain tangible evidence of occupation/use/visitation.
NNTT	National Native Title Tribunal.
NPW Act	*NSW National Parks and Wildlife Act 1974.*
NTSCORP	Native Title Services Corporation Limited.
OEH	Office of Environment and Heritage.
Off Country	Any place not identified by the RAPs as being On Country (refer to entry below).
On Country	A term used by Aboriginal people to refer to the land to which they belong and their place of Dreaming. As guidance the RAPs have identified this area as west of the Lachlan River and north of Wakool River and as close as possible to the Project Area.
Open camp site	An archaeological site situated within an open space (e.g. archaeological material located on a creek bank, in a forest, on a hill, etc.).
OSL	Optically Stimulated Luminescence. A method of dating sediments in archaeological sites.
PAD	Potential Archaeological Deposit. A location considered to have a potential for subsurface archaeological material.
Piercer	A flake used to pierce materials (skins, hides etc).
RAP	Registered Aboriginal Party.
Redirecting Flake	A flake that preserves a portion of a core, detached in order to create a new surface from which to continue flaking. Redirecting flakes are very reliable indicators of technological systems in stone reduction.
REF	Review of Environmental Factors.
Retouched Flake	A flake with secondary flakes scars that impact on or originates from the ventral surface. Retouch can exist on the ventral, dorsal or platform surface of the flake.
Scraper	A retouched artefact with evidence of use in scraping tasks.
SEARs	Secretary's Environmental Assessment Requirements.
Site	A location preserving material evidence of past human activity.
Significance Assessment	Significance defines the meanings and values of a cultural heritage item or collection through research and analysis, and by assessment against a standard set of criteria. Significance is a theoretical framework and a practical method for collection management practice. Significance assessment of Aboriginal heritage in NSW is guided by a number of regulations and guidelines.
Site Boundary	Defined by the presence of *visible* Aboriginal objects: ▪ separated by a distance of 40 m ▪ may have an additional 5-10 m buffer ▪ can also be defined by landscape feature such as a dune, sand hill or pan. There is always potential for further Aboriginal objects to exist immediately adjacent to a defined site boundary and/or beyond a surveyed area.
Site recording	The systematic process of collecting archaeological data for an archaeological investigation.
SSD	State Significant Development.
Stone Tools	Interchangeable with stone artefacts.

Term	Definition
Survey coverage	A graphic and statistical representation of how much of an impact area was actually surveyed and therefore assessed.
Temporary storage	Temporary storage in this document refers to the location in which Aboriginal objects are stored after they have been salvaged from the Project area
The Balranald Project	Balranald Sands Mineral Project (as modified).
The Code	*Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales 2010.*
TSF	Tailing Storage Facility.
WLRWHA	Willandra Lakes Region Word Heritage Area.

Appendix 1 – Schedule of Aboriginal Heritage Assessments and Reports

Table 20 provides a summary of Aboriginal heritage assessments that have occurred within the Project area.

Table 20: Summary of Aboriginal heritage assessments within the Project area

Date	Author	Title	Summary
2011	Landskape / Matthew Cupper	West Balranald and Nepean Mineral Sands Deposits Hydrogeological Investigation: Aboriginal Cultural Heritage Due Diligence Assessment	Archaeological due diligence assessment of 72 drill holes for a hydrogeological program. No Aboriginal sites were identified.
2011	Dr. Tim Stone	West Balranald and Nepean Sonic Holes and Tracks Aboriginal Cultural Heritage Due Diligence Assessment	Archaeological due diligence assessment of six proposed sonic holes and vehicle access tracks. One Aboriginal archaeological site – an artefact scatter was identified.
2012	Niche	Summary for Aboriginal Cultural Heritage due diligence of Iluka's gravel test site options: Balranald Mineral Sands Project	Archaeological due diligence assessment of 39 potential gravel test pit sites. One Aboriginal site was identified on the Wintong property; an artefact scatter and hearth site.
2013 (June)	Niche	Aboriginal Heritage Due Diligence Assessment; Borehole Mining Trial.	Archaeological due diligence assessment of a proposed borehole drilling location and associated land disturbance in an area that had been cleared and ploughed. No Aboriginal archaeological sites were located.
2013 (July)	Niche	Aboriginal Heritage Due Diligence Assessment; Borehole Mining Trial.	Archaeological due diligence assessment of a proposed borehole drilling location and associated land disturbance. 20 new Aboriginal sites were identified: 9 isolated finds, 4 stone artefact scatters, 3 hearth scatters, 1 artefact scatter associated with heart scatter, 1 isolated find associated with heart scatter and 1 stone artefact scatter associated with PAD.
2013 (November)	Niche	Aboriginal Heritage Due Diligence Assessment; Hydrogeological Stage 3 Program Balranald Project.	Archaeological due diligence assessment of three temporary pump testing location, one long term pump test location and fourteen air core/sonic drill locations. 30 new Aboriginal sites were located: 18 isolated finds, 7 stone artefact scatters/PAD sites, 3 stone artefact scatters and 2 stone artefact scatter/hearth scatter/PAD sites.
2014	Niche	Aboriginal Heritage Due Diligence Assessment; Hydrogeological Stage 3 Program Additional Drilling Locations, Balranald Project.	Archaeological due diligence assessment of 49 drill locations. 12 Aboriginal sites were recorded, 9 isolated finds and 3 stone artefact scatters associated with PADs. Two previously recorded sites were re-assessed and had their boundaries extended.
2015	Niche	The Project Aboriginal Cultural Heritage Assessment	The Aboriginal Cultural Heritage Assessment report for the Project and EIS assessment,
2022a	EMM	Balranald MOD1 Aboriginal Cultural Heritage Assessment	The Aboriginal Cultural Heritage Assessment report for MOD1
2022b	EMM	Balranald MOD1 Aboriginal Cultural Heritage Assessment - Addendum	The Aboriginal Cultural Heritage Assessment Addendum report for MOD1 Submission Report

Appendix 2 – Schedule of Recorded Aboriginal Sites in the BAHD

Additional data recorded for sites is kept in the BAHD and available upon request

Table 21: Schedule of Aboriginal Sites in the BAHD

ShortName	AHIMS_ID	SitecardNa	SiteFeatur	ArtefactCo	HearthCoun	CMTreeCoun	ShlCount	MndCount	Scientific
B 1 / B 10	47-2-0312	Bidura 1 / Bidura 10	Artefacts	40.0	0.0	0.0	0.0	0.0	Low
B 11	47-2-0321	Bidura 11	Artefacts	14.0	0.0	0.0	0.0	0.0	Moderate
B 12	47-2-0322	Bidura 12	Artefacts	6.0	0.0	0.0	0.0	0.0	Moderate
B 14	47-2-0323	Bidura 14	Artefacts	3.0	0.0	0.0	0.0	0.0	Low
B 15	47-2-0324	Bidura 15	Culturally Modified Tree	0.0	0.0	2.0	0.0	0.0	Moderate
B 16	47-2-0325	Bidura 16	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
B 17/B 19/B 26/B 27/B 28	47-2-0326	Bidura 17/Bidura 19 / Bidura 26/Bidura 27/Bidura 28	Artefacts	110.0	0.0	0.0	0.0	0.0	Moderate
B 18	47-2-0327	Bidura 18	Artefacts	14.0	0.0	0.0	0.0	0.0	Low
B 2	47-2-0313	Bidura 2	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
B 20	47-2-0328	Bidura 20	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
B 21	47-2-0330	Bidura 21	Artefacts	4.0	0.0	0.0	0.0	0.0	Low
B 22	47-2-0331	Bidura 22	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
B 23	47-2-0332	Bidura 23	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
B 24	47-2-0333	Bidura 24	Artefacts	7.0	0.0	0.0	0.0	0.0	Low
B 25	Lodged 02/16	Bidura 25	Artefacts	29.0	0.0	0.0	0.0	0.0	Low
B 29	47-2-0335	Bidura 29	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
B 3	47-2-0314	Bidura 3	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
B 30	47-2-0336	Bidura 30	Isolated Artefact and Hearth	1.0	1.0	0.0	0.0	0.0	Moderate
B 31	47-2-0337	Bidura 31	Artefacts	2.0	0.0	0.0	0.0	0.0	Low
B 32	47-2-0338	Bidura 32	Artefacts	2.0	0.0	0.0	0.0	0.0	Low
B 33	47-2-0339	Bidura 33	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Moderate
B 34	47-2-0340	Bidura 34	Artefacts	3.0	0.0	0.0	0.0	0.0	Low
B 35	47-2-0341	Bidura 35	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
B 36	47-2-0342	Bidura 36	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
B 37	47-2-0343	Bidura 37	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
B 38	47-2-0344	Bidura 38	Artefacts	6.0	0.0	0.0	0.0	0.0	Low
B 39	47-2-0345	Bidura 39	Artefacts	32.0	0.0	0.0	0.0	0.0	Low
B 4	47-2-0315	Bidura 4	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
B 40	47-2-0346	Bidura 40	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
B 41	47-2-0347	Bidura 41	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
B 42	47-2-0348	Bidura 42	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
B 43	47-2-0349	Bidura 43	Artefacts	121.0	0.0	0.0	0.0	0.0	Moderate
B 44	47-2-0350	Bidura 44	Artefacts	55.0	0.0	0.0	0.0	0.0	Moderate
B 45	47-2-0351	Bidura 45	Artefacts	11.0	0.0	0.0	0.0	0.0	Low
B 46	Lodged 02/16	Bidura 46	Artefacts	5.0	0.0	0.0	0.0	0.0	Low

ShortName	AHIMS_ID	SitecardNa	SiteFeatur	ArtefactCo	HearthCoun	CMTreeCoun	ShlCount	MndCount	Scientific
B 47 / B 48	47-2-0352	Bidura 47 / Bidura 48	Artefacts	24.0	0.0	0.0	0.0	0.0	Low
B 49	47-2-0353	Bidura 49	Artefacts	3.0	0.0	0.0	0.0	0.0	Low
B 5	47-2-0316	Bidura 5	Artefacts	6.0	0.0	0.0	0.0	0.0	Low
B 50	47-2-0354	Bidura 50	Artefacts	7.0	0.0	0.0	0.0	0.0	Low
B 51	Lodged 02/16	Bidura 51	Artefacts and Hearth	2.0	1.0	0.0	0.0	0.0	Low
B 52	47-2-0355	Bidura 52	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
B 53	47-2-0356	Bidura 53	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
B 54	47-2-0357	Bidura 54	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
B 55	47-2-0358	Bidura 55	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
B 56	47-2-0359	Bidura 56	Artefacts	3.0	0.0	0.0	0.0	0.0	Low
B 57	47-2-0360	Bidura 57	Artefacts	2.0	0.0	0.0	0.0	0.0	Low
B 58 / B 62	47-2-0361	Bidura 58 / Bidura 62	Artefacts	4.0	0.0	0.0	0.0	0.0	Low
B 59	47-2-0362	Bidura 59	Artefacts	2.0	0.0	0.0	0.0	0.0	Low
B 6	47-2-0317	Bidura 6	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
B 60	47-2-0363	Bidura 60	Artefacts	4.0	0.0	0.0	0.0	0.0	Low
B 61	47-2-0364	Bidura 61	Artefacts	2.0	0.0	0.0	0.0	0.0	Low
B 63	47-2-0365	Bidura 63	Artefacts	4.0	0.0	0.0	0.0	0.0	Low
B 64	47-2-0366	Bidura 64	Artefacts	17.0	0.0	0.0	0.0	0.0	Low
B 65	47-2-0367	Bidura 65	Artefacts	2.0	0.0	0.0	0.0	0.0	Low
B 66	47-2-0368	Bidura 66	Artefacts	56.0	0.0	0.0	0.0	0.0	Low
B 67	47-2-0369	Bidura 67	Artefacts	20.0	0.0	0.0	0.0	0.0	Low
B 68	47-2-0370	Bidura 68	Artefacts	48.0	0.0	0.0	0.0	0.0	Low
B 69	47-2-0371	Bidura 69	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
B 7	47-2-0318	Bidura 7	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
B 70	47-2-0372	Bidura 70	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
B 71	47-2-0373	Bidura 71	Artefacts and Hearth	13.0	1.0	0.0	0.0	0.0	Moderate
B 72	47-2-0374	Bidura 72	Artefacts	7.0	0.0	0.0	0.0	0.0	Low
B 73	47-2-0375	Bidura 73	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
B 74	47-2-0376	Bidura 74	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
B 75	47-2-0377	Bidura 75	Artefacts	2.0	0.0	0.0	0.0	0.0	Low
B 76	47-2-0378	Bidura 76	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
B 77	47-2-0379	Bidura 77	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
B 78	47-2-0380	Bidura 78	Artefacts	8.0	0.0	0.0	0.0	0.0	Low
B 79	47-2-0381	Bidura 79	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
B 8	47-2-0319	Bidura 8	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
B 80	47-2-0382	Bidura 80	Artefacts	4.0	0.0	0.0	0.0	0.0	Low
B 81	47-2-0383	Bidura 81	Artefacts	8.0	0.0	0.0	0.0	0.0	Low
B 82	47-2-0384	Bidura 82	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low

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B 83	47-2-0385	Bidura 83	Artefacts and Hearth	5.0	2.0	0.0	0.0	0.0	Moderate
B 84	47-2-0386	Bidura 84	Artefacts and Hearth	30.0	1.0	0.0	0.0	0.0	Moderate
B 85	47-2-0387	Bidura 85	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
B 86	47-2-0388	Bidura 86	Artefacts	26.0	0.0	0.0	0.0	0.0	Moderate
B 87	47-2-0389	Bidura 87	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
B 88	47-2-0390	Bidura 88	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
B 89	47-2-0391	Bidura 89	Artefacts	2.0	0.0	0.0	0.0	0.0	Low
B 9	47-2-0320	Bidura 9	Artefacts	2.0	0.0	0.0	0.0	0.0	Low
B 90	47-2-0392	Bidura 90	Artefacts	41.0	0.0	0.0	0.0	0.0	Low
B 91	47-2-0393	Bidura 91	Artefacts	2.0	0.0	0.0	0.0	0.0	Low
B 92	47-2-0394	Bidura 92	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
B 93	47-2-0395	Bidura 93	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
B 94	47-2-0396	Bidura 94	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
B 95	47-2-0397	Bidura 95	Artefacts	9.0	0.0	0.0	0.0	0.0	Low
B 96	47-2-0398	Bidura 96	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
B 97	47-2-0399	Bidura 97	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
B 98	47-2-0400	Bidura 98	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
B 99	47-2-0401	Bidura 99	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
Box Creek IF 1	47-2-0288	Box Creek IF 1	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
BWR 10	47-2-0409	Burke Wills Road 10	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
BWR 11	47-2-0410	Burke Wills Road 11	Hearth	0.0	1.0	0.0	0.0	0.0	Low
BWR 12	47-2-0411	Burke Wills Road 12	Artefacts and Hearth	6.0	1.0	0.0	0.0	0.0	Moderate
BWR 13	47-2-0412	Burke Wills Road 13	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
BWR 14	47-2-0413	Burke Wills Road 14	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
BWR 15	47-2-0414	Burke Wills Road 15	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
BWR 16	47-2-0415	Burke Wills Road 16	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
BWR 17	47-2-0416	Burke Wills Road 17	Artefacts	2.0	0.0	0.0	0.0	0.0	Low
BWR 18	47-2-0417	Burke Wills Road 18	Artefacts	8.0	0.0	0.0	0.0	0.0	Low
BWR 19	47-2-0418	Burke Wills Road 19	Artefacts	2.0	0.0	0.0	0.0	0.0	Low
BWR 20	47-2-0419	Burke Wills Road 20	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
BWR 21	47-2-0420	Burke Wills Road 21	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
BWR 22	47-2-0421	Burke Wills Road 22	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
BWR 23	47-2-0422	Burke Wills Road 23	Artefacts	3.0	0.0	0.0	0.0	0.0	Low
BWR 24	47-2-0423	Burke Wills Road 24	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
BWR 25	47-2-0424	Burke Wills Road 25	Artefacts	4.0	0.0	0.0	0.0	0.0	Moderate
BWR 26	47-2-0425	Burke Wills Road 26	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
BWR 27	47-2-0426	Burke Wills Road 27	Artefacts and Hearth	29.0	1.0	0.0	0.0	0.0	Moderate

