Past Traces
Heritage Consultants

41 King Street, Tarago Lot 3 DP1118635

Aboriginal Cultural Heritage and Archaeological Report.

Report Prepared for Group One

By Past Traces Pty Ltd

LGA: Goulburn-Mulwaree

Date: 6 November 2023

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Document Control

Revision	Date	Author	Reviewed
V1	06/11/2023	N. Cracknell	L. O'Brien

Disclaimer

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Restricted Information

Information contained within this report is culturally sensitive and should not be made publicly available. The information that is restricted includes (but is not limited to):

- Maps, Mapping Grid Reference Co-ordinates or images for Aboriginal heritage sites, places and objects.
- Location or detailed information regarding places of Aboriginal cultural significance, as expressed or directed by Representative Aboriginal Organisations, Aboriginal elders, or members of the wider Aboriginal community.
- Other culturally appropriate restricted information as advised by Aboriginal representatives and traditional knowledge holders.

Information in the report covered by the above categories should be redacted before being made available to the general public. This information should only be made available to those persons with a just and reasonable need for access.

ACKNOWLEDGEMENTS

We acknowledge the traditional custodians of the Country on which we live and work and pay our respects to Elders past, present and emerging. We thank all the community members who have taken the time to speak with us, share their knowledge and express their wishes for the area under assessment.

Past Traces acknowledges the assistance of the following people and organisations in the preparation of this report:

- Pejar Local Aboriginal Land Council
- Adrian Brown
- Buru Ngunawal Aboriginal Corporation
- Clive Freeman
- Mulwaree Aboriginal Corporation
- Teena Riley
- Yurwang Gundana

Note on terms

We have followed the NSW Heritage convention using terms such as 'Aboriginal' and defining groups of community, based on wide language groups i.e. 'Ngunnawal'. We apologise to any First Nations members who find this usage offensive.

ABBREVIATIONS

ACHAR	Aboriginal Cultural Heritage Assessment Report
AHIMS	Aboriginal Heritage Information Management System
AHIP	Aboriginal Heritage Impact Permit
AR	Archaeological Report
DECCW	NSW Department of Environment, Climate Change and Water now NSW Heritage
DP	Deposited Plan
GPS	Global Positioning System
GSV	Ground Surface Visibility
LALC	Local Aboriginal Land Council
MGA	Map Grid of Australia
OEH	formerly NSW Office of Environment and Heritage
PAD	Potential Archaeological Deposit
RAP	Registered Aboriginal Party
SU	Survey Unit

Glossary

Aboriginal object - A statutory term, meaning: '… any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises NSW, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains' (s.5 NPW Act).

Archaeological Survey (Field survey) – a method of data collection for assessment involving the survey team walking across the project area in a systematic way, recording information about the landscape and recording any archaeological sites or materials.

Artefact - an object formed by Aboriginal people on stone material.

Declared Aboriginal place - A statutory term, meaning any place declared to be an Aboriginal place (under s.84 of the NPW Act) by the Minister administering the NPW Act, by order published in the NSW Government Gazette, because the Minister is of the opinion that the place is or was of special significance with respect to Aboriginal culture. It may or may not contain Aboriginal objects.

Development (impact) area - Area proposed to be impacted as part of a specified activity or development proposal.

Harm - A statutory term meaning '… any act or omission that destroys, defaces, damages an object or place or, in relation to an object – moves the object from the land on which it had been situated' (s.5 NPW Act).

Heritage site – an area containing material traces of Aboriginal use.

Place - An area of cultural value to Aboriginal people in the area (whether or not it is an Aboriginal place declared under s.84 of the Act).

Potential archaeological deposit (PAD) - is an area where sub-surface stone artefacts and/or other cultural materials are likely to occur (DEC 2005: 67)

Proponent - A person proposing an activity that may harm Aboriginal objects or declared Aboriginal places and who may apply for an AHIP under the NPW Act.

Proposed activity - The activity or works being proposed.

Project area - The area that is the subject of archaeological investigation and will be impacted by the subdivision.

Registered Aboriginal Parties (RAPS) – Aboriginal representatives registered for the project.

Subsurface testing – test excavations under the Code of Practice to determine the presence of archaeological deposits.

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EXECUTIVE SUMMARY

Past Traces has been engaged by Group One to undertake an Aboriginal Cultural Heritage Assessment for the proposed rezoning and subdivision of Lot 3 DP1118635. The 10.1ha land parcel is currently used as a rural house lot, located at 41 King Street, Tarago. The property has been moderately impacted by the construction of the current dwelling, associated infrastructure and ongoing use of the property.

The project area is located within the Goulburn- Mulwaree Local Government Area and is shown in a regional context in Figure 1 and in detail in Figure 2. The Cultural Heritage Assessment is being undertaken to determine if any heritage impacts will result from the subdivision of the block for residential housing. The subdivision will consist of the following:

- Installation of building envelopes within the project area
- Construction of access road
- Installation of infrastructure such as electricity, water, sewerage and communications
- Installation of boundary fences and landscaping.

To determine the impacts of the development a Due Diligence assessment has been undertaken in accordance with the *Due Diligence Code of Practice* (OEH 2010) by Past Traces in July 2023 to determine the extent of possible impacts. The assessment identified one heritage site (KST1 57-3-0538) consisting of two chert flakes within the project area. As a result of the potential impacts to this heritage site, an Aboriginal Cultural Heritage Assessment has been completed to determine the extent and significance of impacts.

Consultation with the Aboriginal community has been undertaken to assist the heritage team in assessing significance of any identified heritage sites and to provide guidance in the development of culturally appropriate management strategies. Consultation was in accordance with the *Consultation Guidelines for Proponents NSW* (DECCW 2010a) with a number of Registered Aboriginal Parties (RAPs) participating in the project.

As a result of the assessment, one Aboriginal heritage site is present within the project area (KST1: 57-3-0538) consisting of two flakes. This site is considered to hold low significance and does not preclude development of the project area on condition that the following heritage recommendations are implemented.

- One heritage site is present within the project area (KST1: 57-3-0538). An Aboriginal heritage Impact Permit (AHIP) will be required to allow works to proceed. No impacts can occur to the heritage site prior to the approval of an AHIP by NSW Heritage. The area of the AHIP will cover the entire area of the project area, as construction impacts will be widespread and extensive. The area of the proposed AHIP area is shown in Figure 9.
- Surface collection of site KST1 (57-3-0538). within the project area will be required. The surface collection will consist of returning to the site location, marking GPS locations of

artefacts, labelling and bagging each artefact for analysis. The surface collection will follow the methodology set out in Section 8.1.

- The recovered artefacts from the surface collection will be returned to country. A return to country location has been suggested to the RAPs for their consideration. The location and methodology to be followed are provided in Section 8.1.2.
- An AHIP Compliance works report will be submitted to NSW Heritage including the results of the surface collection and return to country at completion of works.
    - Site Impact card with updated details will be submitted to AHIMS for inclusion into the database at completion of works.
- It is an offence to disturb an Aboriginal site without an AHIP as all Aboriginal objects are protected under the NSW *National Parks and Wildlife Act 1974*. Should any Aboriginal objects be encountered during works outside of the AHIP area, then works must cease and a heritage professional contacted to assess the find. Works may not recommence until cleared by NSW Heritage
- Continued consultation with the RAPs for the project should be undertaken. RAPs should be informed of any major changes in project design or scope, further investigations or finds.

1 INTRODUCTION

1.1 PROJECT BRIEF

Past Traces has been engaged by Group One to undertake an Aboriginal Cultural Heritage Assessment for the proposed rezoning and subdivision of Lot 3 DP1118635. The 10.1ha land parcel is currently used as a rural house lot, located at 41 King Street, Tarago. The property has been moderately impacted by the construction of the current dwelling, associated infrastructure and ongoing use of the property.

The project area is located within the Goulburn- Mulwaree Local Government Area and is shown in a regional context in Figure 1 and in detail in Figure 2. The Cultural Heritage Assessment is being undertaken to determine if any heritage impacts will result from the subdivision of the block for residential housing. The subdivision will consist of the following:

- Construction of building envelopes
- Construction of access roads
- Installation of infrastructure such as electricity, water, sewerage and communications
- Installation of boundary fences and landscaping.

The proposed works will involve the substantial displacement and removal of soil and the importation of materials within the immediate area of the residential development and proposed access road. Ground disturbance has the potential to impact on Aboriginal heritage sites and objects which are protected under the NSW *National Parks and Wildlife Act 1974*. The purpose of this assessment is to investigate the presence of any heritage sites and to assess the impacts and management strategies that may mitigate impacts, including application for an Aboriginal Heritage Impact Permit (AHIP) if impacts are unavoidable.

