



ATLAS-CAMPASPE MINERAL SANDS PROJECT
MODIFICATION 6
APPENDIX C
ABORIGINAL CULTURAL HERITAGE ASSESSMENT



Atlas-Campaspe Mineral Sands Project Modification 6

Aboriginal Cultural Heritage Assessment



Report to Tronox Mining Australia Limited
10 February 2026

Landskape

a division of M.L. Copper Pty. Ltd.
ABN 48 107 932 918

Tronox Mining Australia Limited

Atlas-Campaspe Mineral Sands Project Modification 6

Aboriginal Cultural Heritage Assessment



Landscape

Natural and Cultural Heritage Management

a division of M.L. Copper Pty. Ltd.

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CONTENTS

CONTENTS.....	iii
EXECUTIVE SUMMARY	vii
1 INTRODUCTION	1
1.1 Objectives of the Assessment	1
1.2 Structure of this Report.....	4
2 INVESTIGATORS	5
3 DESCRIPTION OF THE MODIFICATION	6
4 ABORIGINAL COMMUNITY CONSULTATION	7
4.1 Introduction.....	7
4.2 Aboriginal Community Participation.....	7
4.2.1 Identification of Registered Aboriginal Parties	7
4.2.2 Presentation of Information about the Proposed Modification	8
4.2.3 Aboriginal Cultural Heritage Field Survey	9
4.3 Aboriginal Community Information about Cultural Significance	9
4.4 Review of the Draft ACHA Report.....	9
5 ENVIRONMENTAL CONTEXT	10
5.1 Introduction.....	10
5.2 Geology.....	10
5.3 Landforms and Vegetation	10
6 ABORIGINAL CULTURAL HERITAGE CONTEXT	12
6.1 Ethno-Historic Context.....	12
6.2 Prehistoric Context.....	12
6.3 Types of Aboriginal Cultural Heritage Sites in the Region.....	13
6.3.1 Stone Artefact Scatters.....	13
6.3.2 Hearths.....	14
6.3.3 Freshwater Shell Middens.....	14
6.3.4 Earth Mounds.....	14
6.3.5 Quarry Sites	14
6.3.6 Modified Trees	14
6.3.7 Stone Arrangements, Ceremonial Rings and Ceremony and Dreaming Sites	15

6.3.8	Burials	15
6.4	Previously Recorded Aboriginal Cultural Heritage Sites in the Study Area.....	15
7	CULTURAL HERITAGE FIELD INVESTIGATION	17
7.1	Overview of Previous Archaeological Investigations	17
7.2	Cultural Heritage Site Predictive Model.....	18
7.3	Field Methodology	19
7.3.1	Personnel.....	19
7.3.2	Survey Methods.....	19
7.4	Survey Coverage Data.....	20
7.4.1	Conditions of Visibility	20
7.4.2	Coverage Analysis	22
7.5	Survey Results and DISCUSSION	23
7.6	Identified Aboriginal Cultural Values	27
8	CULTURAL HERITAGE VALUES.....	28
8.1	Aboriginal Cultural Heritage Significance.....	28
8.1.1	Scientific Significance	28
8.1.2	Aboriginal Social, Cultural, Spiritual and Historical Significance	30
8.1.3	Educational Significance	31
8.1.4	Aesthetic Significance.....	31
8.2	Aboriginal Cultural Landscape	31
8.2.1	Summary of the Archaeological Record.....	31
8.2.2	Aboriginal Settlement Patterns.....	32
8.2.3	Aboriginal Subsistence Strategies	32
8.2.4	Synthesis	33
9	POTENTIAL IMPACTS OF THE MODIFICATION ON ABORIGINAL CULTURAL HERITAGE	34
9.1	Potential Direct Impacts	34
9.2	Potential Indirect Impacts	35
9.3	Cultural Heritage Avoided by the Modification	35
9.4	Cultural Heritage Potentially Impacted by the Modification.....	35
9.5	Potential for Previously Unidentified Aboriginal Cultural Heritage to Occur in the Study Area	36
9.6	Flexibility of the Modification Design	37

9.7	Potential Cumulative Impacts	37
9.8	Potential Impacts to the World Heritage and National Heritage Values of the Willandra Lakes Region	37
10	MANAGEMENT STRATEGIES FOR CULTURAL HERITAGE.....	39
10.1	General Recommendations	39
10.1.1	Heritage Management Plan	39
10.1.2	Role of the Local Aboriginal Community.....	39
10.1.3	Site Management and Cultural Awareness Training.....	39
10.2	Management of Cultural Heritage in Proximity to the Disturbance Areas	40
10.3	Summary of Management Recommendations	40
11	SUMMARY RECOMMENDATIONS	41
12	REFERENCES	42
	APPENDICES	47

Figures

Figure 1. Regional Location	2
Figure 2. Approved and Modified Atlas-Campaspe Mine General Arrangement.....	3
Figure 3. Belah woodland with Bluebush understorey in the Arumpo land system of the central part of the Modification.	11
Figure 4. Belah woodland with Bluebush understorey in the Arumpo land system of the central part of the Modification.	11
Figure 5. Approved Atlas-Campaspe Mine Previously Identified Aboriginal Cultural Heritage Sites	16
Figure 6. Survey team members inspecting the Study Area.	19
Figure 7. Survey team members inspecting the Study Area.	19
Figure 8. Modified Atlas-Campaspe Mine Survey Units.....	21
Figure 9. Example of surface exposure at the Study Area.	22
Figure 10. Example of surface exposure at the Study Area.	22
Figure 11. Example of surface exposure at the Study Area.	22
Figure 12. Example of surface exposure at the Study Area.	22
Figure 13. AHIMS site number 40-5-0365 (Atlas Campaspe Artefact 2).....	25
Figure 14. AHIMS site number 40-5-0366 (Atlas Campaspe Artefact 1).....	25

Figure 15. AHIMS site number 40-5-0371 (Atlas Campaspe Artefact 3).....	25
Figure 16. AHIMS site number 40-5-0372 (Atlas Campaspe Artefact 4).....	25
Figure 17. AHIMS site number 40-5-0373 (Atlas Campaspe Artefact 5).....	25
Figure 18. AHIMS site number 40-5-0374 (Atlas Campaspe Artefact 6).....	25
Figure 19. Modified Atlas-Campaspe Mine Aboriginal Sites	26

Tables

Table 1. Visibility Conditions at the Modification.	20
Table 2. Coverage of the Study Area.	23
Table 3. Landform Summary of Sampled Areas of the Study Area.	23
Table 4. Newly Identified Aboriginal Cultural Heritage Sites within and near the Study Area. .	24
Table 5. Assessment of Significance of the Aboriginal Cultural Heritage Sites.	30
Table 6. Summary of Potential Impacts to Aboriginal Cultural Heritage Sites.....	36
Table 7. Proposed Specific Management Strategies for known Aboriginal Cultural Heritage Sites.	40

Appendices

Appendix 1: Glossary.....	48
Appendix 2: Consultation Log.....	50
Appendix 3: Correspondence To Aboriginal Community Stakeholders.....	52
Appendix 4: Correspondence From Aboriginal Community Stakeholders	93
Appendix 5: AHIMS Register Search	100
Appendix 6: AHIMS Site Cards	109
Appendix 7: Cadastre Information	136

EXECUTIVE SUMMARY

Tronox Mining Australia Limited (Tronox) is the proponent of the Atlas-Campaspe Mineral Sands Project (the Project) which includes the development of a mineral sands mining operation (the Atlas-Campaspe Mine), together with the construction and operation of the Ivanhoe Rail Facility (a rail loadout facility) in western New South Wales (NSW) (Figures 1 and 2).

Development Consent (SSD_5012) was granted for the Project under Part 4 of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act) in 2014.

Tronox is proposing to modify Development Consent (SSD_5012) under section 4.55(2) of the EP&A Act to allow for proposed changes of the Atlas-Campaspe Mine component of the Project (the Modification).

The Modification would include the following proposed changes to the Atlas-Campaspe Mine component of the approved Project:

- development of an optimised services corridor between the Atlas and Campaspe deposits, including haul road, pipelines, electricity transmission line, soil stockpiles and water management infrastructure;
- transport of pre-mineral concentrate and ore from the PCP to the PGCU via a pipeline and/or truck along the optimised transport route;
- a supplementary biodiversity offset area to replace a small section of the approved biodiversity offset area that would be impacted by the optimised services corridor; and
- rehabilitation of the optimised services corridor so that it can be incorporated into the existing biodiversity offset area post-mining.

The existing services corridor would remain to provide an alternative access between the Atlas and Campaspe deposits.

No other changes to the Project would be required.

This Aboriginal Cultural Heritage Assessment (ACHA) has been prepared to support the application to modify Development Consent (SSD_5012) for the Project, which would be sought under section 4.55(2) of the EP&A Act.

The objective of this ACHA is to provide Tronox with an ACHA to support an approval for the Modification under the EP&A Act and the NSW *Environmental Planning and Assessment Regulation 2000*.

This investigation provides a description of the context of the Modification and surrounds, identification of heritage places and cultural values within the Study Area, an assessment of the potential impacts to Aboriginal heritage as a result of the Modification, and development of recommendations to minimise, manage and mitigate these potential impacts.

This ACHA has been undertaken in accordance with the relevant requirements of the various advisory documents and guidelines. These guidelines and documents include: the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (Part 6 National Parks and Wildlife Act 1974)* (Department of Environment, Climate Change and Water [DECCW], 2010a), *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW, 2010b), *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW* (Office of Environment and Heritage, 2011), *Draft Guidelines for Aboriginal Cultural Impact Assessment and Community Consultation* (NSW Department of Environment and Conservation, 2005), The Australia International Council on Monuments and Sites (ICOMOS) Burra Charter (Australia ICOMOS 1999), NSW National Parks and Wildlife Service *Aboriginal Cultural Heritage: Standards and Guidelines Kit* (National Parks and Wildlife Service, 1997), the Australian Heritage Commission *Ask First: A Guide to Respecting Indigenous Heritage Places and Values* (Australian Heritage Commission 2002) and NSW Minerals Council *NSW Minerals Industry Due Diligence Code of Practice for the Protection of Aboriginal Objects* (NSW Minerals Council, 2010).

The specific objectives of the ACHA were to:

- Consult the local Aboriginal community to identify any concerns they may have (consultation with the Aboriginal community followed *Aboriginal Cultural Heritage Community Consultation Requirements for Proponents* [DECCW, 2010a]).
- Conduct a desktop assessment to delineate areas of known and predicted cultural heritage within the Modification.
- Undertake an archaeological survey of known and predicted cultural heritage identified in the desktop assessment with representatives of the local Aboriginal community.
- Record any cultural heritage sites within the Modification and assess their significance.
- Identify the nature and extent of potential impacts of the Modification on cultural heritage.
- Devise options in consultation with the community to avoid or mitigate potential impacts of the development on cultural heritage places and items.

No Aboriginal cultural heritage places or items have previously been recorded in the Study Area. The present survey encountered seven Aboriginal cultural heritage sites, all isolated finds of stone artefacts (AHIMS site numbers 40-5-0365—0366, 40-5-0371—0375). These sites are outside of the proposed disturbance area for the Modification. This assessment concludes the sites are not of high scientific or cultural significance.

Based on the results of this cultural heritage investigation and consultation with representatives of the Registered Aboriginal Parties (RAPs) the following is recommended:

- The Modification be allowed to proceed because the Study Area would be located in an area where harm to cultural heritage would be avoided.
- Harm to the Aboriginal cultural heritage sites (AHIMS site numbers 40-5-0365—0366, 40-5-0371—0375) near the proposed disturbance areas for the Modification should be avoided. Temporary barriers/fences should be erected around the sites (a minimum 10 metre radius buffer) when works are occurring in their vicinity. At a minimum, these should include star pickets and flagging. These barriers would remain in place throughout the life of the Modified Project.
- In the unlikely event that human skeletal remains are encountered during the course of activities associated with the Modification, all work in that area must cease. Remains must not be handled or otherwise disturbed except to prevent further disturbance. If the remains are thought to be less than 100 years old, the Police or the State Coroner's Office (tel: 02 9552 4066) must be notified. If there is reason to suspect that the skeletal remains are more than 100 years old and Aboriginal, Tronox should contact the Environmental Line (tel: 131 555) for advice. In the unlikely event that an Aboriginal burial is encountered, strategies for its management would need to be developed with the involvement of the local Aboriginal community.
- Tronox should revise the Heritage Management Plan (HMP) for the Atlas-Campaspe Mine to reflect the results and recommendations of this ACHA. The HMP should continue to remain active for the life of the Modified Project and define the tasks, scope and conduct of all Aboriginal cultural heritage management activities. The HMP should be revised in consultation with the local Aboriginal community.
- Tronox should continue to provide training to all on-site personnel regarding the HMP strategies relevant to their employment tasks.
- Tronox should continue to involve the RAPs and any other relevant Aboriginal community groups or members in matters pertaining to the Modification.

1 INTRODUCTION

Tronox Mining Australia Limited (Tronox) is the proponent of the Atlas-Campaspe Mineral Sands Project (the Project), which includes the development of a mineral sands mining operation (the Atlas-Campaspe Mine), together with the construction and operation of a rail loadout facility located near the township of Ivanhoe (the Ivanhoe Rail Facility) (**Figure 1**).

The Atlas-Campaspe Mine is located approximately 80 kilometres (km) north of Balranald, New South Wales (NSW). The Atlas-Campaspe Mine includes the development of the Atlas and Campaspe deposits.

Development Consent (SSD_5012) was granted for the Project under Part 4 of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act) in 2014.

Tronox is proposing an application to modify Development Consent (SSD_5012) under section 4.55(2) of the EP&A Act to allow for the changes identified during detailed planning for the development of the Campaspe deposit at the Atlas-Campaspe Mine (**Figure 2**) (the Modification).

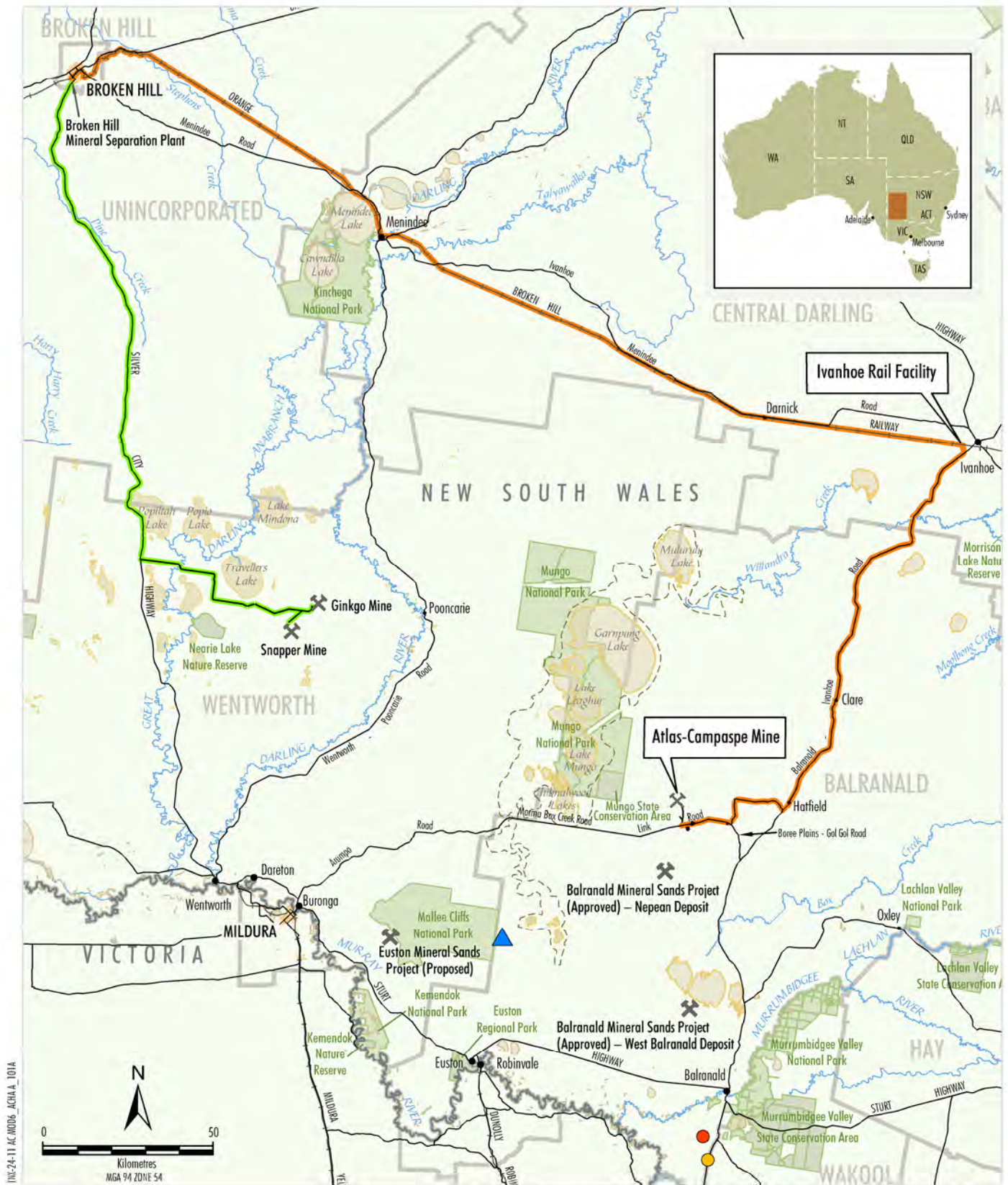
1.1 OBJECTIVES OF THE ASSESSMENT

This Aboriginal Cultural Heritage Assessment (ACHA) has been prepared to support the application to modify Development Consent (SSD_5012) for the Project, which would be sought under section 4.55(2) of the EP&A Act.

This ACHA provides a description of the context of the Modification and surrounds, identification of heritage places and cultural values within the Study Area, an assessment of the potential impacts to Aboriginal heritage as a result of the Modification, and development of recommendations to minimise, manage and mitigate these potential impacts.

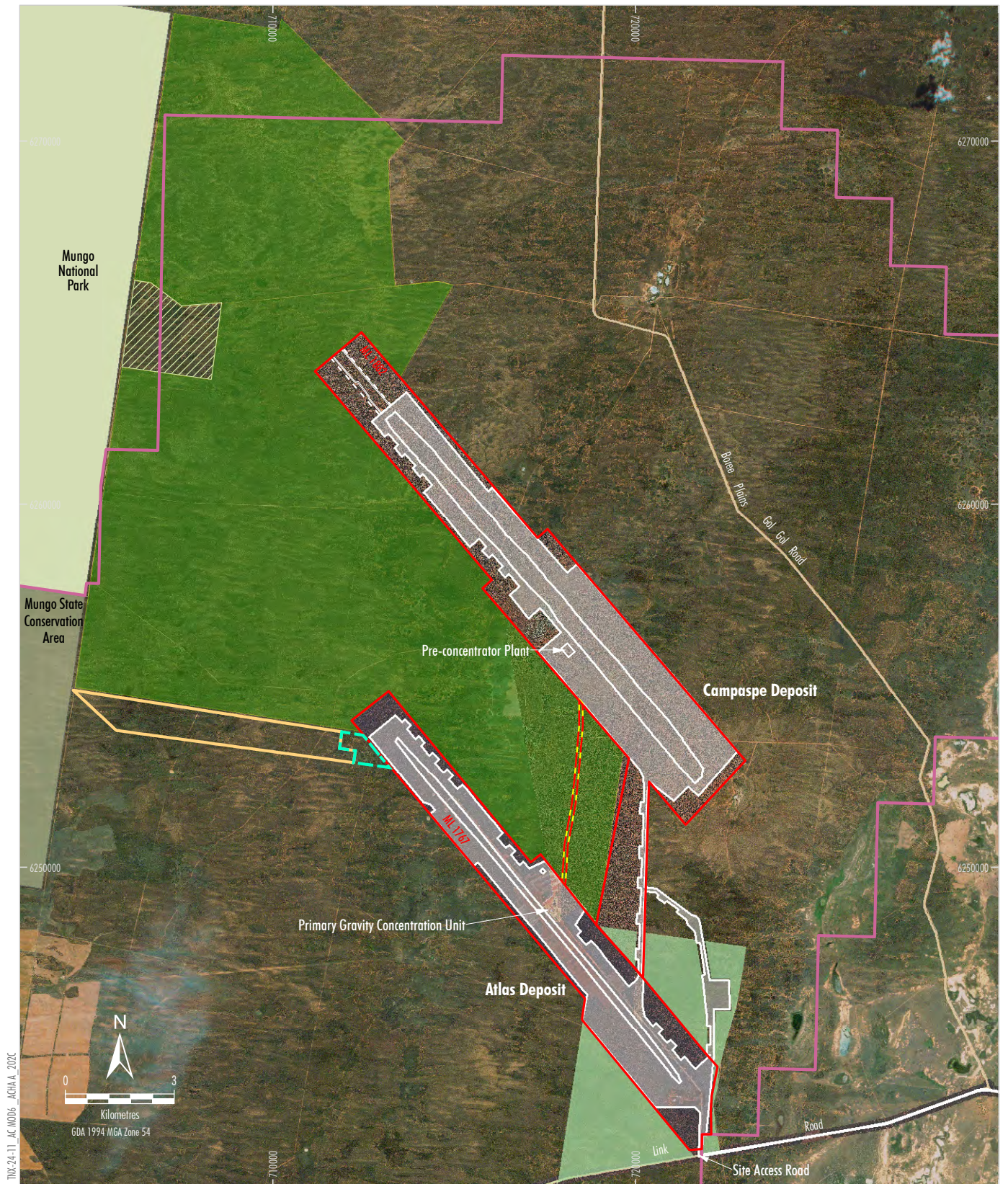
This ACHA has been undertaken in accordance with the relevant requirements of the various advisory documents and guidelines. These guidelines and documents include:

- *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (Part 6 National Parks and Wildlife Act 1974)* (Department of Environment, Climate Change and Water [DECCW], 2010a).
- *Due Diligence Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW, 2010b).
- *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW* (Office of Environment and Heritage [OEH], 2011).
- *Draft Guidelines for Aboriginal Cultural Impact Assessment and Community Consultation* (NSW Department of Environment and Conservation, 2005).
- The Australia International Council on Monuments and Sites (ICOMOS) Burra Charter (Australia ICOMOS, 1999).



Source: NSW Spatial Services (2021), Cristal Mining Australia (2012)

Figure 1



Source: NSW Spatial Services (2024); Tronox (2024); Cristal Mining Australia (2012)
Orthophoto Mosaic: Tronox (2023); AAM (2011)

- LEGEND**
- National Park/State Conservation Area
 - Southern Mallee Landuse Agreement Reserve
 - Approved Project Components
 - Mining Lease Boundaries (ML 1762 & ML 1882)
 - Exploration Licence Boundary (EL 5359)
 - Surface Development Area
 - Groundwater Borefield Study Area ^
 - Mine Path Extent
 - Biodiversity Offset Area
 - Vegetation Management Area

- Modification Components**
- Mining Lease Application (MLA2)
 - Surface Development Area
 - Supplementary Biodiversity Offset Area
 - Potential Biodiversity Stewardship Site

^ The layout of the groundwater borefield would be confirmed based on the outcomes of ongoing hydrogeological test work/design.

Figure 2

- *Aboriginal Cultural Heritage: Standards and Guidelines Kit* (National Parks and Wildlife Service, 1997).
- *Ask First; A Guide to Respecting Indigenous Heritage Places and Values* (Australian Heritage Commission, 2002).
- *NSW Minerals Industry Due Diligence Code of Practice for the Protection of Aboriginal Objects* (NSW Minerals Council, 2010).

1.2 STRUCTURE OF THIS REPORT

This report has been prepared in consideration of the requirements of the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW, 2010b) and as such includes the following specific information:

- Section 1: Outlines the Modification and the objectives and structure of this report.
- Section 2: Lists the investigators and contributors involved with this report.
- Section 3: Provides a summary description of the Modification.
- Section 4: Details the consultation and partnership with Indigenous communities.
- Section 5: Outlines the landscape context and includes descriptions of land use history, geology and vegetation within the locality of the Study Area.
- Section 6: Provides background information relevant to previous archaeological works including relevant ethno-history, the regional archaeological context and previous predictive models for the locality.
- Section 7: Describes predictions for the Modification and documents the archaeological survey and data collection, and includes information regarding the method of the survey and a description of the areas surveyed. Lists the results of the survey and provides a discussion and analysis of these results.
- Section 8: Assesses the cultural heritage significance of the Modification.
- Section 9: Assesses the impact of the Modification on Aboriginal heritage.
- Section 10: Lists the management, mitigation measures and recommendations.
- Section 11: Lists the recommendations in this report.
- Section 12: Lists the references cited in this report.

A glossary of commonly used terms in the report is provided in **Appendix 1**.

2 INVESTIGATORS

Landskape Heritage Management (Landskape) was commissioned by Tronox in January 2025 to complete the ACHA for the Modification.

Dr Matt Cupper, a qualified archaeologist and geoscientist with over two decades' experience as a cultural heritage advisor, was Landskape's project archaeologist.

The field investigation for the Modification was completed on 4 March 2025 and 29 July 2025, and was attended by members of the Muthi Muthi Nation Aboriginal Corporation (Daniel Kenny Senior, Daniel Kenny Junior, Tara Bruton, Chloe Griffiths and Jacob Griffiths).

Community consultation pursuant to the Heritage NSW policy *Aboriginal cultural heritage consultation requirements for proponents 2010* (Consultation Guidelines) (DECCW, 2010a) was managed by Tronox.

3 DESCRIPTION OF THE MODIFICATION

The Modification would include the following proposed changes to the Atlas-Campaspe Mine component of the approved Project:

- development of an optimised services corridor between the Atlas and Campaspe deposits, including haul road, pipelines, electricity transmission line, soil stockpiles and water management infrastructure;
- transport of pre-mineral concentrate and ore from the PCP to the PGCU via a pipeline and/or truck along the optimised transport route;
- a supplementary biodiversity offset area to replace a small section of the approved biodiversity offset area that would be impacted by the optimised services corridor; and
- rehabilitation of the optimised services corridor so that it can be incorporated into the existing biodiversity offset area post-mining.

The existing services corridor would remain to provide an alternative access between the Atlas and Campaspe deposits.

No other changes to the Project would be required.

4 ABORIGINAL COMMUNITY CONSULTATION

4.1 INTRODUCTION

In accordance with the Consultation Guidelines (DECCW, 2010a), this ACHA has been prepared in consultation with the Aboriginal community (via the Registered Aboriginal Parties [RAPs]).

The following sections describe involvement by the RAPs and demonstrate that the input of the Aboriginal community has been considered when determining and assessing impacts, developing management measures, and making final recommendations relevant to Aboriginal cultural heritage within the Study Area.

4.2 ABORIGINAL COMMUNITY PARTICIPATION

The RAPs were consulted throughout the preparation of this assessment, including:

- review and comment on the Proposed Methodology;
- during the information session on the Modification;
- during the field survey with the representatives of the RAPs;
- during the review period for the draft ACHA; and
- encouraged to provide feedback and input throughout the assessment process.

The following sections outline the process and outcomes of the community consultation undertaken during preparation of the ACHA, and to ascertain the Aboriginal cultural heritage values, and associated management strategies, of the Study Area.

4.2.1 Identification of Registered Aboriginal Parties

In accordance with Sections 4.1 and 4.2 of the Consultation Guidelines (DECCW, 2010a), the following individuals and organisations have been previously identified as Aboriginal stakeholders for the Project:

- Kullila Site Consultants;
- Michael (Mick) Kelly on behalf of Ngayampaa people;
- Balranald Local Aboriginal Land Council;
- Barkindji Elders Council;
- Ivanhoe Community Working Party;
- Muthi Muthi Nation Aboriginal Corporation;
- National Koorie Site Management;
- Willandra Lakes Region World Heritage Aboriginal Advisory Group;
- Wakool Indigenous Corporation;
- Maria Maher; and

- Willandra Lakes 2 Traditional Tribal Groups Elders Council.