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BWR 28	47-2-0427	Burke Wills Road 28	Artefacts	17.0	0.0	0.0	0.0	0.0	Moderate
BWR 29	47-2-0428	Burke Wills Road 29	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
BWR 3	47-2-0402	Burke Wills Road 3	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
BWR 30	47-2-0429	Burke Wills Road 30	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
BWR 31	47-2-0430	Burke Wills Road 31	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
BWR 32	47-2-0431	Burke Wills Road 32	Artefacts, Hearth and PAD	290.0	1.0	0.0	0.0	0.0	Moderate
BWR 33	47-2-0432	Burke Wills Road 33	Artefacts	99.0	0.0	0.0	0.0	0.0	Moderate
BWR 34 / BWR 35	47-2-0433	Burke Wills Road 34 / Burke Wills Road 35	Artefacts	50.0	2.0	0.0	0.0	0.0	Moderate
BWR 36	47-2-0434	Burke Wills Road 36	Artefacts	8.0	0.0	0.0	0.0	0.0	Low
BWR 37	47-2-0435	Burke Wills Road 37	Artefacts	76.0	0.0	0.0	0.0	0.0	Moderate
BWR 38	47-2-0436	Burke Wills Road 38	Artefacts	7.0	0.0	0.0	0.0	0.0	Low
BWR 39	47-2-0437	Burke Wills Road 39	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
BWR 4	47-2-0403	Burke Wills Road 4	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
BWR 40	47-2-0438	Burke Wills Road 40	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
BWR 5	47-2-0404	Burke Wills Road 5	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
BWR 6	47-2-0405	Burke Wills Road 6	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
BWR 7	47-2-0406	Burke Wills Road 7	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
BWR 8	47-2-0407	Burke Wills Road 8	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
BWR 9	47-2-0408	Burke Wills Road 9	Artefacts	6.0	0.0	0.0	0.0	0.0	Low
BWR 41	47-2-0439	Burke Wills Road 41	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
BWR 42	47-2-0440	Burke Wills Road 42	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
BWR IF 1	47-2-0289	Burke Wills Road IF 1	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
BWR IF 2	47-2-0290	Burke Wills Road IF 2	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
Cringadale 1	47-2-0441	Cringadale 1	Artefacts and PAD	3.0	0.0	0.0	0.0	0.0	Low
Cringadale 2	47-2-0457	Cringadale 2	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
Karra 10	47-2-0449	Karra 10	Artefacts	2.0	0.0	0.0	0.0	0.0	Low
Karra 11	47-2-0450	Karra 11	Artefacts	2.0	0.0	0.0	0.0	0.0	Low
Karra 12	47-2-0451	Karra 12	Artefacts	2.0	0.0	0.0	0.0	0.0	Low
Karra 13	47-2-0452	Karra 13	Artefacts and Hearth	8.0	1.0	0.0	0.0	0.0	Low
Karra 14	47-2-0453	Karra 14	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
Karra 15	47-2-0454	Karra 15	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
Karra 16	47-2-0455	Karra 16	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
Karra 17	47-2-0456	Karra 17	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
Karra 18	47-2-0458	Karra 18	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
Karra 19	47-2-0459	Karra 19	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
Karra 20	47-2-0460	Karra 20	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
Karra 21	47-2-0461	Karra 21	Artefacts	14.0	0.0	0.0	0.0	0.0	Low

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Karra 22	47-2-0462	Karra 22	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
Karra 23	47-2-0463	Karra 23	Artefacts	2.0	0.0	0.0	0.0	0.0	Low
Karra 24	47-2-0464	Karra 24	Artefacts	25.0	0.0	0.0	0.0	0.0	Low
Karra 25	47-2-0465	Karra 25	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
Karra 26	47-2-0466	Karra 26	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
Karra 27	47-2-0467	Karra 27	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
Karra 28	47-2-0468	Karra 28	Artefacts	4.0	0.0	0.0	0.0	0.0	Low
Karra 29	47-2-0469	Karra 29	Artefacts	4.0	0.0	0.0	0.0	0.0	Low
Karra 3	47-2-0442	Karra 3	Artefacts	2.0	0.0	0.0	0.0	0.0	Low
Karra 30	47-2-0470	Karra 30	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
Karra 31	47-2-0471	Karra 31	Artefacts	3.0	0.0	0.0	0.0	0.0	Low
Karra 33	47-2-0472	Karra 33	Artefacts, Hearth and PAD	449.0	1.0	0.0	0.0	0.0	Moderate
Karra 34	47-2-0473	Karra 34	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
Karra 35	47-2-0474	Karra 35	Artefacts	2.0	0.0	0.0	0.0	0.0	Low
Karra 36	47-2-0475	Karra 36	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
Karra 37	47-2-0476	Karra 37	Artefacts	3.0	0.0	0.0	0.0	0.0	Low
Karra 38	47-2-0477	Karra 38	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
Karra 39	47-2-0478	Karra 39	Artefacts	2.0	0.0	0.0	0.0	0.0	Low
Karra 4	47-2-0443	Karra 4	Artefacts	8.0	0.0	0.0	0.0	0.0	Low
Karra 40	47-2-0479	Karra 40	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
Karra 41	47-2-0480	Karra 41	Artefacts	11.0	0.0	0.0	0.0	0.0	Low
Karra 42	47-2-0481	Karra 42	Artefacts	17.0	0.0	0.0	0.0	0.0	Low
Karra 43	47-2-0482	Karra 43	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
Karra 44	47-2-0483	Karra 44	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
Karra 45	47-2-0484	Karra 45	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
Karra 46	47-2-0485	Karra 46	Artefacts	84.0	0.0	0.0	0.0	0.0	Moderate
Karra 47	47-2-0486	Karra 47	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
Karra 48	47-2-0487	Karra 48	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
Karra 49	47-2-0488	Karra 49	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
Karra 5	47-2-0444	Karra 5	Artefacts	3.0	0.0	0.0	0.0	0.0	Low
Karra 50	47-2-0489	Karra 50	Artefacts	6.0	0.0	0.0	0.0	0.0	Low
Karra 51	47-2-0490	Karra 51	Artefacts	4.0	0.0	0.0	0.0	0.0	Low
Karra 52	47-2-0491	Karra 52	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
Karra 53	47-2-0492	Karra 53	Artefacts	3.0	0.0	0.0	0.0	0.0	Low
Karra 55	47-2-0493	Karra 55	Artefacts	2.0	0.0	0.0	0.0	0.0	Low
Karra 56	47-2-0494	Karra 56	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
Karra 57	47-2-0495	Karra 57	Hearth	0.0	1.0	0.0	0.0	0.0	Low
PL 5	47-6-0796	Pine Lodge 5	Artefacts	4.0	0.0	0.0	0.0	0.0	Low
PL 6	47-6-0797	Pine Lodge 6	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low

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PL 7	47-6-0798	Pine Lodge 7	Artefacts	2.0	0.0	0.0	0.0	0.0	Low
PL 8	47-6-0799	Pine Lodge 8	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
PL 9	47-6-0800	Pine Lodge 9	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
TL 1	47-5-0006	Transmission Line 1	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
TL 2	47-5-0007	Transmission Line 2	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
TL 3	47-6-0603	Transmission Line 3	Hearth	0.0	1.0	0.0	0.0	0.0	Moderate
TL 4	47-6-0604	Transmission Line 4	Hearth	0.0	1.0	0.0	0.0	0.0	Moderate
TL 5	47-6-0605	Transmission Line 5	Hearth	0.0	4.0	0.0	0.0	0.0	Moderate
TL 6	47-6-0606	Transmission Line 6	Hearth and PAD	0.0	1.0	0.0	0.0	0.0	Moderate
TL 7	47-5-0008	Transmission Line 7	Artefacts, Mound, Mound Scatter, Oven, Oven Scatter and PAD	82.0	7.0	0.0	0.0	13.0	Moderate
TL 8	47-5-0009	Transmission Line 8	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
TO 1	47-2-0505	The Oaks 1	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
TO 11	47-2-0507	The Oaks 11	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
TO 12	47-2-0508	The Oaks 12	Artefacts	94.0	0.0	0.0	0.0	0.0	Moderate
TO 13	47-2-0509	The Oaks 13	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
TO 14	47-2-0510	The Oaks 14	Artefacts and Hearth	35.0	2.0	0.0	0.0	0.0	Moderate
TO 15	47-2-0511	The Oaks 15	Artefacts	151.0	0.0	0.0	0.0	0.0	Moderate
TO 16	47-2-0512	The Oaks 16	Artefacts	40.0	0.0	0.0	0.0	0.0	Moderate
TO 17	47-2-0513	The Oaks 17	Artefacts	10.0	0.0	0.0	0.0	0.0	Moderate
TO 18	47-2-0514	The Oaks 18	Artefacts	25.0	0.0	0.0	0.0	0.0	Low
TO 19	47-2-0515	The Oaks 19	Artefacts	6.0	0.0	0.0	0.0	0.0	Low
TO 2 / TO 20	47-2-0506	The Oaks 2 / The Oaks 20	Artefacts and Hearth	403.0	4.0	0.0	0.0	0.0	Moderate
TO 21	47-2-0516	The Oaks 21	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
TO 22 / TO 23	47-2-0517	The Oaks 22 / The Oaks 23	Artefacts and Hearth	4.0	4.0	0.0	0.0	0.0	Low
TO 24	47-2-0518	The Oaks 24	Artefacts and Hearth	10.0	1.0	0.0	0.0	0.0	Low
TO 25	47-2-0311	The Oaks 25	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
TO 26	47-2-0519	The Oaks 26	Artefacts	2.0	0.0	0.0	0.0	0.0	Low
TO 27	47-2-0520	The Oaks 27	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
TO 28	47-2-0521	The Oaks 28	Artefacts	2.0	0.0	0.0	0.0	0.0	Low
TO 29	47-2-0522	The Oaks 29	Artefacts	2.0	0.0	0.0	0.0	0.0	Low
TO 30 / TO 31	47-2-0523	The Oaks 30 / The Oaks 31	Artefacts	39.0	0.0	0.0	0.0	0.0	Low
TO 32	47-2-0524	The Oaks 32	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
TO 33	47-2-0525	The Oaks 33	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
TO 34	47-2-0526	The Oaks 34	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
TO 35	47-2-0527	The Oaks 35	Artefacts	3.0	0.0	0.0	0.0	0.0	Low

ShortName	AHIMS_ID	SitecardNa	SiteFeatur	ArtefactCo	HearthCoun	CMTreeCoun	ShlCount	MndCount	Scientific
TO 36	47-2-0528	The Oaks 36	Artefacts	6.0	0.0	0.0	0.0	0.0	Low
TO 37	47-2-0529	The Oaks 37	Artefacts	3.0	0.0	0.0	0.0	0.0	Low
TO 38	47-2-0530	The Oaks 38	Artefacts	2.0	0.0	0.0	0.0	0.0	Low
TO 39	47-2-0531	The Oaks 39	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
TO 40	47-2-0532	The Oaks 40	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
TO 41	47-2-0533	The Oaks 41	Artefacts	0.0	0.0	0.0	0.0	0.0	Low
TO 42	47-2-0534	The Oaks 42	Artefacts	2.0	0.0	0.0	0.0	0.0	Low
TO 43	47-2-0535	The Oaks 43	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
TO 44	47-2-0536	The Oaks 44	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
TO 45	47-2-0537	The Oaks 45	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
TO 46	47-2-0538	The Oaks 46	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
TO 47	47-2-0539	The Oaks 47	Artefacts	2.0	0.0	0.0	0.0	0.0	Low
TO 48	47-2-0540	The Oaks 48	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
TO 49	47-2-0541	The Oaks 49	Artefacts	2.0	0.0	0.0	0.0	0.0	Low
TT 10	Lodged 02/16	Tin Tin 10	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
TT 11	Lodged 02/16	Tin Tin 11	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
TT 12	Lodged 02/16	Tin Tin 12	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
TT 13	Lodged 02/16	Tin Tin 13	Artefacts	2.0	0.0	0.0	0.0	0.0	Low
TT 14	Lodged 02/16	Tin Tin 14	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
TT 15	Lodged 02/16	Tin Tin 15	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
TT 16	Lodged 02/16	Tin Tin 16	Artefacts	9.0	0.0	0.0	0.0	0.0	Low
TT 24	Lodged 02/16	Tin Tin 24	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
TT 25	Lodged 02/16	Tin Tin 25	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
TT 26	Lodged 02/16	Tin Tin 26	Artefacts	7.0	0.0	0.0	0.0	0.0	Low
TT 27	Lodged 02/16	Tin Tin 27	Artefacts	12.0	0.0	0.0	0.0	0.0	Low
TT 28	Lodged 02/16	Tin Tin 28	Artefacts	2.0	0.0	0.0	0.0	0.0	Low
TT 29	Lodged 02/16	Tin Tin 29	Artefacts	7.0	0.0	0.0	0.0	0.0	Low
TT 30	Lodged 02/16	Tin Tin 30	Artefacts	29.0	0.0	0.0	0.0	0.0	Low
TT 31	Lodged 02/16	Tin Tin 31	Artefacts	4.0	0.0	0.0	0.0	0.0	Low
TT 32	Lodged 02/16	Tin Tin 32	Artefacts	3.0	0.0	0.0	0.0	0.0	Low
TT 33	Lodged 02/16	Tin Tin 33	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
TT 34	Lodged 02/16	Tin Tin 34	Artefacts	41.0	0.0	0.0	0.0	0.0	Moderate
TT 35	Lodged 02/16	Tin Tin 35	Artefacts	2.0	0.0	0.0	0.0	0.0	Low
TT 37	Lodged 02/16	Tin Tin 37	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
TT 38 / TT 39	Lodged 02/16	Tin Tin 38 / Tin Tin 39	Artefacts	4.0	0.0	0.0	0.0	0.0	Low
TT 9	Lodged 02/16	Tin Tin 9	Artefacts	3.0	0.0	0.0	0.0	0.0	Low
TT AS 1	47-2-0292	Tin Tin AS 1	Artefacts and PAD	8.0	0.0	0.0	0.0	0.0	Low
TT AS 2	47-2-0293	Tin Tin AS 2	Artefacts, Hearth and PAD	1.0	1.0	0.0	0.0	0.0	Moderate

ShortName	AHIMS_ID	SitecardNa	SiteFeatur	ArtefactCo	HearthCoun	CMTreeCoun	ShlCount	MndCount	Scientific
TT AS 3	47-2-0294	Tin Tin AS 3	Artefacts	2.0	0.0	0.0	0.0	0.0	Low
TT IF 4	47-2-0295	Tin Tin IF 4	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
TT IF 5	47-2-0296	Tin Tin IF 5	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
TT IF 6	47-2-0297	Tin Tin IF 6	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
TT IF 7	47-2-0298	Tin Tin IF 7	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
TT IF 8	47-2-0299	Tin Tin IF 8	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
UD 1	Lodged 02/16	Upson Downs 1	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
UD 10 / UD 11 / UD 13	Lodged 02/16	Upson Downs 10 / Upson Downs 11 / Upson Downs 13	Artefacts	5.0	0.0	0.0	0.0	0.0	Low
UD 103	Lodged 02/16	Upson Downs 103	Artefacts and Hearth	12.0	2.0	0.0	0.0	0.0	Moderate
UD 104	Lodged 02/16	Upson Downs 104	Artefacts and Hearth	2.0	1.0	0.0	0.0	0.0	Moderate
UD 105	Lodged 02/16	Upson Downs 105	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
UD 106	Lodged 02/16	Upson Downs 106	Hearth	0.0	1.0	0.0	0.0	0.0	Low
UD 107	Lodged 02/16	Upson Downs 107	Artefacts	8.0	0.0	0.0	0.0	0.0	Low
UD 108	Lodged 02/16	Upson Downs 108	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
UD 109	Lodged 02/16	Upson Downs 109	Artefacts	5.0	0.0	0.0	0.0	0.0	Low
UD 110	Lodged 02/16	Upson Downs 110	Artefacts	5.0	0.0	0.0	0.0	0.0	Low
UD 111	Lodged 02/16	Upson Downs 111	Artefacts	11.0	0.0	0.0	0.0	0.0	Low
UD 112	Lodged 02/16	Upson Downs 112	Artefacts	17.0	0.0	0.0	0.0	0.0	Low
UD 113	Lodged 02/16	Upson Downs 113	Isolated Artefact	2.0	0.0	0.0	0.0	0.0	Low
UD 114	Lodged 02/16	Upson Downs 114	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
UD 115 / UD 119	Lodged 02/16	Upson Downs 115 / Upson Downs 119	Artefacts and Hearth	11.0	1.0	0.0	0.0	0.0	Low
UD 116	Lodged 02/16	Upson Downs 116	Artefacts	62.0	0.0	0.0	0.0	0.0	Moderate
UD 117	Lodged 02/16	Upson Downs 117	Artefacts	7.0	0.0	0.0	0.0	0.0	Low
UD 118	Lodged 02/16	Upson Downs 118	Artefacts	4.0	0.0	0.0	0.0	0.0	Low
UD 12	Lodged 02/16	Upson Downs 12	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
UD 120	Lodged 02/16	Upson Downs 120	Artefacts and Hearth	98.0	2.0	0.0	0.0	0.0	Moderate
UD 121	Lodged 02/16	Upson Downs 121	Artefacts	24.0	0.0	0.0	0.0	0.0	Low
UD 122	Lodged 02/16	Upson Downs 122	Artefacts and Hearth	27.0	1.0	0.0	0.0	0.0	Moderate
UD 123	Lodged 02/16	Upson Downs 123	Artefacts and Hearth	17.0	1.0	0.0	0.0	0.0	Moderate
UD 124	Lodged 02/16	Upson Downs 124	Artefacts	2.0	0.0	0.0	0.0	0.0	Low
UD 125	Lodged 02/16	Upson Downs 125	Artefacts	34.0	0.0	0.0	0.0	0.0	Low
UD 126	Lodged 02/16	Upson Downs 126	Isolated Artefact	2.0	0.0	0.0	0.0	0.0	Low
UD 127	Lodged 02/16	Upson Downs 127	Artefacts	1.0	0.0	0.0	0.0	0.0	Low
UD 128	Lodged 02/16	Upson Downs 128	Artefacts	2.0	0.0	0.0	0.0	0.0	Low
UD 129	Lodged 02/16	Upson Downs 129	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
UD 130	Lodged 02/16	Upson Downs 130	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low