The aim of this assessment is to inform the proponents of their responsibilities in regards to cultural heritage sites that exist within the project area and allow for design to minimise or avoid impacts. This report will provide supporting documentation if an AHIP is required. Reporting will follow the guidelines of NSW Heritage, in particular the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCW 2010a).

Consultation with the Aboriginal community has been undertaken to assist the heritage team in assessing significance of any identified heritage sites and to provide guidance in the development of culturally appropriate management strategies. Consultation was in accordance with the *Consultation Guidelines for Proponents NSW* (DECCW 2010a).

1.2 RESTRICTED AND CONFIDENTIAL INFORMATION

Information in this report is restricted due to cultural sensitivities. Appendix 1 contains site locational information which is confidential and not to be made public.

Any figures within the report which show the location of heritage sites is restricted and not to be made available to the general public. If required to be displayed, this information should be redacted.

1.3 ASSESSMENT OBJECTIVES

The following is a summary of the major objectives of the assessment:

- Identify and consult with Registered Aboriginal Parties (RAPs).
- Review previous heritage reports to identify patterns in Aboriginal site distribution.
- Search AHIMS register to identify listed Aboriginal cultural heritage sites within the project area.
- Summarise past Aboriginal occupation within the project area using the archaeological record and develop a predictive site location model.
- Report on field survey undertaken across the project area.
- Through consultation with the Aboriginal community assess the significance of identified heritage sites.
- Identify the impacts of the proposed development on heritage sites within the project area.
- Develop management strategies for the identified heritage sites within the project area.

1.4 INVESTIGATORS AND CONTRIBUTORS

1.4.1 Lyn O'Brien

This report has been reviewed by Lyn O'Brien, Director of Past Traces Pty Ltd who has over 25 years' experience in the heritage profession since completing her BA (Hons) in Archaeology at the Australian National University (ANU) in 1996. Lyn has extensive experience managing major and small-scale projects, conducting numerous field surveys and excavations and authoring reports across both Aboriginal and Historical archaeology.

1.4.2 Nathaniel Cracknell

Nathaniel is a graduate of the University of Wollongong (Bachelor of Arts (Hons) 2017). In 2021 he graduated with a Masters of Archaeological and Evolutionary Science, specialising in Bioarchaeology and Forensic Anthropology from the Australian National University. He has experience in field mapping, GIS, test excavations, salvage, and has assisted with surveys and excavations in both NSW and the ACT.

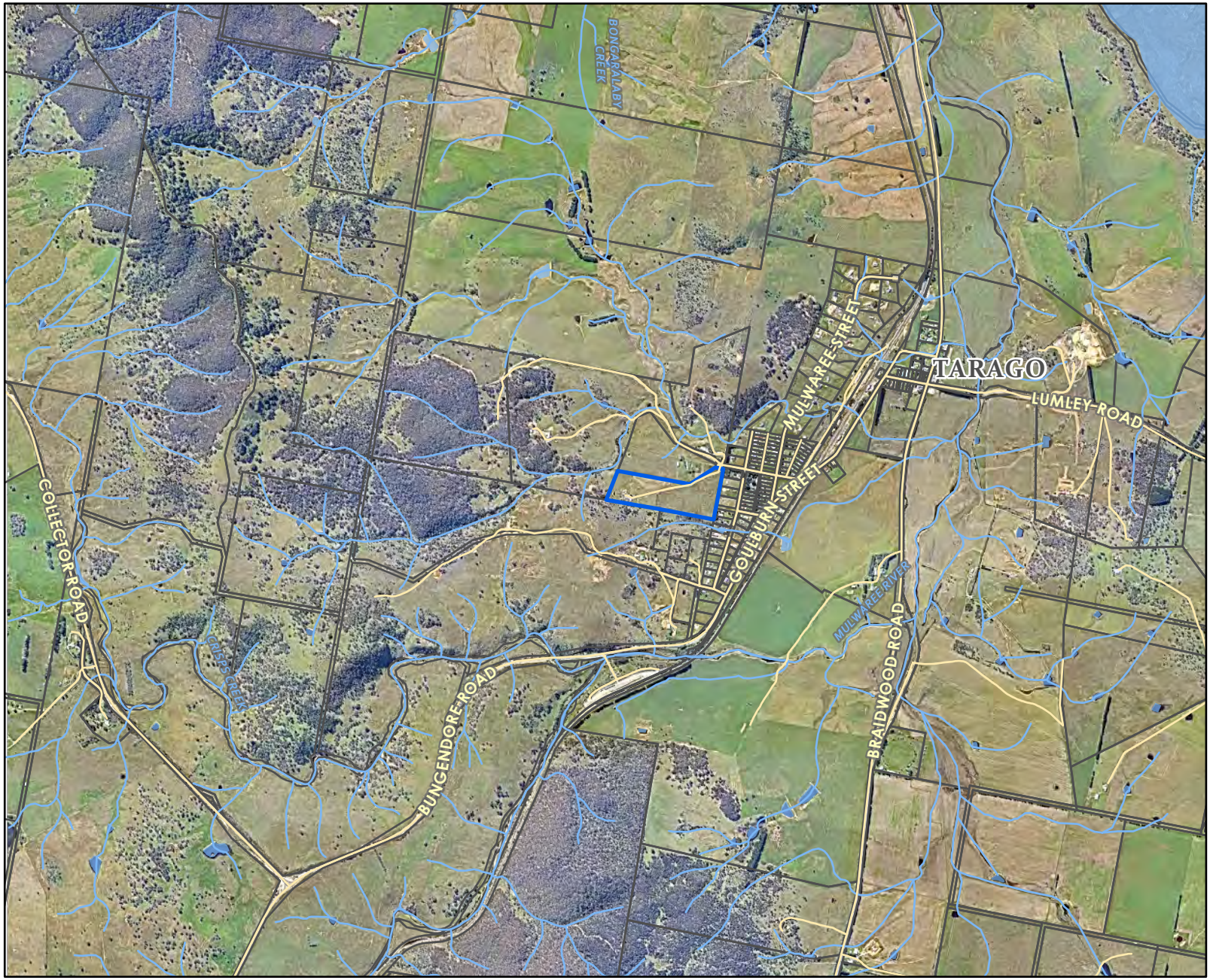

Figure 1: Regional Context

Legend

- Road
- Watercourse
- Project Area
- Waterbody
- Cadastre

N

1:30,000

0 365 730 1,460

Meters

Coordinate System:
GDA 1994 MGA Zone 55

Imagery: © Nearmap

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Figure 2: Project Area

Legend

- Road
- Watercourse
- Contour - 10m
- Project Area
- Waterbody
- Cadastre

N

1:3,500

0 40 80 160

Meters

Coordinate System:
GDA 1994 MGA Zone 55

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2 ABORIGINAL CONSULTATION

Consultation with the Aboriginal community has been undertaken to assist the heritage team and to provide guidance in the development of culturally appropriate management strategies. Consultation was in accordance with the *Consultation Guidelines for Proponents NSW* (DECCW 2010a). Aboriginal representatives provided input into the management recommendations and significance assessment.

The *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* guideline (DECCW 2010a) outlines the following process to be undertaken:

- Notification of project proposal to Aboriginal stakeholders and invitation to register interest.
- Presentation of information about the proposed project and methodology to be followed.
- Gathering information about cultural significance from registered stakeholders by inviting comments, and input into management recommendations and significance
- Review of draft cultural heritage assessment report to ensure views are adequately captured and recommendations incorporated into report.

The consultation log for the project detailing the consultation steps completed and a full list of RAPs is provided in Appendix 1. Copies of notification letters and agency responses are also provided in Appendix 1. Copies of email correspondence and comments from RAPs are provided as supporting documentation to this ACHAR.

A summary of actions completed for each of these stages are as follows.

Step 1. Letters outlining the project were sent to the Pejar Local Aboriginal Land Council (LALC), and statutory authorities including NSW Heritage, on the 28/8/2023 as identified under the consultation guidelines (DECCW 2010). Notification letters were then sent on the 1/9/2023 to the stakeholders identified by the NSW Heritage.

A public notice was placed in the local newspapers the Goulburn Post (23/8/2023) and the Braidwood Times on the 23/8/2023 seeking registrations of interest from Aboriginal stakeholders. The advertisement is provided in Appendix 2.

As a result of this process, seven (7) groups contacted the consultant to register their interest in the proposal. The Registered Aboriginal Groups (RAPs) who registered interest were:

- Pejar Local Aboriginal Land Council
- Adrian Brown
- Buru Ngunawal Aboriginal Corporation
- Clive Freeman
- Mulwaree Aboriginal Corporation
- Teena Riley
- Yurwang Gundana

Step 2. A Project Pack document was sent to the RAPs (22/9/2023) providing details of the project with the registration letter. This project pack is attached at Appendix 2 of the ACHAR.