These Aboriginal stakeholders groups with an interest in Aboriginal heritage at the Project have been previously identified and Tronox has maintained ongoing consultation and engagement with these groups since their individual expressions of interest. These Aboriginal stakeholder groups include those parties who registered for the Project Aboriginal and Non-Aboriginal Heritage Assessment in 2012 (Niche Environment and Heritage, 2012), and who were consulted during:

- Preparation of the Heritage Management Plan (HMP) (Cristal Mining Australia, 2017) in accordance with Condition 28, Schedule 3 of the Development Consent (SSD_5012).
- Consultation required for the ACHA required for MOD 1 in 2019 (Landscape, 2019).
- In accordance with the HMP, consultation was undertaken prior to any pre-clearance works or additional cultural heritage field assessments.
- In accordance with the HMP, Tronox undertakes annual meetings with representatives or RAPs to discuss the progress of the Project.

Consultation with these Aboriginal stakeholder groups has been maintained throughout the life of the Project and would continue as a result of the Modification.

A consultation log with RAPs is included as **Appendix 2**.

4.2.2 Presentation of Information about the Proposed Modification

Information regarding the Modification was provided in writing to all RAPs on 7 February 2025. The correspondence included an invitation to attend an information session and field survey for the Modification and a copy of the Proposed Methodology was provided for review and comment (**Appendix 3**).

A minimum of 28 days were allowed for RAPs to provide input regarding the following aspects of the Proposed Methodology:

- The nature of the Proposed Methodology.
- Any Aboriginal objects or places of cultural value within the Study Area, or issues of cultural significance.
- Any restrictions or protocols considered necessary in relation to any information of sensitivity that may be provided.
- Any other factors considered to be relevant to the heritage assessment.

The period for commenting on the Proposed Methodology was open between 7 February 2025 and 7 March 2025. No comments on the Proposed Methodology were received.

The information session regarding the modification was held on 4 March 2025 at the Atlas Mine office to explain the Modification and Proposed Methodology and address any RAP queries. The information session was attended by representatives of Muthi Muthi Nation Aboriginal Corporation (represented by Daniel Kenny Senior, Daniel Kenny Junior, Tara Bruton, Chloe Griffiths and Jacob Griffiths).

4.2.3 Aboriginal Cultural Heritage Field Survey

All RAPs were invited to provide a representative for involvement in the field survey for the Modification. The following RAP participated in the survey:

- Muthi Muthi Nation Aboriginal Corporation (represented by Daniel Kenny Senior, Daniel Kenny Junior, Tara Bruton, Chloe Griffiths and Jacob Griffiths).

The Aboriginal cultural heritage field survey was completed on 4 March 2025 and 29 July 2025. Further details regarding the survey and survey coverage are provided in Section 7.

The field survey was undertaken during the period for review and comment on the Proposed Methodology. It was described in the material provided to all RAPs with the Proposed Methodology and survey invitation, that if any RAP had comments on the Proposed (assessment) Methodology which (subject to agreement by Tronox) would have altered the field survey design/implementation (i.e. pedestrian survey across the Study Area), Tronox would commit to considering those submissions and take reasonable steps to address them, having regard to the survey requirements and the objectives of the Consultation Guidelines (DECCW, 2010a).

As no comments of this nature were received, no additional survey work was required to be undertaken.

4.3 ABORIGINAL COMMUNITY INFORMATION ABOUT CULTURAL SIGNIFICANCE

As part of the review of the Proposed Methodology and during the field survey, the RAPs were asked to contribute their knowledge on the Study Area and surrounds. This information contributed to the assessment of the cultural heritage significance of the Study Area and is discussed further in Section 8.

4.4 REVIEW OF THE DRAFT ACHA REPORT

A draft of this report was provided to all RAPs for their review and comment in accordance with Sections 4.3 and 4.4 of the Consultation Guidelines (DECCW, 2010a) on 27 October 2025. Follow up communications were sent from Tronox to the RAPs on 30 January 2026, 2 February 2026 and 9 February 2026. Daniel Kelly, Director of the Muthi Muthi Nation Aboriginal Corporation replied on 30 January 2026 that the recommendations in this ACHA report were endorsed and no changes were identified. No other stakeholder responses were received.

5 ENVIRONMENTAL CONTEXT

5.1 INTRODUCTION

The *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCW, 2010b) requires a review of the environmental context to assist in the determination or prediction of the potential of a landscape to have accumulated or preserved objects, the ways Aboriginal people may have used the landscape in the past, with regard to identifiable resources or focal points for activities, and the likely distribution of the material traces of Aboriginal land use based on these factors.

Detailing the landscape context is an integral procedure in modelling potential past Aboriginal land use practices and/or predicting site distribution patterns. The natural environment of an area influences the availability of local resources such as food and raw materials for artefacts, rock platforms for engravings and axe sharpening, and rock outcrops that may provide shelter. The landscape also provides the sediments that may bury objects and archaeological features, as well as the erosive processes that might expose or disperse them.

Geomorphic (land formative) processes may impact upon the type and frequency of archaeological remains. Past climate may also influence the location and types of resources available, which in turn shapes settlement and mobility patterns of past Aboriginal groups in the area. The location of different site-types (such as middens, stone artefact scatters, etc.) are strongly influenced by factors such as these along with a range of other associated features, which are specific to different land systems.

5.2 GEOLOGY

The Study Area is located in the Central Darling region of the Murray Basin. The surface geology of the region is mostly aeolian (wind-blown) sediments, while underlying sequences within the basin were deposited by shallow seas and lakes over the past 60 million years (Brown and Stephenson, 1991).

5.3 LANDFORMS AND VEGETATION

The Study Area is located in dunefields, that have aeolian features comprising low dunes and undulating regions of irregular sandy hummocks. The dunefields have a vegetation cover of Mallee *Eucalyptus* species tall shrublands and mosaics of Belah-Rosewood/Acacia Woodland and Native Grassland/Sparse Acacia/Chenopod Shrubs.

The Study Area falls within the Arumpo dunefield and Bulgamurra sandplain land systems (Soil Conservation Service, 1985, 1991) (**Figures 3 and 4**). The features of the Arumpo dunefield and Bulgamurra sandplain land systems are provided below:

- *Arumpo dunefield land system*: linear east-west dunes as well as sandplains and narrow swales. The dunes comprise of deep brown soils and calcareous sands, covered in dense Mallee and Porcupine Grass (*Triodia scariosa*) and moderately dense to less dense inedible shrubs. The sandplains are made up of brown sands and calcareous red soils. Dense Mallee covers much of the sandplains but there are also occurrences of Porcupine Grass, inedible shrubs and edible chenopods. The narrow swales and flats are characterised by mostly level slopes (to 2 percent [%] slope) and solonized brown soils with some occurrence of yellow and brown soils. Dense Mallee, Belah (*Casuarina crisata*) and Rosewood (*Acacia excelsa*) as well as scattered shrubs cover the swales and flats (Soil Conservation Service, 1985, 1991).
- *Bulgamurra sandplain land system*: extensive undulating sandplains with some dunes and large open flats. The sandplains are characterised by loamy and sandy brown soils with scattered to moderately dense Belah, Rosewood and Wilga (*Geijera parviflora*). White Cypress Pine (*Callitris glaucophylla*) and Sugarwood (*Myoporum platycarpum*) also occur on the sandplains. The undulating sand rises consist of deep brown siliceous soils, and are covered in moderately dense Mallee. The dunes within the Bulgamurra land system have deep brown and siliceous sands with areas of solonized brown sands. The dunes are vegetated by moderately dense Belah, White Cypress Pine and Mallee (Soil Conservation Service, 1985, 1991).



Figure 3. Belah woodland with Bluebush understorey in the Arumpo land system of the northern part of the Modification.



Figure 4. Mallee with Bluebush understorey in the Bulgamurra land system of the southern part of the Modification.

6 ABORIGINAL CULTURAL HERITAGE CONTEXT

Some of the earliest evidence of human occupation of Australia comes from south-western NSW (Bowler *et al.*, 1970, 2003; Thorne *et al.*, 1999; Cupper and Duncan, 2006; Olley *et al.*, 2006). Stone artefacts found at Lake Mungo, about 100 km to the west of the Modification, have been dated to between 46,000 to 50,000 years ago (Bowler *et al.*, 2003). The burials of a male and female at Lake Mungo are 42,000 years old (Olley *et al.*, 2006, cf. Thorne *et al.*, 1999). People were also at nearby Lake Menindee from 45,000 years ago (Cupper and Duncan, 2006) and at Lake Victoria on the Murray River by around 21,000 years ago (Gill, 1973).

6.1 ETHNO-HISTORIC CONTEXT

Aboriginal people of the Ngiyampaa language group occupied the Central Darling region at the time of first contact with Europeans (Sturt, 1982 [1833]; 1984 [1844-6]; Mitchell, 1839; Eyre, 1985 [1842]; Krefft, 1865, Allen, 1974; Tindale, 1974; Hardy, 1976; Hercus, 1982, 1993). These tribes shared similar language and kinship systems, notably the division of members into matrilineal moieties (two-part social classification) known as Mukwara (Wedge-tailed Eagle) and Kilpara (Raven) (Tindale, 1974; Hercus, 1982, 1993; Blows, 1995).

At the time of European contact the Ngiyampaa were hunter-fisher-gatherers and appear to have had a semi-sedentary lifestyle. Early accounts by European observers suggest that they lived near more permanent water sources such as along the stream courses and lakes of the Murrumbidgee and Lachlan Rivers during the warmest months of the year, with people moving into the sandplains to collect food after winter rains (Allen, 1974).

Aspects of the initial interaction between Europeans and Ngiyampaa led to violent conflict. Aboriginal people were shot, poisoned and displaced from their land by pastoral settlers and, in retaliation, sheep and shepherds were speared. Within a decade of the first contact, many of the Ngiyampaa were living adjacent to pastoral homesteads, often working as shepherds or engaged in other labouring activities.

6.2 PREHISTORIC CONTEXT

Accounts of Aboriginal land use of the Central Darling during the late nineteenth and early twentieth centuries provide an insight into possible settlement patterns in the prehistoric period. Allen (1974), using these historical ethnographies and the archaeological record, invoked a subsistence model for the region based on the relationship between occupation of the riverine corridors and sandplains. Large populations of people congregated at the rivers during spring and summer and whenever the systems were high. Following seasonal rains smaller, mobile bands dispersed over the plains exploiting ephemeral resources (Allen, 1974).

The material record of this occupation is preserved in the archaeological sites of the Central Darling region, most of which date to the period since the last Ice Age (after around 18,000 years ago) (Hope, 1981; Balme and Hope, 1990; Balme, 1995). All that remains at many of these sites are flakes of stone debris from the making and resharpening of stone tools. These were made both at Aboriginal open habitation areas (campsites) or special activity areas such as stone knapping sites. As well as being the sites of manufacture and maintenance of stone implements, open habitation areas usually contain evidence of domestic and other activities such as cooking and food preparation. Campfires or oven hearths are common, marked by calcrete, baked clay, ferricrete, sandstone and silcrete heat retaining stones or hearthstones and charcoal. Organic remains consist of burnt animal bones, emu and aquatic bird eggshell and freshwater mussel shell.

6.3 TYPES OF ABORIGINAL CULTURAL HERITAGE SITES IN THE REGION

Based on the results and analytical conclusions of previous archaeological surveys in similar landscape contexts in the Central Darling it is possible to predict the types and topographic contexts of Aboriginal cultural heritage sites in the Study Area. The occurrence and survival of archaeological sites is, however, dependent on many factors including micro-topography and the degree of land surface disturbance.

The types of Aboriginal cultural heritage sites previously recorded in the Central Darling are described in Sections 6.3.1-6.3.8.

6.3.1 Stone Artefact Scatters

Scatters of stone artefacts exposed at the ground surface are one of the most commonly occurring types of archaeological site in the region (Hope, 1982). The remains of fire hearths may also be associated with the artefacts. In rare instances, sites that were used over a long period of time may accumulate sediments and become stratified. That is, there may be several layers of occupation buried one on top of another.

Stone artefact scatters are almost invariably located near permanent or semi-permanent water sources. Local topography is also important in that open campsites tend to occur on level, well-drained ground elevated above the local water source. In the Central Darling region, they are commonly located on river terraces, along creek-lines and around the margins of lakes, swamps and claypans.

6.3.2 Hearths

Hearths consist of lumps of burnt clay or stone cobble hearthstones. Sometimes ash and charcoal are preserved. Other materials found in hearths include animal bone, freshwater mussel shell, emu eggshell and stone artefacts. Hearths probably represent the remains of cooking ovens, similar to those described in ethnographic accounts by Major Thomas Mitchell (1839) and Peter Beveridge (1889) (see also Coutts *et al.*, 1979). These were lined with baked clay nodules and stone cobbles, possibly to retain heat. Hearths may be isolated or occur in clusters and may be associated with open campsites or middens. They are often located in dune swales, particularly on claypans, near soaks and on floodplain terraces.

6.3.3 Freshwater Shell Middens

Shell middens are deposits of shell and other food remains accumulated by Aboriginal people as food refuse. In inland NSW, these middens typically comprise shells of the freshwater lacustrine mussel *Velesunio ambiguus* or the freshwater riverine mussel *Alathyria jacksoni*. Freshwater middens are most frequently found as thin layers or small patches of shell and often contain stone or bone artefacts and evidence of cooking. Such sites are relatively common along the Murrumbidgee and Lachlan Rivers and their associated lakes and tributaries.

6.3.4 Earth Mounds

Earth mounds may have been used by Aboriginal people as cooking ovens or as campsites. They are common on the plains of south-western NSW. Originally, they appear to have ranged from 3 to 35 metres (m) in diameter and from 0.5 to 2 m in height. Today, however, they may be difficult to recognize because of the effects of ploughing, grazing and burrowing rabbits. Earth oven material, stone artefacts, food refuse and the remains of hut foundations have been exposed in excavated earth mounds.

6.3.5 Quarry Sites

Quarries are locations where Aboriginal people obtained raw material for their stone tools or ochre for their art and decoration. Materials commonly used for making flaked stone tools include chert, silcrete, quartz and quartzite. In the Central Darling region, stone sources are particularly scarce. Silcrete outcrops occur at a number of locations in south-western NSW. Chert is found exposed in cliffs incised by the Murray River in South Australia. Most other stone in the Central Darling region was probably sourced via long-distance trade links with the Barrier Ranges and the south-eastern Australian Highlands.

6.3.6 Modified Trees

Slabs of bark were cut from trees by Aboriginal people and used for a variety of purposes including roofing shelters and constructing canoes, shields and containers. Scars also resulted from the cutting of toeholds for climbing trees to obtain honey or to capture animals such as possums. In the Central Darling region, River Red Gums and Black Box are the most commonly scarred species. The classification of scarred trees as natural, European or Aboriginal is often problematic. However, if the scar is Aboriginal the tree must now be more than ~150 years old.

6.3.7 Stone Arrangements, Ceremonial Rings and Ceremony and Dreaming Sites

Stone arrangements range from cairns or piles of rock to more elaborate arrangements such as stone circles or standing slabs of rock held upright by stones around the base. Some stone arrangements were used in ceremonial activities whilst others may represent sacred or totemic sites. Other features associated with the spiritual aspects of Aboriginal life are those now called 'ceremony and dreaming' sites. These can be either stone arrangements or natural features such as rock outcrops, which may be associated with initiation ceremonies or the activities of ancestral creators.

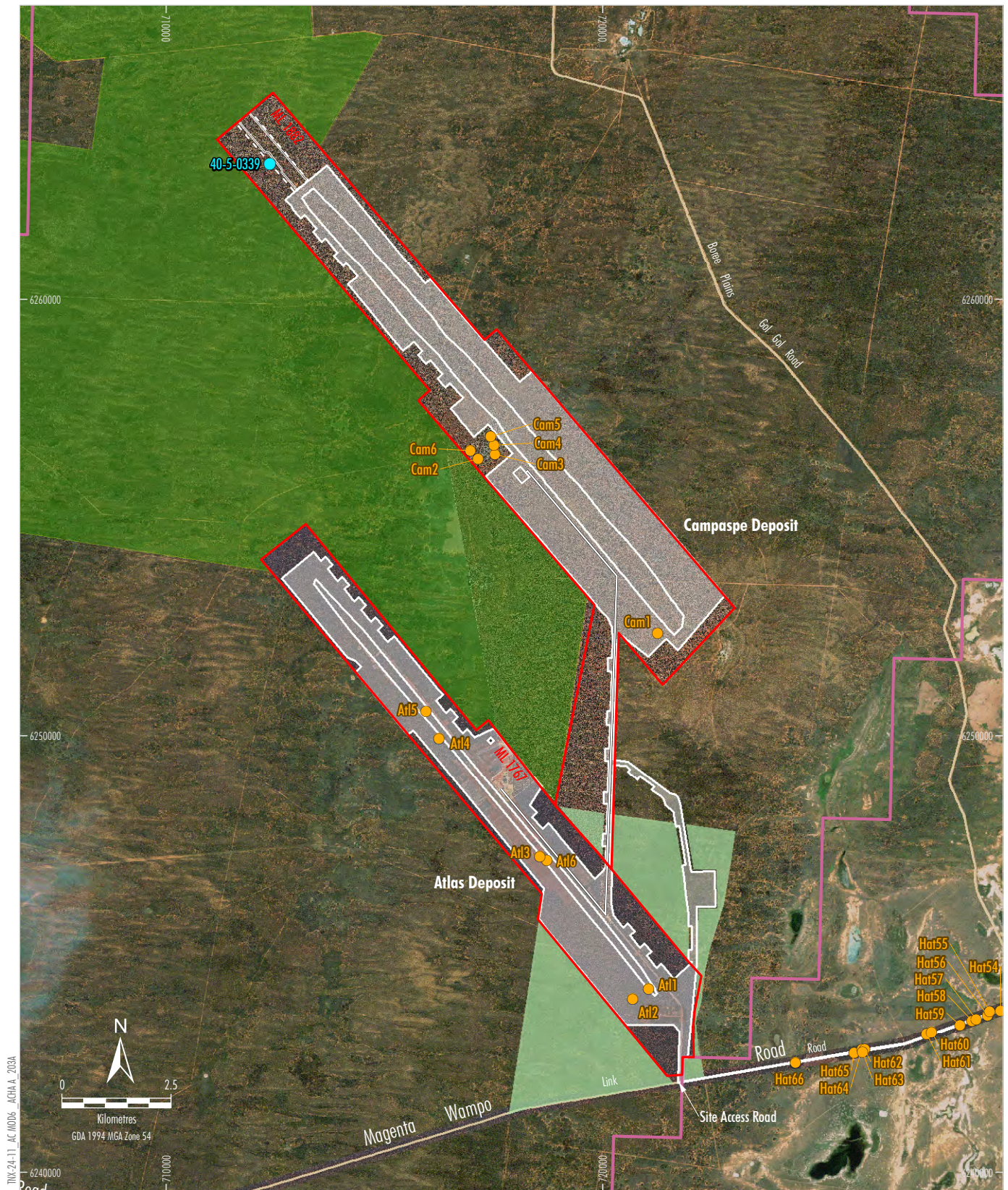
6.3.8 Burials

Aboriginal burial grounds may consist of a single interment or a suite of burials. Burials tend to be in areas of sandy soil that were easy to dig and above floodwaters. Burials are frequently located in source-bordering sand dunes, sand ridges, lunettes and levees along watercourses (Bonhomme, 1993; Hope, 1993). Knowledge of Aboriginal burial grounds is best sought from local Aboriginal communities.

6.4 PREVIOUSLY RECORDED ABORIGINAL CULTURAL HERITAGE SITES IN THE STUDY AREA

There are no previously recorded Aboriginal cultural heritage sites recorded within the Study Area on the Heritage NSW Aboriginal Heritage Information Management System (AHIMS) database (AHIMS search 1047269; 23 September 2025; **Appendix 5**).

The closest previously recorded sites to the Study Area are five Aboriginal cultural heritage sites comprising four stone artefact scatters and a culturally modified tree. These were recorded by Niche Environment and Heritage (2012) in the approved Campaspe surface disturbance area, and are located within approximately 1 km from the Study Area (**Figure 5**).



LEGEND

- Approved Project Components
- Mining Lease Boundaries (ML 1762 & ML 1882)
- Exploration Licence Boundary (EL 5359)
- Surface Development Area
- Mine Path Extent
- Groundwater Borefield Study Area ^
- Biodiversity Offset Area
- Vegetation Management Area
- Aboriginal Heritage Site (Landscape, 2024)
- Aboriginal Heritage Site (Niche, 2012)

Source: NSW Spatial Services (2024); Tronox (2024); Cristal Mining Australia (2012)
Orthophoto Mosaic: Tronox (2023); AAM (2011)

TRONOX
MODIFICATION 6
Previously Identified
Aboriginal Cultural Heritage Sites

^ The layout of the groundwater borefield would be confirmed based on the outcomes of ongoing hydrogeological test work/design.

Figure 5

7 CULTURAL HERITAGE FIELD INVESTIGATION

In accordance with the *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW* (OEH, 2011) and *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCW, 2010b), an archaeological design and survey methodology was prepared as a key component of the cultural heritage field assessment. Details of the archaeological design and survey methodology are presented in the following sections.

7.1 OVERVIEW OF PREVIOUS ARCHAEOLOGICAL INVESTIGATIONS

The Aboriginal archaeology of the Central Darling region is known generally from a number of studies, but very little systematic archaeological research has been undertaken in the sandplains of the Central Darling. Archaeological surveys of developments in these areas are limited to those conducted by Niche Environment and Heritage (2012) and Landsape (2018, 2019, 2024).

Other areas in south-western NSW that have been archaeologically surveyed include the Darling River and its associated lakes (Hope, 1981; Balme and Hope, 1990; Craib, 1992; Martin *et al.*, 1994; Balme, 1995; Marshall and Smith, 1998; Pardoe and Martin, 2002; Pardoe, 2003), Murray River and Lake Victoria (Bonhomme, 1993; Hope, 1998) and the Willandra Lakes (see Johnston and Clark, 1998). Regional studies and syntheses of the archaeological record of south-western NSW include those of Allen (1974), Hope (1982) and Bonhomme Craib and Associates (1999, 2001).

Niche Environment and Heritage (2012) previously surveyed the areas associated with the approved Project (i.e. the Atlas-Campaspe Mine, mineral concentrate transport route and Ivanhoe Rail Facility). Landsape (2018, 2019, 2024) further recorded Aboriginal stone artefacts in the areas associated with the approved Project.

A total of 100 Aboriginal cultural heritage sites were identified within the Project area and surrounds. This includes 78 Aboriginal cultural heritage sites identified at the Atlas-Campaspe Mine area (including the mineral concentrate transport route) and 22 Aboriginal cultural heritage sites identified at the Ivanhoe Rail Facility area during the Aboriginal and Non-Aboriginal Cultural Heritage Assessment for the Project (Niche Environment and Heritage, 2012).

Aboriginal cultural heritage sites identified within the Project area and surrounds comprise 48 stone artefact scatters, 13 stone artefact scatters with hearths, two stone artefact scatters with hearths and non-human bone, one stone artefact scatter with hearths and freshwater mussel shell, 35 isolated finds of stone artefacts and one culturally modified tree (Niche Environment and Heritage, 2012) (**Figure 5**).

7.2 CULTURAL HERITAGE SITE PREDICTIVE MODEL

Previous archaeological studies indicate that sandplains of the Central Darling have a low density of cultural heritage places. Occupation sites are almost invariably located at small ephemeral water sources such as swamps and claypans (McIntyre, 1981; Clark, 1983; Witter, 2001; Niche Environment and Heritage, 2012; Landscape, 2018, 2019, 2024). The most frequently recorded Aboriginal sites in the sandplains are stone artefact scatters and hearths (AHIMS site database). Isolated finds of stone artefacts and hearthstones are also represented in the archaeological record. Other Aboriginal cultural heritage site types previously identified in the Central Darling region are shell middens, stone quarries, ceremonial and dreaming sites, trees scarred by Aboriginal people, burials, earth mounds and stone arrangements (AHIMS site database).

Based on these observations of archaeological site types and their distribution and landscape setting, the following predictive model of site types and locations within the Study Area was developed prior to the survey:

- **Stone artefact scatters, hearth sites and isolated finds of stone artefacts or hearthstones** have the potential to occur within the Study Area. The density of these types of sites was predicted to be low, given the absence of nearby permanent sources of water. Open occupation sites are typically found within 500 m of water sources, so such sites are most likely to be encountered on level ground adjacent to ephemeral swamps and claypans that intermittently retain surface water following rain.
- **Stone quarry** sites have the potential to occur in the Study Area. Silcrete outcrops noted elsewhere in the Central Darling region often occur at topographic low points in the landscape such as abandoned lake beds and playa floors (e.g. Hope, 1998; Cupper, 2003).
- **Scars made by Aboriginal people** are unlikely to occur on any of the trees in the Study Area, because River Red Gum and Black Box trees, the taxa typically scarred by Aboriginal people in the region, are absent in the study area.
- The chance of encountering **shell middens** was predicted to be negligible, as they are usually found near permanent water sources, absent from the area, as are **burial** sites. Source-bordering dunes adjacent to rivers and lakes are the landforms most likely to contain human skeletal remains.
- Although **stone arrangements** have been recorded in the Central Darling region, they are not common and were considered unlikely to be encountered in the area. Stone arrangements tend to occur on level ground, often on elevated landforms such as floodplain terraces.

While predictive studies such as this can be expected to identify areas in which sites associated with economic or subsistence activities may be present, notably open habitation areas, other sites may fall outside such a predictive framework. For example, places associated with spiritual aspects of traditional Aboriginal society such as ceremony and dreaming sites are often located at topographically distinct or unique features, which cannot be identified from an examination of maps or other records. For this reason, it was essential that local Aboriginal communities be consulted so that sites of significance to them can be identified.

7.3 FIELD METHODOLOGY

The archaeological field survey was conducted based on the sampling strategy developed in accordance with the *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW* (OEH, 2011) and Requirement 5a of the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCW, 2010b) outlined in Section 7.

The objective of the field survey was to identify places of Aboriginal cultural significance within the Study Area.

7.3.1 Personnel

The survey was conducted over a period of two days on 4 March 2025 and 29 July 2025. The participants of the field survey were project archaeologist Dr Matt Cupper of Landscape, together with the representatives from the RAPs listed in Section 4.2.3 (**Figures 6 and 7**).



Figure 6. Survey team members inspecting the Study Area.



Figure 7. Survey team members inspecting the Study Area.

7.3.2 Survey Methods

The Study Area was inspected on foot by the Project archaeologist and Aboriginal community representatives. The field team examined the ground surface for any archaeological traces such as stone artefacts, hearths, hearthstones, shells, bones and mounds. All mature trees in the areas of proposed disturbance were inspected for scarring or carving by Aboriginal people.

Particular attention was paid to areas with high ground surface visibility such as along stock and vehicle tracks and in scalds, gullies and other eroded areas.

The team members walked abreast across the surveyed areas in a series of closely spaced transects. These were evenly distributed over the areas of proposed disturbance and approximately 4 m apart. Due to the general openness of the landscape, it was usually possible to identify likely site locations from at least 4 m and deviate from the transects to make closer inspections.

Survey units and descriptions of the visibility conditions for each survey unit are provided in **Table 1** and **Figure 8**.

Table 1. Visibility Conditions at the Modification.

Survey Unit	Landforms	Vegetation	Exposures	Visibility	Survey Method
1	Dunefield	Mallee tall shrubland Belah-Rosewood woodland	Animal tracks, Vehicle tracks, Scalds	80 %	Pedestrian

7.4 SURVEY COVERAGE DATA

7.4.1 Conditions of Visibility

Conditions of ground surface visibility affect how many sites are located. Visibility may also skew the results of a survey. If, for example, conditions of ground surface visibility vary dramatically between different environments, then this would be reflected in the numbers of sites reported for each area. The area with the best visibility may be reported as having the most sites (because they are visible on the ground) while another area with less visibility but perhaps more sites would be reported as having very little occupation. It is important therefore to consider the nature of ground surface visibility as part of any archaeological investigation.

Conditions of ground surface visibility were typically around 80% (**Table 1**). Grass and herbaceous plant growth was very low, and the ground surface was exposed to erosion by scalding, stock and vehicular traffic (**Figures 9-12**).