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UD 131	Lodged 02/16	Upson Downs 131	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
UD 132	Lodged 02/16	Upson Downs 132	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
UD 133	Lodged 02/16	Upson Downs 133	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
UD 134	Lodged 02/16	Upson Downs 134	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
UD 135	Lodged 02/16	Upson Downs 135	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
UD 136	Lodged 02/16	Upson Downs 136	Isolated Artefact and Hearth	1.0	1.0	0.0	0.0	0.0	Low
UD 137	Lodged 02/16	Upson Downs 137	Isolated Artefact	2.0	0.0	0.0	0.0	0.0	Low
UD 138	Lodged 02/16	Upson Downs 138	Artefacts	13.0	0.0	0.0	0.0	0.0	Low
UD 139	Lodged 02/16	Upson Downs 139	Artefacts	6.0	0.0	0.0	0.0	0.0	Low
UD 14	Lodged 02/16	Upson Downs 14	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
UD 140	Lodged 02/16	Upson Downs 140	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
UD 141	Lodged 02/16	Upson Downs 141	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
UD 142	Lodged 02/16	Upson Downs 142	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
UD 143	Lodged 02/16	Upson Downs 143	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
UD 144	Lodged 02/16	Upson Downs 144	Isolated Artefact	3.0	0.0	0.0	0.0	0.0	Low
UD 145	Lodged 02/16	Upson Downs 145	Artefacts	67.0	0.0	0.0	0.0	0.0	Low
UD 15	Lodged 02/16	Upson Downs 15	Isolated Artefact	1.0	1.0	0.0	0.0	0.0	Low
UD 16	Lodged 02/16	Upson Downs 16	Artefacts and Hearth	31.0	3.0	0.0	0.0	0.0	Low
UD 17 / UD 18	Lodged 02/16	Upson Downs 17 / Upson Downs 18	Artefacts and Hearth	28.0	1.0	0.0	0.0	0.0	Low
UD 19	Lodged 02/16	Upson Downs 19	Artefacts	2.0	0.0	0.0	0.0	0.0	Low
UD 2	Lodged 02/16	Upson Downs 2	Artefacts	3.0	0.0	0.0	0.0	0.0	Moderate
UD 20	Lodged 02/16	Upson Downs 20	Artefacts	3.0	0.0	0.0	0.0	0.0	Low
UD 21	Lodged 02/16	Upson Downs 21	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
UD 22	Lodged 02/16	Upson Downs 22	Artefacts	3.0	0.0	0.0	0.0	0.0	Low
UD 23	Lodged 02/16	Upson Downs 23	Artefacts	7.0	0.0	0.0	0.0	0.0	Low
UD 24	Lodged 02/16	Upson Downs 24	Artefacts	8.0	0.0	0.0	0.0	0.0	Low
UD 25	Lodged 02/16	Upson Downs 25	Artefacts	18.0	0.0	0.0	0.0	0.0	Low
UD 26	Lodged 02/16	Upson Downs 26	Artefacts	9.0	0.0	0.0	0.0	0.0	Low
UD 27	Lodged 02/16	Upson Downs 27	Artefacts	300.0	0.0	0.0	0.0	0.0	Low
UD 28	Lodged 02/16	Upson Downs 28	Artefacts	7.0	0.0	0.0	0.0	0.0	Low
UD 29	Lodged 02/16	Upson Downs 29	Artefacts	2.0	0.0	0.0	0.0	0.0	Low
UD 3	Lodged 02/16	Upson Downs 3	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
UD 30	Lodged 02/16	Upson Downs 30	Artefacts	2.0	0.0	0.0	0.0	0.0	Low
UD 31	Lodged 02/16	Upson Downs 31	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
UD 32	Lodged 02/16	Upson Downs 32	Artefacts	4.0	0.0	0.0	0.0	0.0	Low
UD 33	Lodged 02/16	Upson Downs 33	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
UD 34	Lodged 02/16	Upson Downs 34	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
UD 35	Lodged 02/16	Upson Downs 35	Artefacts	2.0	0.0	0.0	0.0	0.0	Low

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UD 36	Lodged 02/16	Upson Downs 36	Artefacts	5.0	0.0	0.0	0.0	0.0	Low
UD 37	Lodged 02/16	Upson Downs 37	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
UD 38	Lodged 02/16	Upson Downs 38	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
UD 39	Lodged 02/16	Upson Downs 39	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
UD 4	Lodged 02/16	Upson Downs 4	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
UD 40	Lodged 02/16	Upson Downs 40	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
UD 41	Lodged 02/16	Upson Downs 41	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
UD 42	Lodged 02/16	Upson Downs 42	Artefacts	3.0	0.0	0.0	0.0	0.0	Low
UD 43	Lodged 02/16	Upson Downs 43	Artefacts	2.0	0.0	0.0	0.0	0.0	Low
UD 44	Lodged 02/16	Upson Downs 44	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
UD 45	Lodged 02/16	Upson Downs 45	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
UD 46 / UD 48 / UD 49	Lodged 02/16	Upson Downs 46 / Upson Downs 48 / Upson Downs 49	Artefacts and Shell	10.0	0.0	0.0	1.0	0.0	Low
UD 47	Lodged 02/16	Upson Downs 47	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
UD 5 / UD 8 / UD 7.1	Lodged 02/16	Upson Downs 5 / Upson Downs 8 / Upson Downs 7.1	Artefacts	15.0	0.0	0.0	0.0	0.0	Low
UD 50	Lodged 02/16	Upson Downs 50	Artefacts	2.0	0.0	0.0	0.0	0.0	Low
UD 51	Lodged 02/16	Upson Downs 51	Artefacts	76.0	0.0	0.0	0.0	0.0	Moderate
UD 52	Lodged 02/16	Upson Downs 52	Artefacts	4.0	0.0	0.0	0.0	0.0	Low
UD 53	Lodged 02/16	Upson Downs 53	Artefacts	2.0	0.0	0.0	0.0	0.0	Low
UD 54	Lodged 02/16	Upson Downs 54	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
UD 55	Lodged 02/16	Upson Downs 55	Artefacts	127.0	0.0	0.0	0.0	0.0	Moderate
UD 6	Lodged 02/16	Upson Downs 6	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
UD 60	Lodged 02/16	Upson Downs 60	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
UD 61	Lodged 02/16	Upson Downs 61	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
UD 62 / UD 64 / UD 65 / UD 70 / UD 75	Lodged 02/16	Upson Downs 62 / Upson Downs 64 / Upson Downs 65 / Upson Downs 70 / Upson Downs 75	Artefacts and Hearth	860.0	1.0	0.0	0.0	0.0	Moderate
UD 63	Lodged 02/16	Upson Downs 63	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
UD 66	Lodged 02/16	Upson Downs 66	Artefacts	4.0	0.0	0.0	0.0	0.0	Low
UD 67	Lodged 02/16	Upson Downs 67	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
UD 68	Lodged 02/16	Upson Downs 68	Artefacts	3.0	0.0	0.0	0.0	0.0	Low
UD 69	Lodged 02/16	Upson Downs 69	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
UD 7	Lodged 02/16	Upson Downs 7	Artefacts	4.0	0.0	0.0	0.0	0.0	Low
UD 71	Lodged 02/16	Upson Downs 71	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
UD 72	Lodged 02/16	Upson Downs 72	Artefacts	2.0	0.0	0.0	0.0	0.0	Low
UD 73	Lodged 02/16	Upson Downs 73	Artefacts and Hearth	244.0	1.0	0.0	0.0	0.0	Moderate
UD 74	Lodged 02/16	Upson Downs 74	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low

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UD 76	Lodged 02/16	Upson Downs 76	Artefacts	2.0	0.0	0.0	0.0	0.0	Low
UD 77	Lodged 02/16	Upson Downs 77	Artefacts	461.0	0.0	0.0	0.0	0.0	Moderate
UD 78	Lodged 02/16	Upson Downs 78	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
UD 79	Lodged 02/16	Upson Downs 79	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
UD 80	Lodged 02/16	Upson Downs 80	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
UD 88	Lodged 02/16	Upson Downs 88	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
UD 89	Lodged 02/16	Upson Downs 89	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
UD 9	Lodged 02/16	Upson Downs 9	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
UD 90	Lodged 02/16	Upson Downs 90	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
UD 91	Lodged 02/16	Upson Downs 91	Artefacts	2.0	0.0	0.0	0.0	0.0	Low
UD 92 / UD 93 / UD 100 / UD 101 / UD 102	Lodged 02/16	Upson Downs 92 / Upson Downs 93 / Upson Downs 100 / Upson Downs 101 / Upson Downs 102	Artefacts and Hearth	153.0	4.0	0.0	0.0	0.0	Moderate
UD 94	Lodged 02/16	Upson Downs 94	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
UD 95	Lodged 02/16	Upson Downs 95	Artefacts	4.0	0.0	0.0	0.0	0.0	Low
UD 96	Lodged 02/16	Upson Downs 96	Hearth	0.0	2.0	0.0	0.0	0.0	Low
UD 97	Lodged 02/16	Upson Downs 97	Hearth	0.0	1.0	0.0	0.0	0.0	Low
UD 98	Lodged 02/16	Upson Downs 98	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
UD 99	Lodged 02/16	Upson Downs 99	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
UD81 / UD82 / UD83 / UD84 / UD85 / UD86 / UD87	Lodged 02/16	Upson Downs81 / Upson Downs82 / Upson Downs83 / Upson Downs84 / Upson Downs85 / Upson Downs86 / Upson Downs87	Artefacts and Hearth	122.0	3.0	0.0	0.0	0.0	Moderate
W 1	Lodged 02/16	Wintong 1	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
W 10	Lodged 02/16	Wintong 10	Artefacts	2.0	0.0	0.0	0.0	0.0	Low
W 11	Lodged 02/16	Wintong 11	Artefacts	6.0	0.0	0.0	0.0	0.0	Low
W 12	Lodged 02/16	Wintong 12	Artefacts	26.0	0.0	0.0	0.0	0.0	Low
W 2	Lodged 02/16	Wintong 2	Artefacts and Hearth	250.0	5.0	0.0	0.0	0.0	Moderate
W 3	Lodged 02/16	Wintong 3	Artefacts and Hearth	49.0	1.0	0.0	0.0	0.0	Low
W 4	Lodged 02/16	Wintong 4	Artefacts	2.0	0.0	0.0	0.0	0.0	Low

ShortName	AHIMS_ID	SitecardNa	SiteFeatur	ArtefactCo	HearthCoun	CMTreeCoun	ShlCount	MndCount	Scientific
W 5	Lodged 02/16	Wintong 5	Artefacts	3.0	0.0	0.0	0.0	0.0	Low
W 6	Lodged 02/16	Wintong 6	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
W 7	Lodged 02/16	Wintong 7	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
W 8	Lodged 02/16	Wintong 8	Artefacts	11.0	0.0	0.0	0.0	0.0	Low
W 9	Lodged 02/16	Wintong 9	Artefacts	9.0	0.0	0.0	0.0	0.0	Low
WB 1	47-2-0226	West Balranald 1	Artefacts, Hearth and PAD	125.0	1.0	0.0	0.0	0.0	Moderate
WB 10	47-2-0233	West Balranald 10	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 100	47-2-0308	West Balranald 100	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 101	47-2-0309	West Balranald 101	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 102	47-2-0310	West Balranald 102	Artefacts and PAD	7.0	0.0	0.0	0.0	0.0	Low
WB 105	Relodged 02/16	West Balranald 105	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 106	Relodged 02/16	West Balranald 106	Artefacts	2.0	0.0	0.0	0.0	0.0	
WB 107	Relodged 02/16	West Balranald 107	Artefacts and Hearth	115.0	4.0	0.0	0.0	0.0	Moderate
WB 108	Relodged 02/16	West Balranald 108	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 109	Relodged 02/16	West Balranald 109	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 11	47-2-0234	West Balranald 11	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 110	Relodged 02/16	West Balranald 110	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 111	Relodged 02/16	West Balranald 111	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 112	Relodged 02/16	West Balranald 112	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 113 / WB 115	Relodged 02/16	West Balranald 113 / West Balranald 115	Artefacts	33.0	0.0	0.0	0.0	0.0	Low
WB 114	Relodged 02/16	West Balranald 114	Artefacts	12.0	0.0	0.0	0.0	0.0	Low
WB 117	Relodged 02/16	West Balranald 117	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 118	Relodged 02/16	West Balranald 118	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 119	Relodged 02/16	West Balranald 119	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 12	47-2-0235	West Balranald 12	Artefacts	2.0	0.0	0.0	0.0	0.0	Low
WB 120	Lodged 02/16	West Balranald 120	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low

ShortName	AHIMS_ID	SitecardNa	SiteFeatur	ArtefactCo	HearthCoun	CMTreeCoun	ShlCount	MndCount	Scientific
WB 121	Lodged 02/16	West Balranald 121	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 122	Lodged 02/16	West Balranald 122	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 123	Lodged 02/16	West Balranald 123	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 124	Lodged 02/16	West Balranald 124	Artefacts	12.0	0.0	0.0	0.0	0.0	Low
WB 125	Lodged 02/16	West Balranald 125	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 126	Lodged 02/16	West Balranald 126	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 127	Lodged 02/16	West Balranald 127	Artefacts	5.0	0.0	0.0	0.0	0.0	Low
WB 128	Lodged 02/16	West Balranald 128	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 129	Lodged 02/16	West Balranald 129	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 13	47-2-0236	West Balranald 13	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 130	Lodged 02/16	West Balranald 130	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 131	Lodged 02/16	West Balranald 131	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 132	Lodged 02/16	West Balranald 132	Artefacts	2.0	0.0	0.0	0.0	0.0	Low
WB 133	Lodged 02/16	West Balranald 133	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 134	Lodged 02/16	West Balranald 134	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 135	Lodged 02/16	West Balranald 135	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 136	Lodged 02/16	West Balranald 136	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 137	Lodged 02/16	West Balranald 137	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 138	Lodged 02/16	West Balranald 138	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 139	Lodged 02/16	West Balranald 139	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 14	47-2-0237	West Balranald 14	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 140	Lodged 02/16	West Balranald 140	Artefacts	153.0	0.0	0.0	0.0	0.0	Moderate
WB 141	Lodged 02/17	West Balranald 141	Artefacts	9.0	0.0	0.0	0.0	0.0	Low
WB 142	Lodged 02/18	West Balranald 142	Artefacts	2.0	0.0	0.0	0.0	0.0	Low
WB 143	Lodged 02/19	West Balranald 143	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low