Step 3. A Methodology Pack with the proposed heritage assessment methodology for the proposal was sent to all RAPs (25/9/2023). The document invited comments regarding the proposed methodology and requested any information regarding known Aboriginal heritage sites or values within the project area.

Step 4. A draft version of this *Aboriginal Cultural Heritage Assessment Report* for the project (this document) was forwarded to the RAPs 03/11/2023 and a timeframe of 28 days has been provided to allow for responses to the document.

2.1 ABORIGINAL COMMUNITY FEEDBACK

Aboriginal consultation has been ongoing through the project with feedback requested during the design of methodology and the cultural assessment. No information in respect of the project area holding specific cultural values or known heritage sites being located within the project area boundaries has been provided.

A draft of this report has been forwarded on its completion to the RAPs and any responses received have been included in the final ACHAR recommendations.

3 LANDSCAPE CONTEXT

3.1 GEOLOGY

The geology of the project area consists of the Undifferentiated Lower Devonian volcanics and sediments (Mount Fairy Group). These interbedded volcanics and tertiary sedimentary rocks consisting of tuffs, quartzite, dacite, rhyolite, conglomerate ferruginous sandstone, ferricrete, silcrete, laterite, iron stone and siltstone with the occasional limestone lenses.

The Lower Devonian volcanics of the Braidwood Rises physiographic region can occur as intrusions, with the eastern half of the project area located on the Tertiary sediments of the Lake Bathurst Basic physiographic region. Sources suitable for lithic manufacture may be present within the project area or surrounds. The terrain slopes east to the catchment of the Mulwaree River which runs just east of the project area. The project area is of generally low relief with long side slopes running downslope to the east, with the northwest sloping towards a tributary of the Mulwaree River. The Geology of the project area is shown on Figure 3.

3.2 SOILS

Soils throughout the project area consist of the Sight Hill and Morass soil landscapes. All soils are relatively shallow and erodible with no deep deposits over basal layers. Thin soils are not conducive to the preservation or burying of archaeological deposits. This distribution of soils is shown on Figure 4 and the soil composition is described as follows:

- Sight Hill: The erosional Sight Hill soil landscape is located on the rolling to steep hills on volcanics of the Braidwood Rises physiographic region. Consisting of moderately well-drained Red Podzolic soils and imperfectly drained Yellow Podzolic soils with a total soil depth of 60-100cm. This soil is shallow, acidic and presents wind and sheet erosion (Jenkins 2000: 110)
- Morass: The residual Morass landscape is located on the undulating rises on Tertiary sediments of Lake Bathurst Basin physiographic region. The low slope soils consist of poorly drained Solodic soils of up to 40cm of black clay loam overlaying 20-40cm of bleached clay loam to blocky clay. These soils are low fertility, hard setting with localised salinity (Jenkins 2000: 35).

3.3 FLORA AND FAUNA

The natural vegetation across the project area has been cleared and is now considered as a highly modified environment with the only trees present in the project area consisting of young Eucalypts. Grass coverage appears to have been subject to pasture improvement (ploughing) with a high proportion of weed species. Prior to clearing, the project area was dominated by two Plant Community Types: Southern Tableland Grassy Box Woodland and Goulburn Tableland Box-Gum Grassy Forest.

These previous vegetation communities would have consisted of partially open dry sclerophyll forest with *Eucalyptus sieberi* (silvertop ash), *Allocasuarina littoralis* (black she-oak), *Acacia decurrens* (green wattle), *E. dives* (broad-leaved peppermint), *E. mannifera* (brittle gum), *E. rossii* (scribbly gum), *E. macrorhyncha* (red stringybark). The understorey was typically low with shrubs and herbs such as *Kunzea parvifolia* (small-leaved kunzea), *Hibbertia obtusifolia* (guinea flower), *Melichrus urceolatus* (urn heath), *Acacia genistifolia* (spreading wattle), *Leptospermum sp.* (tea-tree), *Aristida ramosa* (wire grass) and *Danthonia pallida* (wallaby grass). With the previous woodland (frost pocket community) and grassland consisting of *Eucalyptus pauciflora* (snow gum), *Acacia dealbata* (silver wattle) and *Themeda triandra* (kangaroo grass).

As a result of the ongoing use of the property, the process of vegetation removal, pasture improvement involving ploughing and ongoing stock impacts will all have reduced the potential for sites to be preserved.

3.4 LANDSCAPE CONTEXT

The landscape elements within the project area affect the findings of archaeological potential, based on the conditions for use and occupation of the landscape and the availability of resources present in the region. The presence or absence of landscape features, degree of slope and exposure to wind or cold drainage all affect the assessment of potential and influence predictive modelling for the presence of Aboriginal sites. In this instance, the project area is confined to gentle slopes with 1st order drainage lines to the northwest and south outside of the development area.

The mapping of previous sites in the region suggests that areas with river frontage and creek lines would be a focus of activity as water is a main resource. Preferred resting or camping locations would then be located on small rises of dry ground probably situated on alluvial terraces or lower slopes. No such features are present within the project area. No water sources are present, indicating transient use of the area.

The landscape of the project area suggests that Aboriginal groups would have travelled across and utilised the area. Areas with concentrated resources are present in the region, which would have drawn and focused activity. None of these resources are present within the project area.

The presence of the Mulwaree River to the east (1.5km approximately) would have provided year-round resources and it is highly probable that sites will be found along its length. A known highly significant cultural feature Lake Bathurst is 4kms to the east and Lake George is located to the west. These area were regularly visited by Aboriginal people and large campsites are common along their length. The environment of Lake George would have provided 'refugia' during periods of climatic variation and drought, and groups travelling to these high resource areas may have passed through the project area as part of an ongoing cycle of visits.