LEGEND

Approved Project Components

Mining Lease Boundaries (ML 1762 & ML 1882)

Exploration Licence Boundary (EL 5359)

Surface Development Area

Mine Path Extent

Modification Components

Mining Lease Application (MLA2)

Study Area

Approximate Transect

Source: NSW Spatial Services (2024); Tronox (2024); Cristal Mining Australia (2012)
Orthophoto Mosaic: Tronox (2023); AAM (2011)

Figure 8



Figure 9. Example of surface exposure at the Study Area.



Figure 10. Example of surface exposure at the Study Area.



Figure 11. Example of surface exposure at the Study Area.



Figure 12. Example of surface exposure at the Study Area.

7.4.2 Coverage Analysis

Coverage analysis is a useful measurement to allow cultural resource managers to assess surveys from adjacent areas and it also allows some meaningful calculation of the actual sample size surveyed. The *actual* or *effective* area surveyed by a study depends on the conditions of ground surface visibility. Conditions of surface visibility are affected by vegetation cover, geomorphic processes such as sedimentation and erosion rates and the abundance of natural rock that may obscure the remains of cultural activities.

17 % of the Study Area was inspected on foot. The areas covered during the survey are outlined in **Table 2** and summarised by landform in **Table 3**. Survey coverage was high, given the intensive nature of the survey.

Table 2. Coverage of the Study Area.

Survey Unit	Landform	Area (m ²)	Coverage (m ²)	Visibility (%)	Effective Cover (m ²)	Effective Cover (%)	No. Sites
1	Dunefield	930,000	200,000	80	160,000	17	7
2	Sandplain	50,000	10,000	80	8,000	16	-
Total		980,000	210,000	80	168,000	17	7

Table 3. Landform Summary of Sampled Areas of the Study Area.

Landform	Landform Area (m ²)	Area Effectively Covered (m ²)	Landform Effectively Surveyed (%)	No. Sites
Dunefield	930,000	200,000	17	7
Sandplain	50,000	10,000	16	-
Total	980,000	210,000	17	7

7.5 SURVEY RESULTS AND DISCUSSION

Seven Aboriginal cultural heritage sites were newly identified during the survey in the Study Area. This comprised isolated finds of silcrete artefacts (AHIMS site number 40-5-0365; Atlas Campaspe Artefact 2; AHIMS site number 40-5-0366; Atlas Campaspe Artefact 1; AHIMS site number 40-5-0371; Atlas Campaspe Artefact 3; AHIMS site number 40-5-0372; Atlas Campaspe Artefact 4; AHIMS site number 40-5-0373; Atlas Campaspe Artefact 5; AHIMS site number 40-5-0374; Atlas Campaspe Artefact 6; AHIMS site number 40-5-0375; Atlas Campaspe Artefact 7). Summary descriptions of the newly identified Aboriginal cultural heritage sites are below, and in **Table 4**:

- AHIMS site number 40-5-0365 (Atlas Campaspe Artefact 2 - silcrete core on the dunefield in the northern part of the Study Area).
- AHIMS site number 40-5-0366 (Atlas Campaspe Artefact 1 - silcrete flake on the dunefield in the northern part of the Study Area).
- AHIMS site number 40-5-0371 (Atlas Campaspe Artefact 3 – quartzite angular fragment on the dunefield in the northern part of the Study Area).
- AHIMS site number 40-5-0372 (Atlas Campaspe Artefact 4 - silcrete angular fragment on the dunefield in the northern part of the Study Area).
- AHIMS site number 40-5-0373 (Atlas Campaspe Artefact 5 - silcrete angular fragment on the dunefield in the northern part of the Study Area).
- AHIMS site number 40-5-0374 (Atlas Campaspe Artefact 6 – sandstone grindstone fragment on the dunefield in the northern part of the Study Area).
- AHIMS site number 40-5-0375 (Atlas Campaspe Artefact 7 - silcrete flaked piece on the dunefield in the northern part of the Study Area).

Table 4. Newly Identified Aboriginal Cultural Heritage Sites within the Study Area.

AHIMS Number	Site Name	Location GDA94 mE (Zone 55)	Location GDA94 mN (Zone 55)	Size (m)	Contents
40-5-0365	Atlas Campaspe Artefact 2	718247	6254620	na	One silcrete core
40-5-0366	Atlas Campaspe Artefact 1	718279	6254641	na	One silcrete flake
40-5-0371	Atlas-Campaspe Artefact 3	718418	6254563	na	One quartzite angular fragment
40-5-0372	Atlas-Campaspe Artefact 4	718420	6254475	na	One silcrete angular fragment
40-5-0373	Atlas-Campaspe Artefact 5	718407	6254433	na	One silcrete angular fragment
40-5-0374	Atlas-Campaspe Artefact 6	718415	6254417	na	One sandstone grindstone fragment
40-5-0375	Atlas-Campaspe Artefact 7	718594	6254037	na	One silcrete flaked piece

Images of a representative sample of Aboriginal cultural heritage sites at the Study Area are depicted in **Figures 13 to 18**. The locations of the sites are shown on **Figure 19**.

No historical cultural heritage items or sites were encountered in the Study Area during the assessment. This is primarily due to the sparse historical land use of the Study Area, and specifically because it avoids pastoral homesteads and outbuildings, which are the most likely historical cultural heritage features to occur in the region.



Figure 13. AHIMS site number 40-5-0365 (Atlas Campaspe Artefact 2)



Figure 14. AHIMS site number 40-5-0366 (Atlas Campaspe Artefact 1)



Figure 15. AHIMS site number 40-5-0371 (Atlas Campaspe Artefact 3)



Figure 16. AHIMS site number 40-5-0372 (Atlas Campaspe Artefact 4)



Figure 17. AHIMS site number 40-5-0373 (Atlas Campaspe Artefact 5)



Figure 18. AHIMS site number 40-5-0374 (Atlas Campaspe Artefact 6)



Source: NSW Spatial Services (2024); Tronox (2024); Cristal Mining Australia (2012)
Orthophoto Mosaic: Tronox (2023); AAM (2011)

- LEGEND**
- Atlas Campaspe Artefacts
 - Approved Project Components
 - Mining Lease Boundaries (ML 1762 & ML 1882)
 - Exploration Licence Boundary (EL 5359)
 - Surface Development Area
 - Mine Path Extent
 - Modification Components
 - Mining Lease Application (MLA2)
 - Study Area
 - Surface Development Area

TRONOX

MODIFICATION 6

Location of Aboriginal Cultural
Heritage Sites

Figure 19

7.6 IDENTIFIED ABORIGINAL CULTURAL VALUES

As described in earlier sections, this ACHA has been prepared in accordance with the Consultation Guidelines (DECCW, 2010a) and the NSW *National Parks and Wildlife Regulation 2009*.

The cultural values assessment undertaken to date has been based on the following:

- review of background resources including previous archaeological investigations for the surrounding region and the approved Project (Niche Environment and Heritage, 2012; Landsape, 2018, 2019, 2024);
- historical research;
- discussions with RAPs during field survey;
- discussions with RAPs during community information sessions;
- requests for comments during the review period for the Proposed Methodology; and
- specific meetings with RAPs upon request.

These points of consultation provided the opportunity for the Aboriginal community to have direct input into the management of Aboriginal cultural heritage values (both tangible and intangible) in the Study Area.

During the archaeological survey, the attending RAPs did not identify any specific locations within the Study Area or wider surrounds as being of high or specific cultural significance.

RAPs identified the Study Area as a place that Aboriginal people had occupied in the past. Generally, the Aboriginal representatives viewed the Aboriginal cultural heritage sites as significant because they preserve a record of how and where people lived in the past.

8 CULTURAL HERITAGE VALUES

8.1 ABORIGINAL CULTURAL HERITAGE SIGNIFICANCE

The significance of Aboriginal cultural heritage sites such as that found during this study are usually assessed in terms of their importance to archaeologists (i.e. their scientific or research significance), their importance to contemporary Aboriginal people and their importance to the general public. Once the significance of a site has been assessed it can be ranked against others and specific recommendations formulated. Criteria for assessing scientific significance are set out below. The values used in this ACHA have been the subject of some discussion in the archaeological literature and the information provided is drawn from a number of sources (e.g. Bowdler, 1983).

8.1.1 Scientific Significance

A number of criteria are used to assess the scientific significance of a site. These include the integrity of a site, its structure and contents. These criteria combine to give a site its value as a research tool for archaeologists. In addition to the above criteria, a site may also be of scientific significance because of its representativeness or rarity. It is a basic tenet of archaeology that any site which is not represented elsewhere is of great value because archaeologists are concerned with preserving a representative sample of all site types for future generations.

Site Integrity

Site integrity refers to its state of preservation or condition. A site can be disturbed through a number of factors including natural erosional processes, destructive land use practices or repeated use of a site in the past by both humans and animals. A summary description of site integrity ratings is provided below:

low	highly disturbed or poorly preserved with little research potential.
moderate	some disturbance but remaining cultural material allows for some research potential.
high	little or no disturbance to site, good preservation and considerable research potential.

In terms of site integrity, the sites located during this survey would be rated as low. This is based on the degree of disturbance noted during the investigation. The isolated finds were identified in modified contexts of a grazing paddock. They have been disturbed by repeated traffic of hooved animals and vehicles, coupled with erosion by wind and water.

Site Structure

Site structure refers to the physical dimensions of a site (i.e. its area and depth or stratification). A large site, or a site with stratified deposits, usually has more research potential than a small site or surface scatter. In some instances, however, specific research questions may be aimed at smaller sites in which case they would be rated at a higher significance than normal. A summary description of site structure ratings is provided below:

low	small surface scatters with no stratified deposit.
moderate	medium to large surface scatters with or without stratification.
high	large <i>in situ</i> surface scatters, any site with stratified deposit.

The stone artefact sites are very small in size, with one artefact at each, and have a low site structure. The artefacts form a lag deposit on a scalded, exposed surfaces. The surfaces of these sites is degrading.

Site Contents

Site contents refers to the range and type of occupation debris found in a site. Generally, sites that contain a large and varied amount of organic and non-organic material are considered to have greater research potential than those sites with small, uniform artefacts. A summary description of site contents ratings is provided below:

low	small amount and low diversity of cultural material.
moderate	medium amount and diversity of cultural material.
high	large and diverse amount of cultural material.

The original cultural material of the sites recorded during the survey have been exposed to weathering. Only single stone artefacts remained at each of the open sites.

The stone artefacts were of silcrete, sandstone and quartzite. The flaked lithics were unmodified angular fragments, a flaked piece, flake and core, with a ground stone artefact also identified. Artefact density at these sites is very low.

The stone artefact sites rate low by the site contents criterion.

Site Representativeness and Rarity

Representativeness or rarity refers to how often a particular site type occurs in an area and requires some knowledge of the background archaeology of the area in which the study is being undertaken. Sites that are representative of the local and regional archaeological record may have value for that reason and if a site is rare or unique in some way then it is *ipso facto* significant (Bowdler, 1983). A summary description of Site Representativeness and Rarity ratings is provided below:

low	many of the same site type occurring in a single area or region.
moderate	site type occurs elsewhere but not in great quantity or with good preservation.
high	site type is rare or unique.

On the basis of the results of previous archaeological investigations (e.g. Niche Environment and Heritage, 2012; Landsape, 2018, 2019, 2024) and information held on the AHIMS site register it is clear that stone artefacts are widespread in the region. The types of archaeological sites located during this study are therefore not unique and are well represented outside the Study Area.

A summary of the archaeological significance assessment of the sites is presented in **Table 5**.

Table 5. Assessment of Significance of the Aboriginal Cultural Heritage Sites.

AHIMS Number	Scientific Significance				Cultural Significance	Educational Significance	Aesthetic Significance
	Integrity	Structure	Contents	Rarity			
40-5-0365	Low	Low	Low	Low	Moderate	Low	Low
40-5-0366	Low	Low	Low	Low	Moderate	Low	Low
40-5-0371	Low	Low	Low	Low	Moderate	Low	Low
40-5-0372	Low	Low	Low	Low	Moderate	Low	Low
40-5-0373	Low	Low	Low	Low	Moderate	Low	Low
40-5-0374	Low	Low	Low	Low	Moderate	Low	Low
40-5-0375	Low	Low	Low	Low	Moderate	Low	Low

8.1.2 Aboriginal Social, Cultural, Spiritual and Historical Significance

The significance of a site is not restricted to its scientific or research value. The views of Aboriginal people on the significance of archaeological sites are also important. Their perceptions usually stem from traditional, cultural and educational beliefs, although most local Aboriginal communities also value the scientific information that archaeological sites may be able to provide.

Archaeological sites provide connections to the past for the present Aboriginal community and future generations. Aboriginal cultural heritage sites such as those identified during this survey

can also provide information about past lifestyles and strengthen the links between Aboriginal people and the land.

The level of significance attributed to individual sites may vary according to a number of factors including the nature and integrity of the heritage items and the landscape in which the site is located. The views of the Aboriginal representatives involved in the field survey and community field inspections and discussion forums are considered to be indicative of Aboriginal community attitudes.

The Aboriginal significance of the sites listed in **Table 5** was established through consultation with the Aboriginal stakeholders involved with the field survey.

Generally, the Aboriginal community view all archaeological sites as significant because they preserve a record of how and where people lived in the past. Such cultural heritage sites also stand as testimony to the continuation of Aboriginal culture and association with the land. However, the Aboriginal community representatives involved in this ACHA did not have particularly high spiritual, traditional, historical or contemporary associations with the archaeological sites identified in the Study Area.

8.1.3 Educational Significance

The value of archaeological sites to the general public is generally assessed by their potential to educate the public about the Aboriginal past. The sites rank low by this criterion. They are small, isolated and unlikely to attract particular interest in Aboriginal heritage.

8.1.4 Aesthetic Significance

Aesthetic significance relates to the scale, form, materials, texture, colour, space and relationship of the components of the place. The relationship of the place with its setting is equally important. The site is a subdued feature in the landscape and lacks high aesthetic value.

8.2 ABORIGINAL CULTURAL LANDSCAPE

Scientific information collected from the Aboriginal archaeological sites identified during this ACHA, combined with social and cultural information provided by the Aboriginal community stakeholders and ethno-historical sources, allows interpretation of the Aboriginal cultural landscape of the Study Area, provided in the following sections.

8.2.1 Summary of the Archaeological Record

The material culture of past Aboriginal occupants of the Study Area comprises seven stone artefact sites.

8.2.2 Aboriginal Settlement Patterns

The locations of freshwater sources are likely to have been the main controlling factor of past Aboriginal occupation of the Study Area. Humans carry out most of their activities close to fresh water, rarely straying far from reliable water sources (see Gould, 1969, 1980; Allen, 1974; Jochim, 1976; Mitchell, 1990; McNiven, 1998). They also prefer larger or more persistent water sources to smaller, ephemeral water bodies. As well as the obvious abundance of aquatic molluscs, fish and birds at large, permanent water sources, mammals (such as macropods) that were hunted for protein and skins are also limited by water availability.

There are no permanent streams or wetlands in the Study Area. There are a number of unnamed, ephemeral basins nearby that are probably inundated for brief periods after heavy rain, but any pools of water rapidly seep away and evaporate. Peak occupation of the Study Area is likely to have corresponded to when these transient supplies were available.

8.2.3 Aboriginal Subsistence Strategies

Hunter-fisher-gatherers obtain the resources necessary for life by foraging and collecting subsistence strategies. Foragers gather food as it is encountered, regularly moving between resource zones and rarely storing food (Binford, 1989). Collectors, alternatively, adopt a logistical strategy for procuring resources. They often rely on stores of food and may maintain base camps, with smaller groups dispersing to collect resources. Foraging and collecting are two end-members of a subsistence continuum, with most hunter-fisher-gatherer societies engaging in a combination of both strategies (Yellen, 1977; Binford, 1989; Renfrew and Bahn, 1991).

Sites occupied by hunter-fisher-gatherer people may reflect these strategies (Binford, 1989). For example, base camps were generally occupied for long periods of the year and were used for a range of domestic and industrial activities. Alternatively, base camps may have been intensively used for part of the year, acting as congregative focal points. Temporary field camps were dispersive sites, created when groups charged with carrying out a specific task journeyed beyond the daily foraging radius.

The frequency of site occupation can sometimes be determined from their contents and structure. Residential base campsites, occupied over relatively long periods of time, tend to have a more complex structure than short-term campsites. Base camps may contain evidence of a wide variety of activities associated with daily habitation. Short-term sites were probably only occupied for a specific reason, such as to collect a particular resource. These usually display evidence of being occupied only once or twice, and are often smaller, with fewer and less diverse archaeological remains.

It is probable that the Aboriginal people who occupied the Study Area were hunter-fisher-gatherers employing both foraging and collecting subsistence strategies. These people would have primarily occupied the riparian zones of the Lachlan River and its more permanent anabranches including Willandra Creek, dispersing from the riverine corridors to exploit ephemeral resources of the more poorly watered hinterland during favourable climatic conditions, as invoked in the subsistence model of Allen (1974).

Only relatively small areas were investigated in a heterogeneous landscape, but it is probable that the archaeological record of the Study Area reflects the occupation of the riverine hinterland by small, mobile bands. The cultural heritage sites in the Study Area is probably derived from temporary habitation by small groups during periods of seasonal dispersal. This is because the dunefields and sandplains seasonally supported food plants and animals.

Plant resources in the Study Area that could have been harvested by winter foragers include seeds from grasses (e.g. Porteners, 1993; Latz, 1995; Gott, 1998). When holding surface water, the nearby claypans could have become havens for birds such as wading species, which may have been hunted. Ephemeral water sources would have also attracted macropods.

8.2.4 Synthesis

Aboriginal people probably occupied the Study Area following the end of the last Ice Age some 18,000 years ago. The Aboriginal archaeological record of the Study Area is probably late Holocene (less than a few thousand years) in age. The lack of reliable, permanent sources of water in the hinterland of the riverine plains would have made the Study Area unattractive for permanent habitation.

The non-stratified stone artefact sites at the Study Area probably represents temporary occupation sites. People from the small, mobile groups that probably periodically journeyed into the hinterland from the rivers and streams of the riverine plains to forage for food and other resources may have occupied such an area for brief durations. Past Aboriginal people probably also transited through the region to access areas for resource exploitation and cultural purposes. Foraging and collecting subsistence strategies are clearly artificial divisions, and these tactics undoubtedly overlapped.

9 POTENTIAL IMPACTS OF THE MODIFICATION ON ABORIGINAL CULTURAL HERITAGE

The Modification could potentially directly and indirectly impact upon Aboriginal cultural heritage sites. Potential negative direct and indirect impacts may result from the Modification and could include the destruction of the sites via earthmoving, indirect physical affects (e.g. dust deposition) or aesthetic affects.

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

9.1 POTENTIAL DIRECT IMPACTS

Construction of the Modification would disturb the current land surface and would likely directly impact the Aboriginal cultural heritage sites associated with the Modification surface disturbance area if not relocated prior to disturbance. The optimised services corridor layout would be confirmed based on the outcomes of ongoing engineering work/design and is expected to have a surface development area of approximately 50.54 hectares (ha) within the optimised services corridor study area. The surface development area required for the Modification is flexible and can be revised to avoid any direct impact on the identified Aboriginal cultural heritage site.

Such impacts on cultural heritage values typically fall into three categories:

- the loss of information which could otherwise be gained by conducting research today;
- the loss of the cultural heritage resource for future research using methods and addressing questions not available today; and
- the permanent loss of the physical record.

These impacts can usually be mitigated to various degrees, depending on the nature and significance of the cultural heritage. Where sites are of low scientific significance, their destruction may have little scientific consequence. This could be due to the lack of useful information that could be gained from research, or the availability of many equivalent and alternative sites for study.

Aboriginal cultural heritage sites with greater scientific significance may be the subject of investigation prior to their disturbance. This allows for the salvage of information, and the recovery of a sample of artefactual materials according to current methods and research priorities. Sites and site groupings that are common elsewhere may not require the same degree of salvage attention as those which are rare, of high significance, and subject to active deterioration.

Salvage investigations can provide for the discovery of new knowledge about the past human occupation and land use of an area. Despite the loss of physical evidence involved, the information gained can in turn aid the interpretation and better management of the remaining cultural heritage resource.

9.2 POTENTIAL INDIRECT IMPACTS

In areas where the proposed works for the proposal would not involve significant earthmoving, impacts may be limited to minor surface disturbance, limited disturbance of the associated substrates or landforms and no significant alteration of the landscape context.

Potential indirect impacts to archaeological sites could include the following:

- deposition of dust generated by earthworks and vehicular traffic;
- accidental disturbance by peripheral activities; and
- inappropriate visitation including the unauthorized removal of Aboriginal objects.

9.3 CULTURAL HERITAGE AVOIDED BY THE MODIFICATION

Harm can be avoided to seven Aboriginal cultural heritage sites near the proposed disturbance areas for the Modification. These comprise seven isolated finds of stone artefacts. These sites are in the broader Study Area for the assessment, but outside the proposed surface development area for the optimised services corridor.

9.4 CULTURAL HERITAGE POTENTIALLY IMPACTED BY THE MODIFICATION

The impact of the Modification on Aboriginal cultural heritage is determined by the nature and the degree of harm that the construction works for the Modification would cause. The type of harm is either direct or indirect, and therefore, the consequence of harm is a total or a partial loss in value (DECCW, 2010b). A total loss in value would occur when the entire Study Area is impacted by the Modification. A partial loss of value would occur when only part of the site (such as in the case of an artefact scatter) is impacted by the Modification.

No Aboriginal cultural heritage sites are located within the proposed surface development area for the Modification. Therefore, there would be no direct harm to any Aboriginal cultural heritage sites by the Modification. Any potential indirect impacts due to the proximity of the Aboriginal cultural heritage sites to the surface development area for the Modification can be appropriately managed (see Section 10.1.3. and 10.2).

The potential impacts of the Modification on the Aboriginal cultural heritage sites in the Study Area are summarised in **Table 6**.

Table 6. Summary of Potential Impacts to Aboriginal Cultural Heritage Sites.

AHIMS Number	Site Type	Type of Harm	Degree of Harm	Consequence of Harm
40-5-0365	Artefact (n=1)	None/Indirect	No harm; Avoided	No harm; No loss of value
40-5-0366	Artefact (n=1)	None/Indirect	No harm; Avoided	No harm; No loss of value
40-5-0371	Artefact (n=1)	None/Indirect	No harm; Avoided	No harm; No loss of value
40-5-0372	Artefact (n=1)	None/Indirect	No harm; Avoided	No harm; No loss of value
40-5-0373	Artefact (n=1)	None/Indirect	No harm; Avoided	No harm; No loss of value
40-5-0374	Artefact (n=1)	None/Indirect	No harm; Avoided	No harm; No loss of value
40-5-0375	Artefact (n=1)	None/Indirect	No harm; Avoided	No harm; No loss of value

9.5 POTENTIAL FOR PREVIOUSLY UNIDENTIFIED ABORIGINAL CULTURAL HERITAGE TO OCCUR IN THE STUDY AREA

Although the Study Area was sufficiently surveyed, there remains the potential for Aboriginal cultural heritage sites to be located within this area (e.g. sites that may have been obscured by grass or soil at the time of survey). Such previously unidentified features, should they occur, would probably be isolated finds or low-density concentrations of stone artefacts (based on the predictive model outlined in Section 7.1 and informed by the results of the current survey, summarised in Section 7.5).

The shallow soils of the Study Area, coupled with past disturbance from pastoralism and mining exploration, means that significant *in situ* subsurface cultural deposits are highly improbable.

The Study Area does not contain culturally sensitive landforms such as lunettes or source-bordering sand dunes where subsurface Aboriginal cultural deposits (e.g. burials) have been recorded previously.

A strategy for managing any newly identified Aboriginal objects during the life of the Modification is outlined in Section 10.

9.6 FLEXIBILITY OF THE MODIFICATION DESIGN

The potential area of disturbance associated with the Modification is flexible. Subject to engineering constraints, components may be relocated away from any additional Aboriginal heritage sites that may be encountered to avoid disturbance.

9.7 POTENTIAL CUMULATIVE IMPACTS

The Modification is located within the south-western region of NSW, which contains a number of currently approved or operational mine sites and/or other large-scale infrastructure projects. These existing operations have caused adverse heritage impacts to a range of Aboriginal cultural heritage sites, principally archaeological ones. For the most part, these adverse impacts have been associated with the disturbance or destruction of Aboriginal cultural heritage sites subsequent to archaeological investigation and assessment.

The survey undertaken for this ACHA indicates that the types of Aboriginal cultural heritage sites within the Study Area that may be impacted by the Modification comprise part of a region-wide distribution of very small open occupation sites, including disturbed artefacts. Given the low scientific significance of these Aboriginal cultural heritage sites, the cumulative effect that may result from the development of the Modification is considered to be low, and would be mitigated by the ongoing program of archaeological recording/salvage recommended by this ACHA.

In terms of cultural values, the Modification is located within an area that has already been modified by past clearing and pastoral and mining exploration activities. The Modification is considered likely to cause few impacts additional to those that have already occurred. On this basis, it is considered that the Modification would not appreciably increase cumulative impacts to Aboriginal heritage in the region.

9.8 POTENTIAL IMPACTS TO THE WORLD HERITAGE AND NATIONAL HERITAGE VALUES OF THE WILLANDRA LAKES REGION

The Modification is located approximately 19 km from the Willandra Lakes World Heritage Area, which includes the dunes of Lake Mungo, where the remains of a 42,000-year-old male and female (i.e. Mungo Man and Mungo Lady) were discovered. Mungo Lady is believed to be the oldest site of ritual cremation in the world (Bowler *et al.* 2003). The Willandra Lakes Region World Heritage Area is listed under both the World Heritage List and the National Heritage List.

At its closest point the Willandra Lakes Region World Heritage Area is approximately 19 km from the closest disturbance footprint of the Modification. The landscape features from which the world heritage values are derived are lunettes and associated relict lake and inter-lake connecting areas. Combined, these landforms preserve a rich palaeo-environmental (World Heritage criterion viii; National Heritage criteria [a], [b], [c]) and a cultural (World Heritage criterion iii; National Heritage criteria [a], [b], [c], [g]) record stretching from 100,000 years ago to the present. Significantly the combined archaeological and environmental record preserved within the Willandra Lakes Region World Heritage Area documents life ways, cultural practices and human responses to a changing climate and environment over the last 50,000 years.

The results of the survey for the Modification provide no evidence that similar values exist within the Modification footprint. The optimised services corridor are situated on quaternary sand dunes and sandplains, which do not contain a significant natural and cultural record. Consultation has been undertaken with Aboriginal stakeholders including those from the Barkandji (Paakantji), Muthi Muthi and Ngayampaa tribal groups associated with the Willandra Lakes. The registered Aboriginal stakeholders have not identified any of the recorded sites as being of particular cultural significance (Appendix C) or raised any concerns regarding potential impacts to the Willandra Lakes or its cultural values.

Based on the above, it is concluded that the Modification would not have a significant impact on the World Heritage or National Heritage values of the Willandra Lakes Region World Heritage Area.

10 MANAGEMENT STRATEGIES FOR CULTURAL HERITAGE

This section presents proposed strategies for the management of Aboriginal cultural heritage values within the Study Area that may be subject to direct impacts by the Modification. These recommendations have been developed in consideration of the management approved in the EIS and the HMP.

10.1 GENERAL RECOMMENDATIONS

10.1.1 Heritage Management Plan

In accordance with Condition 28, Schedule 3 of the Development Consent (SSD_5012), a HMP, which outlines the management and mitigation measures for Aboriginal cultural heritage, has been previously prepared for the Project in consultation with the Aboriginal community and Heritage NSW. Tronox should revise the HMP to reflect the results and recommendations of this ACHA. The HMP should continue to remain active for the life of the Modified Project and define the tasks, scope and conduct of all Aboriginal cultural heritage management activities. The HMP should be revised in consultation with the local Aboriginal community.

The measures presented below are considered best practice in the mining industry. Their effectiveness and reliability is demonstrated by their continued use and inclusion in management plans and strategies developed in consultation with the RAPs and to the satisfaction of Heritage NSW.

10.1.2 Role of the Local Aboriginal Community

Tronox is committed to involving the local Aboriginal community as an integral participant in the management of Aboriginal cultural heritage values in the Study Area. The strategies outlined in this report have incorporated the views of community representatives and the HMP would be prepared in consultation with the local Aboriginal community.