ShortName	AHIMS_ID	SitecardNa	SiteFeatur	ArtefactCo	HearthCoun	CMTreeCoun	ShlCount	MndCount	Scientific
WB 144	Lodged 02/20	West Balranald 144	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 145	Lodged 02/21	West Balranald 145	Artefacts	2.0	0.0	0.0	0.0	0.0	Low
WB 146	Lodged 02/22	West Balranald 146	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 147	Lodged 02/23	West Balranald 147	Artefacts	3.0	0.0	0.0	0.0	0.0	Low
WB 148	Lodged 02/24	West Balranald 148	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 149	Lodged 02/25	West Balranald 149	Artefacts	6.0	0.0	0.0	0.0	0.0	Low
WB 15	47-2-0238	West Balranald 15	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 150	Lodged 02/25	West Balranald 150	Artefacts	6.0	0.0	0.0	0.0	0.0	Low
WB 151	Lodged 02/26	West Balranald 151	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 152	Lodged 02/27	West Balranald 152	Artefacts	11.0	0.0	0.0	0.0	0.0	Low
WB 153	Lodged 02/28	West Balranald 153	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 154	Lodged 02/29	West Balranald 154	Artefacts	76.0	0.0	0.0	0.0	0.0	Moderate
WB 155	Lodged 02/30	West Balranald 155	Artefacts	14.0	0.0	0.0	0.0	0.0	Low
WB 156	Lodged 02/31	West Balranald 156	Artefacts	122.0	0.0	0.0	0.0	0.0	Moderate
WB 157	Lodged 02/32	West Balranald 157	Artefacts	7.0	0.0	0.0	0.0	0.0	Low
WB 158	Lodged 02/33	West Balranald 158	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 159	Lodged 02/34	West Balranald 159	Artefacts	3.0	0.0	0.0	0.0	0.0	Low
WB 16	47-2-0239	West Balranald 16	Artefacts	3.0	0.0	0.0	0.0	0.0	Low
WB 160	Lodged 02/16	West Balranald 160	Artefacts	8.0	0.0	0.0	0.0	0.0	Low
WB 17	47-2-0240	West Balranald 17	Artefacts	2.0	0.0	0.0	0.0	0.0	Low
WB 18	47-2-0241	West Balranald 18	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 19	47-2-0242	West Balranald 19	Artefacts and PAD	8.0	0.0	0.0	0.0	0.0	Low
WB 2	47-2-0227	West Balranald 2	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 20	47-2-0243	West Balranald 20	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 21	47-2-0244	West Balranald 21	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 22	47-2-0245	West Balranald 22	Artefacts and PAD	5.0	0.0	0.0	0.0	0.0	Low
WB 23	47-2-0246	West Balranald 23	Artefacts and PAD	4.0	0.0	0.0	0.0	0.0	Low

ShortName	AHIMS_ID	SitecardNa	SiteFeatur	ArtefactCo	HearthCoun	CMTreeCoun	ShlCount	MndCount	Scientific
WB 24	47-2-0247	West Balranald 24	Artefacts and PAD	5.0	0.0	0.0	0.0	0.0	Low
WB 25		West Balranald 25	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 26	47-2-0249	West Balranald 26	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 27		West Balranald 27	Artefacts, Hearth and PAD	186.0	1.0	0.0	0.0	0.0	Moderate
WB 28	47-2-0250	West Balranald 28	Artefacts and PAD	81.0	0.0	0.0	0.0	0.0	Moderate
WB 29	47-2-0251	West Balranald 29	Artefacts and Hearth	6.0	1.0	0.0	0.0	0.0	Moderate
WB 3	47-2-0228	West Balranald 3	Artefacts, Hearth and PAD	28.0	0.0	0.0	0.0	0.0	Low
WB 30	47-2-0252	West Balranald 30	Isolated Artefact and Hearth	1.0	1.0	0.0	0.0	0.0	Low
WB 31	47-2-0253	West Balranald 31	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 32	47-2-0254	West Balranald 32	Isolated Artefact, Hearth and PAD	1.0	2.0	0.0	0.0	0.0	Moderate
WB 33	47-2-0255	West Balranald 33	Hearth and PAD	0.0	1.0	0.0	0.0	0.0	Low
WB 34	47-2-0256	West Balranald 34	Hearth	0.0	1.0	0.0	0.0	0.0	Low
WB 35	47-2-0257	West Balranald 35	Hearth and PAD	0.0	1.0	0.0	0.0	0.0	Low
WB 36	47-2-0258	West Balranald 36	Hearth	0.0	1.0	0.0	0.0	0.0	Low
WB 37	47-2-0259	West Balranald 37	Artefacts and Hearth	2.0	1.0	0.0	0.0	0.0	Low
WB 38	47-2-0260	West Balranald 38	Hearth and PAD	0.0	1.0	0.0	0.0	0.0	Low
WB 39	47-2-0261	West Balranald 39	Artefacts	2.0	0.0	0.0	0.0	0.0	Low
WB 4	47-2-0229	West Balranald 4	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 40	47-2-0262	West Balranald 40	Artefacts, Hearth, Shell, Scarred Tree and PAD	1030.0	13.0	1.0	1.0	0.0	High
WB 41	47-2-0263	West Balranald 41	Artefacts, Hearth and PAD	187.0	1.0	0.0	0.0	0.0	Moderate
WB 42	47-2-0264	West Balranald 42	Artefacts, Hearth and PAD	117.0	4.0	0.0	0.0	0.0	Moderate
WB 43	47-2-0265	West Balranald 43	Artefacts, Hearth and PAD	121.0	1.0	0.0	0.0	0.0	Moderate
WB 44	47-2-0266	West Balranald 44	Artefacts, Hearth and PAD	41.0	1.0	0.0	0.0	0.0	Low
WB 45		West Balranald 45	Artefacts, Hearth and PAD	83.0	1.0	0.0	0.0	0.0	Low
WB 46	47-2-0268	West Balranald 46	Artefacts, Hearth and PAD	4.0	3.0	0.0	0.0	0.0	Moderate
WB 47	47-6-0607	West Balranald 47	Artefacts and PAD	6.0	0.0	0.0	0.0	0.0	Low
WB 48	47-2-0269	West Balranald 48	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 49	47-2-0270	West Balranald 49	Hearth	0.0	1.0	0.0	0.0	0.0	Low
WB 5		West Balranald 5	Artefacts	2.0	0.0	0.0	0.0	0.0	Low

ShortName	AHIMS_ID	SitecardNa	SiteFeatur	ArtefactCo	HearthCoun	CMTreeCoun	ShlCount	MndCount	Scientific
WB 50	47-2-0271	West Balranald 50	Hearth	0.0	1.0	0.0	0.0	0.0	Low
WB 51	47-2-0272	West Balranald 51	Hearth and PAD	0.0	1.0	0.0	0.0	0.0	Moderate
WB 52	47-2-0273	West Balranald 52	Hearth	0.0	1.0	0.0	0.0	0.0	Low
WB 53	47-2-0274	West Balranald 53	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 54	47-2-0275	West Balranald 54	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 55	47-2-0276	West Balranald 55	Artefacts and PAD	3.0	0.0	0.0	0.0	0.0	Low
WB 56	47-2-0277	West Balranald 56	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 57	47-2-0278	West Balranald 57	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 58	47-2-0279	West Balranald 58	Artefacts	7.0	0.0	0.0	0.0	0.0	Low
WB 59	47-2-0280	West Balranald 59	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 6	47-2-0231	West Balranald 6	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 60	47-2-0281	West Balranald 60	Artefacts and PAD	2.0	0.0	0.0	0.0	0.0	Low
WB 61	47-2-0282	West Balranald 61	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 62	47-2-0283	West Balranald 62	Artefacts	3.0	0.0	0.0	0.0	0.0	Low
WB 63	47-2-0284	West Balranald 63	Artefacts, Hearth and PAD	85.0	1.0	0.0	0.0	0.0	Moderate
WB 64	47-2-0285	West Balranald 64	Isolated Artefact and PAD	1.0	0.0	0.0	0.0	0.0	Low
WB 65 /WB 81	47-2-0286	West Balranald 65	Artefacts, Hearth and PAD	150.0	1.0	0.0	0.0	0.0	Moderate
WB 66	47-2-0287	West Balranald 66	Artefacts, Hearth and PAD	13.0	1.0	0.0	0.0	0.0	High
WB 67	47-2-0300	West Balranald 67	Artefacts and PAD	24.0	0.0	0.0	0.0	0.0	Low
WB 68	47-2-0301	West Balranald 68	Artefacts and PAD	2.0	0.0	0.0	0.0	0.0	Low
WB 69	47-2-0302	West Balranald 69	Artefacts and PAD	2.0	0.0	0.0	0.0	0.0	Low
WB 7	47-2-0232	West Balranald 7	Artefacts	2.0	0.0	0.0	0.0	0.0	Low
WB 70	47-2-0303	West Balranald 70	Artefacts and PAD	5.0	0.0	0.0	0.0	0.0	Moderate
WB 71	47-2-0304	West Balranald 71	Artefacts, Hearth and PAD	10.0	1.0	0.0	0.0	0.0	Moderate
WB 72	47-2-0305	West Balranald 72	Artefacts	4.0	0.0	0.0	0.0	0.0	Low
WB 73	47-2-0306	West Balranald 73	Artefacts and PAD	5.0	0.0	0.0	0.0	0.0	Low
WB 74	47-2-0307	West Balranald 74	Artefacts and PAD	9.0	0.0	0.0	0.0	0.0	Moderate
WB 75	47-2-0195	West Balranald 75	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 76	47-2-0196	West Balranald 76	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 77	47-2-0197	West Balranald 77	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 78	47-2-0198	West Balranald 78	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low

ShortName	AHIMS_ID	SitecardNa	SiteFeatur	ArtefactCo	HearthCoun	CMTreeCoun	ShlCount	MndCount	Scientific
WB 79	47-2-0199	West Balranald 79	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 8	47-2-0193	West Balranald 8	Artefacts and Hearth	2.0	1.0	0.0	0.0	0.0	Low
WB 80	47-2-0200	West Balranald 80	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 82	47-2-0202	West Balranald 82	Hearth	0.0	1.0	0.0	0.0	0.0	Low
WB 83	47-2-0203	West Balranald 83	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 84	47-2-0204	West Balranald 84	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 85	47-2-0205	West Balranald 85	Artefacts	3.0	0.0	0.0	0.0	0.0	Low
WB 86	47-2-0206	West Balranald 86	Artefacts and Hearth	2.0	1.0	0.0	0.0	0.0	Low
WB 87	47-2-0207	West Balranald 87	Artefacts	2.0	0.0	0.0	0.0	0.0	Low
WB 88	47-2-0208	West Balranald 88	Hearth	0.0	1.0	0.0	0.0	0.0	Low
WB 89	47-2-0209	West Balranald 89	Artefacts	2.0	0.0	0.0	0.0	0.0	Low
WB 9	47-2-0194	West Balranald 9	Isolated Artefact and Hearth	1.0	1.0	0.0	0.0	0.0	Low
WB 90	47-2-0210	West Balranald 90	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 91	47-2-0211	West Balranald 91	Hearth	0.0	1.0	0.0	0.0	0.0	Low
WB 92	47-2-0212	West Balranald 92	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 93	47-2-0213	West Balranald 93	Artefacts	2.0	0.0	0.0	0.0	0.0	Low
WB 94	47-2-0214	West Balranald 94	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 95	47-2-0215	West Balranald 95	Artefacts	2.0	0.0	0.0	0.0	0.0	Low
WB 96	47-2-0218	West Balranald 96	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 97	47-2-0219	West Balranald 97	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 98	47-2-0217	West Balranald 98	Isolated Artefact	1.0	0.0	0.0	0.0	0.0	Low
WB 99	47-2-0216	West Balranald 99	Isolated Artefact and Hearth	1.0	1.0	0.0	0.0	0.0	Low

Table 22 – Aboriginal objects, sites and places documented within the MOD1 additional disturbance area

AHIMS #	Site name	Site type	Archaeological significance	Description
47-2-0262	WB40	Artefacts, hearth, scarred tree, PAD	High	WB40 was originally recorded as a high-density archaeological complex with a high volume and range of stone artefacts, hearths, a culturally modified tree and PAD. The site represents the most intense and diverse assemblage in the project area. The 2021 survey identified artefacts dispersed across the scald, with no discernible patterning. In total, an additional 25 silcrete flakes, a flaked river pebble and a few pieces of shell recorded. The area of PAD appears to extend slightly further north within the MOD1 additional disturbance area than previously mapped. The site extent of WB40 is now 1000 m x 815 m. No evidence of hearths was identified within the MOD1 additional disturbance area. There were very few trees within the investigation area. Trees were inspected but no trees with cultural scars were identified within the MOD1 additional disturbance area. No subsurface artefacts or cultural material was identified during test excavation undertaken in 2022.
47-2-0263	WB41	Artefacts, hearth, PAD	Moderate	WB41 was initially recorded as a low to moderate artefact density, hearth and PAD. The 2021 survey identified an additional 20 silcrete flakes in association with WB41 which extends across a large claypan. The site appears to extend further south within the investigation area than previously mapped. The site extent is now 750 m x 460 m. No evidence of the hearth was identified within the 2022 investigation area. No subsurface artefacts or cultural material was identified during test excavation undertaken in 2022.
47-2-0264	WB42	Artefacts, hearth, PAD	Moderate	Low density artefact scatter, dispersed heat retainers indicating a disturbed hearth, and PAD. WB41 is situated on a highly eroded area. Artefacts are dispersed in low concentrations across the scald, with no discernible patterning. The 2021 survey identified an additional 30 silcrete flakes in association with WB45 which extends across a vast claypan. No evidence of disturbed hearth within the MOD1 additional disturbance area. Site extent is now 1000 m x 500 m.
47-2-0267	WB45	Artefacts, hearth, PAD	Low	Small scatter of 6 silcrete artefacts, assessed as in poor condition (Niche 2015). The site is situated on soft sandy soils with scattered re-growth trees. No evidence of hearth within the MOD1 additional disturbance area. No subsurface artefacts or cultural material was identified during test excavation undertaken in 2022.
47-6-0607	WB47	Artefacts, PAD	Low	Small scatter of 6 silcrete artefacts, assessed as in poor condition (Niche 2015).