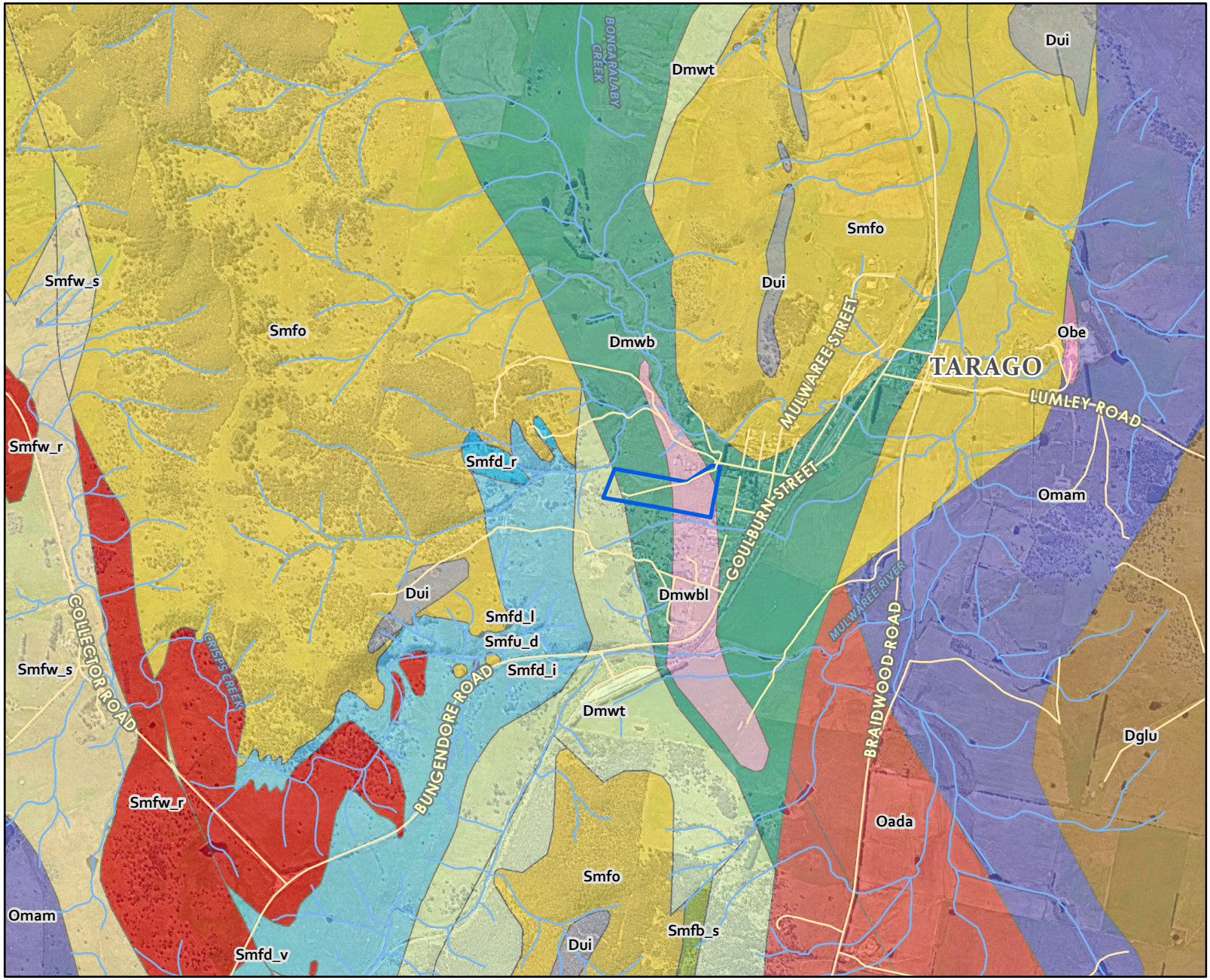

Figure 3: Geology

Legend

- placepoint
- Road
- Watercourse
- Project Area

Geology

- Abercrombie Formation
- Bendoc Group
- Bongalaby Formation
- Boxers Creek Formation - siltstone
- Bundong Granite
- Covan Creek Formation
- Currawang Basalt - dolerite
- De Drack Formation - limestone
- De Drack Formation - rhyolite
- De Drack Formation - siltstone and mudstone
- De Drack Formation - volcanic sandstone
- Lake Bathurst Limestone Member
- Mundoonen Sandstone
- Tarago Conglomerate
- Unassigned Devonian intrusions
- Woodlawn Volcanics - rhyolite
- Woodlawn Volcanics - sandstone

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Kilometers
Coordinate System:
GDA 1994 MGA Zone 55

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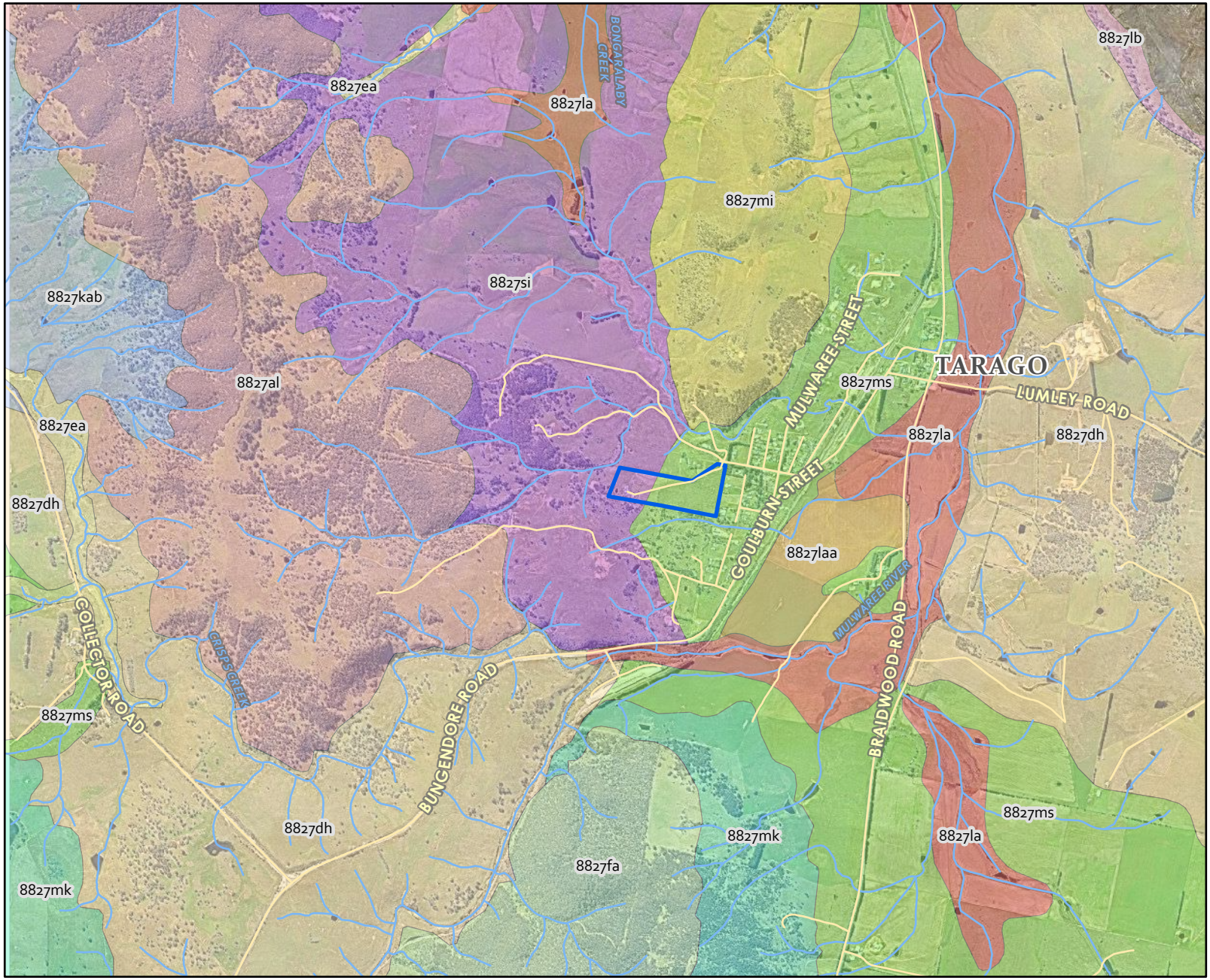

Figure 4:Soil Landscape

Legend

- placepoint
- Road
- Watercourse
- Project Area

Soil Landscapes

- Allianoyonyiga
- Duckfield Hut
- Eastfields Creek
- Fairy
- Kalbili variant b
- Lake Bathurst
- Larbert
- Larbert variant a
- Misery Mountain
- Morass
- Moura Creek
- Sight Hill

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Kilometers
Coordinate System:
GDA 1994 MGA Zone 55

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4 ABORIGINAL ARCHAEOLOGICAL CONTEXT

A review of heritage registers and previous archaeological studies for the Project Area, and the wider Tarago region has been undertaken. This information has been used to identify previously recorded sites and to develop an Aboriginal site prediction model for the project area.

4.1.1 Aboriginal Groups within the Project Areas

Within the Tarago and the wider Goulburn region, two major language groups were identified by Norman Tindale in his seminal work on Aboriginal tribal boundaries. There were the Gundungurra (Gandangara) to the north of Goulburn, and the Ngunawal (Ngunnawal) also known as the Yass tribe, Lake George Blacks or Molonglo tribe to the south. The boundaries of the Ngunawal ran to the south-east where they met the Ngarigo at the Molonglo and the Wiradjuri in the Yass region (Tindale 1974). This distribution with minor amendments is still accepted and the review of tribal boundaries undertaken in the 1990s (Horton 1996) confirmed these earlier boundary locations.

The Ngunawal and Gundungurra languages are closely related with a shared majority of words but with a difference in syntax (Koettig and Lance 1986:13). This similarity can either be a result of long contact between the two groups or as a result that Matthews, one of Tindale's main source of information, was not working in the region until the 1890s when the Aboriginal people of the area had already been impacted by the results of white settlements and groups had merged together following the impacts of disease and disruption of traditional lifeways (Flood 1980:27).

The Goulburn region has many early settlers' accounts of the traditional lifeways of the aboriginal community. These recorders lived in the area during the early 1830's and recorded many aspects of Aboriginal life. Some of the best sources for observations of the Indigenous inhabitants of the region are Bennett (1834). MacAlister (1907) and Govett (1977). Their observations must be viewed as from a white perspective and filtered through their cultural traditions but they provide a glimpse of a functioning hunter and gatherer lifestyle with a cycle of repeated visits to areas at times of seasonable resource availability and a ceremonial life that imposed duties and responsibilities on members of the group.

MacAlister records that three tribes resided in the district, the Cookmai or Mulwarrie (Mulwaree), the Tarlo, and the Burra Burra (MacAlister 1907:82). MacAlister notes that Aboriginal people travelled from the Lachlan River to visit Goulburn (1907:82). Larger gatherings of Aboriginal people were recorded at Rocky Hill near the East Goulburn Church of England, the old railway quarry on the Wollondilly River, Mulwaree Flats near the historic brewery, the All-Saints church in Eastgrove and the Goulburn Railway Station (AMBS 2012:13, Tazewell 1991:243, Wyatt 1972:111-112).

The flat, rolling topography of the Goulburn region and the lack of natural physical barriers would have facilitated contact and movement through the region and the surrounding Aboriginal people. Lhotsky in 1834 crossed the Breadalbane Plains meeting a party of approximately 60 Aboriginal people at Fish River. This group told Lhotsky that they travelled as far as Goulburn and Yass Plains but not so far as Limestone (Lhotsky 1979:104-105). At a large gathering at Bathurst in c.1837 Aboriginal people were present from Goulburn, the Monaro and as far away as the Hunter Region (Boswell 1890:7-8).