The recording, collection, curation, storage and replacement of moved Aboriginal objects would occur with the invited participation of local Aboriginal community representatives.

10.1.3 Site Management and Cultural Awareness Training

The effective application of the HMP and its strategies will be dependent on an appreciation of its content and function by on-site staff and employees.

It is proposed to provide training to all on-site personnel regarding the HMP strategies relevant to their employment tasks.

10.2 MANAGEMENT OF CULTURAL HERITAGE IN PROXIMITY TO THE DISTURBANCE AREAS

Harm to the Aboriginal cultural heritage sites within the Study Area for the Modification would be avoided. Temporary barrier/fences would be erected around the sites (a minimum 10 m radius buffer) when works are occurring in their vicinity. At a minimum, these would include star pickets and flagging. These barriers would remain in place throughout the life of the Modified Project.

10.3 SUMMARY OF MANAGEMENT RECOMMENDATIONS

Proposed site management strategies for the Aboriginal cultural heritage site identified during the field survey are summarised in **Table 7**.

Table 7. Proposed Specific Management Strategies for known Aboriginal Cultural Heritage Sites.

Site Name	Type	Summary Scientific Significance	Potential Impacts	Proposed Management Measures
40-5-0365	Artefact (n=1)	Low	Indirect	Install temporary protective fencing
40-5-0366	Artefact (n=1)	Low	Indirect	Install temporary protective fencing
40-5-0371	Artefact (n=1)	Low	Indirect	Install temporary protective fencing
40-5-0372	Artefact (n=1)	Low	Indirect	Install temporary protective fencing
40-5-0373	Artefact (n=1)	Low	Indirect	Install temporary protective fencing
40-5-0374	Artefact (n=1)	Low	Indirect	Install temporary protective fencing
40-5-0375	Artefact (n=1)	Low	Indirect	Install temporary protective fencing

11 SUMMARY RECOMMENDATIONS

Based on the results of this cultural heritage investigation and consultation with representatives of the RAPs the following is recommended:

- The Modification be allowed to proceed because the Study Area would be located in an area where harm to cultural heritage would be avoided.
- Harm to the Aboriginal cultural heritage sites (AHIMS site numbers 40-5-0365—0366, 40-5-0371—0375) near the proposed surface development area for the Modification would be avoided. Temporary barrier/fences would be erected around the sites (a minimum 10 m radius buffer) when works are occurring in their vicinity. At a minimum, these should include star pickets and flagging. These barriers would remain in place throughout the life of the Modified Project.
- In the unlikely event that human skeletal remains are encountered during the course of activities associated with the Modification, all work in that area must cease. Remains must not be handled or otherwise disturbed except to prevent further disturbance. If the remains are thought to be less than 100 years old, the Police or the State Coroner's Office (tel: 02 9552 4066) must be notified. If there is reason to suspect that the skeletal remains are more than 100 years old and Aboriginal, Tronox should contact the Environmental Line (tel: 131 555) for advice. In the unlikely event that an Aboriginal burial is encountered, strategies for its management would need to be developed with the involvement of the local Aboriginal community.
- Tronox should update the HMP for the Atlas-Campaspe Mine to reflect the results and recommendations of this ACHA. The HMP should continue to remain active for the life of the Modified Project and define the tasks, scope and conduct of all Aboriginal cultural heritage management activities. The HMP should be revised in consultation with the local Aboriginal community.
- Tronox should provide training to all on-site personnel regarding the HMP strategies relevant to their employment tasks.
- Tronox should continue to involve the RAPs and any other relevant Aboriginal community groups or members in matters pertaining to the Modification.

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APPENDICES

Appendix 1 Glossary

Appendix 2 Consultation Log

Appendix 3 Correspondence to Aboriginal Community Stakeholders

Appendix 4 Correspondence from Aboriginal Community Stakeholders

Appendix 5 AHIMS Register Search

Appendix 6 AHIMS Site Cards

Appendix 7 Cadastre Information

APPENDIX 1: GLOSSARY

Archaeological site - A place with evidence of past human activity. This evidence may include Aboriginal and/or historic artefacts, features, structures or organic traces.

Artefact scatter - A surface scatter of Aboriginal or historic cultural material. Scatters of stone artefacts are a common archaeological site type. These scatters may also contain charcoal, discarded animal bones, shell and ochre.

Assemblage - A collection of artefacts from a single archaeological site.

Burial site - A place with a concentration of human remains. Ochre, stone tools, charcoal and grave goods may be associated with burials. Most burial sites are found in sand dunes but dead trees, caves and rock shelters were also used.

Ceremonial ground - Place that may be associated with initiation ceremonies, meetings or sacred rituals. Stone arrangements may be present, including cairns, stone circles or standing slabs of rock.

Chert - A fine-grained opaline rock ranging in color from white to black, but most often grey, brown, grayish brown and light green to rusty red.

Core - A piece of stone from which flakes have been removed. They usually have negative flake scars that have resulted from the removal of flakes.

Cultural material - Any material remains or objects resulting from human activity.

Debitage - Any waste material including flakes and cores produced during the manufacture of chipped stone tools.

Flake - A piece of stone detached from a core that typically displays a striking platform, bulb of percussion and flake scars on the ventral surface.

Flaked piece - Small fragments of stone resulting from the manufacture of stone tools. A striking platform or bulb of percussion may not be evident.

Formalized tools - An artefact that has been deliberately shaped by flaking, retouch or grinding to produce a predetermined tool type.

Ground surface visibility - The amount of bare ground exposed, usually expressed as a percentage.

Hearth - The remains of a campfire containing charcoal, discoloured soil, and possibly, hearthstones, heat retainers or the remains of animals or shellfish cooked and consumed at the campsite.

Hearthstone - Stone cobble placed in a campfire to retain heat for cooking. The types of stone used as hearthstones in western Victoria includes calcrete and sandstone.

Heat retainer - Nodule of baked clay, thought to have been placed in campfires to retain heat for cooking.

in situ - An artefact or other feature that has not been disturbed from its original position.

Mound - Raised areas of earth ranging from 3 to 35m in diameter and from 0.5m to 2m in height. Earth oven material, stone artefacts, food refuse and the remains of hut foundations have been recovered from excavated earth mounds in the central and western parts of Victoria.

Ochre - Soft varieties of the iron oxides goethite, limonite or haematite usually coloured red or yellow and used as pigment for painting.

Quarry - An outcrop of stone or ochre where Aboriginal people have extracted the raw material for use or trade. Stone quarries are identifiable by a dense scatter of broken stone and flakes or consist of pits or hollows where material has been dug out of the ground.

Quartz - A silica mineral resistant to weathering because of its hardness. It is commonplace in the landscape as a consequence.

Quartzite - A metamorphic rock formed by the re-crystallization of quartz.

Retouch - A stone artefact with fine, secondary flaking along one or more edges.

Scarred tree - A tree with a scar on its trunk caused by bark removal.

Shell midden - A surface scatter or heap of discarded shell often with charcoal, animal bones and stone artefacts. Middens may found near coastlines, rivers, creeks, swamps and ancient lakes.

Silcrete - A hard, fine-grained rock composed of silica cement.

Stone feature - Cairns, rock wells, grinding groves, stone structures, fish traps and stone arrangements are examples of stone features.

Stratified deposit - Material that has been laid down over time forming a sequence of events.

Subsurface testing - A method of excavation used for detecting cultural material below the ground surface. Testing is commonly by shovel, trowel or hand auger.

Survey - An inspection of land either by foot or vehicle for the purpose of identifying archaeological sites.

Transect - A predetermined area or a path that directs the course of a survey.

APPENDIX 2: CONSULTATION LOG

DATE	ORGANISATION CONTACTED	HOW CONTACTED	CONTACTED BY	NATURE OF CONSULTATION	TIME
6-Jan-25	Balranald Local Aboriginal Land Council, Ivanhoe Community Working Party, Michael (Mick) Kelly on behalf of Ngayampaa people, Muthi Muthi Nation Aboriginal Corporation, Willandra Lakes 2 Traditional Tribal Groups Elders Council, Kullila Site Consultants, National Koorie Site Management, Willandra Lakes Region World Heritage Area Aboriginal Advisory Group, Wakool Indigenous	Email	Tronox	Stage 2 letter notifying the RAPs of the Modification and to provide feedback on the Proposed Methodology.	1:56 pm
6-Jan-25	Tronox	Email	Daniel Kelly	Comment on Proposed Methodology	2:11 pm
6-Jan-25	Tronox	Email	Mickandlara Kelly	Comment on Proposed Methodology	1:41 pm
7-Feb-25	Balranald Local Aboriginal Land Council, Ivanhoe Community Working Party, Michael (Mick) Kelly on behalf of Ngayampaa people, Muthi Muthi Nation Aboriginal Corporation, Willandra Lakes 2 Traditional Tribal Groups Elders Council, Kullila Site Consultants, National Koorie Site Management, Willandra Lakes Region World Heritage Area Aboriginal Advisory Group, Wakool Indigenous	Email	Tronox	Letter notifying information session and field survey dates.	
13-Feb-25	Tronox	Email	Gary Pappin	Confirmed attendance at the initial surveys	
15-Jul-25	Balranald Local Aboriginal Land Council, Ivanhoe Community Working Party, Michael (Mick) Kelly on behalf of Ngayampaa people, Muthi Muthi Nation Aboriginal Corporation, Willandra Lakes 2 Traditional Tribal Groups Elders Council, Kullila Site Consultants, National Koorie Site Management, Willandra Lakes Region World Heritage Area Aboriginal Advisory Group, Wakool Indigenous	Email	Tronox	Letter notifying RAPs of the additional survey for revised study area.	
	Tronox		Muthi Muthi Nation Aboriginal Corporation	Confirmed attendance at the initial surveys	
27-Oct-25	Balranald Local Aboriginal Land Council, Ivanhoe Community Working Party, Michael (Mick) Kelly on behalf of Ngayampaa people, Muthi Muthi Nation Aboriginal Corporation, Willandra Lakes 2 Traditional Tribal Groups Elders Council, Kullila Site Consultants, National Koorie Site Management, Willandra Lakes Region World Heritage Area Aboriginal Advisory Group, Wakool Indigenous	Email	Tronox	Tronox provided the draft ACHA to RAPs for comment for 28 days	
30-Jan-26/2-Feb-2026/9-Feb-26	Balranald Local Aboriginal Land Council, Ivanhoe Community Working Party, Michael (Mick) Kelly on behalf of Ngayampaa people, Muthi Muthi Nation Aboriginal Corporation, Willandra Lakes 2 Traditional Tribal Groups Elders Council, Kullila Site Consultants, National Koorie Site Management, Willandra Lakes Region World Heritage Area Aboriginal Advisory Group, Wakool Indigenous	Email	Landskape	Landskape contacted RAPs to confirm there was no comments provided during the ACHA draft review period	
30-Jan-26	Landskape	Email	Muthi Muthi Nation Aboriginal Corporation (Daniel Kelly)	Confirmation of endorsement from this RAP surrounding the Modification	

APPENDIX 3: CORRESPONDENCE TO ABORIGINAL COMMUNITY STAKEHOLDERS

6 January 2025

To Registered Aboriginal Party,

RE: Atlas-Campaspe Mineral Sands Project Modification 6 – Aboriginal Cultural Heritage Assessment Proposed Methodology, Information Session and Field Survey

Tronox Mining Australia Limited (Tronox) is the proponent of the Atlas-Campaspe Mineral Sands Project (the Project) which includes the development of a mineral sands mining operation (the Atlas-Campaspe Mine), together with the construction and operation of the Ivanhoe Rail Facility (a rail loadout facility) in western New South Wales (NSW) (Figure 1).

Development Consent (SSD_5012) was granted for the Project under Part 4 of the NSW *Environmental Planning and Assessment Act 1979* in 2014.

Tronox has identified an opportunity to improve operational efficiency at the Atlas-Campaspe Mine by developing an optimised services corridor alignment between the Atlas and Campaspe deposits (the Modification) (Figure 2).

In summary, the Modification would include the following:

- development of an optimised services corridor between the Atlas and Campaspe deposits (Figure 2), including haul road, pipeline, electricity transmission line, soil stockpiles and water management infrastructure;
- transport of pre-mineral concentrate and ore from the pre-concentrator plant (PCP) to the primary gravity concentration unit (PGCU) via a pipeline and/or truck along the optimised transport route; and
- additional biodiversity offset area(s) to replace the approved biodiversity offset area that would be disturbed by the optimised services corridor.

The existing services corridor (Figure 2) would remain to provide an alternative access between the Atlas and Campaspe deposits.

The optimised services corridor study area is shown on Figure 2 (the Study Area).

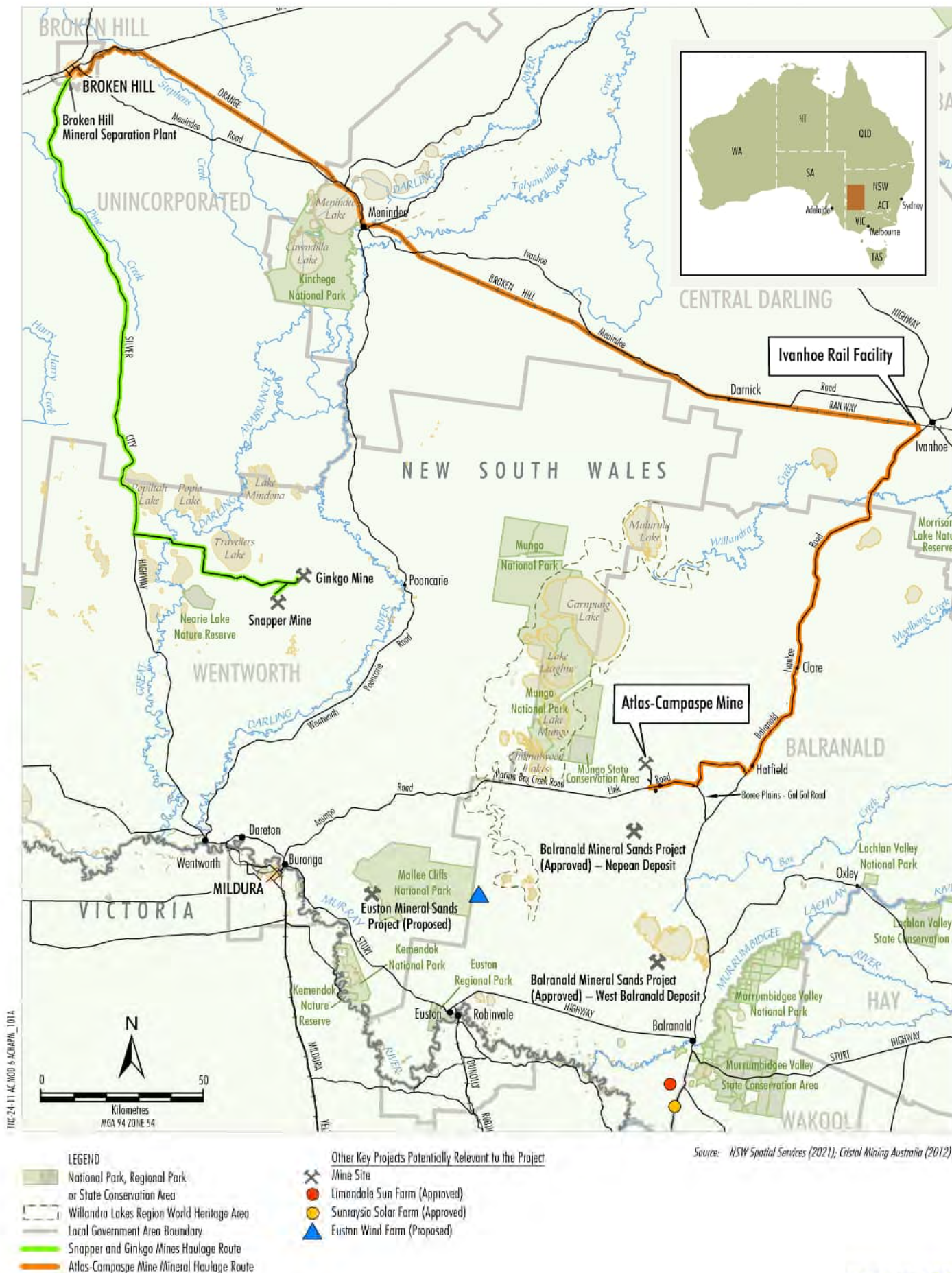
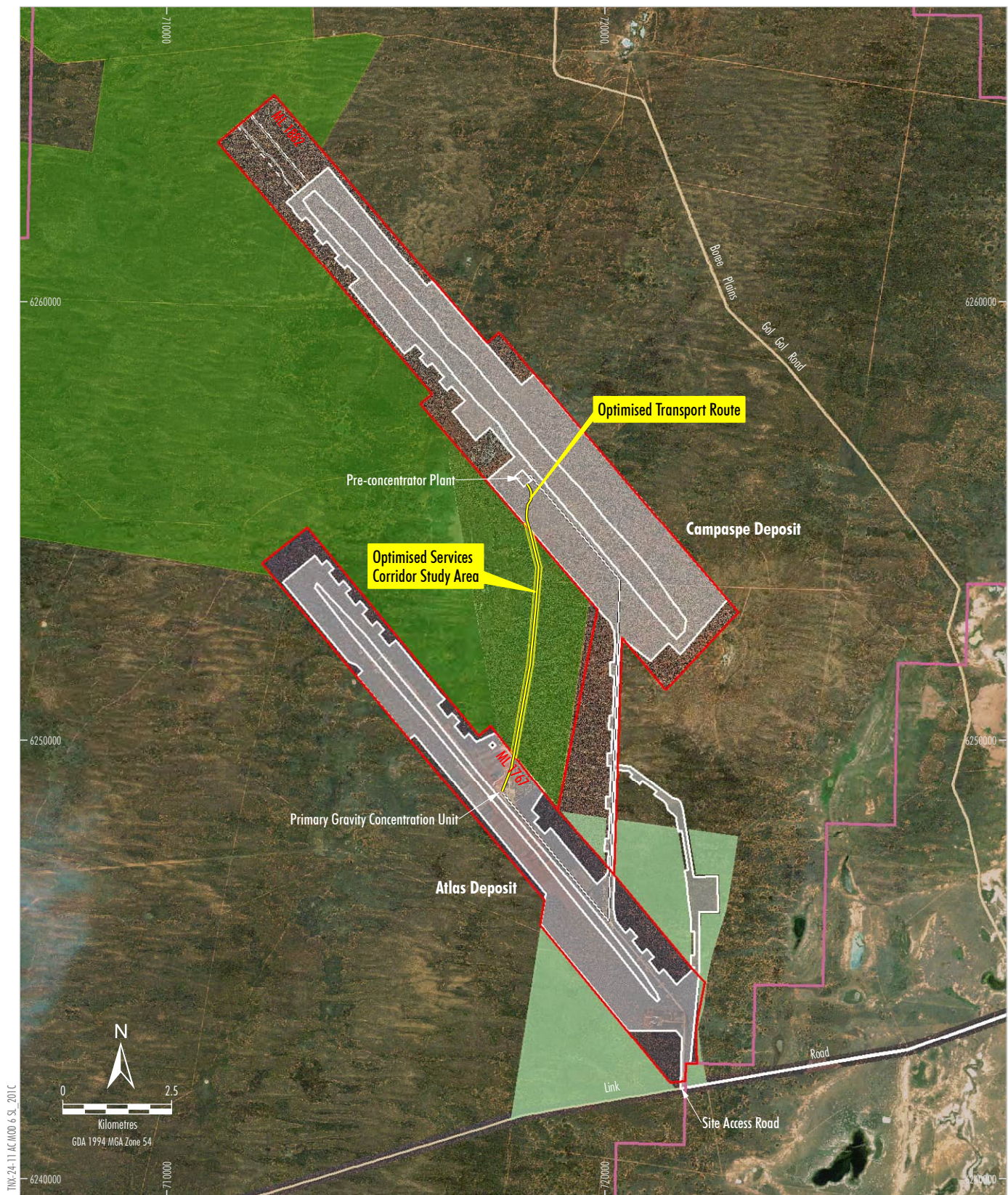


Figure 1



LEGEND

Approved Project Components

- Mining Lease Boundaries (ML 1762 & ML 1882)
- Exploration Licence Boundary (EL 5359)
- Surface Development Area
- Mine Path Extent
- Groundwater Borefield Study Area ^
- Biodiversity Offset Area
- Vegetation Management Area

Modification Components

- Modified Atlas-Campaspe Mine Component
- Optimised Services Corridor Study Area

Source: NSW Spatial Services (2024); Tronox (2024); Cristal Mining Australia (2012)
Orthophoto Mosaic: Tronox (2023); AAM (2011)

TRONOX

MODIFICATION 6

Approved and Modified
General Arrangement

^ The layout of the groundwater borefield would be confirmed based on the outcomes of ongoing hydrogeological test work/design.

Figure 2

As part of the Modification Application, Tronox will be preparing an Aboriginal Cultural Heritage Assessment to identify ways to avoid or minimise potential harm to Aboriginal objects. The subject area of the Modification and any such application is depicted as the “Optimised Services Corridor Study Area” as shown on Figure 2.

Community consultation is an important part of this process. In accordance with the requirements as set out in the *Aboriginal cultural heritage consultation requirements for proponents 2010* (NSW Department of Environment, Climate Change and Water, 2010) (Consultation Guidelines), Tronox is required to conduct a community consultation process with relevant Aboriginal people to assist in the preparation of the Aboriginal Cultural Heritage Assessment. This includes:

- Contacting various government organisations and requesting a list of any Aboriginal persons or groups who may hold cultural knowledge relevant to, or who have a right or interest in, determining the cultural heritage significance of Aboriginal objects and/or places in the “Optimised Services Corridor Study Area”.
- Writing to the Aboriginal persons or groups identified by the above process to notify them of the Modification and invite them to register an interest in the community consultation process.

Due to your previous involvement for the Atlas-Campaspe Mineral Sands Project, you have been automatically registered for the consultation process associated with the Modification. You do not need to contact Tronox to re-register for the Modification.

Proposed Methodology

Please find enclosed for your review, a copy of the Proposed Methodology for the Aboriginal Cultural Heritage Assessment for the Modification (Enclosure A).

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

If you wish to provide input on the following, please provide feedback to Tronox (via the contact details provided at the end of this letter) by **5:00 pm 4 February 2025**:

- The nature of the Proposed Methodology.
- Any Aboriginal objects or places of cultural value within the Modification area, or issues of cultural significance, that you are aware of.

- Any restrictions or protocols you may consider necessary in relation to any information of sensitivity that you may provide.
- Any other factors you consider to be relevant to the heritage assessment.

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

Information Session and Field Survey

As part of the Aboriginal Cultural Heritage Assessment, Tronox will be facilitating an information session and field survey for the Modification.

Expected timing for both the information session and field survey will be provided in future correspondence.

Contact Details

To provide any feedback with respect to the Proposed Methodology, please do not hesitate to contact me if you have any queries.

Chaka Chirozva
Tronox Mining Australia Limited
E: Chaka.Chirozva@tronox.com
M: 0437 146 508

ENCLOSURE A

PROPOSED METHODOLOGY FOR THE ABORIGINAL CULTURAL HERITAGE
ASSESSMENT FOR THE MODIFICATION

ATLAS CAMPASPE MINERAL SANDS PROJECT
MODIFICATION 6
PROPOSED METHODOLOGY
FOR THE
ABORIGINAL CULTURAL HERITAGE ASSESSMENT

6 JANUARY 2025

1 INTRODUCTION

1.1 Background

Tronox Mining Australia Limited (Tronox) is the proponent of the Atlas-Campaspe Mineral Sands Project (the Project) which includes the development of a mineral sands mining operation (the Atlas-Campaspe Mine), together with the construction and operation of the Ivanhoe Rail Facility (a rail loadout facility) in western New South Wales (NSW) (Figure 1).

Development Consent (SSD_5012) was granted for the Project under Part 4 of the NSW *Environmental Planning and Assessment Act 1979* in 2014.

Tronox has identified an opportunity to improve operational efficiency at the Atlas-Campaspe Mine by developing an optimised services corridor alignment between the Atlas and Campaspe deposits (the Modification) (Figure 2).

Tronox is seeking to engage with the Aboriginal community as part of the preparation for an Aboriginal Cultural Heritage Assessment (ACHA) for the Modification. Consultation with Aboriginal people and communities will be guided by Heritage NSW's *Aboriginal cultural heritage consultation requirements for proponents 2010* (NSW Department of Environment, Climate Change and Water [DECCW], 2010a).

1.3 Modification Overview

The Modification would include the following:

- development of an optimised services corridor between the Atlas and Campaspe deposits (Figure 2), including haul road, pipeline, electricity transmission line, soil stockpiles and water management infrastructure;
- transport of pre-mineral concentrate and ore from the pre-concentrator plant (PCP) to the primary gravity concentration unit (PGCU) via a pipeline and/or truck along the optimised transport route; and
- additional biodiversity offset area(s) to replace the approved biodiversity offset area that would be disturbed by the optimised services corridor.

The existing services corridor (Figure 2) would remain to provide an alternative access between the Atlas and Campaspe deposits.

The optimised services corridor study area is shown on Figure 2 (the Study Area).

The Modification would not change the following approved Project components:

- mine path;
- mine life;
- mining methods or rate;
- processing methods or rate;
- product transport;
- overburden and process residue management;
- annual maximum water supply/demand; and
- workforce.

1.3 Structure of this Document

Section 2 of this document outlines the Proposed Methodology for the cultural and archaeological assessment of Aboriginal objects, places and/or Aboriginal cultural heritage values within the Study Area.

Section 3 outlines the sensitive cultural information management protocol and Section 4 provides further information on the preparation of the ACHA report. Relevant personnel for the assessment are outlined in Section 5.

2 PROPOSED ASSESSMENT METHODOLOGY

The Proposed Methodology for the cultural and archaeological assessment for the ACHA is as follows:

- Complete a desktop assessment of the Study Area to delineate areas of known and predicted Aboriginal objects, places and/or Aboriginal cultural heritage values, including a detailed review of the previous assessments.
- Identify the Aboriginal cultural heritage values associated with the Study Area through consulting with Aboriginal people with cultural knowledge or responsibilities for Country in which the Modification occurs, utilising written, oral research and field investigations.
- Complete a cultural and archaeological assessment with representatives of the local Aboriginal community (represented by the Registered Aboriginal Parties; RAPs), to identify Aboriginal objects, places and/or Aboriginal cultural heritage values. The field investigation would be carried out by the project archaeologist with the assistance of Aboriginal representatives.
- Record/document any Aboriginal objects, places and/or Aboriginal cultural heritage values within the relevant area and assessment of their significance with representatives of the RAPs.
- In consultation with the RAPs, develop recommended management and mitigation measures for Aboriginal objects, places and/or Aboriginal cultural heritage values, including documentation (where relevant).
- Provide a consideration of the potential impacts of the Modification on Aboriginal objects, places and/or Aboriginal cultural heritage values within the Study Area.
- Describe and justify the outcomes and alternatives.
- Document the Aboriginal cultural heritage impact assessment and the recommendations to minimise potential impacts on Aboriginal cultural heritage.
- Provide a copy of the draft ACHA to the RAPs for their review and feedback.
- Document feedback received as part of the cultural assessment from RAPs for presentation in the final ACHA report (subject to the sensitivity of the information provided).

In accordance with the *Aboriginal cultural heritage consultation requirements for proponents 2010* (DECCW, 2010a), Tronox requests that RAPs provide, where relevant during the conduct of the ACHA, cultural information regarding:

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

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

3 SENSITIVE CULTURAL INFORMATION – MANAGEMENT PROTOCOL

In the event that a RAP has sensitive or restricted public access information, it is proposed that Tronox would manage this information (if provided by the Aboriginal community) in accordance with a sensitive cultural information management protocol.

It is anticipated that the protocol would include making note of and managing the material in accordance with the following key limitations/requirements as advised by the relevant RAP at the time of the information being provided:

- any restrictions on access to the material;
- any restrictions on communication of the material;
- any restrictions on the location/storage of the material;
- any cultural recommendations on handling the material;
- any contextual information;
- any names and contact details of persons authorised by the relevant Aboriginal party to make decisions concerning the Aboriginal material and the degree of authorisation;
- any details of any consent given in accordance with customary law;
- the level of confidentiality to be accorded to the material; and
- any access and use by the RAP, of the cultural information in the material.