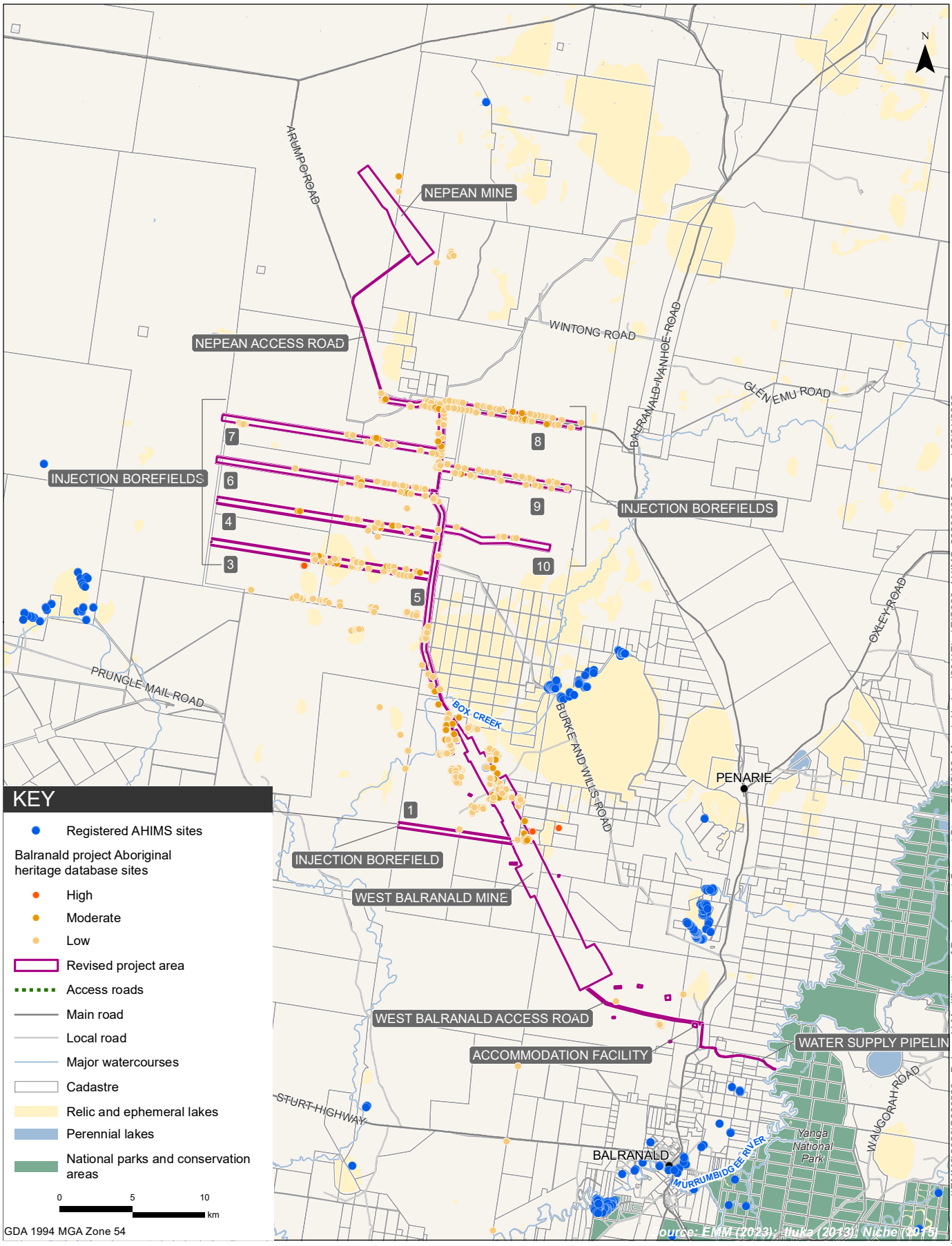
AHIMS #	Site name	Site type	Archaeological significance	Description
				The site is situated on soft sandy soils with scattered re-growth trees. The 2021 survey did not relocate any of the previously identified material (EMM 2022a).
47-2-0310	WB102	Artefact site, PAD	Low	Low density, small artefact scatter. Further surface and subsurface artefact predicted to be present in remnant vegetation mounds and deeper soils. The 2021 survey identified a high concentration of surface artefacts on a highly eroded scald with fringing vegetation mounds, recording an additional 50 silcrete flakes in association with WB102. The site extends to the north of previously mapped area. Site extent is now 150 m x 90 m. Test excavation undertaken in 2022 identified a single artefact. The results of excavation in this area suggests that artefact densities in the natural soil (PAD) within the vegetation mounds are likely to be in similar concentrations to what is visible on the surface, which is considered relatively low.
47-2-0675	WB162	Artefact scatter	Low	WB162 is an artefact scatter comprising >55 silcrete flakes exposed on a series of erosion scalds. Site extent is ~500 m x 170 m.
47-2-0680	WB163	Artefact scatter	Low	WB163 is an artefact scatter comprising ~30 silcrete flakes exposed on an erosion scald. Site extent is 90 m x 80 m.
47-2-0674	WB164	Artefact scatter	Low	WB164 is a low-density artefact scatter comprising >80 silcrete flakes exposed across a series of erosion scars. Site extent is 430 m x 240 km.
47-2-0681	WB165	Artefact scatter	Low	WB165 is a very low-density artefact scatter comprising three silcrete flakes exposed on an erosion scar and access track. Site extent is 150 m x 50 m.
47-2-0672	WB166	Artefact scatter	Low	WB166 is a low-density artefact scatter comprising >15 silcrete flakes exposed across a series of erosion scars. Site extent 260 m x 170 m.
47-2-0671	WB167	Artefact scatter	Low	WB167 is a low-density artefact scatter comprising >15 silcrete flakes exposed within a series of erosion scars. Site extent is 285 m x 90 m.
47-2-0673	WB168	Artefact scatter	Low	WB168 is an extensive low-density artefact scatter comprising 35 silcrete flakes exposed across a series of small claypans. Site extent is 310 m x 145 m.
47-2-0679	WB169	Artefact scatter	Low	WB169 is a small artefact scatter comprising four silcrete flakes and two silcrete cores. Site extent is 55 m x 50 m.
47-2-0670	WB170	Isolated find	Low	WB170 is an isolated silcrete flake exposed on an erosion scald.
47-2-0678	WB171	Artefact scatter	Low	WB171 is a small artefact scatter comprising five silcrete flakes exposed on a small claypan. Site extent is 20 m x 10 m.
47-2-0677	WB172	Artefact scatter	Low	WB172 is an artefact scatter comprising ~45 silcrete flakes and several silcrete cores exposed on an extensive claypan. Other artefact types include several large quartzite flakes and quartzite cores. Site extent is 390 m x 110 m.
47-2-0676	WB173	Artefact scatter	Low	WB173 is a low-density artefact scatter comprising <10 silcrete flakes exposed on a claypan. Site extent is 130 m x 90 m.

AHIMS #	Site name	Site type	Archaeological significance	Description
47-2-0690	WB174	Artefact scatter and PAD	Moderate	WB174 comprises four silcrete and quartzite flakes distributed across an area approximately 50 m x 100 m on a slightly raised mound on the south-western edge of Muckee Lake.
47-2-0689	WB175	Modified tree	High	WB175 is a dead but still standing eucalypt tree with 13 scars of various sizes in an otherwise cleared paddock on the south-western edge of Muckee Lake.

Appendix 3 – Schedule of Recorded Aboriginal Objects (by site)

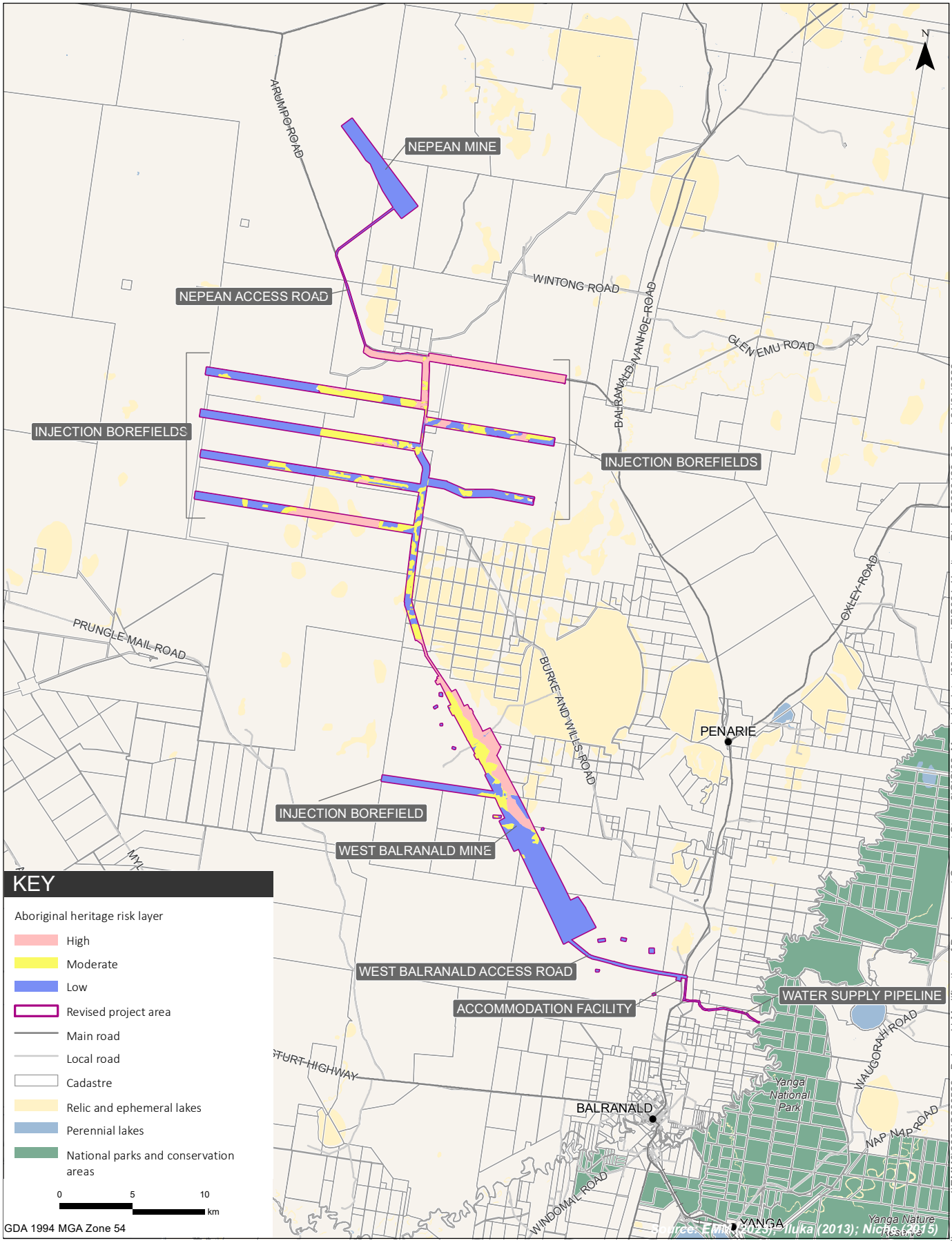
Schedule of Individual Recorded Aboriginal Objects (by site) will be a standalone volume and added on incrementally as the Aboriginal heritage program progresses.

Appendix 4 – Schedule of the Aboriginal Archaeological Risk Layer



Aboriginal sites in and around the project area

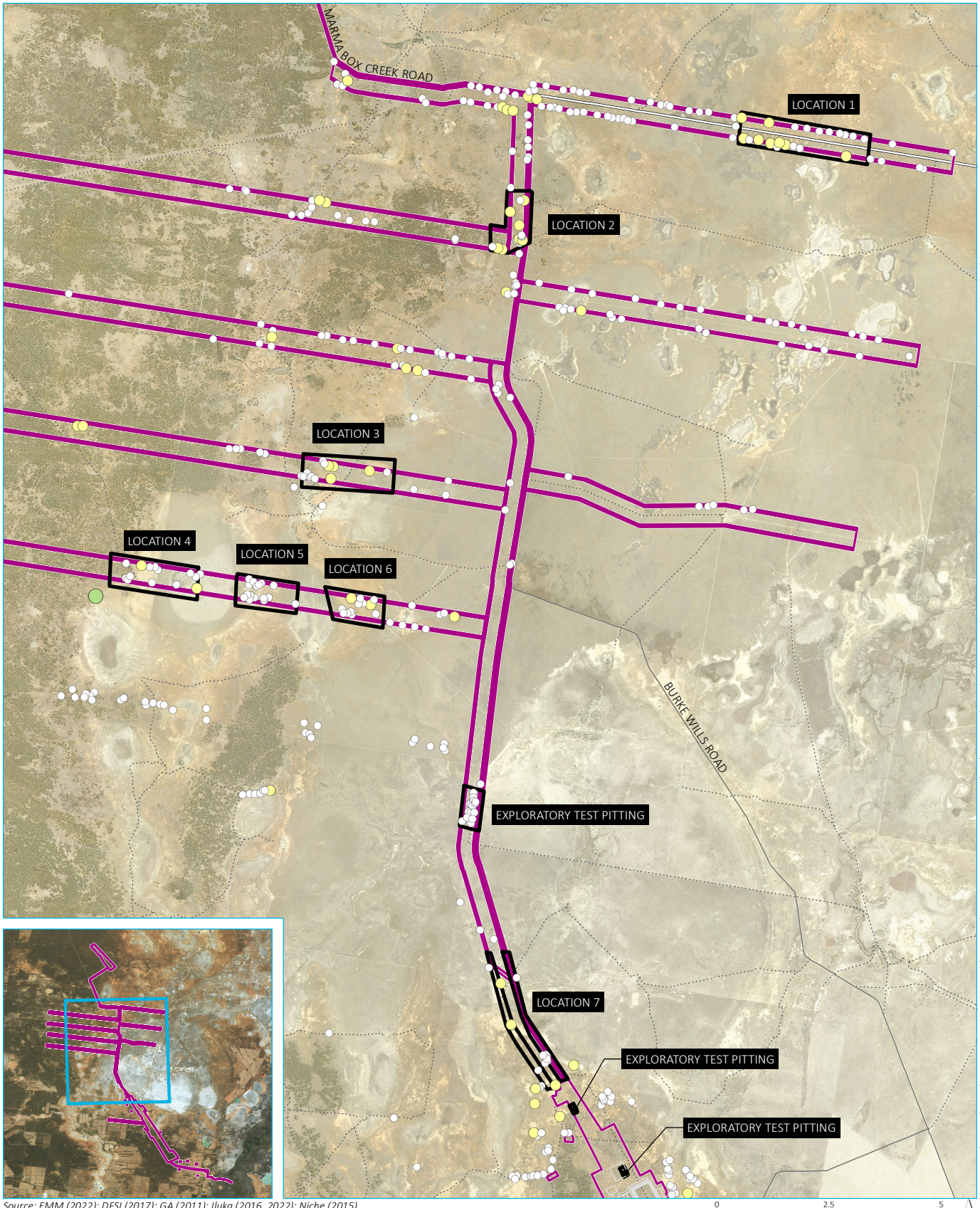
Balranald Mineral Sands Project
Environmental Impact Statement
Figure 13.1



Aboriginal heritage risk layers in the project area

Balranald Mineral Sands Project
Environmental Impact Statement
Figure 13.2

Appendix 5 – Schedule of Areas of Archaeological Research Interest



\\emmsvr1\EMM3\2020\S200529 - Balranald Modification of Development Consent Stage 2\GIS\02_Maps_Updated2011Figs\NICHE001_SubsurfaceExtractionInjectionBorefield_20221123_01.mxd 24/11/2022

Source: EMM (2022); DFSI (2017); GA (2011); Iluka (2016, 2022); Niche (2015)

0 2.5 5 km

GDA 1994 MGA Zone 54

N

KEY

- Revised project area
- Proposed subsurface extraction location
- Mine plan
- Major road
- Minor road
- Vehicular track

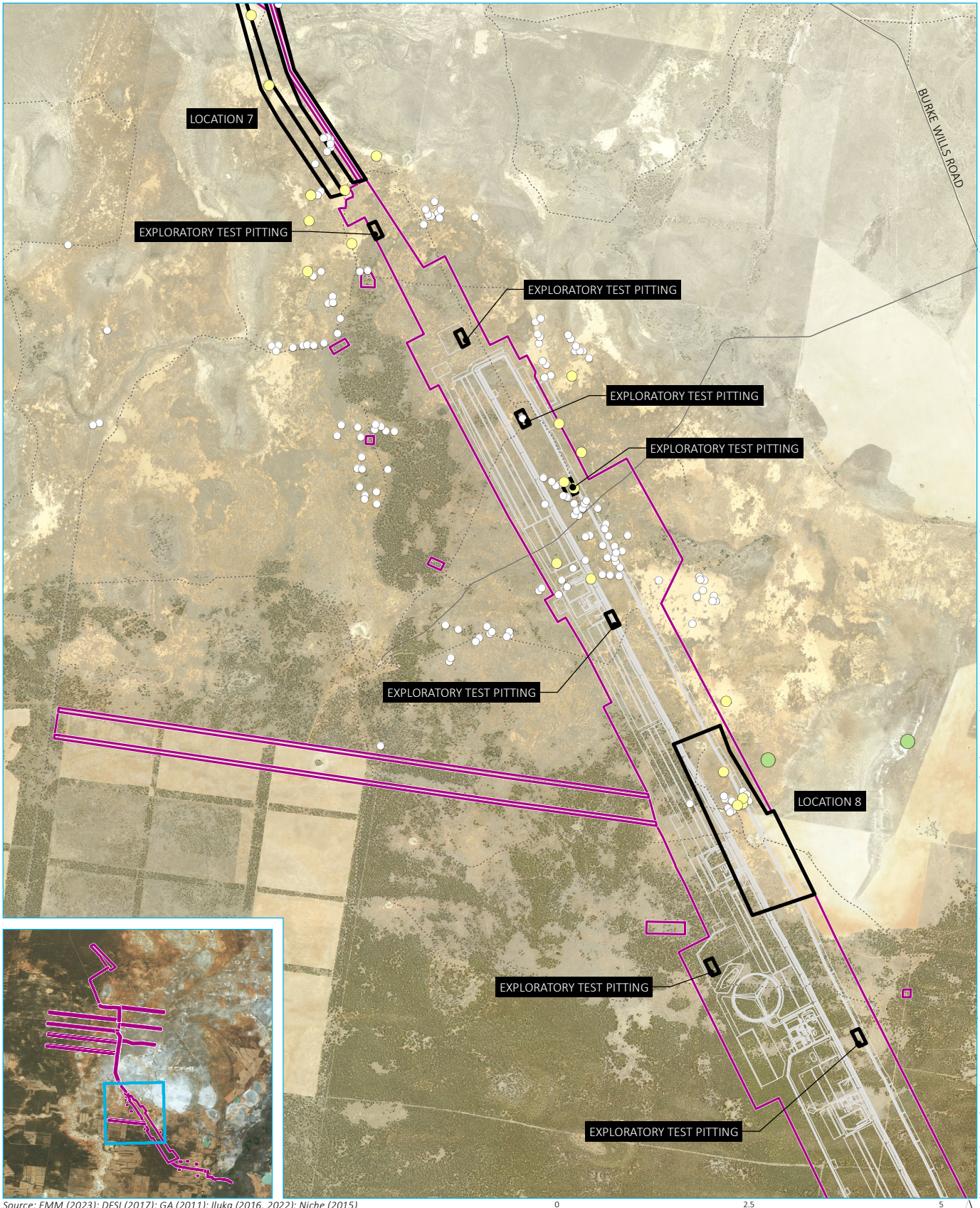
Archaeological site and significance rating

- High
- Moderate
- Low

Proposed subsurface extraction program: injection borefield and haul road infrastructure

Balranald Mineral Sands Project
Aboriginal Cultural Heritage
Figure 1

EMM
creating opportunities



Source: EMM (2023); DFSI (2017); GA (2011); Iluka (2016, 2022); Niche (2015)