Disease followed the settlement of the area and may have preceded it with the smallpox epidemic originating in Sydney in 1789 possibly spreading throughout the region (Flood 1980:32). This disease would have decimated the Aboriginal population and was followed by Influenza in 1846. The notable decline of the number of the Aboriginal people was noted in 1845 at Bungonia and in 1848 at Goulburn by the Bench of Magistrates (Tazewell 1991: 244).

4.2 PREVIOUS ARCHAEOLOGICAL WORK

The project area is located in the Goulburn Plains within the Southern Tablelands. Regional models of aboriginal landscape and resource use, along with models of intensity of utilization and number of Aboriginal occupants have been developed for the Goulburn region (Koettig and Lance 1986, Fuller 1989). Limited heritage studies have been undertaken in the Lake Bathurst area, and fewer still within proximity of the Project area.

Following reports to National Parks and Wildlife Service in 1975, McBryde was consulted to assess archaeological deposits stemming from the commercial sand mines on the south-eastern shores of Lake Bathurst. McBryde undertook the salvage collection and investigation with students from the ANU. This site occurred in a beach deposit at about 40cm below the current land surface and just above one of two gravel bands recorded from this beach. Over 6000 artefacts have been recorded from this site with the maximum artefact density being 326 in a 100sqm area, i.e. about 3/sqm.

Several sites have been recorded in similar topographic situations in the Lake George Basin (Hughes, Barz and Hiscock 1984) and numerous sites have been recorded in the Shoalhaven River catchment to the east and southeast (Attenbrow and Hughes 1983).

Anutech Pty Ltd in 1984 undertook an archaeological assessment of 'Gilmour' via Lake Bathurst. The archaeological survey was required to assess the heritage potential of the two sand bodies proposed to be mined (GIL1 – GIL2). Due to its high disturbance, GIL2 was classified to hold minor scientific importance (thirteen artefacts). The survey recorded a higher density of archaeological material at GIL1 (twenty artefacts). The main raw material at both sites was homogenous translucent quartz. However, little work has been carried out around Lake Bathurst to assess its scientific importance.

In 2000, Navin Officer Heritage Consultants (NOHC) were commissioned for a Cultural Heritage Assessment of a proposed landfill site at the Woodlawn Mine and an Intermodal Facility at Crisps Creek south of Tarago. Four artefact scatters (Crisps Creek 1 – Crisps Creek 4) were identified during the survey with 'Consents to Destroy' issued for three of the four sites, Crisps Creek 1, 2 & 4, with these sites recovering one, one and 70 artefacts respectively.

NSW Archaeology conducted an assessment of the 'Roseview' property south of Tarago for proposed erosion control works in 2008, approximately 4km southeast of the current project area. Of the surveyed 8.5ha, three Aboriginal heritage sites were identified. Two of these sites (SU2/L1 & SU3/L1) were comprised of low-density artefact scatters with site SU1/L1 consisting of a low-moderate density scatter with moderate-high potential to contain areas of intact archaeological deposit.

The proposed construction of Capital Wind Farm was located between Tarago and Bungendore, with the initial cultural assessments being undertaken by Austral Archaeology in 2004 and 2005. As a result, five Aboriginal sites were recorded consisting of three isolated finds and two low-density artefact scatters, as well as six areas of PAD. In 2007, six areas within four of the areas of PAD were subsurface tested. In total, 83 test pits were excavated yielding 348 artefacts from across the site namely

constructed of quartz, quartzite, silcrete and chert. In 2010, Austral Archaeology were again commissioned for Capital Wind Farm II located to the east of Lake George. This assessment identified 63 new sites consisting of 31 isolated finds, 30 artefact scatters and two areas of PAD, with 23 of these sites located with proximity to Taylors Creek.

In 2021, Austral Archaeology conducted a Due Diligence Assessment of 800m of John Holland CRN railway line at Tarago (approximately 400m from the current project area). No artefacts were identified from the survey.

In 2022, Past Traces conducted a due diligence assessment for the proposed extension of the Holy Cross Cemetery at Lake Bathurst. The area adjacent to the current cemetery was surveyed with no identified heritage sites in the vicinity.

These previous assessments in the Tarago region show site locations clustered on major waterways like Lake Bathurst and Lake George with results from the wind farms showing that high ridgelines and travel routes contain the potential for small artefact sites.

4.3 ABORIGINAL HERITAGE INFORMATION MANAGEMENT SYSTEM (AHIMS) SEARCH AND SITE ANALYSIS

An extensive search of the NSW Heritage AHIMS database was undertaken on the 15 June 2023 for the due diligence assessment, covering the 1km surrounding area centred on the project area. The extensive search revealed no previously recorded heritage sites within the project area with 5 sites within the wider search area. The recorded sites consist of isolated artefacts, artefact scatters and areas of Potential Archaeological Deposit (PAD).

Heritage assessments have been undertaken in increasing frequency due to the level of increased development within the Lake Bathurst region and increased legislative requirements within NSW. These studies have resulted in a site location model being developed for the region. This model predicts the majority of sites will consist of small artefact sites located on level ground or terrace features in proximity to water sources, with larger sites with subsurface deposits being present in proximity to water features such as a creek confluence or major water sources.

The recorded sites by type as listed on AHIMs are listed in Table 1 and shown on Figure 5 in relation to the project area. These sites indicate a low level of utilisation in the immediate region.

Table 1. AHIMS Site Details

Site ID	Site name	Datum	Zone	Easting	Northing	Site features	Recorders
57-3-0347	Crisps Creek 1	AGD	55	740420	6114420	Isolated Find	NOHC 2000
57-3-0350	Crisps Creek 4	AGD	55	740400	6114350	Artefact Scatter	NOHC 2000
57-3-0466	Tarago 1	GDA	55	741500	6115865	Artefact Scatter	Kayandel 2011
57-3-0465	Tarago 2	GDA	55	741326	6116030	Artefact Scatter	Kayandel 2011
57-3-0464	Tarago PAD1	GDA	55	741350	6115760	PAD	Kayandel 2011

Figure 5: AHIMS

Legend

- AHIMS Site
- Road
- Watercourse
- Project Area
- Waterbody
- Cadastre

N

1:10,000

0 125 250 500

Meters

Coordinate System:
GDA 1994 MGA Zone 55

Imagery: © Nearmap

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4.4 PREDICTIVE MODEL

Predictive modelling has been undertaken to broadly predict the type and location of Aboriginal cultural heritage sites within the boundaries of the project area. The model is based primarily on Fuller's (1989) prediction models, the landforms present within the project area and the degree of disturbance which has occurred historically.

Based on the previous assessments completed through the region site locations and types can be summarised as follows:

- the majority of open artefact scatters are located near creek lines, particularly on reasonably level, elevated ground,
- large artefact scatters occur most frequently within 100-150m of major water features, with a possible preference for creek confluences,
- artefact scatters occurring away from major creek lines tend to be small and sparse,
- scarred trees are rare and may occur wherever old growth trees of sufficient age have survived (locally at least 140-150 years); and
- stone procurement sites may occur where rock suitable for stone tool manufacture is present on the surface, but none are recorded in the area.

The following predictive model has been developed for the project area (Table 2).

Table 2 Site Prediction Model

Probability	Site Type	Definition	Landform
Low	Isolated finds and surface scatters of stone artefacts	Stone artefacts ranging from single artefact to high numbers	Creek lines and spur crests – none present within project area
Low	Potential Archaeological Deposits (PADS)	Area considered on landform to hold higher potential for unidentified subsurface deposits	Varies, but most frequent on elevated terraces along creek lines and spur lines - no such features present
Nil	Culturally Modified Trees (CMTs)	Trees which have been modified by scarring, marking or branch twining	May be present on old remaining trees – No trees present
Nil	Rock Engravings	Images engraved on flat rock surfaces	Escarpments, rock platforms or rock shelters - not present
Nil	Stone arrangements	Arrangements of stones by human intention, including circles lines or patterns.	Crest lines or large ceremonial areas on creekflats, - not present
Nil	Stone quarries/Ochre sources	Quarry sites where resources have been mined.	Any landform that has not been disturbed – not present

Probability	Site Type	Definition	Landform
Nil	Axe grinding grooves	Grooves in stone caused by the grinding of stone axes	Usually in creek lines, as water is used as abrasive with sand - not present
Nil	Burials	Burials of Aboriginal persons	Usually requiring deep sandy soils on eastern facing slopes – not present
Nil	Aboriginal places	A place that hold spiritual, traditional or historical significance to Aboriginal people	Any landform, identified through consultation with RAPs and historical sources

5 ARCHAEOLOGICAL FIELD SURVEY

A field survey was undertaken on the 4th July 2023 as part of the Due Diligence assessment in accordance with the Code of Practice specifications, to verify the findings of the desktop review of landforms and determine the degree of previous disturbance through the area. Extensive grass coverage was present through all sections of the project area with a decreased visibility. The results of this survey were described in the 2023 Due Diligence report. Results and survey conditions are replicated in the following sections for ease of reference.