All RAPs should be aware of the mandatory requirement that all feedback provided must be documented in the final ACHA (DECCW, 2010a), including copies of any submissions received and the proponents response to the issues raised.

4 ABORIGINAL CULTURAL HERITAGE ASSESSMENT

Following consultation on the Proposed Methodology of the cultural and archaeological assessment, and undertaking any required field components, a draft ACHA report will be prepared. The draft ACHA will be provided to all RAPs for their review and comment, and will include:

- details of the Aboriginal objects, places and/or Aboriginal cultural heritage values within the Study Area and how they will be impacted by the Modification;
- details of the consultation undertaken and how comments received at various times were considered; and
- management and mitigation recommendations drawing on information provided by RAPs and the results of the cultural and archaeological assessments.

5 PERSONNEL

Project Archaeologist: Dr Matt Cupper would be the project archaeologist. Matt has a wide range of experience in cultural and natural heritage management and an academic background in archaeology, geology and botany, including a PhD in the palaeoecology and early Aboriginal occupation of the Darling River. His particular area of expertise is the interaction of Aboriginal people and arid ecosystems in the interior of Australia. As a consultant archaeologist he has been engaged in many management and research-oriented studies of the Murray Darling Basin for industry and government. These have included investigation of the cultural heritage of western and central NSW for mine, and archaeological surveys of water supply and irrigation infrastructure along the Lachlan, Macquarie, Murrumbidgee, Murray and Darling Rivers.

Aboriginal Field Representatives: It is anticipated that Aboriginal field representatives of the RAPs would be engaged by Tronox for the duration of the cultural heritage field survey subject to workplace health and safety constraints.

6 REFERENCES

Department of Environment, Climate Change and Water (DECCW) (2010a) *Aboriginal cultural heritage consultation requirements for proponents 2010*.

Department of Environment, Climate Change and Water (DECCW) (2010b). *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*. NSW Department of Environment, Climate Change and Water, Sydney.

Office of Environment and Heritage (OEH) (2011). *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW*. Office of Environment and Heritage, Sydney.

FIGURES

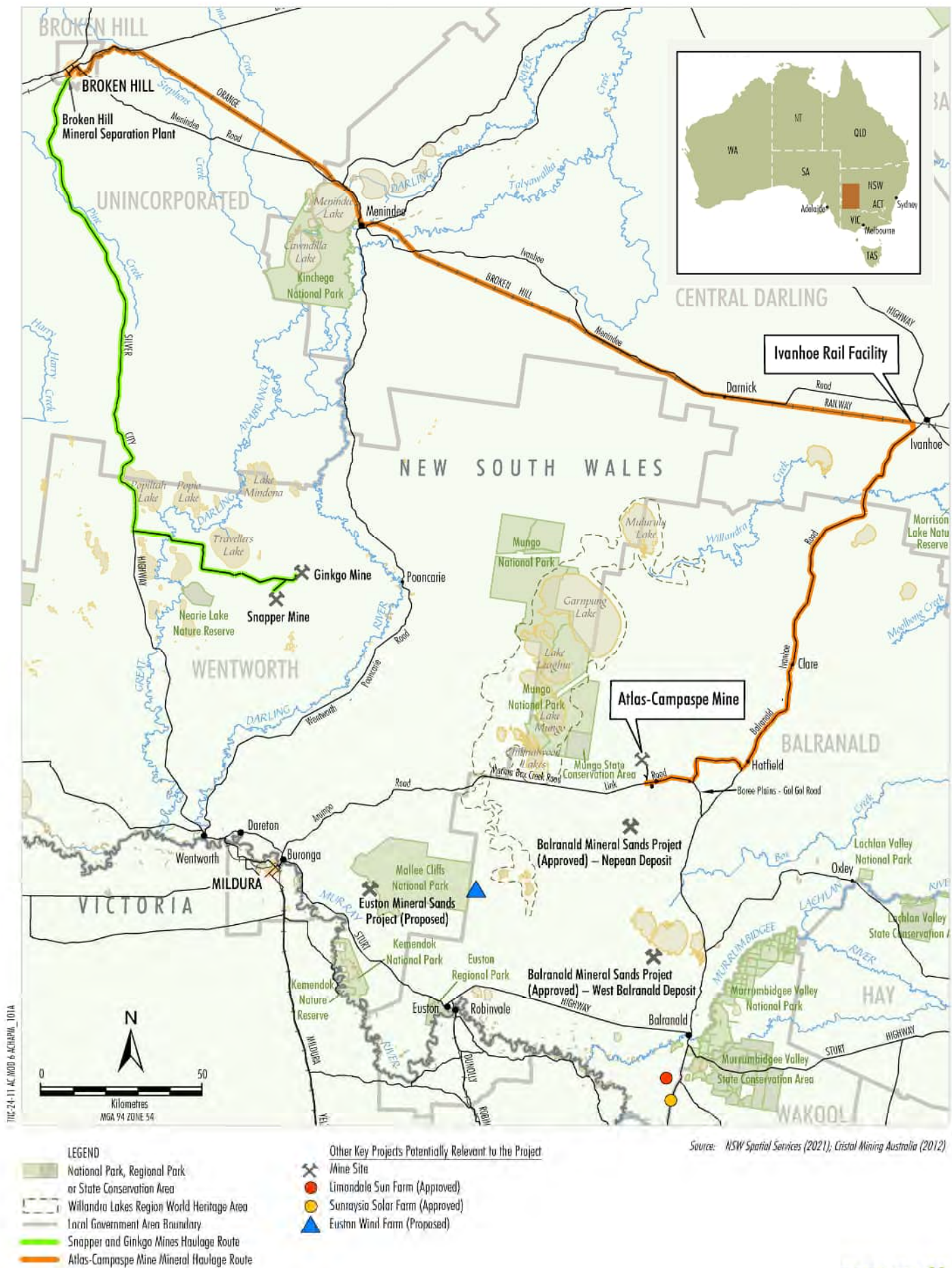
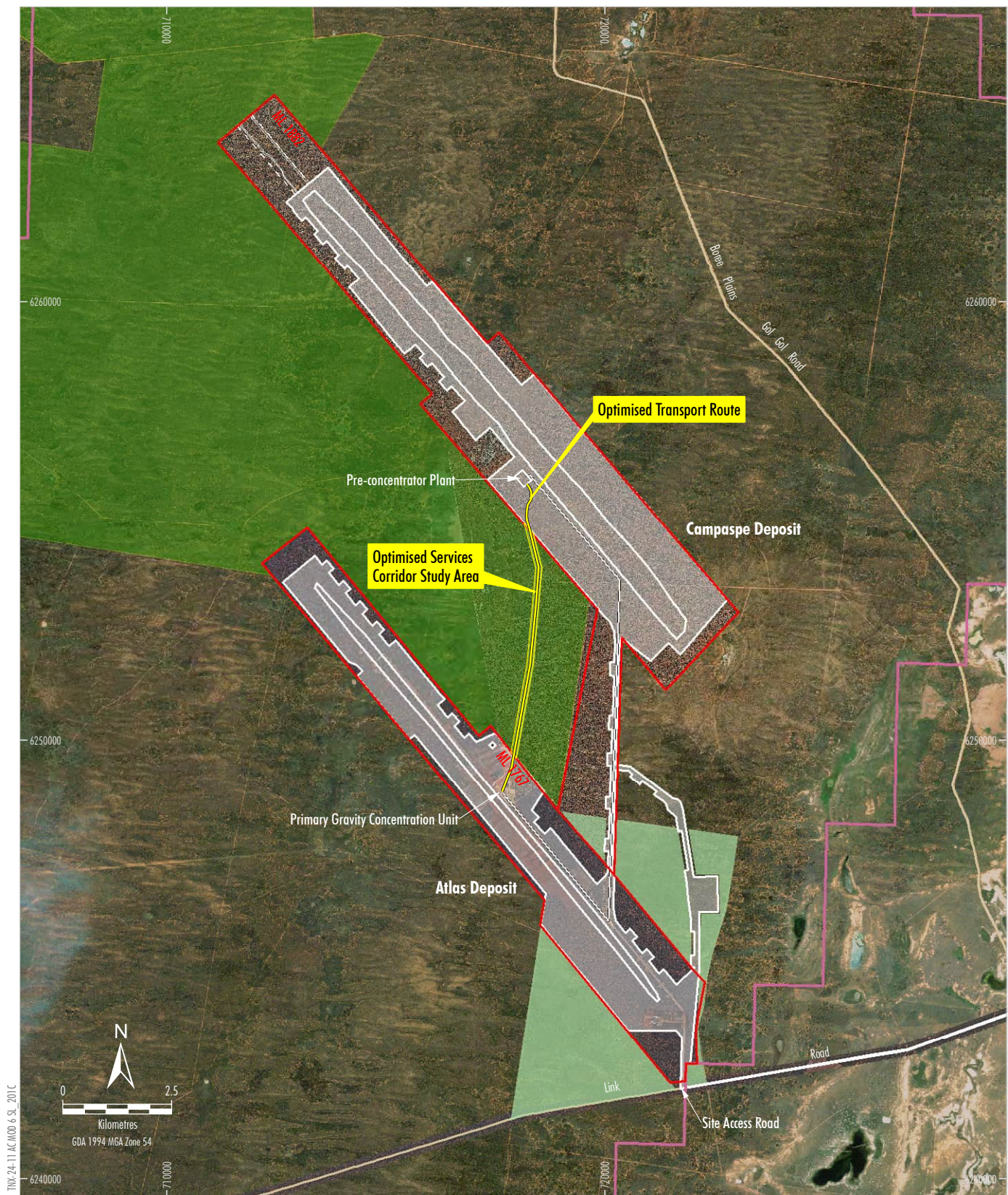


Figure 1



LEGEND

Approved Project Components

- Mining Lease Boundaries (ML 1762 & ML 1882)
- Exploration Licence Boundary (EL 5359)
- Surface Development Area
- Mine Path Extent
- Groundwater Borefield Study Area ^
- Biodiversity Offset Area
- Vegetation Management Area

Modification Components

- Modified Atlas-Campaspe Mine Component
- Optimised Services Corridor Study Area

Source: NSW Spatial Services (2024); Tronox (2024); Cristal Mining Australia (2012)
Orthophoto Mosaic: Tronox (2023); AAM (2011)

TRONOX

MODIFICATION 6

Approved and Modified
General Arrangement

^ The layout of the groundwater borefield would be confirmed based on the outcomes of ongoing hydrogeological test work/design.

Figure 2

7 February 2025

To whom it may concern,

RE: Atlas-Campaspe Mineral Sands Project Modification 6 – Aboriginal Cultural Heritage Assessment Information Session and Field Survey

Please see below for details of the proposed information session and field surveys for the Atlas-Campaspe Mineral Sands Project Modification 6 Aboriginal Cultural Heritage Assessment (ACHA).

Information Session

In accordance with Section 4.2 and 4.3 of the *Aboriginal cultural heritage consultation requirements for proponents 2010* (NSW Department of Environment, Climate Change and Water [DECCW], 2010), the Proposed Methodology of the ACHA was provided for your review and comment on 6 January 2025. As part of the review process for the Proposed Methodology, Tronox Mining Australia Limited (Tronox) would like to offer those who registered an interest (both individuals and representative groups) in the ACHA (referred to as Registered Aboriginal Parties [RAPs]) an opportunity to participate in an information session.

The purpose of the information session is to provide further information regarding the Modification and an opportunity for RAPs to discuss, ask questions and/or provide comments on the Proposed Methodology. Representatives from the consulting archaeologist and Tronox will also participate in the information session and field survey.

The details of the meeting are below:

Date Time: 08:30am, 4 March 2025

Location: Atlas-Campaspe Camp Dining Hall

The information session will also provide RAPs with an opportunity to raise any cultural issues and/or comments/perspectives regarding the Modification or the Proposed Methodology. Note that issues can also be raised at any point during the consultation process.

Field Survey

As part of the ACHA for Modification 6, Tronox will be facilitating a field survey of the Modification Study Area to allow representatives of the RAPs to inspect the area and any Aboriginal heritage sites which may be located within or in immediate proximity of the area.

Regardless of participation in the surveys, all RAPs will be invited by Tronox to attend a site inspection of the Modification area and a selection of the recorded sites following completion of the field surveys.

The field survey is expected to take place between **4 March 2025** and **5 March 2025**. Further details will be provided to the successful applicants as soon as possible.

Registration of Interest in the Information Session and/or Field Survey

Should you wish to indicate your interest to participate in the information session and/or field survey, please advise Tronox via the contact details below by **5:00 pm 22 September 2023**:

Chaka Chirozva
Environmental Lead
Tronox Mining Australia Limited
E: Chaka.Chirozva@tronox.com
M: 0437 146 508

Where a response is not received by **5:00 pm 14 February 2025**, it will be assumed that you do not wish to seek consideration for paid involvement in the field investigation. Incomplete applications will not be accepted by Tronox. Please note that Tronox reserves the right to request any further information/clarification or supporting documentation from you in respect to your application.

Assistance in the completion of the application form can be provided to you upon request. Please use the contact details provided above.

Site Induction

RAPs who are attending the field survey will be required to complete an online induction process before coming to site (**prior to 4 March 2025**). The online induction process takes on average 3-4 hours to complete.

Before the commencement of the field survey, RAPs will go through a site orientation, vehicle and equipment checks, job hazard analysis and safe work method statements (on average take a few hours to complete).

RAP Payment Details

Tronox will pay out of pocket travel expenses for RAPs from their home address to the meeting location and return (note that Tronox will pay 75 cents per kilometre, up to a maximum of \$300 per RAP for travel). RAPs will need to provide proof of transport and sign a payment declaration form. Tronox will compensate RAPs for their participation in the field survey.



To provide any feedback with respect to the information session and field survey, please do not hesitate to contact me if you have any queries.

Yours sincerely,

Chaka Chirozva
Environmental Lead
Tronox Mining Australia Limited
E: Chaka.Chirozva@tronox.com
M: 0437 146 508

15 July 2025

To whom it may concern,

RE: Atlas-Campaspe Mineral Sands Project Modification 6 – Aboriginal Cultural Heritage Assessment – Additional Field Survey

Please see below for details of an additional field survey for the Atlas-Campaspe Mineral Sands Project Modification 6 Aboriginal Cultural Heritage Assessment (ACHA).

Tronox has adjusted the Optimised Services Corridor previously surveyed by RAPs on 4-5 March 2025 based on further design work. The additional field work currently proposed would survey areas of the adjusted Optimised Services Corridor that was not surveyed on 4-5 March 2025. Figure 1 details the new survey areas.

Field Survey

As part of the ACHA for Modification 6, Tronox will be facilitating a field survey of the Modification Study Area to allow representatives of the RAPs to inspect the area and any Aboriginal heritage sites which may be located within or in immediate proximity of the area.

Regardless of participation in the surveys, all RAPs will be invited by Tronox to attend a site inspection of the Modification area and a selection of the recorded sites following completion of the field surveys.

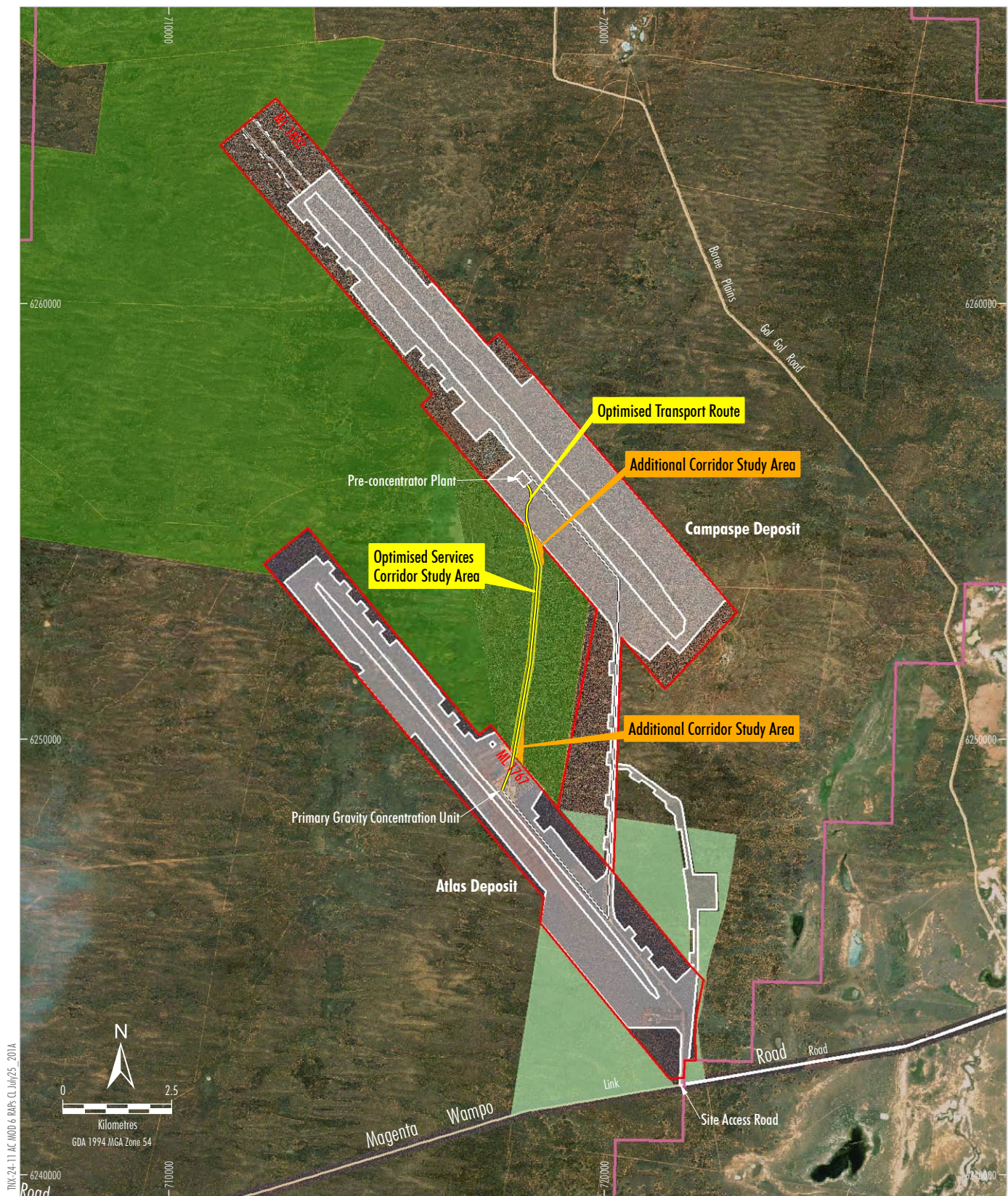
The field survey is expected to take place on **29 July 2025**. Further details will be provided to the successful applicants as soon as possible.

Registration of Interest in the Information Session and/or Field Survey

Should you wish to indicate your interest to participate in the information session and/or field survey, please advise Tronox via the contact details below by **5:00 pm 22 July 2025**:

Chaka Chirozva
Environmental Lead
Tronox Mining Australia Limited
E: Chaka.Chirozva@tronox.com
M: 0437 146 508

Where a response is not received by **5:00 pm 23 July 2025**, it will be assumed that you do not wish to seek consideration for paid involvement in the field investigation. Incomplete applications will not be accepted by Tronox. Please note that Tronox reserves the right to request any further information/clarification or supporting documentation from you in respect to your application.



LEGEND

- Approved Project Components
- Mining Lease Boundaries (ML 1762 & ML 1882)
- Exploration Licence Boundary (EL 5359)
- Surface Development Area
- Mine Path Extent
- Groundwater Borefield Study Area ^
- Biodiversity Offset Area
- Vegetation Management Area

Modification Components

- Modified Atlas-Campaspe Mine Component
- Optimised Services Corridor Study Area
- Additional Corridor Study Area

Source: NSW Spatial Services (2024); Tronox (2024); Cristal Mining Australia (2012)
Orthophoto Mosaic: Tronox (2023); AAM (2011)

TRONOX

MODIFICATION 6

Approved and Modified General Arrangement
Additional Corridor Study Area

^ The layout of the groundwater borefield would be confirmed based on the outcomes of ongoing hydrogeological test work/design.

Figure 1

Assistance in the completion of the application form can be provided to you upon request. Please use the contact details provided above.

Site Induction

RAPs who are attending the field survey will be required to complete face-to-face induction process on the day of fieldwork (**29 July 2025**).

Before the commencement of the field survey, RAPs will go through a site orientation, vehicle and equipment checks, job hazard analysis and safe work method statements (on average take a few hours to complete).

RAP Payment Details

Tronox will pay out of pocket travel expenses for RAPs from their home address to the meeting location and return (note that Tronox will pay 88 cents per kilometre, up to a maximum of \$300 per RAP for travel). RAPs will need to provide proof of transport and sign a payment declaration form. Tronox will compensate RAPs for their participation in the field survey.

To provide any feedback with respect to the information session and field survey, please do not hesitate to contact me if you have any queries.

Yours sincerely,

Chaka Chirozva
Environmental Lead
Tronox Mining Australia Limited
E: Chaka.Chirozva@tronox.com
M: 0437 146 508

27 October 2025

To Registered Aboriginal Parties,

RE: Atlas-Campaspe Mineral Sands Project Modification 6 – Draft Aboriginal Cultural Heritage Assessment

Tronox Mining Australia Limited (Tronox) is the proponent of the Atlas-Campaspe Mineral Sands Project (the Project) which includes the development of a mineral sands mining operation (the Atlas-Campaspe Mine), together with the construction and operation of a rail loadout facility located near the township of Ivanhoe (the Ivanhoe Rail Facility).

Development Consent (SSD_5012) was granted for the Project under Part 4 of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act) in 2014.

Tronox is proposing an application to modify Development Consent (SSD_5012) under section 4.55(2) of the EP&A Act to allow for the changes identified during detailed planning for the development of the Campaspe deposit at the Atlas-Campaspe Mine (the Modification).

As you are aware, as part of this Modification application, Tronox is preparing an Aboriginal Cultural Heritage Assessment. In accordance with the *Aboriginal cultural heritage consultation requirements for proponents 2010* (New South Wales [NSW] Department of Environment, Climate Change and Water, 2010), we have provided the draft ACHA for your review and feedback. Your feedback may include the identification of issues or areas of cultural significance that may be used to affect, inform or refine the draft ACHA.

If you wish to provide input on the following, please make a submission to Tronox by 5.00 pm 24 November 2025 (via the contact details provided below):

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

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

Please submit any feedback regarding the draft ACHA to Tronox via the following contact details by 5.00 pm 24 November 2025:

Chaka Chirozva
Tronox Mining Australia Limited
E: Chaka.Chirozva@tronox.com
M: 0437 146 508
PO Box 444 | Broken Hill, NSW | 2880

Yours sincerely,

Chaka Chirozva
Environmental Lead
Tronox Mining Australia Limited

APPENDIX 4: CORRESPONDENCE FROM ABORIGINAL COMMUNITY STAKEHOLDERS

From: Daniel Kelly danielkelly1952@gmail.com

Subject: Re: Atlas-Campaspe MOD 6

Date: 30 January 2026 at 6:24 pm

To: Matt Cupper mattcupper@telstra.com, Tara Bruton tbruton74@gmail.com, danielkelly2715@gmail.com

DK

Hi Matt

I had spoken to Tara and Daniel junior

Regarding the cultural and heritage for the Mutthi Mutthi people we agreed to the document due to Tronax interest in our cultural and heritage within the mining area Atlas

We hope our views are acceptable

Yours in good faith

Unc Danny Kelly

Mutthi Wamba elder

On Fri, Jan 30, 2026 at 11:53 AM Daniel Kelly <danielkelly1952@gmail.com> wrote:

Hi Matt

Yes had recived Chaka report and will

We will get back to you soon

Thanks

Unc Danny

On Fri, 30 Jan 2026, 11:49 Matt Cupper, <mattcupper@telstra.com> wrote:

Dear Danny,

Happy new year: trust yours has started well!

Chaka from Tronox sent you a draft of the Aboriginal cultural heritage assessment report for the modification 6 for the Atlas Campaspe Mineral Sands Project in October 2025.

Chaka has since been on leave so I was wondering if you'd contacted him with any comments. If so, could you forward them again to me directly, please?

Many thanks,
Matt

Dr Matt Cupper
Principal
Landskape

Tel: 0408 006 690
mattcupper@telstra.com

On 5 Sep 2024, at 5:50 pm, Daniel Kelly <danielkelly1952@gmail.com> wrote:

Thank you for the information!

On Thu, 5 Sept 2024, 17:17 Chirozva, Chaka, <Chaka.Chirozva@tronox.com> wrote:

Dear Registered Aboriginal Party,

For your information, the *NSW Department of Planning, Housing and Infrastructure* has placed the Atlas-Campaspe Mineral Sands Project MOD 5 on Public Exhibition, with comments due by **11 September 2024**.

The Modification Report (including the final **Aboriginal Cultural Heritage Assessment**) can be viewed online (<https://www.planningportal.nsw.gov.au/major-projects/projects/mod-5-borefield-and-processing-efficiencies>). The Aboriginal Cultural Heritage Assessment is included as Appendix C of the Modification Report. I have attached the **Aboriginal Cultural Heritage Assessment** to this email for your convenience.

Comments relating to the Aboriginal Cultural Heritage Assessment and/or any other part of the Modification Report can be provided online via the NSW Department of Planning, Housing and Infrastructure website.

Please do not hesitate to reach out if you have any questions or need further clarification.

Kind Regards,

Chaka Chirozva

Environmental Lead

Tronox Mining Australia

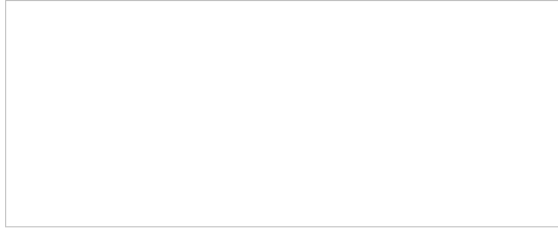
AUS-Eastern Operations

[138 Pinnacles Road](#) | [Broken Hill](#) | [2880](#) | [NSW](#)

M: +61 437 146 508

E: Chaka.Chirozva@tronox.com | W: www.tronox.com

Working Hours: Monday - Thursday



<image001.png><image001.png>

From: Daniel Kelly <danielkelly1952@gmail.com>
Sent: Monday, 6 January 2025 2:11 PM
To: Chirozva, Chaka
Subject: Re: Atlas-Campaspe Mineral Sands Project Modification 6 - Proposed Methodology
Attachments: image001.png; image001.png

ALERT: This message originated outside of Tronox's network. **BE CAUTIOUS** before clicking on links or opening attachments.

Well done! No objection here
Regards
Unc Danny Kelly

On Mon, 6 Jan 2025, 13:57 Chirozva, Chaka, <Chaka.Chirozva@tronox.com> wrote:

Dear Registered Aboriginal Party,

In accordance with the *Aboriginal cultural heritage consultation requirements for proponents 2010*, please find attached correspondence for the Atlas-Campaspe Mineral Sands Project – Modification 6 Proposed Methodology for your review and feedback.

If you wish to provide an input of the Proposed Methodology, please make a submission to Tronox by **5:00 pm 4 February 2025**.

Please do not hesitate to contact me if you have any queries.

Kind Regards,

Chaka Chirozva

Environmental Lead

Tronox Mining Australia

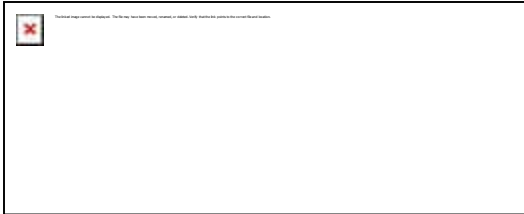
AUS-Eastern Operations

[138 Pinnacles Road | Broken Hill](#) | 2880 | NSW

M: +61 437 146 508

E: Chaka.Chirozva@tronox.com | W: www.tronox.com

Working Hours: Monday - Thursday



From: mickandlara kelly <mickandlara@gmail.com>
Sent: Monday, 6 January 2025 1:41 PM
To: Chirozva, Chaka
Subject: Re: Atlas-Campaspe Mineral Sands Project Modification 6 - Proposed Methodology
Attachments: image001.png; image001.png

ALERT: This message originated outside of Tronox's network. **BE CAUTIOUS** before clicking on links or opening attachments.