0 2.5 5 km

GDA 1994 MGA Zone 54

N

KEY

- Revised project area
- Proposed subsurface extraction location
- Mine plan
- Minor road
- Vehicular track

Archaeological site and significance rating

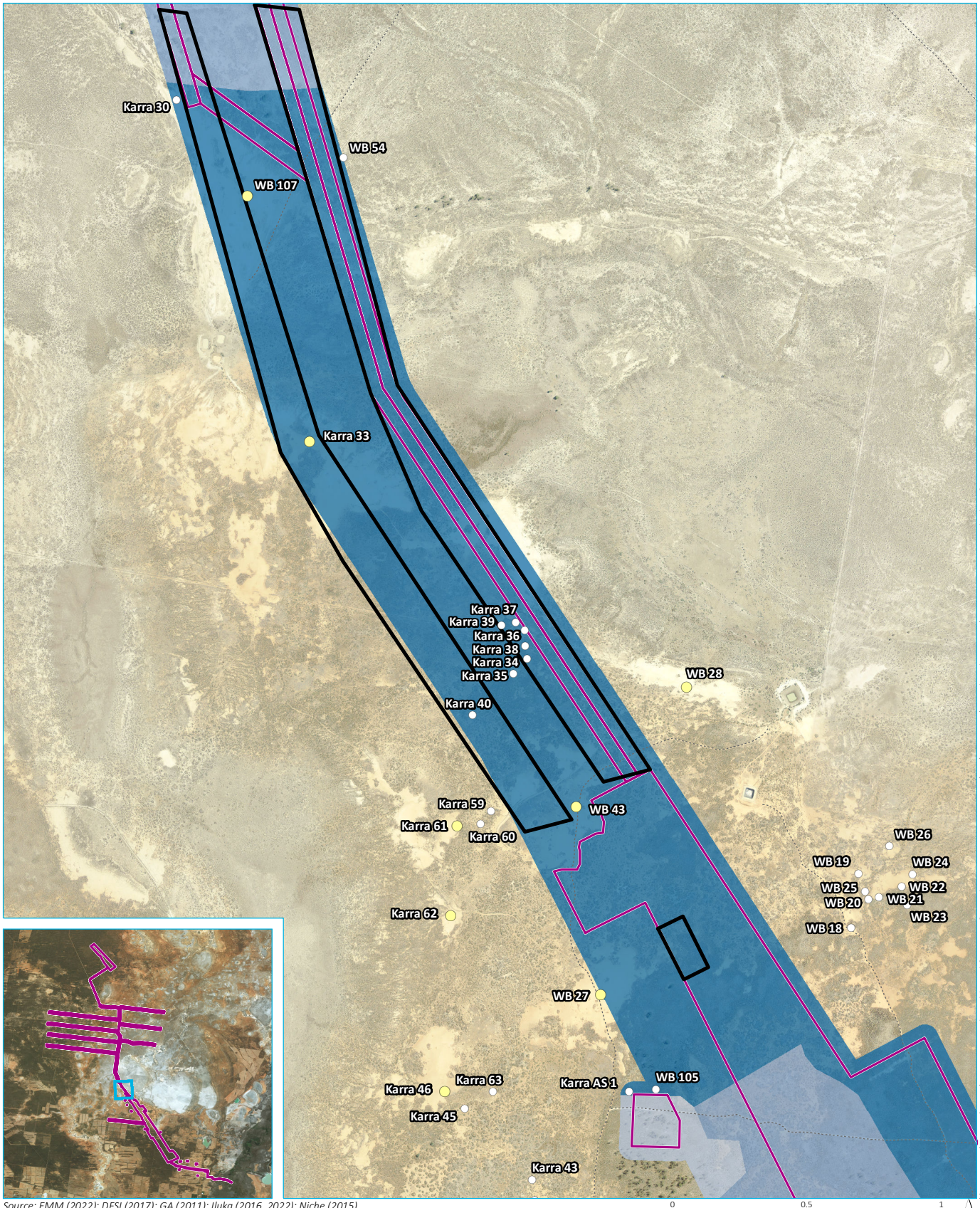
- High
- Moderate
- Low

Proposed subsurface extraction program: West Balranald mine

Balranald Mineral Sands Project
Aboriginal Cultural Heritage
Figure 2

EMM creating opportunities

\\emmsvr1\EMM3\2020\S200529 - Balranald Modification of Development Consent Stage 2\GIS\02_Maps_Updated2011Figs\NICHE002_SubsurfaceExtractionInjectionBorefieldSouth_20230123_01.mxd 23/01/2023



Source: EMM (2022); DFSI (2017); GA (2011); Iluka (2016, 2022); Niche (2015)

0 0.5 1 km

GDA 1994 MGA Zone 54

N

\\emmsvr1\EMM3\2020\S200529 - Balranald Modification of Development Consent Stage 2\GIS\02_Maps_Updated2011Figs\NICHE003_ProposedSubsurfaceLocation7_20221123_01.mxd 24/11/2022

KEY

- Revised project area
- Proposed subsurface extraction location
- Vehicular track

Archaeological site and significance rating

- Moderate
- Low

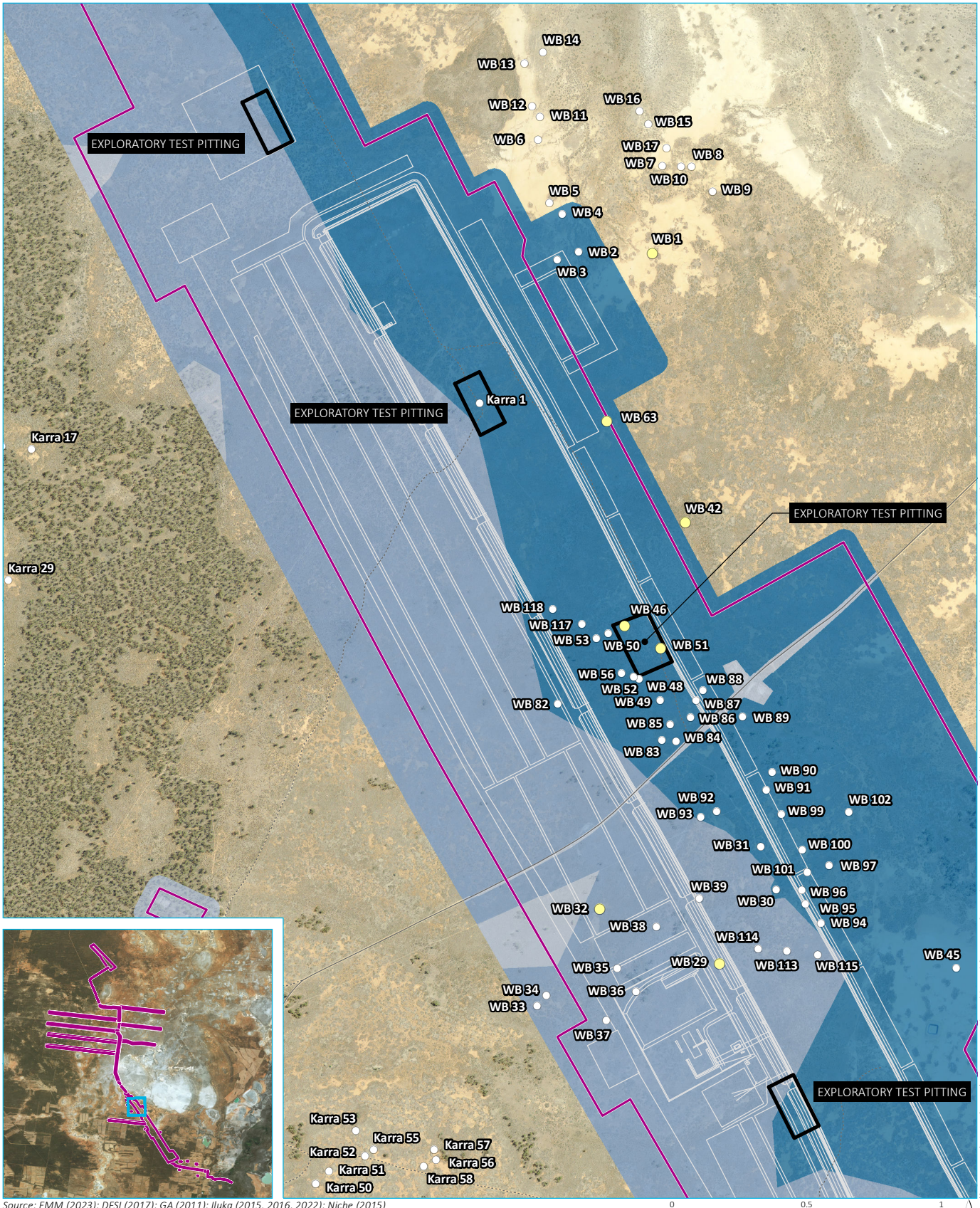
Aboriginal heritage risk

- High
- Moderate
- Low

Proposed subsurface extraction program: Location 7

Balranald Mineral Sands Project
Aboriginal Cultural Heritage
Figure 3

EMM
creating opportunities



Source: EMM (2023); DFSI (2017); GA (2011); Iluka (2015, 2016, 2022); Niche (2015)

0 0.5 1 km

GDA 1994 MGA Zone 54

N

\\emmsvr1\EMM3\2020\S200529 - Balranald Modification of Development Consent Stage 2\GIS\02_Maps_Updated2011Figs\NICHE004_ProposedSubsurfaceWestBalranald_20230123_02.mxd 23/01/2023

KEY

- Revised project area
- Proposed subsurface extraction location
- Mine plan
- Minor road
- Vehicular track

Archaeological site and significance rating

- Moderate
- Low

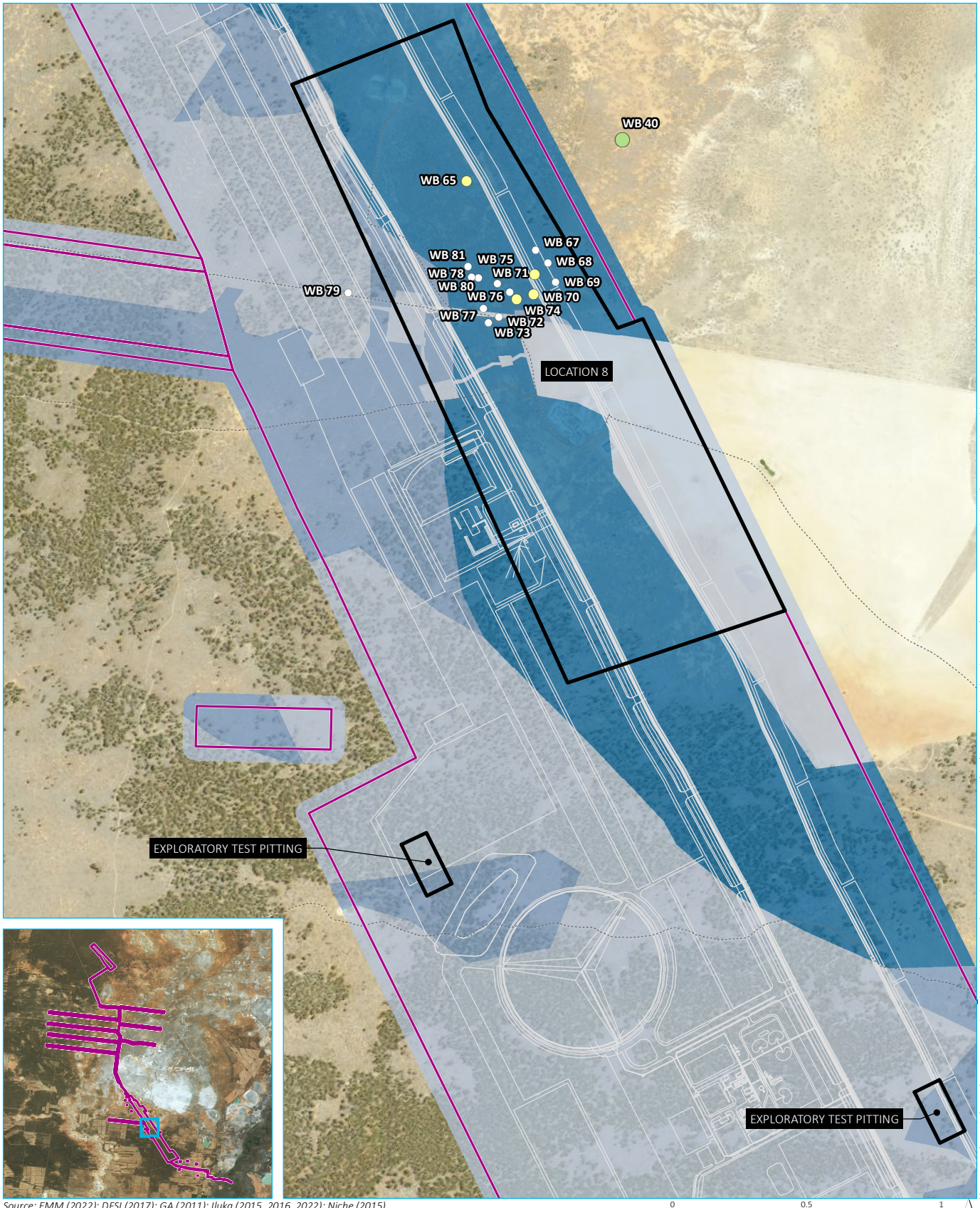
Aboriginal heritage risk

- High
- Moderate
- Low

Proposed subsurface extraction program: West Balranald

Balranald Mineral Sands Project
Aboriginal Cultural Heritage
Figure 4

EMM
creating opportunities



Source: EMM (2022); DFSI (2017); GA (2011); Iluka (2015, 2016, 2022); Niche (2015)

0 0.5 1 km

GDA 1994 MGA Zone 54

N

\\emmsvr1\EMM3\2020\S200529 - Balranald Modification of Development Consent Stage 2\GIS\02_Maps_Updated2011Figs\NICHE005_ProposedSubsurfaceWestBalranaldLocation8_20221123_01.mxd 24/11/2022

KEY

- Revised project area
- Proposed subsurface extraction location
- Mine plan
- Vehicular track

Archaeological site and significance rating

- High
- Moderate
- Low

Aboriginal heritage risk

- High
- Moderate
- Low

Proposed subsurface extraction program: Location 8 - West Balranald

Balranald Mineral Sands Project
Aboriginal Cultural Heritage
Figure 5

EMM
creating opportunities

Appendix 6 – Procedures for Archaeological Excavation

Archaeological excavation will be undertaken by appropriately qualified and experienced archaeologist(s) and representatives of the Registered Aboriginal Parties, where available.

Archaeological excavation in accordance with the archaeological subsurface excavation program (described in Section 6.2) will be undertaken in two phases. The first phase will be an initial stratigraphic trenching and/or test pitting exploratory phase followed by, if warranted, a more targeted, open area salvage approach.

Stratigraphic Trenches

Stratigraphic trenches will be excavated, mechanically where possible, to give a large soil cross section and to assist in the characterisation of stratigraphy, likely culturally sterile layers and assist in the collection of cultural materials, dating, soil, environmental samples.

The final placement of the stratigraphic trench will be determined in consultation with a geomorphologist and archaeologist with respect to the overall aims of the Project's Aboriginal heritage research program.

A sample of soil moved as a result of the excavation of the stratigraphic trench may be sieved.

Where stratigraphic trenches and mechanical excavation is not feasible, exploratory test pits may be substituted.

Exploratory Test Pitting

The objective of exploratory test pitting is to help characterise the landscape and determine the nature and composition of the Aboriginal heritage evidence in a location. The information collected during exploratory test pitting will inform whether further targeted salvage excavation is required.

One or more transects or "spoke-wheels" of test pits (0.5 m by 0.5 m) will be placed no more than 20 m apart within an investigation area as per the archaeological subsurface excavation program outlined in Section 6.2. In rangeland landscapes, test pits may be excavated as $1m^2$ sample areas.

Where site specific management measures identify the need for additional exploratory test pitting beyond the program identified in Section 6.2 the number of test pits will be determined by the length or width of the Aboriginal site (as determined by the surface expression of artefacts[8] and less disturbed portions of the landform).

The number of test pits may be reduced depending on the nature and scale of the site or landform being assessed, subject to the advice of qualified and experienced archaeologist.

Wherever possible, test pits should be placed utilise areas of that are relatively less disturbed.

Placement of test pits should consider the overall aims and objectives of the Aboriginal heritage research program.

Test pits will be excavated using hand tools and expanded out if necessary in conjunction with a safe work methods for excavating at depth or in unstable soil profiles (such as stepping out or shoring) depending on

[8] Requires additional clarification – for example focal point of surface artefacts to compensate for continuous artefact distribution in landscape.

the stability of the sediment, depth of culturally sterile of deposits or depth of proposed impact[9]. Soil excavated for safe work methods rather than as part of the sample being investigated may not be sieved.