5.1 ARCHAEOLOGICAL SURVEY AIMS

The principle aims of the survey were to:

- Provide the heritage team an opportunity to view the project area and to identify landforms and levels of previous disturbance.
- Complete pedestrian survey of the project area, visually inspecting areas and landforms to record any Aboriginal heritage.
- Identify and record any heritage sites visible on the ground surface.
- Identify and record areas of potential archaeological deposits (PADs).

5.2 FIELD SURVEY METHODS

The archaeological survey was conducted on foot and consisted of pedestrian transects across the project area. The survey was undertaken with the assistance of the Pejar LALC. The survey was conducted in accordance with the archaeological survey requirements of the Code of Practice (DECCW 2010). Information that was recorded during the survey included:

- Any Aboriginal sites identified during the survey.
- Natural resources utilised by Aboriginal people.
- Landforms present
- Photographs of the project area
- Ground surface visibility (GSV) and areas of exposure.
- Levels of disturbance

5.3 ARCHAEOLOGICAL SURVEY RESULTS

Field survey was conducted during July 2023 with parallel transects at an average spacing of 20m being walked and visually inspected across the project area. The survey was undertaken at a time when surface visibility was moderate across the project area and grass length varied from low to dense. Areas of exposure were present across the project area consisting of the following:

- Vehicle access tracks – vehicle impact access tracks were present across the project area providing long areas of linear exposure across all the main landforms particularly at gate entrances at fence lines.

- Animal tracks – various confined stock impact tracks across the grassed areas despite the lack of stock at the time of survey.
- Erosion – areas of erosion and sparser grass coverage were present throughout the project area particularly on crests and upper slope landforms.

The conditions across the project area at the time of field survey are shown in the following plates.

Plate 1: North of project area depicted very low GSV (South)

Plate 2. Gravelled driveway with introduced materials (Southwest)

Plate 3: From centre of project area looking downslope with power poles present (East)

Plate 4: Looking upslope towards the dwelling location (West)

Plate 5: Southeast corner of project area with 1st order stream to the left (West)

Plate 6: Electricity junction box with subsurface cabling present (West)

Transects were positioned to cover all landforms present within the project area. The locations of the survey transects are shown in Figure 6.

5.3.1 *Ground Surface Visibility (GSV) and Levels of Disturbance*

Ground Surface Visibility (GSV) is the percentage of ground that can be visibly assessed. GSV varies by the degree of grass coverage across the ground surface, presence of leaf litter, branches and the presence of natural gravels. Exposures are areas that provide high levels of GSV and usually result from erosion, stock impacts, clearing, previous construction or vehicle trails. The higher the rate of exposures and the background GSV of a survey unit (SU) the higher the effectiveness of the field survey.

Background GSV varied through the project area, due to the degree of erosion and grass coverage. GSV was highest along fence lines, the central access road, gate entrances and areas surrounding outbuilding where erosional features were prevalent. In these areas the degree of soil clearly visible is estimated at 80%. GSV was lowest along the majority of the lower slopes where the deeper soils allowed for increased grass coverage. In these areas the GSV decreased to an average of 20%.

The GSV, degree of disturbance and rate of exposures for each landform is provided in Table 4 below.

Table 3. Ground Surface Visiblity Rating

Landform	GSV	Degree of Disturbance	Mechanism of disturbance
Drainage Line/Creek flat	20%	Moderate	Vegetation clearing, animal trail impacts. vehicle trails, minor erosion on bank edge, dam construction.
Lower slopes	20%	Moderate	Vegetation clearing in past, dense grass coverage with several erosion exposures, pastoral land with stock present, pasture improvement and access road.

Landform	GSV	Degree of Disturbance	Mechanism of disturbance
Mid slopes	30%	Moderate/High	Vegetation clearing in past, pastoral grazing with stock present, dam construction, access road, current dwelling, sheds and outbuildings, landscaping evident.
Upper Slope	50%	Low	Fencing impacts, pastoral grazing.

5.3.2 Survey Coverage

The factors of GSV, level of disturbance, the number of survey participants and the spacing of transects all combine to provide estimates of survey coverage and effectiveness.

One team member and one member of Pejar LALC completed the field survey, in spaced transect. Each team member visually inspected an area of approximately 2m on each side during the pedestrian walkover, considered to be the maximum distance of effective coverage (Burke and Smith 2004). The physical area inspected with the GSV and exposure rate for each landform taken into account provides the survey coverage. At the levels recorded for the field survey, the effectiveness of the field survey is considered to be fair. The landforms are shown on Figure 6.

The landform summary and a summary of effective survey coverage for the Project Area is provided in Table 5 and 6. These calculations are based on the formula provided in Requirement 10 of the Code of Practice.

Table 4. Survey Coverage

Landform	SU Area (m2)	GSV %	Exposure %	Effective Coverage Area m2 (SU area x GSV% x Exp%)	Effective coverage (Eff coverage area/SU Area x 100)
Drainage Line/ Creek Flats	2296.2	20%	20%	91.8	4%
Lower Slopes	74089.7	20%	20%	2963.6	4%
Middle Slope	23571.0	30%	40%	2828.5	12%
Upper Slopes	346.9	30%	60%	62.44	18%
Total	100,303.8			5,946	38%

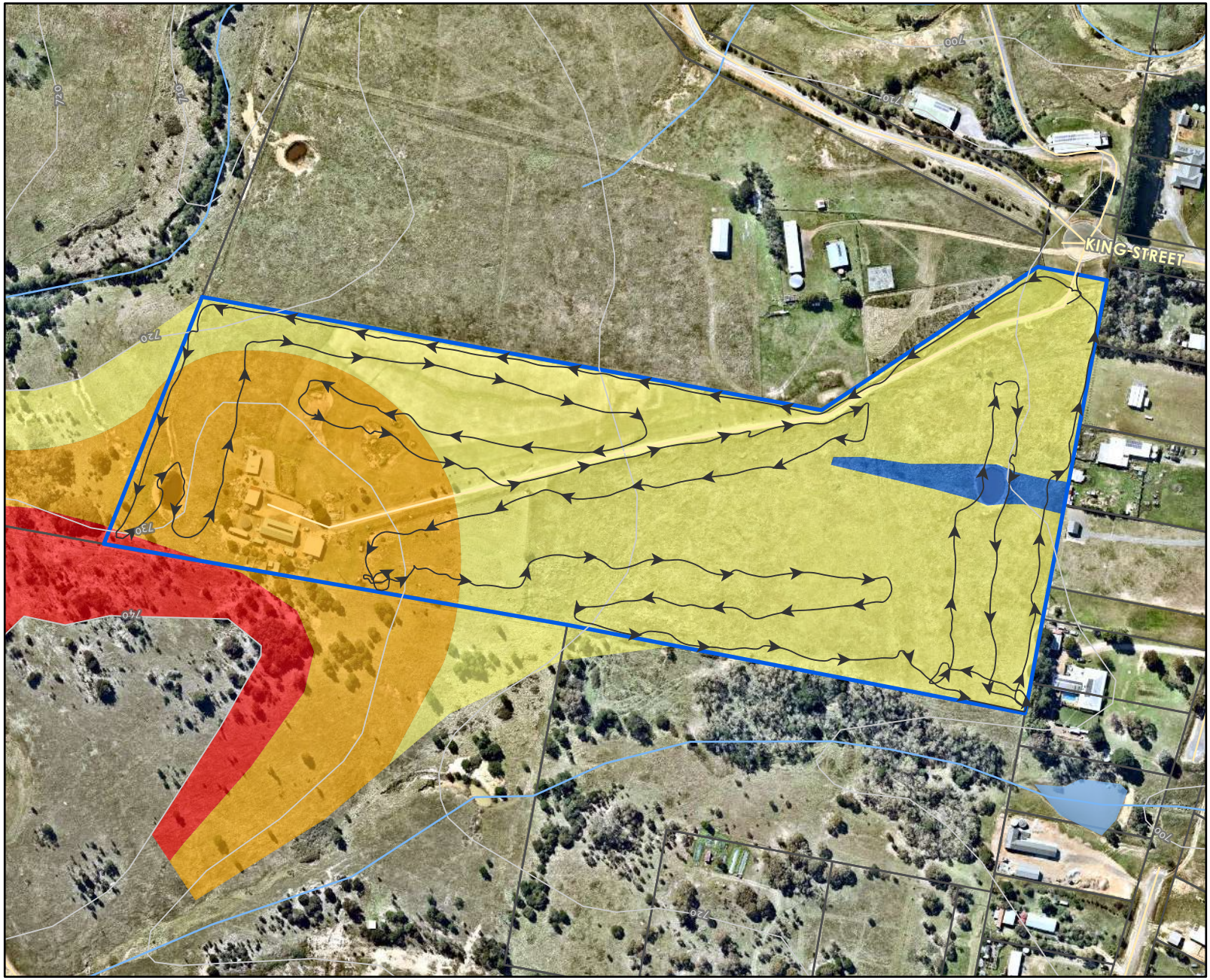

Figure 6: Landforms and Transects

Legend

- Road
- Watercourse
- Contour - 10m
- Project Area
- Waterbody
- Cadastre
- Survey Transect