Thanks Chaka for the update,

I am a little under the pump to get involved at the present time please keep liaising with the Balranald Aboriginal Community regarding the on ground assessment

Thanks

Michael (Mick) Kelly

On Mon, 6 Jan 2025, 1:57 pm Chirozva, Chaka, <Chaka.Chirozva@tronox.com> wrote:

Dear Registered Aboriginal Party,

In accordance with the *Aboriginal cultural heritage consultation requirements for proponents 2010*, please find attached correspondence for the Atlas-Campaspe Mineral Sands Project – Modification 6 Proposed Methodology for your review and feedback.

If you wish to provide an input of the Proposed Methodology, please make a submission to Tronox by **5:00 pm 4 February 2025**.

Please do not hesitate to contact me if you have any queries.

Kind Regards,

Chaka Chirozva

Environmental Lead

Tronox Mining Australia

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M: +61 437 146 508

E: Chaka.Chirozva@tronox.com | W: www.tronox.com

Working Hours: Monday - Thursday



APPENDIX 5: AHIMS REGISTER SEARCH

LandScape - Natural & Cultural Heritage Management

Date: 23 September 2025

P O Box 246

Merbein Victoria 3505

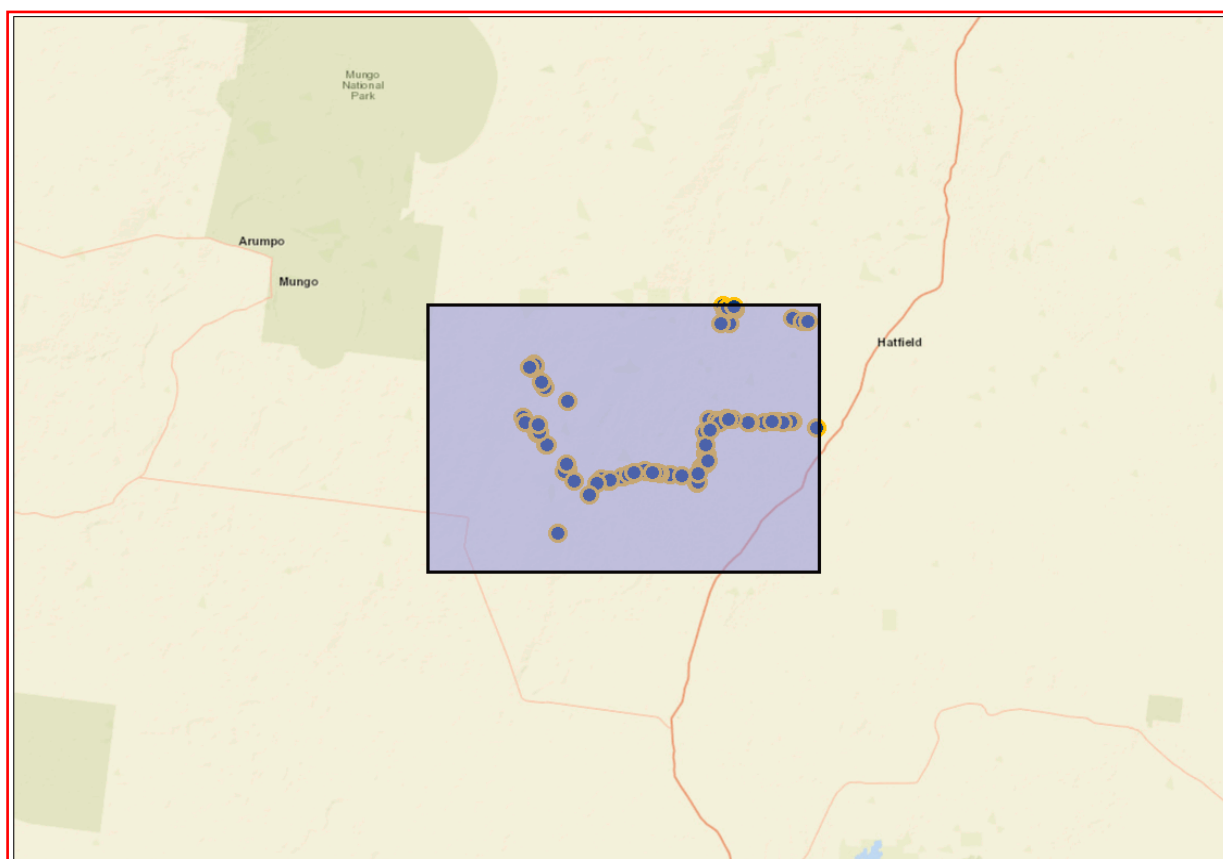
Attention: Matt Cupper

Email: landscape@telstra.com

Dear Sir or Madam:

AHIMS Web Service search for the following area at Lat, Long From : -34.028, 143.2139 - Lat, Long To : -33.743, 143.709, conducted by Matt Cupper on 23 September 2025.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of Heritage NSW AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

103	Aboriginal sites are recorded in or near the above location.
0	Aboriginal places have been declared in or near the above location. *

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
40-6-0012	Paxtons track 1	AGD	54	747700	6261300	Open site	Valid	Artefact : 15, Hearth : 3		98318
	Contact	Recorders						Permits		
40-6-0051	Hatfield 34	GDA	54	737406	6245174	Open site	Valid	Artefact : 1		
	Contact	Recorders						Permits		
40-6-0060	Hatfield 42	GDA	54	735973	6242659	Open site	Valid	Artefact : 1		
	Contact	Recorders						Permits		
40-5-0284	Hatfield 51	GDA	54	730257	6243751	Open site	Valid	Artefact : 1		
	Contact	Recorders						Permits		
40-5-0288	Hatfield 56	GDA	54	728822	6243595	Open site	Valid	Artefact : 1, Hearth : 1		
	Contact	Recorders						Permits		
40-5-0296	Hatfield 64	GDA	54	725939	6242824	Open site	Valid	Artefact : 1		
	Contact	Recorders						Permits		
40-6-0039	Hatfield 20	GDA	54	738091	6249312	Open site	Valid	Artefact : 1, Earth Mound : 1, Hearth : 1, Non-Human Bone and Organic Material : 1, Potential Archaeological Deposit (PAD) : 1		
	Contact	Recorders						Permits		
40-5-0279	Atlas 3	GDA	54	718563	6247242	Open site	Valid	Artefact : 1		
	Contact	Recorders						Permits		
40-5-0304	Atlas Artefact 12	GDA	54	717449	6249002	Open site	Valid	Artefact : -		
	Contact	Recorders						Permits		
40-5-0365	Atlas Campaspe Artefact 2	GDA	54	718247	6254620	Open site	Valid	Artefact : -		
	Contact	Recorders						Permits		
40-5-0373	Atlas Campaspe Artefact 5	GDA	54	718407	6254433	Open site	Valid	Artefact : -		
	Contact	Recorders						Permits		
40-5-0374	Atlas Campaspe Artefact 6	GDA	54	718415	6254417	Open site	Valid	Artefact : -		
	Contact	Recorders						Permits		
40-6-0003	Paxton's 2	AGD	54	739990	6262550	Open site	Valid	Artefact : 1		98318
	Contact	Recorders						Permits		
40-6-0008	Paxtons 7	AGD	54	741019	6262508	Open site	Valid	Artefact : 50		98318
	Contact	Recorders						Permits		
40-6-0010	Paxtons 9	AGD	54	739858	6262495	Open site	Valid	Artefact : 3		98318
	Contact	Recorders						Permits		

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
40-6-0056	Hatfield 38	GDA	54	736977	6244319	Open site	Valid	Artefact : 1		
	Contact	Recorders	Niche Environment and Heritage,Ms.Clare Anderson							Permits
40-6-0062	Hatfield 44	GDA	54	736136	6242198	Open site	Valid	Artefact : 1		
	Contact	Recorders	Niche Environment and Heritage,Ms.Clare Anderson							Permits
40-5-0286	Hatfield 54	GDA	54	729119	6243696	Open site	Valid	Artefact : 1		
	Contact	Recorders	Niche Environment and Heritage,Ms.Clare Anderson							Permits
40-5-0295	Hatfield 63	GDA	54	725960	6242757	Open site	Valid	Artefact : 1		
	Contact	Recorders	Niche Environment and Heritage,Ms.Clare Anderson							Permits
40-5-0297	Hatfield 65	GDA	54	725762	6242736	Open site	Valid	Artefact : 1, Hearth : 1		
	Contact	Recorders	Niche Environment and Heritage,Ms.Clare Anderson							Permits
40-5-0277	Atlas 1	GDA	54	721057	6244204	Open site	Valid	Artefact : 1		
	Contact	Recorders	Niche Environment and Heritage,Ms.Clare Anderson							Permits
40-5-0278	Atlas 2	GDA	54	720691	6243973	Open site	Destroyed	Artefact : 1		
	Contact	Recorders	Niche Environment and Heritage,Doctor.Matt Cupper,LandScape - Natural & Cultur							Permits
40-5-0303	Atlas Artefact 11	GDA	54	724941	6242991	Open site	Valid	Artefact : -		
	Contact	Recorders	Doctor.Matt Cupper,LandScape - Natural & Cultural Heritage Management							Permits
40-5-0273	Campaspe 3	GDA	54	717529	6256450	Open site	Valid	Artefact : 1		
	Contact	Recorders	Niche Environment and Heritage,Ms.Clare Anderson							Permits
40-5-0371	Atlas Campaspe Artefact 3	GDA	54	718418	6254563	Open site	Valid	Artefact : -		
	Contact	Recorders	Doctor.Matt Cupper,LandScape - Natural & Cultural Heritage Management							Permits
40-5-0170	Nepean 3	GDA	54	719797	6236685	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact	Recorders	Mr.Giles Hamm							Permits
40-6-0050	Hatfield 32	GDA	54	737215	6244485	Open site	Valid	Artefact : 1		
	Contact	Recorders	Niche Environment and Heritage,Ms.Clare Anderson							Permits
40-6-0057	Hatfield 39	GDA	54	736730	6244106	Open site	Valid	Artefact : 1, Hearth : 1, Potential Archaeological Deposit (PAD) : 1		
	Contact	Recorders	Niche Environment and Heritage,Ms.Clare Anderson							Permits
40-6-0064	Hatfield 46	GDA	54	733085	6243312	Open site	Valid	Artefact : 1		
	Contact	Recorders	Niche Environment and Heritage,Ms.Clare Anderson							Permits
40-6-0040	Hatfield 21	GDA	54	737804	6248978	Open site	Valid	Artefact : 1, Earth Mound : 1, Hearth : 1		
	Contact	Recorders	Niche Environment and Heritage,Ms.Clare Anderson							Permits
40-5-0275	Campaspe 5	GDA	54	717437	6256850	Open site	Valid	Artefact : 1		

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
	Contact	Recorders	Niche Environment and Heritage,Ms.Clare Anderson					Permits		
40-6-0006	Paxtons 5	AGD	54	740465	6262672	Open site	Valid	Artefact : 1		98318
	Contact	Recorders	Niche Environment and Heritage,Ms.Clare Anderson					Permits		
40-6-0014	Paxtons track 3	AGD	54	740292	6260962	Open site	Valid	Artefact : 6, Shell : 1		98318,98682
	Contact	Recorders	Niche Environment and Heritage,Ms.Clare Anderson					Permits	1477,1478	
40-6-0049	Hatfield 31	GDA	54	737321	6244615	Open site	Valid	Artefact : 1		
	Contact	Recorders	Niche Environment and Heritage,Ms.Clare Anderson					Permits		
40-5-0285	Hatfield 52	GDA	54	730146	6243826	Open site	Valid	Artefact : 1		
	Contact	Recorders	Niche Environment and Heritage,Ms.Clare Anderson					Permits		
40-5-0292	Hatfield 60	GDA	54	727538	6243217	Open site	Valid	Artefact : 1		
	Contact	Recorders	Niche Environment and Heritage,Ms.Clare Anderson					Permits		
40-6-0043	Hatfield 24	GDA	54	737277	6247984	Open site	Valid	Artefact : 1		
	Contact	Recorders	Niche Environment and Heritage,Ms.Clare Anderson					Permits		
40-6-0045	Hatfield 26	GDA	54	737268	6246696	Open site	Valid	Artefact : 1		
	Contact	Recorders	Niche Environment and Heritage,Ms.Clare Anderson					Permits		
40-5-0281	Atlas 5	GDA	54	715957	6250560	Open site	Valid	Artefact : 1		
	Contact	Recorders	Niche Environment and Heritage,Ms.Clare Anderson					Permits		
40-5-0299	Atlas Artefact 8	GDA	54	720939	6244908	Open site	Valid	Artefact : -		
	Contact	Recorders	Doctor.Matt Cupper,LandScape - Natural & Cultural Heritage Management					Permits		
40-5-0300	Atlas Artefact 7	GDA	54	721758	6242765	Open site	Valid	Artefact : -		
	Contact	Recorders	Doctor.Matt Cupper,LandScape - Natural & Cultural Heritage Management					Permits		
40-5-0271	Campaspe 1	GDA	54	721258	6252349	Open site	Destroyed	Artefact : 1		
	Contact	Recorders	Niche Environment and Heritage,Doctor.Matt Cupper,LandScape - Natural & Cultural Heritage Management					Permits		
40-5-0272	Campaspe 2	GDA	54	717141	6256343	Open site	Valid	Artefact : 1		
	Contact	Recorders	Niche Environment and Heritage,Ms.Clare Anderson					Permits		
40-6-0026	Hatfield 7	GDA	54	745828	6249332	Open site	Valid	Artefact : 1		
	Contact	Recorders	Niche Environment and Heritage,Ms.Clare Anderson					Permits		
40-6-0027	Hatfield 8	GDA	54	745352	6249319	Open site	Valid	Artefact : 1		
	Contact	Recorders	Niche Environment and Heritage,Ms.Clare Anderson					Permits		
40-6-0029	Hatfield 10	GDA	54	745107	6249371	Open site	Valid	Artefact : 1		
	Contact	Recorders	Niche Environment and Heritage,Ms.Clare Anderson					Permits		
40-6-0030	Hatfield 11	GDA	54	744157	6249194	Open site	Valid	Artefact : 1		
	Contact	Recorders	Niche Environment and Heritage,Ms.Clare Anderson					Permits		
40-6-0031	Hatfield 12	GDA	54	742499	6249318	Open site	Valid	Artefact : 1		
	Contact	Recorders	Niche Environment and Heritage,Ms.Clare Anderson					Permits		
40-6-0032	Hatfield 13	GDA	54	742296	6249281	Open site	Valid	Artefact : 1		

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
	Contact	Recorders	Niche Environment and Heritage,Ms.Clare Anderson					Permits		
40-6-0033	Hatfield 14	GDA	54	740469	6249658	Open site	Valid	Artefact : 1		
	Contact	Recorders	Niche Environment and Heritage,Ms.Clare Anderson					Permits		
40-6-0035	Hatfield 16	GDA	54	739713	6249807	Open site	Valid	Artefact : 1		
	Contact	Recorders	Niche Environment and Heritage,Ms.Clare Anderson					Permits		
40-5-0372	Atlas Campaspe Artefact 4	GDA	54	718420	6254475	Open site	Valid	Artefact : -		
	Contact	Recorders	Doctor.Matt Cupper,LandSkape - Natural & Cultural Heritage Management					Permits		
40-6-0002	Paxton's 1	AGD	54	739623	6263121	Open site	Valid	Artefact : 40, Hearth : 1		98318
	Contact	Recorders						Permits		
40-6-0052	Hatfield 33	GDA	54	737194	6244579	Open site	Valid	Artefact : 1		
	Contact	Recorders	Niche Environment and Heritage,Ms.Clare Anderson					Permits		
40-6-0065	Hatfield 47	GDA	54	732988	6243321	Open site	Valid	Artefact : 1		
	Contact	Recorders	Niche Environment and Heritage,Ms.Clare Anderson					Permits		
40-6-0066	Hatfield 48	GDA	54	731853	6243516	Open site	Valid	Artefact : 1		
	Contact	Recorders	Niche Environment and Heritage,Ms.Clare Anderson					Permits		
40-5-0290	Hatfield 58	GDA	54	728460	6243475	Open site	Valid	Artefact : 1		
	Contact	Recorders	Niche Environment and Heritage,Ms.Clare Anderson					Permits		
40-5-0293	Hatfield 61	GDA	54	727425	6243173	Open site	Valid	Artefact : 1		
	Contact	Recorders	Niche Environment and Heritage,Ms.Clare Anderson					Permits		
40-6-0038	Hatfield 19	GDA	54	738752	6249385	Open site	Valid	Artefact : 1, Hearth : 1		
	Contact	Recorders	Niche Environment and Heritage,Ms.Clare Anderson					Permits		
40-6-0044	Hatfield 25	GDA	54	737725	6249820	Open site	Valid	Artefact : 1, Hearth : 1, Potential Archaeological Deposit (PAD) : 1		
	Contact	Recorders	Niche Environment and Heritage,Ms.Clare Anderson					Permits		
40-5-0282	Atlas 6	GDA	54	718721	6247145	Open site	Valid	Artefact : 1		
	Contact	Recorders	Niche Environment and Heritage,Ms.Clare Anderson					Permits		
40-6-0023	Hatfield 4	GDA	54	747553	6249305	Open site	Valid	Artefact : 1		
	Contact	Recorders	Niche Environment and Heritage,Ms.Clare Anderson					Permits		
40-6-0024	Hatfield 5	GDA	54	747283	6249219	Open site	Valid	Artefact : 1		
	Contact	Recorders	Niche Environment and Heritage,Ms.Clare Anderson					Permits		
40-5-0375	Atlas Campaspe Artefact 7	GDA	54	718594	6254037	Open site	Valid	Artefact : -		
	Contact	Recorders	Doctor.Matt Cupper,LandSkape - Natural & Cultural Heritage Management					Permits		
40-6-0046	Hatfield 28	GDA	54	737372	6245602	Open site	Valid	Artefact : 1		
	Contact	Recorders	Niche Environment and Heritage,Ms.Clare Anderson					Permits		

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
40-6-0011	Paxtons 10	AGD	54	740001	6262499	Open site	Valid	Artefact : 1		98318
	Contact	Recorders						Permits		
40-6-0013	Paxtons track 2	AGD	54	748800	6261000	Open site	Valid	Artefact : 12		98318,98682
	Contact	Recorders						Permits	1478	
40-6-0053	Hatfield 35	GDA	54	737296	6245676	Open site	Valid	Artefact : 1		
	Contact	Recorders			Niche Environment and Heritage,Ms.Clare Anderson			Permits		
40-6-0059	Hatfield 41	GDA	54	735779	6242855	Open site	Valid	Artefact : 1, Hearth : 1		
	Contact	Recorders			Niche Environment and Heritage,Ms.Clare Anderson			Permits		
40-6-0061	Hatfield 43	GDA	54	736286	6242283	Open site	Valid	Artefact : 1		
	Contact	Recorders			Niche Environment and Heritage,Ms.Clare Anderson			Permits		
40-6-0063	Hatfield 45	GDA	54	734347	6243154	Open site	Valid	Artefact : 1		
	Contact	Recorders			Niche Environment and Heritage,Ms.Clare Anderson			Permits		
40-6-0067	Hatfield 49	GDA	54	731471	6243581	Open site	Valid	Artefact : 1		
	Contact	Recorders			Niche Environment and Heritage,Ms.Clare Anderson			Permits		
40-5-0289	Hatfield 57	GDA	54	728560	6243501	Open site	Valid	Artefact : 1		
	Contact	Recorders			Niche Environment and Heritage,Ms.Clare Anderson			Permits		
40-5-0291	Hatfield 59	GDA	54	728189	6243370	Open site	Valid	Artefact : 1		
	Contact	Recorders			Niche Environment and Heritage,Ms.Clare Anderson			Permits		
40-6-0037	Hatfield 18	GDA	54	738556	6249623	Open site	Valid	Artefact : 1		
	Contact	Recorders			Niche Environment and Heritage,Ms.Clare Anderson			Permits		
40-6-0042	Hatfield 23	GDA	54	737588	6248257	Open site	Valid	Artefact : 1		
	Contact	Recorders			Niche Environment and Heritage,Ms.Clare Anderson			Permits		
40-5-0274	Campaspe 4	GDA	54	717508	6256656	Open site	Valid	Artefact : 1		
	Contact	Recorders			Niche Environment and Heritage,Ms.Clare Anderson			Permits		
40-6-0022	Hatfield 3	GDA	54	750268	6248490	Open site	Valid	Artefact : 1		
	Contact	Recorders			Niche Environment and Heritage,Ms.Clare Anderson			Permits		
40-6-0036	Hatfield 17	GDA	54	738979	6249295	Open site	Valid	Artefact : 1, Hearth : 1, Non-Human Bone and Organic Material : 1, Potential Archaeological Deposit (PAD) : 1, Shell : 1		
	Contact	Recorders			Niche Environment and Heritage,Ms.Clare Anderson			Permits		
40-5-0366	Atlas Campaspe Artefact 1	GDA	54	718279	6254641	Open site	Valid	Artefact : -		
	Contact	Recorders			Doctor.Matt Cupper,LandSkape - Natural & Cultural Heritage Management			Permits		
40-6-0004	Paxtons 3	AGD	54	740071	6262878	Open site	Valid	Artefact : 7		98318

Report generated by AHIMS Web Service on 24/10/2025 for Matt Cupper for the following area at Lat, Long From : -34.028, 143.2139 - Lat, Long To : -33.743, 143.709. Number of Aboriginal sites and Aboriginal objects found is 103

This information is not guaranteed to be free from error omission. Heritage NSW and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
	Contact	Recorders						Permits		
40-6-0055	Hatfield 37	GDA	54	737154	6248205	Open site	Valid	Artefact : 1		
	Contact	Recorders						Permits		
40-5-0283	Hatfield 50	GDA	54	731018	6243638	Open site	Valid	Artefact : 1		
	Contact	Recorders						Permits		
40-5-0287	Hatfield 55	GDA	54	728868	6243685	Open site	Valid	Artefact : 1		
	Contact	Recorders						Permits		
40-5-0294	Hatfield 62	GDA	54	726004	6242825	Open site	Valid	Artefact : 1		
	Contact	Recorders						Permits		
40-5-0298	Hatfield 66	GDA	54	724419	6242520	Open site	Valid	Artefact : 1		
	Contact	Recorders						Permits		
40-5-0301	Atlas Artefact 9	GDA	54	717666	6248645	Open site	Valid	Artefact : -		
	Contact	Recorders						Permits		
40-5-0276	Campaspe 6	GDA	54	716967	6256525	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	Contact	Recorders						Permits		
40-6-0034	Hatfield 15	GDA	54	739973	6249709	Open site	Valid	Artefact : 1		
	Contact	Recorders						Permits		
40-5-0180	Iona Artefact 1	GDA	54	723522	6241165	Open site	Valid	Artefact : -		
	Contact	Recorders						Permits		
40-6-0047	Hatfield 29	GDA	54	737416	6245336	Open site	Valid	Artefact : 1		
	Contact	Recorders						Permits		
40-6-0007	Paxtons 6	AGD	54	740850	6262900	Open site	Valid	Artefact : 30		98318
	Contact	Recorders						Permits		
40-6-0009	Paxtons 8	AGD	54	739258	6260880	Open site	Valid	Artefact : 1		98318
	Contact	Recorders						Permits		
40-6-0015	Paxtons track 4	AGD	54	749530	6260962	Open site	Valid	Artefact : 50		98318,98682
	Contact	Recorders						Permits	1478	
40-6-0048	Hatfield 30	GDA	54	737480	6244879	Open site	Valid	Artefact : 1		
	Contact	Recorders						Permits		
40-6-0054	Hatfield 36	GDA	54	737218	6246739	Open site	Valid	Artefact : 1		
	Contact	Recorders						Permits		
40-6-0058	Hatfield 40	GDA	54	736261	6243385	Open site	Valid	Artefact : 1, Hearth : 1		
	Contact	Recorders						Permits		

<u>SiteID</u>	<u>SiteName</u>	<u>Datum</u>	<u>Zone</u>	<u>Easting</u>	<u>Northing</u>	<u>Context</u>	<u>Site Status **</u>	<u>SiteFeatures</u>	<u>SiteTypes</u>	<u>Reports</u>
40-6-0041	Hatfield 22	GDA	54	737777	6248522	Open site	Valid	Artefact : 1, Potential Archaeological Deposit (PAD) : 1		
	<u>Contact</u>	<u>Recorders</u>	Niche Environment and Heritage,Ms.Clare Anderson					<u>Permits</u>		
40-5-0280	Atlas 4	GDA	54	716250	6249943	Open site	Valid	Artefact : 1		
	<u>Contact</u>	<u>Recorders</u>	Niche Environment and Heritage,Ms.Clare Anderson					<u>Permits</u>		
40-5-0302	Atlas Artefact 10	GDA	54	717881	6248764	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>	Doctor.Matt Cupper,LandSkape - Natural & Cultural Heritage Management					<u>Permits</u>		
40-5-0305	Atlas Artefact 13	GDA	54	717725	6249572	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>	Doctor.Matt Cupper,LandSkape - Natural & Cultural Heritage Management					<u>Permits</u>		
40-6-0025	Hatfield 6	GDA	54	746402	6249202	Open site	Valid	Artefact : 1		
	<u>Contact</u>	<u>Recorders</u>	Niche Environment and Heritage,Ms.Clare Anderson					<u>Permits</u>		
40-6-0028	Hatfield 9	GDA	54	745145	6249285	Open site	Valid	Artefact : 1, Hearth : 1		
	<u>Contact</u>	<u>Recorders</u>	Niche Environment and Heritage,Ms.Clare Anderson					<u>Permits</u>		

** Site Status

Valid - The site has been recorded and accepted onto the system as valid

Destroyed - The site has been completely impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There is nothing left of the site on the ground but proponents should proceed with caution.

Partially Destroyed - The site has been only partially impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There might be parts or sections of the original site still present on the ground

Not a site - The site has been originally entered and accepted onto AHIMS as a valid site but after further investigations it was decided it is NOT an aboriginal site. Impact of this type of site does not require permit but Heritage NSW should be notified

Report generated by AHIMS Web Service on 24/10/2025 for Matt Cupper for the following area at Lat, Long From : -34.028, 143.2139 - Lat, Long To : -33.743, 143.709. Number of Aboriginal sites and Aboriginal objects found is 103

This information is not guaranteed to be free from error omission. Heritage NSW and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

APPENDIX 6: AHIMS SITE CARD

Aboriginal Site Recording Form

Manager, Information Systems

Locked Bag 5020, Parramatta 2124 NSW

AHIMS site ID:

Date recorded:

24-10-2025

Site Location Information

Site name:

Atlas Campaspe Artefact 2

Easting:

718247

Northing:

6254620

Coordinates must be in GDA94 (MGA)

Horizontal Accuracy (m):

5

Zone:

54

Non-Differential GPS

Recorder Information

(The person responsible for the completion and submission of this form)

Title

Surname

First name

Dr.

Cupper

Matt

Organisation:

Landskape

Address:

178 Midgen Flat Road Broken Head 2481

Phone:

0408006690

E-mail:

landskape@telstra.com

Site Context Information

Land Form
Pattern:

Undulating Plain

Land Use:

Farming Low Intensity

Land Form
Unit:

Plain

Vegetation:

Open Woodland

Distance to
Water (m):

2000

Primary
Report:

Cupper, M. (2025). Tronox Mining Atlas Campaspe Modification 6

How to get
to the site:

Take Magenta-Mungo Road 6 km west of Boree Plains Road intersection. Site is 13 km north of road

Other site
information:

Site location map



Site plan



Site contents information

open/closed site:

Site condition:

Features:

		Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees			
					Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
1.	Artefact	1	1	1				

Feature condition:

Description:

One silcrete core

Features:

		Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees			
					Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
2.								

Feature condition:

Description:

Features:

		Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees			
					Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
3.								