Test pits will be excavated in 5 cm spits and/or stratigraphic units.

It may be necessary in some situations to excavate mechanically if, for instance soils are cemented or for safe work methods for excavating at depth or in unstable soil profiles (such as stepping out or shoring) depending on the stability of the sediment, depth of culturally sterile of deposits or depth of proposed impact. In the case of mechanical excavation:

- mechanical excavation would be conducted in a controlled manner
- the size of the test pits will be determined based on the advice of the archaeologist and generally aim to be as small as can reasonably achieved
- test pits would be excavated in 10 cm spits and/or stratigraphic units.

Test pits, either excavated using hand tools or by mechanical means, will be excavated to either:

- depth of the proposed impact
- depth of the culturally sterile deposits
- bedrock
- water table
- where it would be considered that digging any deeper would be unsafe.

All material recovered from the test pits will be sieved using at minimum a 3mm mesh size.

All cultural material remaining in the sieves will be bagged and labelled in accordance with current standards for archaeological excavation.

All excavation units will be assigned an identifier (such as an alpha numeric identifier) in accordance with standard archaeological practice.

Standard site recording forms will be utilised to record excavation units and contexts in accordance with current archaeological practice and standards and will provide spatial data on the location of excavation units.

Photographic and/or scale drawn records of exposed soil profiles in will be made.

If specific archaeological features such as hearths are identified, the feature will be excavated in accordance with standard archaeological practice and photographs and/or scale plans drawn.

Dating samples will be collected and a representative sample will be processed where appropriate samples are identified. This analysis will only be undertaken when it will add significantly to an understanding of a site's stratigraphy.

[9] Any spoil that results from shoring or stepping may not be sieved for cultural material.

Where the test pitting and stratigraphic trenches have good spatial integrity and in situ cultural deposits and indicate the potential for:

- Archaeological material of moderate or higher significance, indicated by (for example):
    - intact knapping floors
    - high densities of artefacts as per Table 3
    - deposits likely to be of considerable age[10]
    - the presence of ochre
    - burnt features likely to be of cultural origins
    - unusual or rare material or artefact types
    - middens, culturally modified faunal remains
    - indications of continuous occupation
    - potential evidence of interaction between megafauna and humans
    - other indicators of high significance.

Further targeted salvage excavation will be triggered.

Where the exploratory test pits indicate that the site does not hold moderate or high significance or few subsurface artefacts, then targeted salvage excavation will not be undertaken. In such circumstances there would remain little value in a more detailed scientific investigation of the site through controlled salvage excavation. Controlled excavation is a costly and time-intensive exercise, and should be reserved for sites with good spatial integrity and in situ cultural deposits.

Table 23: Artefact density triggers during subsurface investigation

Likely significance	**High** *Triggers a targeted salvage excavation*	**Moderate** *May trigger targeted salvage excavation based on advice from a qualified archaeologist*	**Low** *Does not trigger salvage excavation*
	Examples		
Artefact Densities	>100 artefacts per m2	> 30 artefacts per m2	< 30 artefacts per m2

Targeted Salvage Excavation

Where targeted salvage excavation is triggered by the first phase of exploratory excavation (see above) and determined to be warranted by Iluka Resources in consultation with a suitably qualified and experienced archaeologist, targeted salvage excavation will be undertaken. The aim of the targeted salvage excavation will be to collect a sufficient sample that captures the heritage values of the site and to provide information that informs the overall aims and objectives of the Aboriginal heritage research program.

The following process will be generally implemented at a level appropriate to the extent and nature of the site:

- The area and extent to be targeted for salvage excavation will be selected by an appropriately qualified and experienced archaeologist, in consultation with Iluka and the RAPs.

[10] Assessments of considerable age should consider the number and nature of dates collected in the region for archaeological occupation and whether further salvage excavation would contribute new or meaningful information about past Aboriginal land use

in the Project Area.

Placement of salvage excavation pits will consider the overall aims and objectives of the Aboriginal heritage research program.

- Wherever possible, salvage excavation pits should be placed utilise areas of that are relatively less disturbed.

The extent of the targeted salvage excavation must take into consideration the excavation volumes commitments identified in Section 1.4. Where the extent of the anticipated excavation volumes exceed that amounts identified in Section 1.4 and/or the upper limiting 135 m^3 (135 cubic metres) of excavated archaeological sample, further salvage will be at the discretion of Iluka with advice from a suitably qualified and experienced archaeologist and RAPs.

Salvage excavations will be conducted at minimum to the standard specified in current OEH guidelines such as the Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW.

Salvage excavation pits will be excavated in 0.5 m x 0.5 m quadrants and may take the form of open area excavation or 'spoke-wheel' investigations where appropriate using hand tools and expanded out if necessary in conjunction with a safe work methods for excavating at depth or in unstable soil profiles (such as stepping out or shoring) depending on the stability of the sediment, depth of culturally sterile of deposits or depth of proposed impact[11]. Soil excavated for safe work methods rather than as part of the sample being investigated may not be sieved.

Salvage excavation pits will be excavated in 5 cm spits and/or stratigraphic units.

It may be necessary in some situations to excavate mechanically if, for instance soils are cemented or for safe work methods for excavating at depth or in unstable soil profiles (such as stepping out or shoring) depending on the stability of the sediment, depth of culturally sterile of deposits or depth of proposed impact. In the case of mechanical excavation:

- mechanical excavation would be conducted in a controlled manner;
- the size of the salvage excavation pits will be determined based on the advice of the archaeologist and generally aim to be as small as can reasonably achieved;
- salvage excavation pits would be excavated in 10 cm spits and/or stratigraphic units.

Salvage excavation pits, either excavated using hand tools or by mechanical means, will be excavated to either:

- depth of the proposed impact
- depth of the culturally sterile deposits
- bedrock
- water table
- where it would be considered that digging any deeper would be unsafe.

All material recovered from the test pits will be sieved using at minimum a 3 mm mesh size.

All cultural material remaining in the sieves will be bagged and labelled in accordance with current standards for archaeological excavation.

[11] Any spoil that results from shoring or stepping may not be sieved for cultural material.

All excavation units will be assigned an identifier (such as an alpha numeric identifier) in accordance with standard archaeological practice.

Standard site recording forms will be utilised to record excavation units and contexts in accordance with current archaeological practice and standards and will provide spatial data on the location of excavation units.

Photographic and/or scale drawn records of exposed soil profiles in will be made.

If specific archaeological features such as hearths are identified, the feature will be excavated in accordance with standard archaeological practice and photographs and/or scale plans drawn.

Dating samples will be collected and a representative sample will be processed where appropriate samples are identified. This analysis will only be undertaken when it will add significantly to an understanding of a site's stratigraphy.

The above requirements may be modified if suitable based on advice from a suitably qualified archaeologist.

Appendix 7 – Guidance for Significance Assessments

Significance assessments of Aboriginal sites should be conducted in line with best practice and consider:

- The *Burra Charter* (Australia ICOMOS 2013).
- Current OEH policies such as:
    - the Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW (OEH, 2011)
    - Code of Practice for Archaeological Investigation of Aboriginal Object in New South Wales (DECCW 2010b).
    - Aboriginal Cultural Heritage Standards and Guidelines Kit (NSW NPWS 1997).
- Cumulative significance and impact through consideration of the cultural landscape and the key statement of significance for the project area.

In assessing the archaeological values of the sites recorded during this project model statements of significance were developed to allow the significance to be described and compared within a regional approach. In this framework examples such as the ancient sites and ancestral remains present at Lake Mungo were considered as the example of what is high value.

Low

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

Moderate

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

High

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

Very High

The site, object or landscape is considered of very high significance because it contains very rare archaeological and or contextual features which demonstrate outstanding, exceptional heritage values, likely to be of national or world heritage value. This site, object or landscape is likely to demonstrate a high example of intactness. An example of a landscape with very high significance would be the Willandra Lakes World Heritage Area and the Lake Victoria Landscape.

Examples of very high cultural significance:

"*Criterion (iii): The drying up of the Willandra Lakes some 18,500 years BP allowed the survival of remarkable evidence of the way early people interacted with their environment. The undisturbed stratigraphy has revealed evidence of Homo sapiens sapiens in this area from nearly 50,000 years BP, including the earliest known cremation, fossil trackways, early use of grindstone technology and the exploitation of fresh water resources, all of which provide an exceptional testimony to human development during the Pleistocene period.*

"The cultural heritage demonstrates a unique conjunction of a number of highly significant aspects: the burial grounds, the extensive preservation of rich Aboriginal heritage material, and the number of significant historic events and processes that have occurred here, from the Rufus River Massacre and other massacres to the building of the regulation works. Individually, these aspects are very important, but together they give the Lake outstanding cultural value to the Aboriginal people who have traditional and historic ties, as well as to other Australians. Because of this there is no doubt that Lake Victoria is of national cultural significance."

Table 24 provides some guidelines for triggering updated significance assessments during surface collection may require updating throughout the lifespan of the project so as to reflect advancements in the understanding of the project's and regional archaeology. They are designed as a guide rather than a condition.

Table 24: Guideline to trigger update significance assessments during surface collection.

Likely significance	**High** *Triggers a significance assessment prior to the commencement of activities*	**Moderate** *May trigger updated significant assessment based on advice from a qualified archaeologist*	**Low** *Does not trigger updated significance assessment*
	Examples		
Artefact Densities	>20 artefacts per m2 >80 artefacts per ha	> 10 artefacts per m2 > 80 artefacts per ha	< 10 artefacts per m2 <80 artefacts per ha
	Multiple intact knapping events	Intact knapping event	
Rare or unusual site types	Possible human remains Four or more site features eg. Artefacts, Hearths, PAD and (shell, bone, culturally modified tree) Shell/faunal remains suggestive of cultural use and of sufficient quantities to indicate a midden Potential evidence of interaction between megafauna and humans	Culturally modified trees Four or more site features eg. Artefacts, Hearths, PAD and (shell, bone, culturally modified tree) Bone Shell suggestive of cultural use and of sufficient quantities to indicate a midden	Three or less site features
Cultural Aspects	Specific cultural knowledge of a person, event, ceremonial activity, mythological story relating to that site	Specific cultural knowledge	

Appendix 8 – Guidance for Cumulative Impact Assessment

Framework

Cumulative impacts can arise from the compounding activities of a single operation when considering past, current and future activities in an area. Cumulative impacts assessed the total impact resulting from incremental impacts (including both direct and indirect impacts) from the project when added to other existing and proposed developments in the locality and region.

An Aboriginal heritage cumulative impact assessment was completed for the Balranald Project as part of the Environmental Impact Statement (Niche 2015). The cumulative impact assessment indicated that sites of moderate and high heritage value would be impacted by the project but many more sites of equal or greater value could be expected to be present in the region. A cultural heritage model has been developed for the project to predict the known and likely Aboriginal heritage resource. A risk assessment was undertaken and an Aboriginal Heritage Management Plan developed to manage and mitigate those risks. The assessment process identified a number of knowledge gaps and the risk assessment for the project identified a number of foreseeable risks around the potential for Aboriginal heritage items and or values of high significance the likelihood of Aboriginal burials in the project area.

Comprehensive information is not necessarily a pre-requisite to cumulative impact management (NSW Minerals Council 2015). Cumulative impact assessment models that take an adaptive management approach may be a means of enabling impacts to be managed in the absence of up-front comprehensive information.

An adaptive management approach requires trigger points to consider cumulative impact against baseline data, evaluate whether the existing conditions are still fit for purpose and adapt to the management strategies as required.

One of the important positive cumulative impact roles that the Balranald Project plays for the region is to provide baseline data for the more effective management of cumulative impacts to Aboriginal heritage in the region. The region for the purpose of cumulative impact assessment is defined those areas that encompass the Project Area, the Balranald Local Government Area, the Balranald Local Aboriginal Lands Council area, land traditionally associated with the Mutthi Mutthi and Yitha Yitha groups, the relict paths and tributaries of Box Creek and the Lachlan River with Ivanhoe the northern most point, Hillston and Hay the eastern most points, the Murrumbidgee River in the south and Robinvale and Arumpo in the west. The region encompasses the Willadra Lakes World Heritage Area, the Willandra National Park, the Lachlan Valley State Conservation Area and the Murrumbidgee Valley National Park / Yanga National Park. A portion of the Malle Cliffs Reserve also falls within the land traditionally associated with the Mutthi Mutthi.

Baseline Data

The project utilises the existing data from the Balranald Aboriginal Cultural Heritage Assessment to provide a baseline for cumulative impact assessments and significance assessmenst for the project, with the Willandra Lakes World Heritage Area acting as a benchmark for universal value and very high significance.

Further baseline information is gained from:

- The outcomes of the Aboriginal Heritage Research Program
    - Ongoing collection of data
    - Ongoing reporting on significance and cumulative impact indicators, including consideration

of other baseline information from AHIMS at the reporting phases of the research project (Section 6)

- Ongoing consultation identified in the ACHMP (Section 7.1)
- Collection of any cumulative impact indicators such as incidents, stakeholder complaints (Section 8)
- Ongoing adaptive management strategies identified in the TARPs (Section 7.3, 7.4, 7.5) and the ACHMP (Section 9).

- Each of these actions is reflexive, that is new information is collected and assessed and feeds back into the projects understanding of cumulative impact (See 8).

Trigger Points for the Assessment of Cumulative Impact

The following figure highlights trigger points where cumulative impact is considered within this ACHMP.

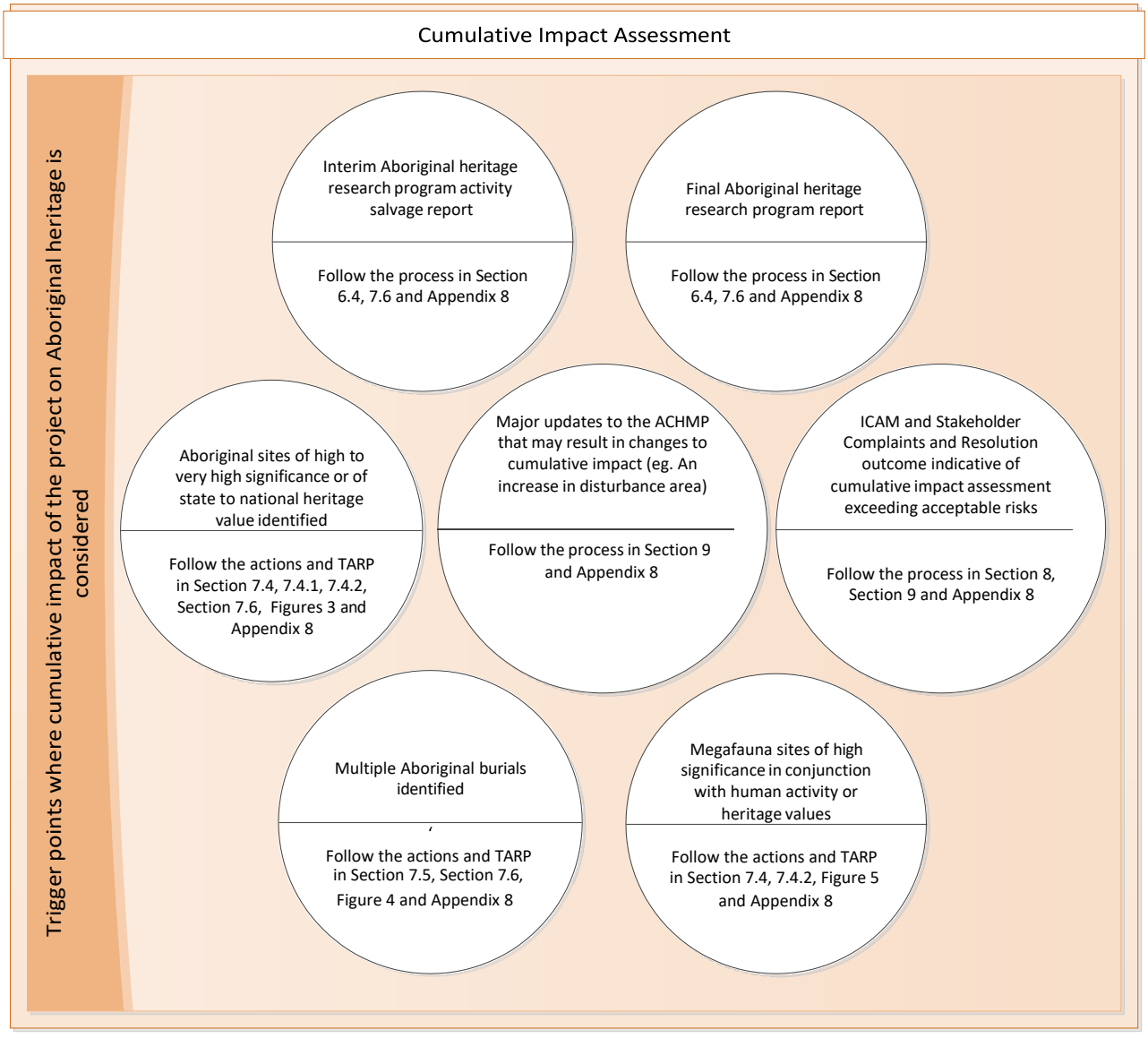


Figure 8: Trigger points and process for cumulative impact to be considered

Actions to be considered by any future cumulative impact assessment

The Project will consider how its actions impact on the heritage value of heritage resources within the Project Area and the region, whether those actions have affected cumulative impact of the heritage resources within the Project Area and region and whether there are any cumulative impacts that need to be addressed.
Thresholds of Acceptable and Unacceptable Risks and Significant Cumulative Impacts

Iluka will utilise its existing internal risk assessment matrix to determine acceptable and unacceptable risks to its operations, company reputation, work health and safety, environment, stakeholders and regulatory compliance.