Landform

- Drainage Line / Creekflat
- Lower Slopes
- Mid Slope
- Upper Slope

N

1:3,500

0 25 50 100

Meters
Coordinate System:
GDA 1994 MGA Zone 55

Imagery: © Nearmap

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Table 5. Landform Summary

Landform	Area (m2)	effective coverage area (m2)	% of landform surveyed	no of sites	No of PAD
Drainage Line/ Creek Flats	2296.2	91.8	4%	0	0
Lower Slopes	74089.7	2963.6	4%	0	0
Middle Slope	23571.0	2828.5	12%	1	0
Upper Slopes	346.9	104.1	18%	0	0
Total	100,303.8	5,946	38%)	1	0

5.4 FIELD SURVEY RESULTS

The field survey identified one Aboriginal heritage site across all surveyed areas, which was recorded as a low-density artefact scatter KST1 (Table 3). This artefact scatter consisted of two chert flakes located at (GDA94 MGA55) 740557.6115357. This site was found within an area of exposure approximately 1x1m in the southwest corner of a shed and adjacent to the southern boundary fence. It is located on the gently undulating low slopes with a north eastern aspect. The exposure is eroding from the corner post of a small shed. The posthole would have been excavated either by hand or by machine before placing in the corner post, adding concrete for stability, and backfilling the remainder.

The site is considered highly disturbed due to the excavation of the shed's posthole and difficult to assess whether the artefacts were uncovered during the footing's excavation or had moved further downslope to this location.

There is the potential that this artefact scatter extends further with low GSV across the rest of the paddock, however this possibility is considered unlikely. No subsurface deposits are predicted at this site location due to thin soils and high levels of disturbance.

This site type and artefact type is considered common for the region and holds low significance due to its highly disturbed context.

This site is depicted in Table 6, Plates 7 and 8 and in Figures 7 and 8.

Table 6: Aboriginal sites identified during the survey with GDA94 MGA55 coordinates.

AHIMS ID	Site ID	Easting	Northing	Site features	Comments
57-3-0538	KST1	740557	6115357	Artefact Scatter (2)	21x17x7mm chert flake 17x10x3mm chert flake 1x1m area of exposure adjacent to small shed

Plate 7: Two identified chert flakes

Plate 8: View from Site KST1 (Facing East)

Figure 7**:** Site location of KST1 located in southwest corner of a shed (GoogleEarth)

5.5 SUMMARY OF ARCHAEOLOGICAL SURVEY RESULTS

Archaeological survey was undertaken across the project area with the following findings:

- No previously recorded Aboriginal heritage sites are present within the project area.
- One Aboriginal heritage site was identified, KST1 (57-3-0538), with no areas of PAD.
- Soils appeared to be erosional in nature dependant on landform. Area had been subject to ploughing and cropping in the past.
- GSV was generally moderate to fair across the project area due to levels of grass coverage with areas of erosion and stock impact present.

The project area is situated on a gently undulating series of mid and low slopes descending towards the Mulwaree River to the east. It is thought that the area prior to European settlement would have supported a temperate grassy forest on the mid and lower slopes near the river frontage with scattered woodlands on the surrounding hills (Hird 1991). No water sources are present, and no known concentration of resources is present.

These landforms (mid and lower slopes) and soils types have been shown by previous heritage studies to contain potential for Aboriginal sites on raised features. These Aboriginal sites are likely to be small to moderate in size with larger sites potentially located on level areas near river frontage. This predictive model has been confirmed by the findings of the field survey and number of identified sites in the area.

The results of the 2023 field survey are shown on Figure 7.

6 ARCHAEOLOGICAL SIGNIFICANCE ASSESSMENT

6.1 INTRODUCTION TO THE ASSESSMENT PROCESS

The NSW heritage assessment criteria is set out in the NSW Heritage guideline Assessing Heritage Significance (NSW Heritage 2001) and requires assessment against the four values in the Australia ICOMOS Burra Charter (2013) generally accepted as heritage best practice.

These values are (as defined in NSW Heritage 2001):

- Historical significance refers to historic values. Items which demonstrate strong associations to a particular event, historical theme, people or philosophies, regardless of the intactness of the item or any of its structures hold varying levels of significance.
- Aesthetic significance refers to items which demonstrate creative, aesthetic or technical excellence, innovation or achievement. Aesthetic items may also have been the inspiration for creative achievement.
- Social/cultural significance refers to items which are esteemed by the community for their cultural values; which if damaged or destroyed would cause the community a sense of loss; and/or items which contribute to a community's sense of identity.
- Scientific significance refers to the assessment of whether a site has the ability to reveal valuable archaeological, technical, or scientific information.

For assessing the significance of Aboriginal sites the two main sections that are applicable are cultural values to the Aboriginal community and archaeological (scientific) values (ICOMOS 2013).

There are two criteria generally used in assessing the scientific significance of heritage sites:

- Research potential – the potential of a site to provide information which is of value in the scientific analysis of research questions.
- Representativeness – an assessment of whether the artefact or place is a good representative of its type.

Cultural value to the Aboriginal community can only be assessed by discussion with RAPs and feedback provided in response to the site identifications.

6.2 SCIENTIFIC SIGNIFICANCE ASSESSMENT

The following archaeological significance assessment is based on Requirement 11 of the *Code of practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW 2010). Using the Burra Charter assessment criteria of representativeness, condition and research potential, a rating of scientific significance was determined for the identified heritage sites. Scientific significance can be summarised as the potential of the site to provide important information on the past use of the area, Aboriginal technology, trade or movement. Table 7 provides the results of the archaeological significance assessment when applied to the newly identified site KST1.

Based on this criteria, as the site consists of artefacts common to the region and are low in density, the site holds low scientific significance. The low density of artefacts and disturbed context provides little potential for additional information and data into Aboriginal lifeways.

Table 7. Scientific significance assessment of archaeological sites recorded within the project area.

AHIMS	Site name	Research Potential	Representativeness	Condition	Scientific Significance
57-3-0538	KST1 (King St Tarago 1)	Low	Common	Disturbed	Low

6.3 CULTURAL SIGNIFICANCE

All heritage sites are important to Aboriginal people and all represent the past occupation and use of the region by Aboriginal people. As a reminder of the widespread nature of Aboriginal occupation, sites provide a physical guide to usage, and points for education, discussion and cultural transmission of knowledge.

The sites within the Tarago region are generally small and common in their nature, away from the verges of the larger lake features. The larger site locations conform to the modelling for the region (McBryde 1975), known camping sites of past peoples and confirms landscape use. The information they provide will further support existing information but will not provide new or innovative research themes. Aboriginal communities do not accept the western view of site importance with all sites being considered to be of overall importance within the landscape.

Appropriate management that is suggested for the present heritage site consists of the minimisation of impacts whenever possible, and the salvage (surface collection) of the site prior to impacts, where following detailed recording, the salvaged artefacts will be returned to country in an area that will remain undisturbed. This management recommendation has been incorporated into the management recommendation for the project, provided in Section 7.

This recommendation of salvage was provided to each of the RAPs in the form of the draft report. All comments will be incorporated into the management recommendations.

The finding of cultural significance can only be assessed by the Aboriginal community. The RAP who was present for the survey when these sites were originally recorded assessed them as holding low significance do to their highly disturbed context and suggested the process of return to country as being the most appropriate.

6.4 STATEMENT OF SIGNIFICANCE

The Project Area overall contains one Aboriginal heritage site, KST1 (57-3-0538), consisting of two stone artefacts within the excavated corner of a small shed amidst gently undulating mid to low slopes.

The two stone artefacts identified during the survey represent common site types found throughout New South Wales and consist of common materials and artefact types for the region. The recorded sites are considered to hold a low level of cultural and scientific values. Recording of these sites will assist in regional studies aimed at assessing Aboriginal usage of the landscape, technology and raw

material trade and sourcing. Due to the nature of the site, it is considered to hold a local level of significance not warranting conservation within the disturbed areas, following its salvage.