Feature condition:

Description:

Features:

Number of
features

Length of
feature(s)
extent (m)

Width of
feature (s)
extent (m)

Scarred Trees			
Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species

4.

Feature condition:

Description:

Features:

Number of
features

Length of
feature(s)
extent (m)

Width of
feature (s)
extent (m)

Scarred Trees			
Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species

5.

Feature condition:

Description:

Site photographs

Description:

Atlas Campaspe Artefact 2



Description:

Atlas Campaspe Artefact 2

Description:

Description:

Site restrictions

Do you want to

Restrict this site?:

☐

Restriction type:

Gender

☐

General

☐

Location

☐

Why is this site restricted?:

Further information contact

Title

Surname

Kelly

First name

Daniel

Organisation:

Mutthi Mutthi Aboriginal Corporation

Address:

Phone:

0437527966

E-mail:

danielkelly1952@gmail.com

Site interpretation and community statement

AHIMS site ID:

Date recorded:

24-10-2025

Site Location Information

Site name:

Atlas Campaspe Artefact 1

Easting:

718279

Northing:

6254641

Coordinates must be in GDA94 (MGA)

Horizontal Accuracy (m):

5

Zone:

54

Non-Differential GPS

Recorder Information

(The person responsible for the completion and submission of this form)

Title

Surname

First name

Dr.

Cupper

Matt

Organisation:

Landskape

Address:

178 Midgen Flat Road Broken Head 2481

Phone:

0408006690

E-mail:

landskape@telstra.com

Site Context Information

Land Form
Pattern:

Undulating Plain

Land Use:

Farming Low Intensity

Land Form
Unit:

Plain

Vegetation:

Open Woodland

Distance to
Water (m):

2000

Primary
Report:

Cupper, M. (2025). Tronox Mining Atlas Campaspe
Modification 6

How to get
to the site:

Take Magenta-Mungo Road 6 km west of Boree Plains Road intersection. Site
is 13 km north of road

Other site
information:

Site location map



Site plan



Site contents information

open/closed site:

Site condition:

Features:

		Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees			
					Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
1.	Artefact	1	1	1				

Feature condition:

Description:

One silcrete flake

Features:

		Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees			
					Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
2.								

Feature condition:

Description:

Features:

		Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees			
					Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
3.								

Feature condition:

Description:

Features:

Number of
features

Length of
feature(s)
extent (m)

Width of
feature (s)
extent (m)

4.

Feature condition:

Description:

Scarred Trees

Scar Depth
(cm)

Regrowth
(cm)

Scar shape

Tree Species

Features:

Number of
features

Length of
feature(s)
extent (m)

Width of
feature (s)
extent (m)

5.

Feature condition:

Description:

Scarred Trees

Scar Depth
(cm)

Regrowth
(cm)

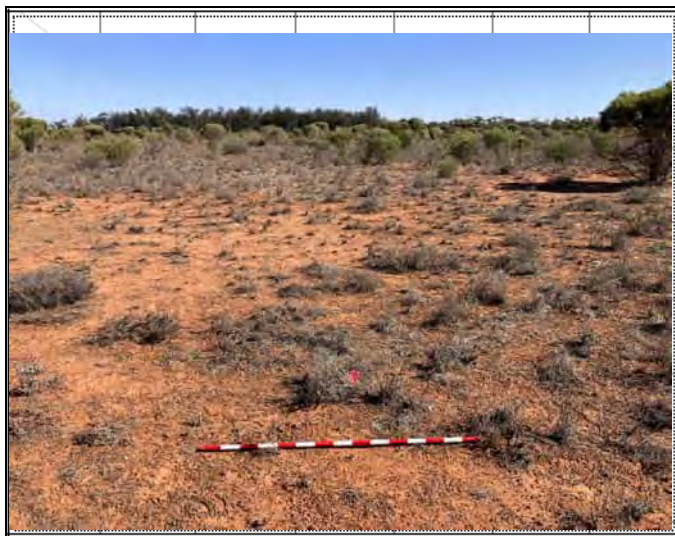
Scar shape

Tree Species

Site photographs

Description:

Atlas Campaspe Artefact 1



Description:

Atlas Campaspe Artefact 1

Description:

Description:

Site restrictions

Do you want to

Restrict this site?:

☐

Restriction type:

Gender

☐

General

☐

Location

☐

Why is this site restricted?:

Further information contact

Title

Surname

Kelly

First name

Daniel

Organisation:

Mutthi Mutthi Aboriginal Corporation

Address:

Phone:

0437527966

E-mail:

danielkelly1952@gmail.com

Site interpretation and community statement

AHIMS site ID:

Date recorded:

24-10-2025

Site Location Information

Site name:

Atlas Campaspe Artefact 3

Easting:

718418

Northing:

6254563

Coordinates must be in GDA94 (MGA)

Horizontal Accuracy (m):

5

Zone:

54

Non-Differential GPS

Recorder Information

(The person responsible for the completion and submission of this form)

Title

Surname

First name

Dr.

Cupper

Matt

Organisation:

Landscape

Address:

178 Midgen Flat Road Broken Head 2481

Phone:

0408006690

E-mail:

landscape@telstra.com

Site Context Information

Land Form
Pattern:

Undulating Plain

Land Use:

Farming Low Intensity

Land Form
Unit:

Plain

Vegetation:

Open Woodland

Distance to
Water (m):

2000

Primary
Report:

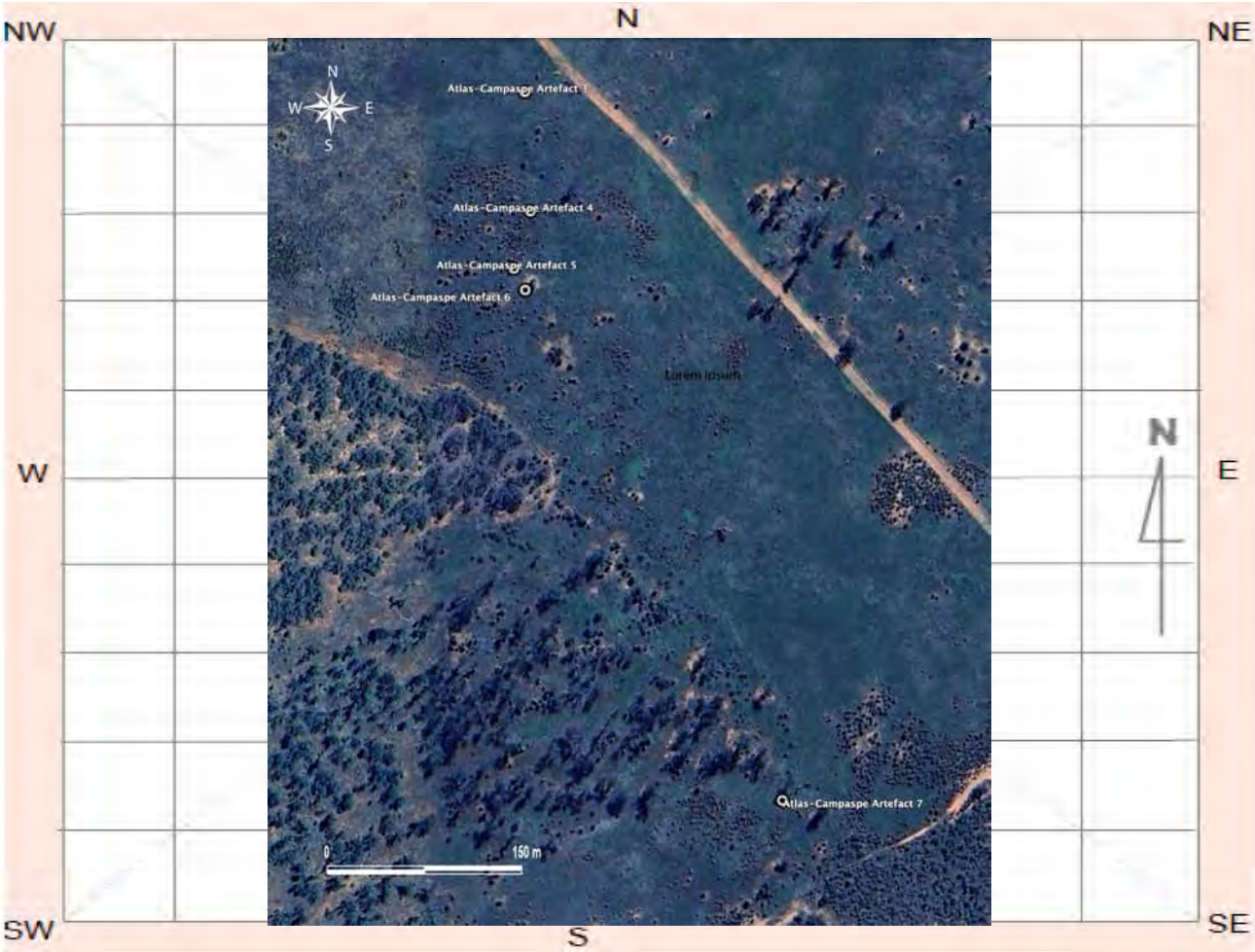
Cupper, M. (2025). Tronox Mining Atlas Campaspe Modification 6

How to get
to the site:

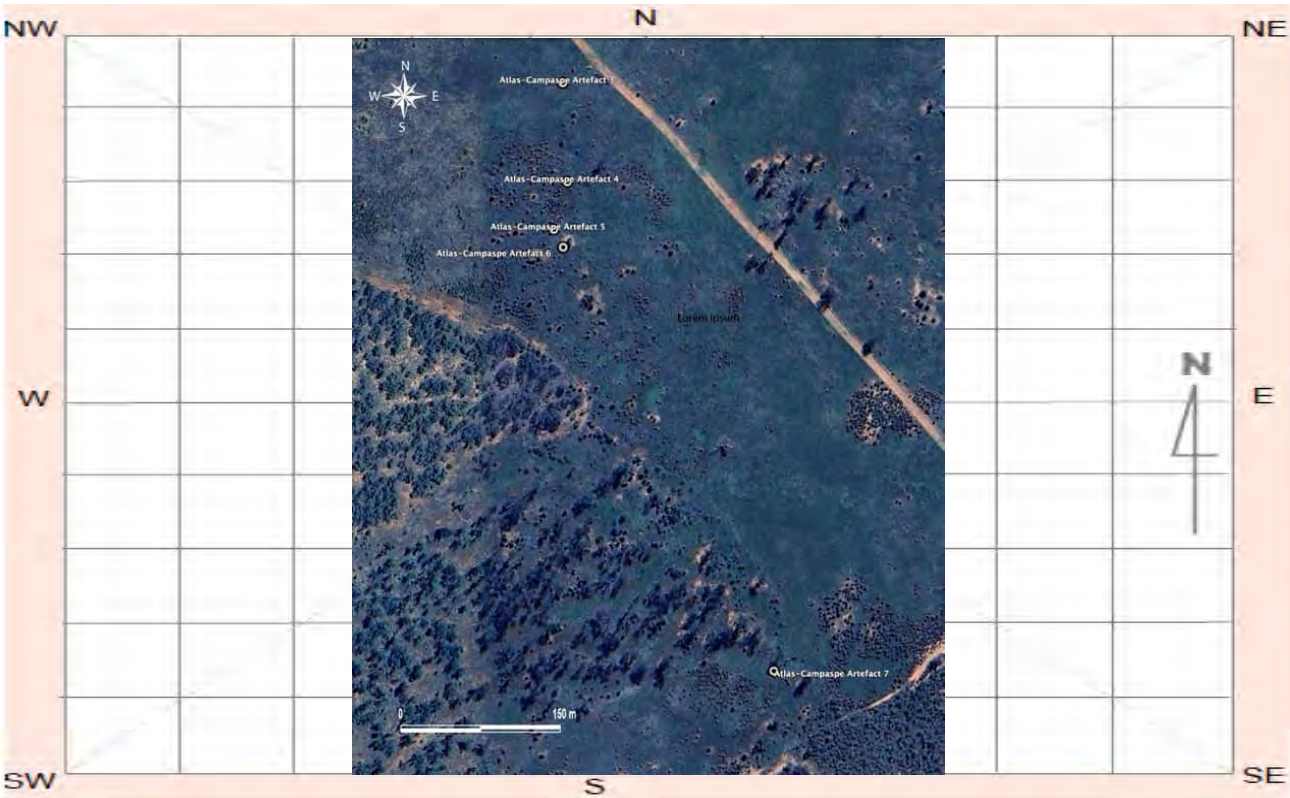
Take Magenta-Mungo Road 6 km west of Boree Plains Road intersection. Site is 13 km north of road

Other site
information:

Site location map



Site plan



Site contents information

open/closed site:

Site condition:

Features:

		Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees			
					Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
1.	Artefact	1	1	1				

Feature condition:

Description:

One quartzite angular fragment measuring 40 x 38 x 8 mm

Features:

		Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees			
					Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
2.								

Feature condition:

Description:

Features:

		Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees			
					Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
3.								

Feature condition:

Description:

Features:

4.

Feature condition:

Description:

Features:

5.

Feature condition:

Description:

Scarred Trees			
Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species

Scarred Trees			
Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species

Site photographs



Description:



Description:

Description:

Description:

Site restrictions

Do you want to

Restrict this site?:

☐

Restriction type:

Gender

☐

General

☐

Location

☐

Why is this site restricted?:

Further information contact

Title

Surname

Kelly

First name

Daniel

Organisation:

Muthi Muthi Nation Aboriginal Corporation

Address:

Phone:

0437527966

E-mail:

danielkelly1952@gmail.com

Site interpretation and community statement

AHIMS site ID:

Date recorded:

24-10-2025

Site Location Information

Site name:

Atlas Campaspe Artefact 4

Easting:

718420

Northing:

6254475

Coordinates must be in GDA94 (MGA)

Horizontal Accuracy (m):

5

Zone:

54

Non-Differential GPS

Recorder Information

(The person responsible for the completion and submission of this form)

Title

Surname

First name

Dr.

Cupper

Matt

Organisation:

Landscape

Address:

178 Midgen Flat Road Broken Head 2481

Phone:

0408006690

E-mail:

landscape@telstra.com

Site Context Information

Land Form
Pattern:

Undulating Plain

Land Use:

Farming Low Intensity

Land Form
Unit:

Plain

Vegetation:

Open Woodland

Distance to
Water (m):

2000

Primary
Report:

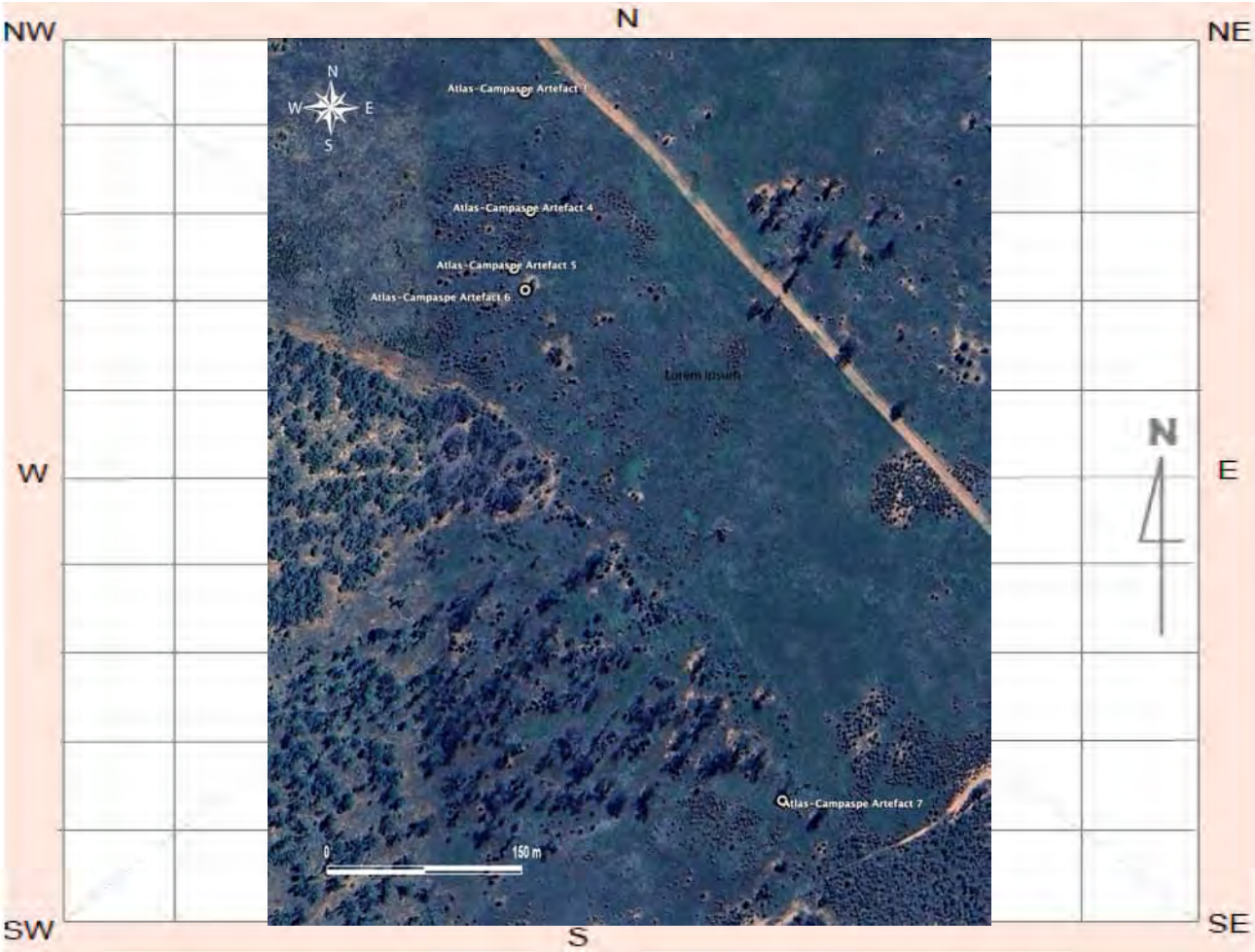
Cupper, M. (2025). Tronox Mining Atlas Campaspe Modification 6

How to get
to the site:

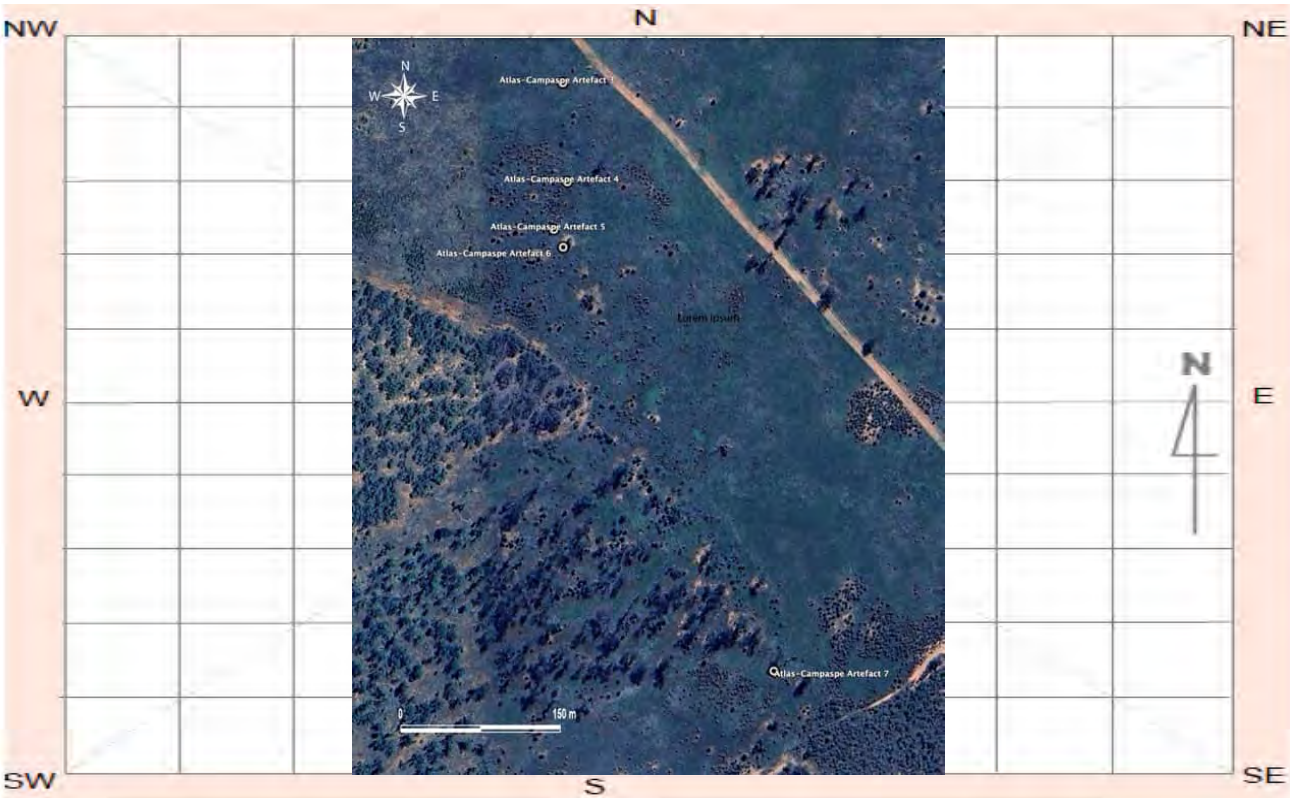
Take Magenta-Mungo Road 6 km west of Boree Plains Road intersection. Site is 13 km north of road

Other site
information:

Site location map



Site plan



Site contents information

open/closed site:

Site condition:

Features:

		Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees			
					Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
1.	Artefact	1	1	1				

Feature condition:

Description:

One silcrete angular fragment measuring 39 x 30 x 9 mm

Features:

		Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees			
					Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
2.								

Feature condition:

Description:

Features:

		Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees			
					Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
3.								

Feature condition:

Description:

Features:

4.

Feature condition:

Description:

Features:

5.

Feature condition:

Description:

Scarred Trees			
Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species

Scarred Trees			
Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species

Site photographs



Description:



Description:

Description:

Description:

Site restrictions

Do you want to

Restrict this site?:

☐

Restriction type:

Gender

General

Location

☐☐☐

Why is this site restricted?:

Further information contact

Title

Surname

First name

Kelly

Daniel

Organisation:

Muthi Muthi Nation Aboriginal Corporation

Address:

Phone:

0437527966

E-mail:

danielkelly1952@gmail.com

Site interpretation and community statement

AHIMS site ID:

Date recorded:

24-10-2025

Site Location Information

Site name:

Atlas Campaspe Artefact 5

Easting:

718407

Northing:

6254433

Coordinates must be in GDA94 (MGA)

Horizontal Accuracy (m):

5

Zone:

54

Non-Differential GPS

Recorder Information

(The person responsible for the completion and submission of this form)

Title

Surname

First name

Dr.

Cupper

Matt

Organisation:

Landskape

Address:

178 Midgen Flat Road Broken Head 2481

Phone:

0408006690

E-mail:

landskape@telstra.com

Site Context Information

Land Form
Pattern:

Undulating Plain

Land Use:

Farming Low Intensity

Land Form
Unit:

Plain

Vegetation:

Open Woodland

Distance to
Water (m):

2000

Primary
Report:

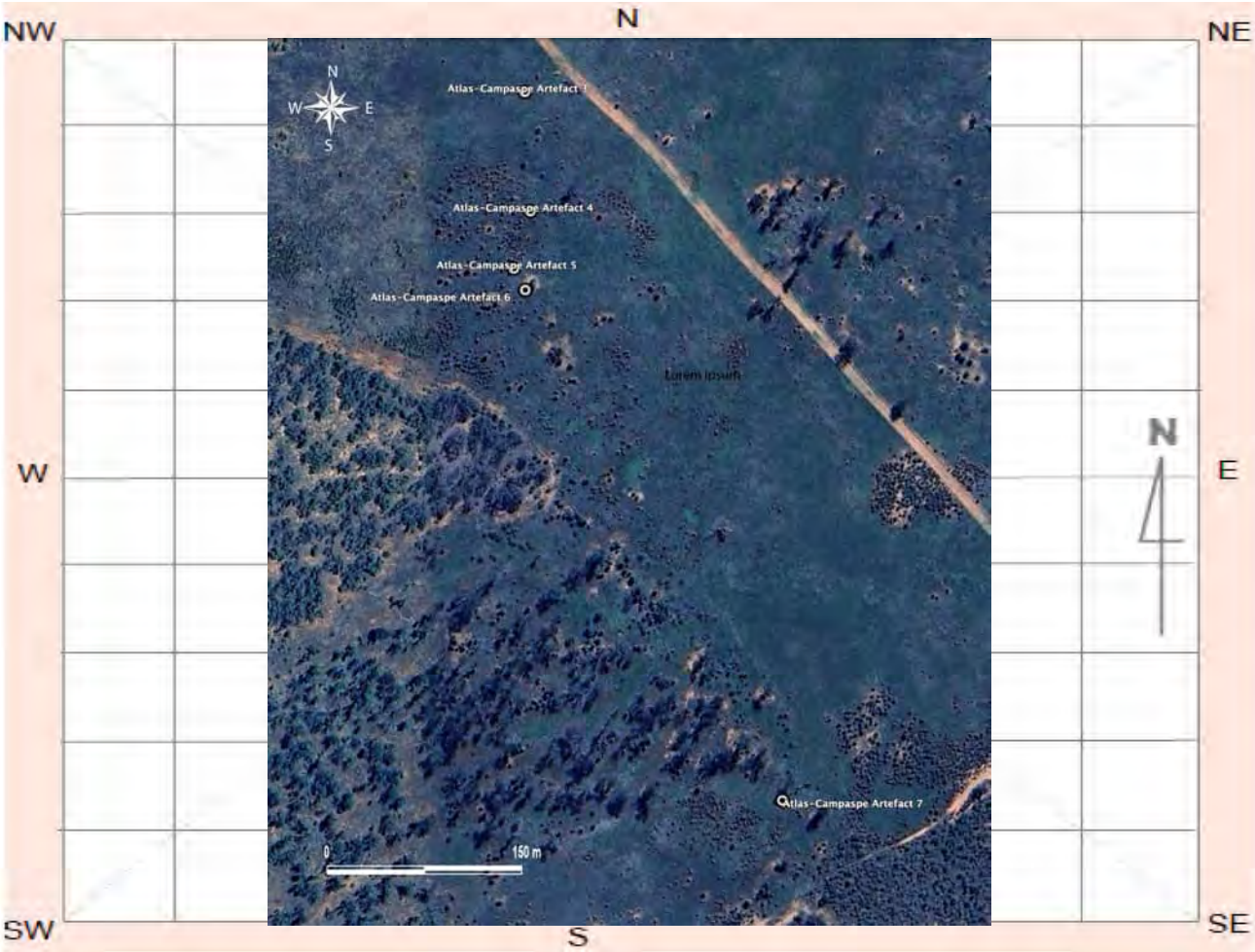
Cupper, M. (2025). Tronox Mining Atlas Campaspe Modification 6

How to get
to the site:

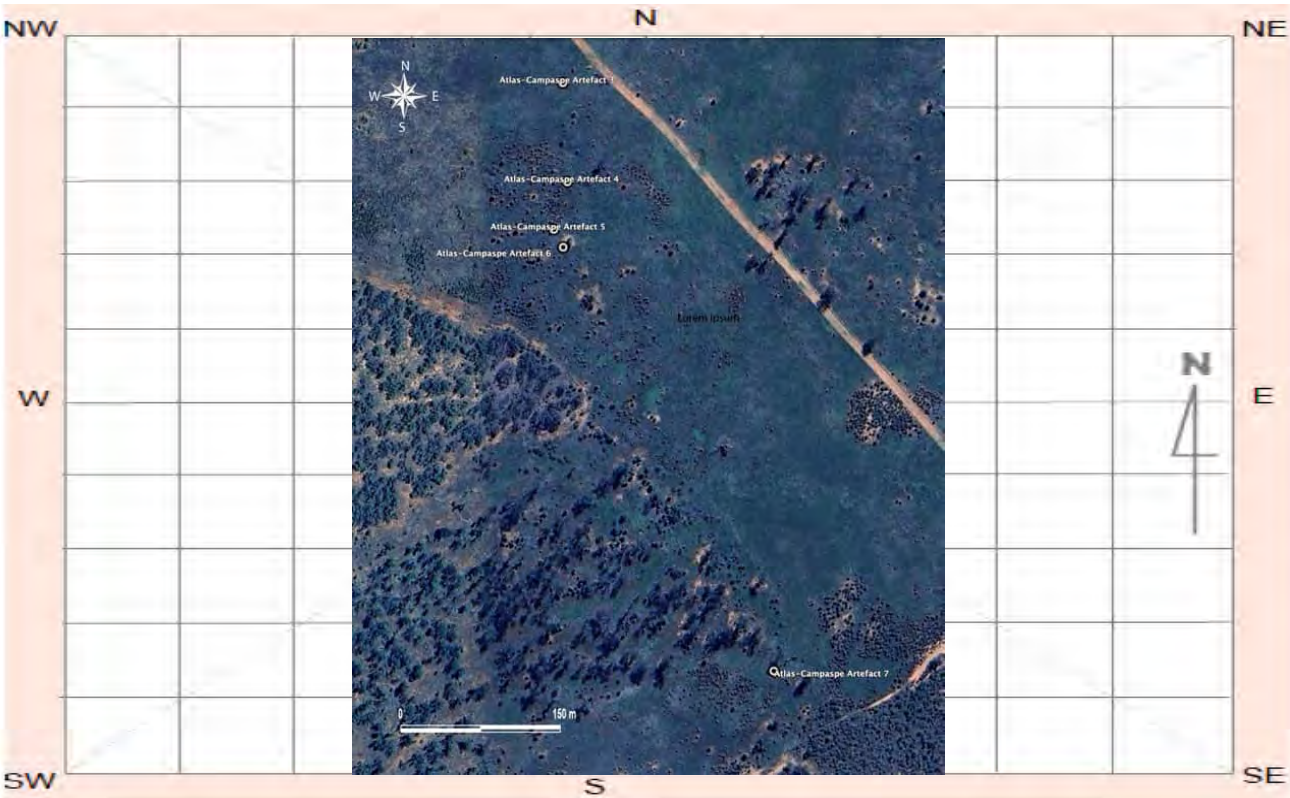
Take Magenta-Mungo Road 6 km west of Boree Plains Road intersection. Site is 13 km north of road

Other site
information:

Site location map



Site plan



Site contents information

open/closed site:

Site condition:

Features:

		Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees			
					Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
1.	Artefact	1	1	1				

Feature condition:

Description:

One silcrete angular fragment measuring 35 x 32 x 7 mm

Features:

		Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees			
					Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
2.								