Adaptive, Evaluation of Effectiveness, Documented Learning

There are trigger points for the consideration of cumulative impacts as part of the TARPS, reporting and assessment process for Aboriginal heritage management activities and events (Section 6.4, Section 7.4, Section 7.5, Section 7.6, Section 8 and Section 9). These usually result in assessment of existing management strategies, consultation with relevant stakeholders and the documentation any changes in strategies within the Aboriginal Cultural Heritage Management Plan.

Appendix 9 – Relevant Contacts

Table 25: Contact details relevant to this ACHMP

Organisation / Role	Relevant Personnel	Contact details
Iluka Senior Environmental Specialist	Brendan Isaacs	0455 470 233
Iluka Manager – Communities & Indigenous Affairs	Jeremy Kenna	0447 280 262
Heritage NSW	Kym McNamara	0437 418 124
Balranald Police	-	03 5020 1404
Heritage NSW	-	(02) 9995 5000
Department of Planning and Environment	-	1300 420 596

For contact details of the Registered Aboriginal Parties, the Aboriginal Heritage Working Group and Interested Aboriginal Parties, please contact the Iluka Senior Environmental Advisor

Appendix 10 – Balranald Project Site Disturbance Clearance Procedure Process

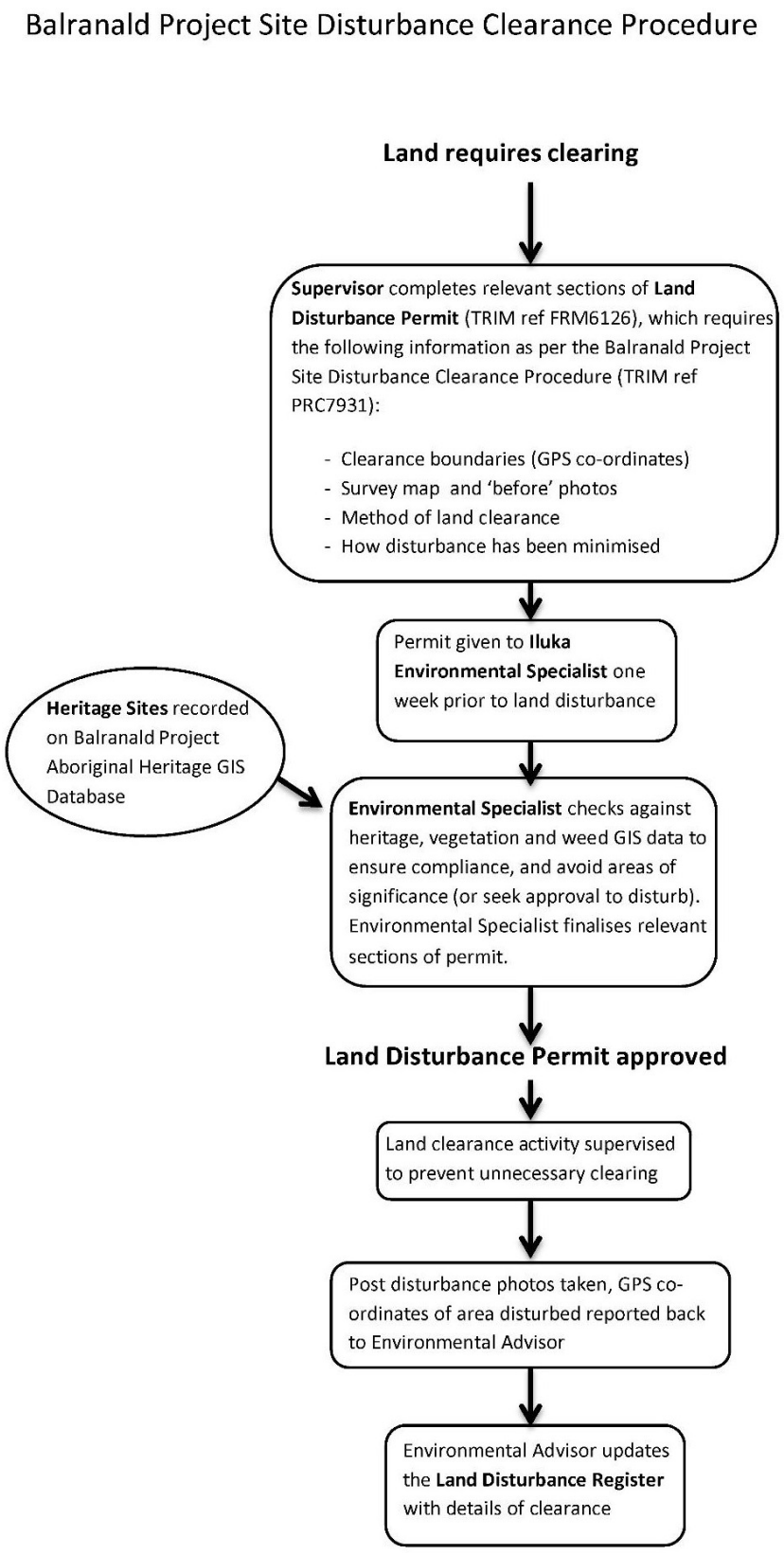


Figure 9: Balranald Project Site Disturbance Clearance Procedure

Appendix 11 – Balranald Project Conditions of Consent

Table 26: SSD 5285 Conditions of Consent

Approval	Approval Condition #	Requirement	Relevant Section of the Aboriginal Cultural Heritage Management Plan (ACHMP)
NSW Government Department of Planning and Environment Development Consent SSD-5285	18	**Protection of Aboriginal Sites** The Applicant must ensure that the development does not cause any direct or indirect impact on the identified Aboriginal heritage sites located outside the disturbance area for the project	**Section 7.8 - Management of identified Aboriginal heritage sites located outside the approved disturbance area for the Balranald Project** Addressed through the Balranald Project 'Work Outside the Approved Disturbance Area Procedure' (TRIM ref: PRC8119) and 'Perimeter Work Permit' (TRIM ref: FRM8118)
	19	**Aboriginal Cultural Heritage Working Group** The Applicant must establish and maintain an Aboriginal Cultural Heritage Working Group for the development to the satisfaction of the Secretary. This group must:	**Section 7.1.4 – Aboriginal Cultural Heritage Working Group** Commitments include a call for expressions of interest from Aboriginal stakeholders, and development of a Charter for the group.
	19(a)	Be established in consultation with Heritage NSW and local Aboriginal stakeholders prior to the construction of the West Balranald mine;	
	19(b)	Be composed of a range of Aboriginal cultural heritage experts / stakeholders from the local Aboriginal groups, the Applicant (and its heritage experts) and government (if available), whose appointments have been approved by the Secretary;	
	19(c)	Meet at least 2 times a year, unless otherwise agreed by the Secretary; and	**Section 7.1.4– Aboriginal Cultural Heritage Working Group** **Table 12: Ongoing Communication and Consultation Protocols**
	19(d)	Provide advice on project-related Aboriginal cultural heritage management issues, including • preparation and/or implementation of the Aboriginal Cultural Heritage Management Plan (see condition 20 below) • Aboriginal heritage site monitoring • Aboriginal heritage site salvage • excavation, storage and management.	**Section 7.1.4 – Aboriginal Cultural Heritage Working Group** **Table 12: Ongoing Communication and Consultation Protocols** **Table 13: RAP Fieldwork Notification and Consultation Commitments**
	Note: The Aboriginal Cultural Heritage Working Group is an advisory committee. The Department and other relevant agencies are responsible for ensuring that the Applicant complies with this approval.		
	20	**Aboriginal Cultural Heritage Management Plan** The Applicant must prepare an Aboriginal Cultural Heritage Management Plan for the development to the satisfaction of the Secretary, and carry out the development in accordance with this plan. The plan must:	**Whole ACHMP**

Approval	Approval Condition #	Requirement	Relevant Section of the Aboriginal Cultural Heritage Management Plan (ACHMP)
	20(a)	Be prepared in consultation with Heritage NSW, local Aboriginal stakeholders and the Aboriginal Cultural Heritage Working Group (if	**Section 2.4 - Consultation** Outlines the consultation process with Heritage NSW, the Registered Aboriginal Parties for Balranald
		established), and approved by the Secretary prior to the undertaking of any development on site	and other Interested Aboriginal Parties for the development of the ACHMP
	20(b) (i)	**Include a Geomorphic Assessment** to assist in the development of the Subsurface Archaeological Testing Program and other management plan components (see below)	**Section 6 – Aboriginal Heritage Research Program** **Section 6.1 – Geomorphic Assessment** Outlines Geomorphic Assessment commitments
	20(b) (ii)	**Include a Subsurface Archaeological Testing Program,** that includes provision for • sub-surface investigation of the excavation areas identified in Appendix 6 prior to any development within 250 metres of the excavation areas • assessment of the archaeological and cultural heritage significance of any Aboriginal sites or megafauna assemblages (found in conjunction with cultural heritage values) identified during the sub-surface investigations, including consideration of cumulative impact • involvement in the survey and investigation works by the Aboriginal Cultural Heritage Working Group (if established).	**Section 6 – Aboriginal Heritage Research Program** **Section 6.2 - Archaeological subsurface excavation program** **Appendix 6 – Procedures for Archaeological Excavation** **Section 7.4 – Discovery of an Aboriginal Site and Significance Assessments** **Section 7.4.2 - Additional Requirements: Megafauna assemblages in conjunction with Aboriginal Objects** **Figure 5: Megafauna Site Identified and Significance Assessment Trigger Action Response Plan** **Section 7.6 and Figure 8– Cumulative Impact Assessment** **Appendix 6 – Procedures for Archaeological Excavation** **Appendix 7 – Guidance for Significance Assessment** **Appendix 8 – Guidance for Cumulative Impact Assessment** **Table 13: RAP Fieldwork Notification and Consultation Commitments**

Approval	Approval Condition #	Requirement	Relevant Section of the Aboriginal Cultural Heritage Management Plan (ACHMP)
	20(b) (iii)	**Include an Archaeological Salvage Program** for Aboriginal sites/objects within the project disturbance area (including those identified following the additional testing program above), including methodology and procedures/protocols for: • Salvage, excavation and/or management of sites within the disturbance area • Site assessment and reporting • Research objectives to inform knowledge of Aboriginal occupation • Protection, storage and management of salvaged Aboriginal objects • Addressing relevant statutory requirements under the NP&W Act • Long term protection of salvaged Aboriginal objects.	**Section 6 – Aboriginal Heritage Research Program** **Section 6.3 – Archaeological Surface Collection** **Section 7.7 – Management of Aboriginal Sites and Areas of the moderate and high archaeological risk layer where disturbance can be avoided** **Appendix 6 -** **Appendix 7 – Guidance for Significance Assessment** **Appendix 8 – Guidance for Cumulative Impact Assessment** **Table 10: Summary of Reporting Commitment's for the Aboriginal Heritage Research Program**
			Section 6.5 – Temporary Storage of Recovered Aboriginal Heritage Evidence - includes commitment to working with RAPs to identify suitable long term locations for recovered Aboriginal heritage evidence **Section 7.2 – Recording of Aboriginal Heritage in the Balranald Aboriginal Heritage Database and the Balranald Geographic Information System (GIS) Database**
	20(b) (iv)	**Include Trigger Action Response Plans** (including stop work provisions and notification protocols) for managing key risks to Aboriginal heritage, including: o The discovery of any potential human remains; o The discovery of previously unidentified Aboriginal objects or megafauna assemblages (found in conjunction with cultural heritage values) on site; and Managing unauthorised ground disturbance;	**Section 7.5 – Management of potential and confirmed Human Remains** **Figure 6: Trigger Action Response Plan for the Discovery of Potential Human Remains** **Section 7.4 – Discovery of an Aboriginal Site and Site Significance** **Section 7.4.2 - Additional Requirements: Megafauna assemblages in conjunction with Aboriginal Objects** **Figure 4: Aboriginal Site Identified and Significance Assessment Trigger Action Response Plan** **Figure 5: Megafauna Site Identified and Significance Assessment Trigger Action Response Plan** **Section 7.3 – Land Disturbance within the Project Area** Addressed through the Iluka Land Disturbance Permit (TRIM ref: FRM6126) and the Balranald Project Site Disturbance

Approval	Approval Condition #	Requirement	Relevant Section of the Aboriginal Cultural Heritage Management Plan (ACHMP)
			Clearance Procedure (TRIM ref: PRC7931) **Figure 7: Trigger Action Response Plan for unauthorised Land Disturbance resulting in disturbance of an Aboriginal object**
	20(b) (v)	Include a Cultural Heritage Management Program, including a description of the measures that would be implemented for: o Protecting, monitoring and managing Aboriginal sites outside the project disturbance area; o Maintaining and managing reasonable access for Aboriginal stakeholders to cultural heritage items on site o Ongoing consultation with the Aboriginal Cultural Heritage Working Group and other local Aboriginal stakeholders in the conservation and management of Aboriginal cultural heritage on-site; Ensuring any workers on site receive suitable heritage inductions prior to carrying out any activities which may disturb Aboriginal sites, and that suitable records are kept of these inductions; and o The long term management of the Aboriginal cultural heritage values of the site	**Section 5 – Balranald Aboriginal Heritage Management Strategy** **Section 7.8 - Management of identified Aboriginal heritage sites located outside the approved disturbance area for the Balranald Project** **Table 15: Commitments to access of temporary storage facilities and project areas** **Section 7.1 – Communication, Consultation and involvement of Registered Aboriginal Parties** **Table 12: Ongoing Communication and Consultation Protocols** **Section 7.9 – Cultural Heritage Awareness Training and Inductions** **Section 7.2 – Recording of Aboriginal Heritage in the Balranald Aboriginal Heritage Database and the Balranald Geographic Information System (GIS) Database** **Section 6.5 – Temporary Storage of Recovered Aboriginal Heritage Evidence –** includes commitment to working with RAPs to identify suitable long term locations for recovered Aboriginal heritage evidence **Section 7.7 – Management of Aboriginal Sites and Areas of the moderate and high archaeological risk layer where disturbance can be avoided**

Approval	Approval Condition #	Requirement	Relevant Section of the Aboriginal Cultural Heritage Management Plan (ACHMP)
	21	**Additional Aboriginal Heritage Approval** The Applicant shall not disturb any site/s of high or very high cultural heritage significance identified during the implementation of the programs/plans identified in condition 20(b) above, or during the carrying out of the development, without the prior written approval of the Secretary. In seeking this approval, the Applicant shall submit a report to the Secretary. This report must:	**Figure 4: Aboriginal Site Identified and Significance Assessment Trigger Action Response Plan** **Figure 5: Megafauna Site Identified and Significance Assessment Trigger Action Response Plan** Both TARPs include the requirement for an additional plan to be developed and approved by the Secretary in the event additional site/s of high or very high cultural heritage significance are identified
	21(a)	be prepared in consultation with OEH and the Aboriginal Cultural Heritage Working Group	
	21(b)	assess the heritage significance of the site/s, and their context:	
	21(c)	Justify why impacts to the site cannot be avoided; and	
	21(d)	Describe in detail the proposed salvage and/or management measures that would be implemented during any disturbance of the site, and incorporated into the Aboriginal Cultural Management Plan	
	20A	The Applicant must not commence any surface disturbance until the Aboriginal Cultural Heritage Management Plan is approved by the Secretary.	**Whole ACHMP**
	20B	The Applicant must implement the Aboriginal Cultural Heritage Management Plan as approved by the Secretary.	**Whole ACHMP**
	Note: For the avoidance of doubt, this condition (21) does not apply to sites identified in the EIS		