Feature condition:

Description:

Features:

		Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees			
					Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
3.								

Feature condition:

Description:

Features:

4.

Feature condition:

Description:

Features:

5.

Feature condition:

Description:

Scarred Trees			
Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species

Scarred Trees			
Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species

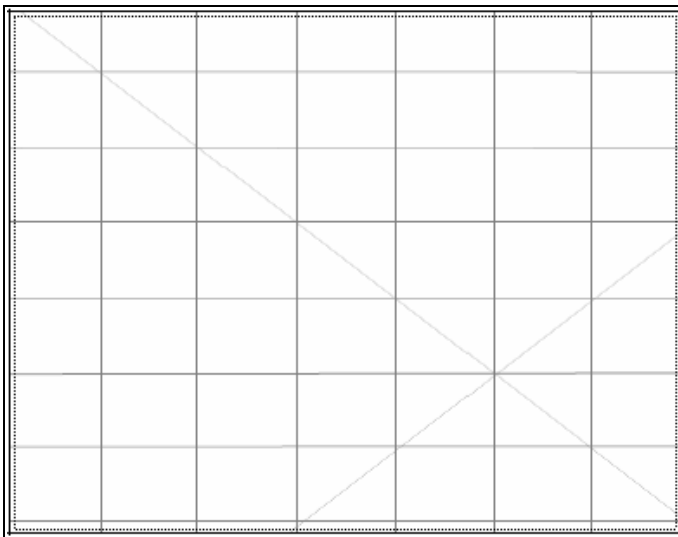
Site photographs



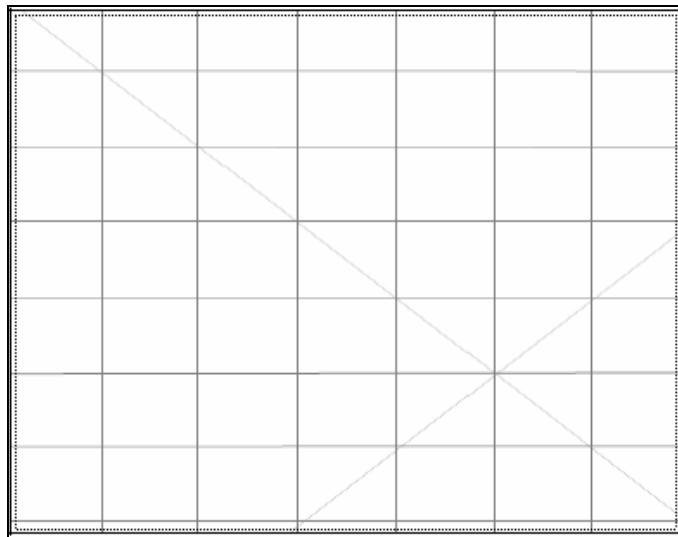
Description:



Description:



Description:



Description:

Site restrictions

Do you want to

Restrict this site?:

☐

Restriction type:

Gender

☐

General

☐

Location

☐

Why is this site restricted?:

Further information contact

Title

Surname

Kelly

First name

Daniel

Organisation:

Muthi Muthi Nation Aboriginal Corporation

Address:

Phone:

0437527966

E-mail:

danielkelly1952@gmail.com

Site interpretation and community statement

Aboriginal Site Recording Form

Manager, Information Systems

Locked Bag 5020, Parramatta 2124 NSW

AHIMS site ID:

Date recorded:

24-10-2025

Site Location Information

Site name:

Atlas Campaspe Artefact 6

Easting:

718415

Northing:

6254417

Coordinates must be in GDA94 (MGA)

Horizontal Accuracy (m):

5

Zone:

54

Non-Differential GPS

Recorder Information

(The person responsible for the completion and submission of this form)

Title

Surname

First name

Dr.

Cupper

Matt

Organisation:

Landscape

Address:

178 Midgen Flat Road Broken Head 2481

Phone:

0408006690

E-mail:

landscape@telstra.com

Site Context Information

Land Form
Pattern:

Undulating Plain

Land Use:

Farming Low Intensity

Land Form
Unit:

Plain

Vegetation:

Open Woodland

Distance to
Water (m):

2000

Primary
Report:

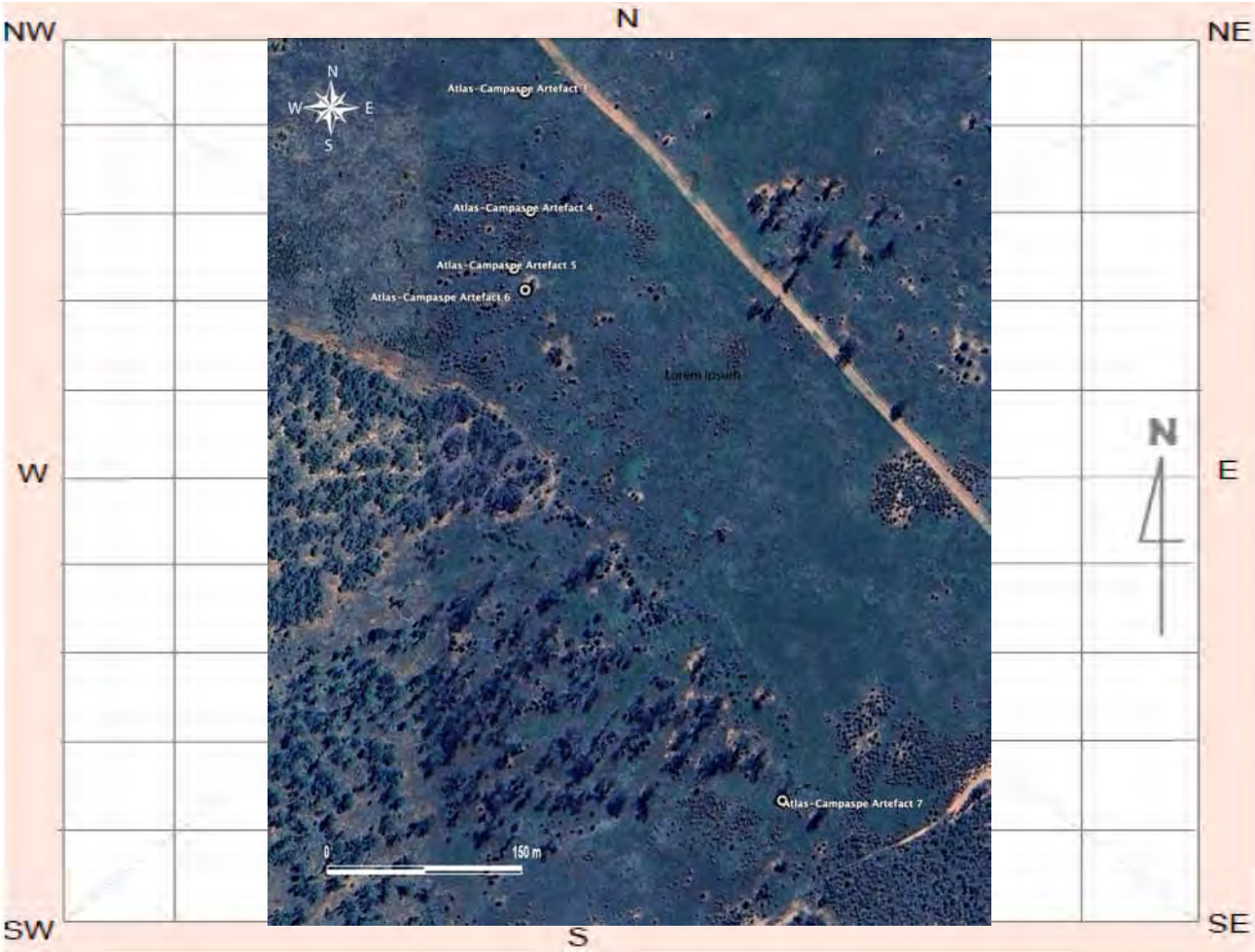
Cupper, M. (2025). Tronox Mining Atlas Campaspe Modification 6

How to get
to the site:

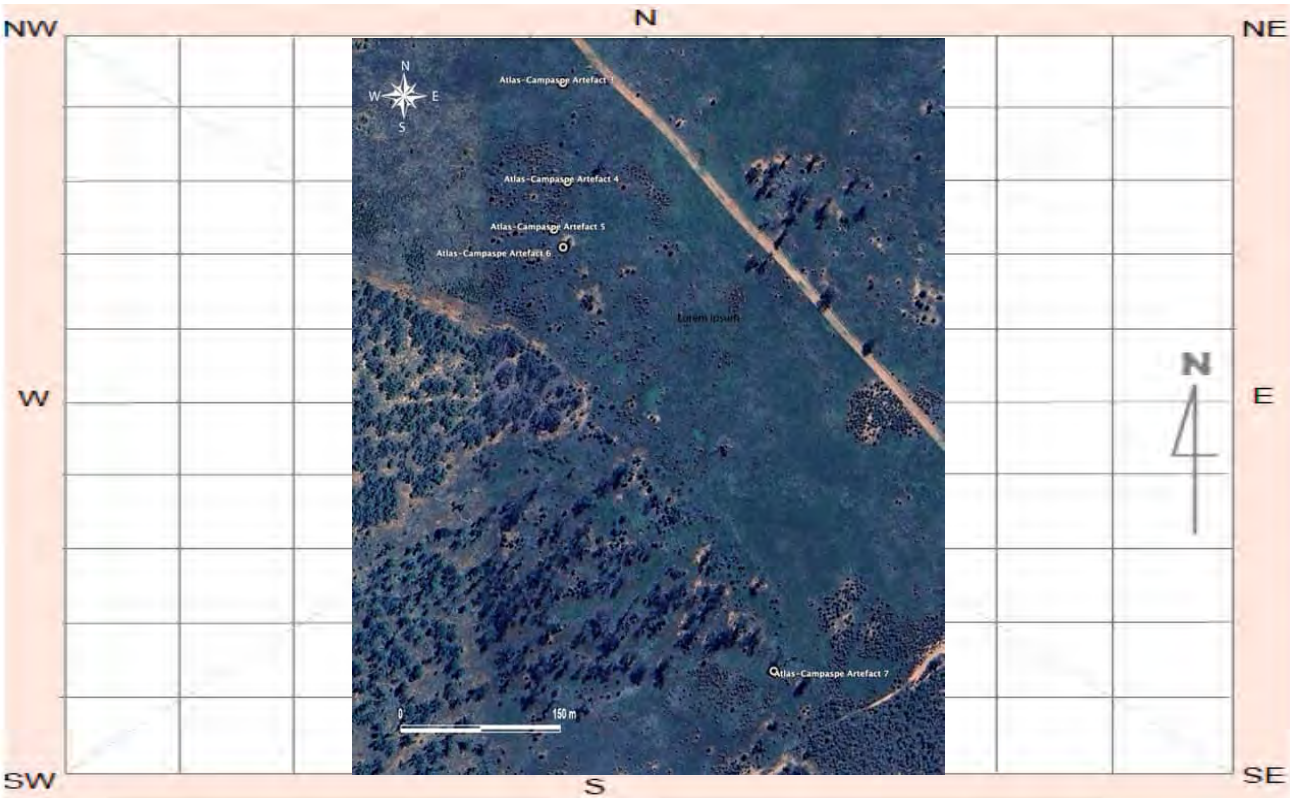
Take Magenta-Mungo Road 6 km west of Boree Plains Road intersection. Site is 13 km north of road

Other site
information:

Site location map



Site plan



Site contents information

open/closed site:

Site condition:

Features:

		Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees			
					Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
1.	Artefact	1	1	1				
Feature condition: Erosion								

Description:

One sandstone millstone/grindstone fragment measuring 55 x 47 x 14 mm

Features:

		Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees			
					Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
2.								
Feature condition:								

Description:

Features:

		Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees			
					Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
3.								
Feature condition:								

Description:

Features:

4.

Feature condition:

Description:

Features:

5.

Feature condition:

Description:

Scarred Trees			
Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species

Scarred Trees			
Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species

Site photographs



Description:



Description:

Description:

Description:

Site restrictions

Do you want to

Restrict this site?:

☐

Restriction type:

Gender

☐

General

☐

Location

☐

Why is this site restricted?:

Further information contact

Title

Surname

Kelly

First name

Daniel

Organisation:

Muthi Muthi Nation Aboriginal Corporation

Address:

Phone:

0437527966

E-mail:

danielkelly1952@gmail.com

Site interpretation and community statement

AHIMS site ID:

Date recorded:

24-10-2025

Site Location Information

Site name:

Atlas Campaspe Artefact 7

Easting:

718594

Northing:

6254037

Coordinates must be in GDA94 (MGA)

Horizontal Accuracy (m):

5

Zone:

54

Non-Differential GPS

Recorder Information

(The person responsible for the completion and submission of this form)

Title

Surname

First name

Dr.

Cupper

Matt

Organisation:

Landscape

Address:

178 Midgen Flat Road Broken Head 2481

Phone:

0408006690

E-mail:

landscape@telstra.com

Site Context Information

Land Form
Pattern:

Undulating Plain

Land Use:

Farming Low Intensity

Land Form
Unit:

Plain

Vegetation:

Open Woodland

Distance to
Water (m):

2000

Primary
Report:

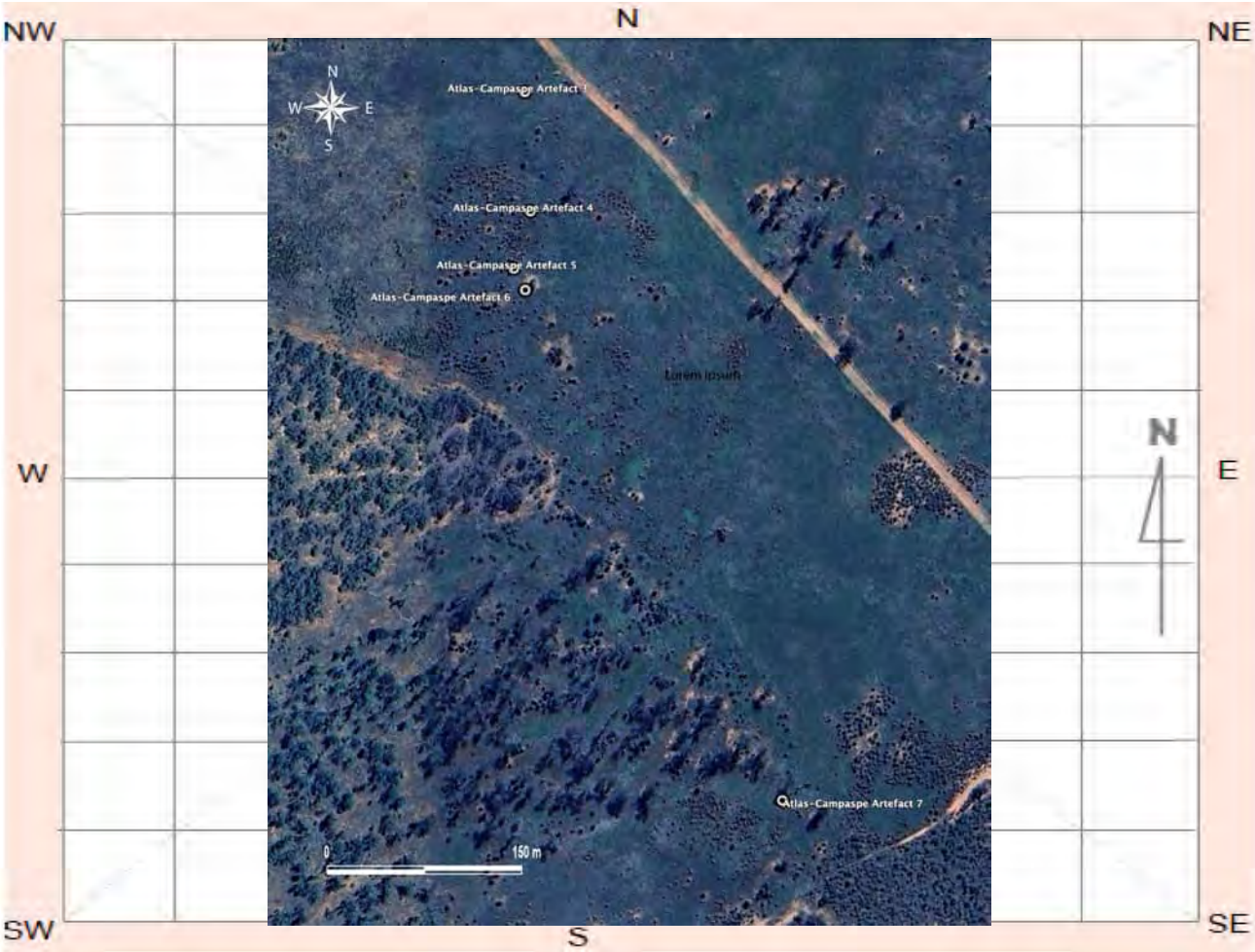
Cupper, M. (2025). Tronox Mining Atlas Campaspe Modification 6

How to get
to the site:

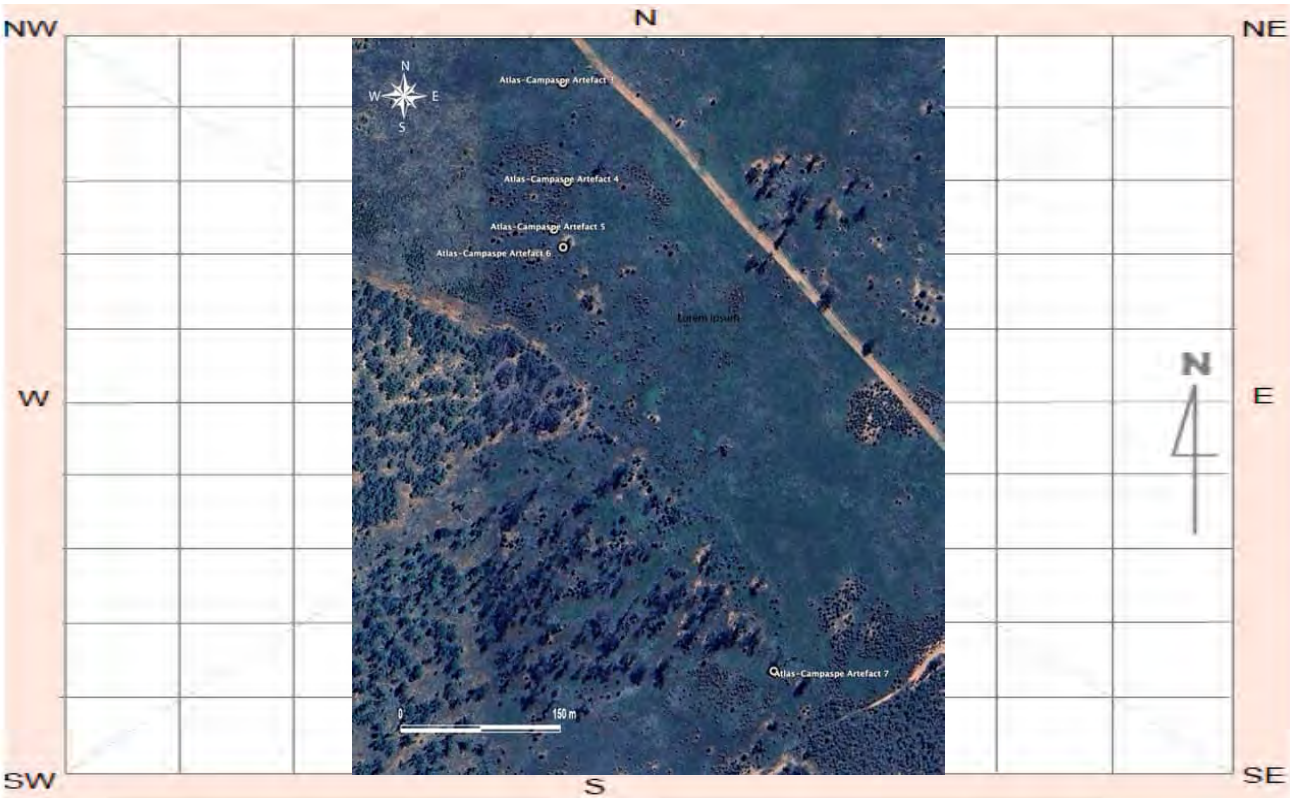
Take Magenta-Mungo Road 6 km west of Boree Plains Road intersection. Site is 13 km north of road

Other site
information:

Site location map



Site plan



Site contents information

open/closed site:

Site condition:

Features:

		Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees			
					Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
1.	Artefact	1	1	1				

Feature condition:

Description:

One silcrete flaked piece measuring 44 x 40 x 10 mm

Features:

		Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees			
					Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
2.								

Feature condition:

Description:

Features:

		Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees			
					Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
3.								

Feature condition:

Description:

Features:

Number of
features

Length of
feature(s)
extent (m)

Width of
feature (s)
extent (m)

4.

Feature condition:

Description:

Scarred Trees

Scar Depth
(cm)

Regrowth
(cm)

Scar shape

Tree Species

Features:

Number of
features

Length of
feature(s)
extent (m)

Width of
feature (s)
extent (m)

5.

Feature condition:

Description:

Scarred Trees

Scar Depth
(cm)

Regrowth
(cm)

Scar shape

Tree Species

Site photographs

Description:



Description:

Description:

Description:

Site restrictions

Do you want to

Restrict this site?:

☐

Restriction type:

Gender

☐

General

☐

Location

☐

Why is this site restricted?:

Further information contact

Title

Surname

Kelly

First name

Daniel

Organisation:

Muthi Muthi Nation Aboriginal Corporation

Address:

Phone:

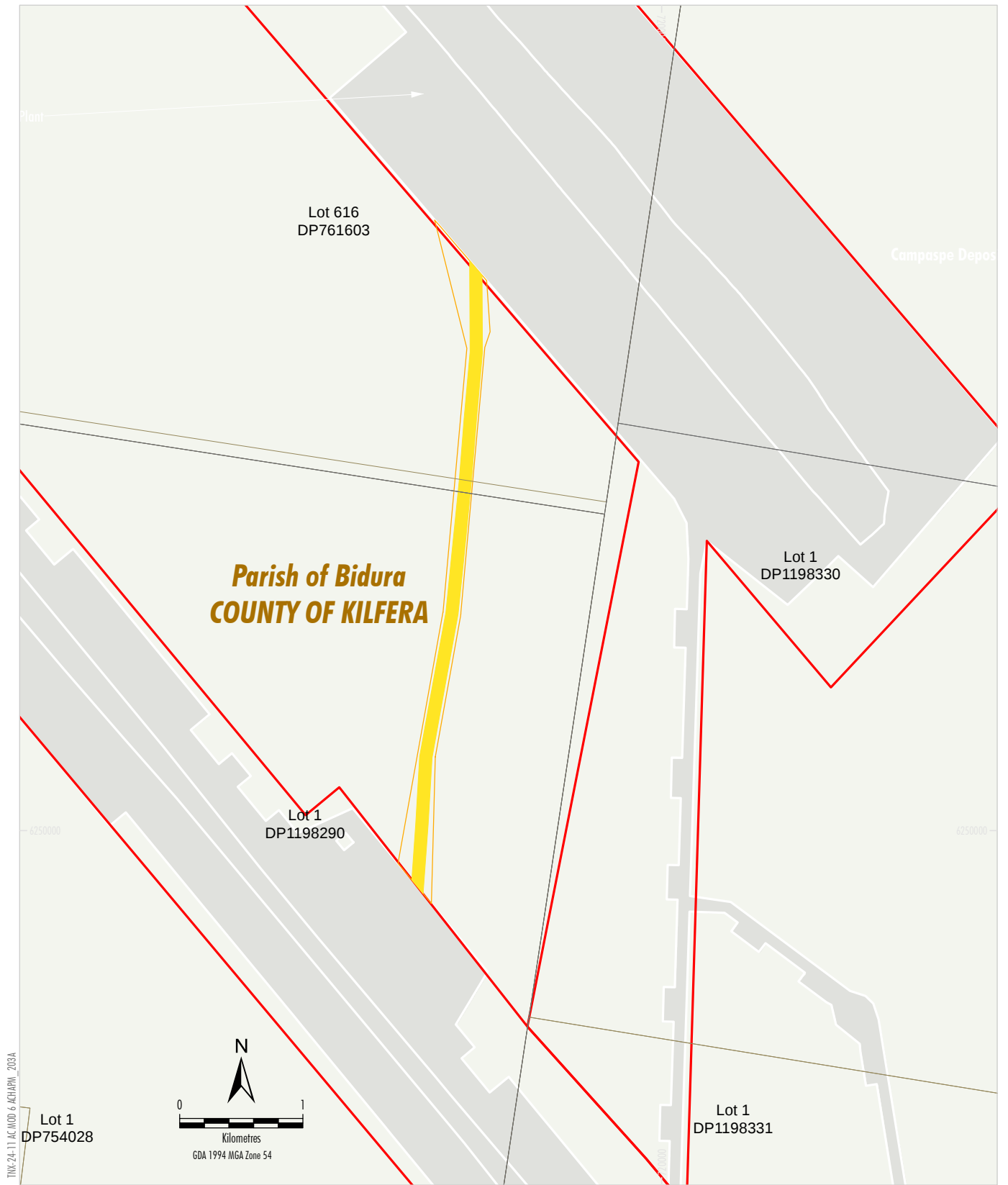
0437527966

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Site interpretation and community statement

APPENDIX 7: CADASTRE INFORMATION



Source: NSW Spatial Services (2024); Tronox (2024); Cristal Mining Australia (2012)

- LEGEND**
- Mining Lease Boundaries (ML 1762 & ML 1882)
 - Surface Development Area
 - Mine Path Extent
 - Indicative Surface Development Area
 - Study Area

TRONOX

MODIFICATION 6

Cadastral Information

Figure A7