These values are provided in the following table as defined in Section 2.4 of the *Guide to Investigating, Assessing and Reporting on Aboriginal Culture in NSW* (OEH 2011).

Table 8. Table of assessed values

Value	Assessed Level
Social	The site is assessed to hold low levels of cultural value based on discussions with the present RAP due to its role as a marker of past occupation and continuing connection.
Aesthetic	The sites hold no aesthetic significance.
Historical	There are no known historical records or associations which apply to the site or immediate surrounds.
Scientific	The site holds low scientific values based on the composition of common materials and common artefact types for the region, providing little new or significant information.

7 IMPACT ASSESSMENT

7.1 DEVELOPMENT IMPACTS

The proposed subdivision and development requires a high level of disturbance within the project area. The proposed rural subdivision will cause disturbance in the form of soil excavation, vegetation removal, infrastructure installation, heavy vehicle and plant movement across the site and revegetation following completion of works. Impacts will be confined to the area of the building envelope, access road and associated infrastructure.

The types of activities that will impact the ground surface and sub-soils include:

- Excavation of house footings
- Installation of underground services, such as sewerage, water, gas and telecommunications
- Construction of access road, kerbside and water drainage.

As required by the Code of Practice, the assessed statement of impact for the Aboriginal archaeological sites in the project area has been summarised in Table 9.

Table 9: Summary of potential archaeological impact

AHIMS	Site name	Type of Harm	Degree of Harm	Impact of Harm
57-3-0538	KST1 (King St Tarago 1)	Direct	Total	Removal of values

7.2 SUSTAINABLE DEVELOPMENT PRINCIPLES

Australia's *National Strategy for Ecologically Sustainable Development (1992)* defines ecologically sustainable development as: 'using, conserving and enhancing the community's resources so that ecological processes, on which life depends, are maintained, and the total quality of life, now and in the future, can be increased'.

In regards to cultural heritage the main aspects of the ESD principles are intergenerational equity and the assessing of cumulative impacts on the heritage resource.

7.2.1 Intergenerational Equity

The concept of Intergenerational equity can be explained as the concept that resources (such as heritage sites) do not belong to any generation but are to be administered in trust for all future generations.

A key factor in intergenerational equity is the preservation of sites to ensure cultural information can be communicated to future generations. This concept can be also be explained as sites that if lost cause pain or sorrow to the community. This is generally understood as sites that are highly valued by the community and play an active role in the transmission, education and continuance of Aboriginal tradition.

Within Aboriginal communities intergenerational equity is maintained by the transmission of cultural knowledge, traditions and continued access and visitation to cultural sites. Loss of cultural knowledge, heritage sites or access to highly significant sites is detrimental to the current and future communities.

Destruction of cultural heritage sites may impact on future generations if by the action the cultural record is significantly altered or a continuing traditional link is broken. Assessing these impacts can be addressed by understanding the significance of sites, the range and variety of the site type that is present in the area and the role that the site plays with the Aboriginal community. Sites may play various roles as teaching sites, ceremonial areas or areas for cultural traditions (birthing trees, scarred trees, rock shelters for example).

In assessing the role of the site at Tarago and the effects of its removal from the archaeological record the main factors are the archaeological and cultural values.

Archaeological

- The sites significance in the region
- The frequency of occurrence of this type of site in the region
- The effect of removal of these sites on the regional archaeological record

Site KST1 consists of two chert flakes. Based on the assessment criteria in Section 6.2, the site consists of artefacts common to the region and are low in density, resulting in a finding of low scientific significance. The site is located close to a small building and is within an area of high disturbance.

Based on extended AHIMS searches covering the surrounding 5kms centred on the site (repeated on the 25/10/2023 for verification) 15 archaeological sites are present of which 14 are listed as artefact scatters. These registered sites are protected under legislation and show the common nature of KST1.

In addition within the Goulburn-Mulwaree Council area sites are preserved areas of Crown Reserves, Nature Reserves in addition to numerous Council and Recreational areas. It is considered that removal of the site will not significantly affect the archaeological record in this regard.

Cultural

- Whether sites are highly valued by community
- Play or may play an active role in communicating cultural information
- Whether the removal of these sites would result in significant loss of cultural knowledge or result in break of cultural tradition.

The sites are considered to be of low cultural significance by the community. This association is mainly with the role of the site as a marker of past utilisation of the region, reflecting use of the landscape.

The site at King Street has not played any role in ongoing cultural traditions, transmission of knowledge or learning for the next generation. The site type of small artefact scatters are included in landscape discussions of cultural transmission in regards to connection to country, obligations to country and song lines. More visible sites such as large surface scatters, rock art, scarred trees or resource areas (waterholes, rivers, woodland, wetlands) are preferred centres for learning, generating discussion between participants. Whilst using the visible sites as anchors for discussions, intangible values, creation lore and song lines are also a focus (BNAC *pers comm* 23/06/203).

As such the impacts to the site will not have a detrimental effect on continuing traditions and the transmission of knowledge to future generations, as it plays no active role in the current and future community. Preservation of the site would not increase cultural knowledge or provide a ready pathway of communication of cultural values which are currently being passed on and preserved in the community through group settings and familial members.

These factors affecting significance are provided in Table 16 for reference.

Table 6. Site Factors

Factor	Role
Highly valued by Community	No
Plays active role in communicating cultural information	No
Loss will result in significant change in cultural record	No
Loss will result in break with cultural tradition	No
Frequency of site type in area	Common
Site occurrence in protected areas	Common

7.2.2 Cumulative Impacts

Developments in the Tarago area are planned for the future and the cumulative impacts by the continued destruction of sites is of concern to the community and should be addressed by continued assessments and focus on preserving sites that are either intact, contain many artefacts, or are significant to the community. The determination of which sites warrant conservation should be undertaken by heritage professionals and the Aboriginal community through a process of consultation and involvement.

The cumulative impact of future developments at Tarago would appear to be limited, due to the predictive model which indicates that impacts would most likely be confined to a few small surface sites on slopes near the township. Site locations with higher densities, as shown by the subsurface testing program may be located on lower slopes or adjacent to Lake Bathurst or Mulwaree River in line with the predictive models. If, as predicted, these landforms are the most sensitive, then current and future developments will, based on current evidence be low in their cumulative impacts.

Any future housing developments will need to be assessed for their heritage impacts during the development assessment process and consultation with the Aboriginal community undertaken to mitigate impacts whenever possible.

By applying this process, heritage sites can be identified prior to construction and a conservation approach can be applied to reduce or remove development impacts through these areas and conserve sites of importance.

8 MANAGEMENT AND MITIGATION STRATEGY

Avoidance of impact to archaeological and cultural heritage sites through design of the development is the primary mitigation and management strategy and should be implemented where practicable. In cases where avoidance and conservation are not practical, the salvage of artefacts, gathering of information through collection (especially where impact cannot be avoided) and interpretation are management options.

For this project, the low density and low significance of the site does not warrant protection from the area of impact in the form of a conservation area. The nature of the site, consisting of common artefact types and materials does not warrant this class of treatment to ensure their preservation. A mitigation strategy of salvage, analysis and reburial (return to country) should be undertaken for the site KST1.

Further details of the proposed measures are provided within section 8.1.

8.1 MITIGATION MEASURES

For the heritage site that is to be impacted under an AHIP (Table 9), mitigation measures should be applied to retain the maximum amount of archaeological and cultural information possible. The mitigation measures have been discussed with the Pejar LALC representative whilst on site and provided to each of the RAPs for their comments in the form of the draft report.

RAPS should be provided with an opportunity to participate in the below listed mitigation measures which will be undertaken under the guidance of a qualified heritage consultant. An Aboriginal Heritage Impact Permit will be required for these mitigation measures to be undertaken.

The following mitigation measure has been developed for the impacted site:

8.1.1 Surface Collection (Salvage)

Surface collection of the site KST1 (57-3-0538) should be undertaken prior to impacts. The methodology to be followed would consist of:

- Returning to GPS location and flagging all surface artefacts within a 10m radius of site location.
- Each artefact to be collected, given a number and bagged individually with their GPS location.
- Artefacts to be analysed (noting materials, basic technological attributes, Etc.)
- The completion of an AHIP Compliance works report submitted to NSW Heritage including the results of the surface collection.

8.1.2 Return to Country Protocol

The recovered artefact from the surface collection will be returned to country in a conserved location. A proposed location is within an area of conserved open space on the edge of the development at MGA 55 740965.6115352. The proposed location is shown on Figure 8.

Figure 8: Return to Country

Legend

- Return to Country
- Road
- Watercourse
- Contour - 10m
- Project Area
- Waterbody
- Cadastre

N

1:3,200

0 25 50 100

Meters
Coordinate System:
GDA 1994 MGA Zone 55

Imagery: © Nearmap

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A return to country protocol is under discussion with the proponents and RAPs and is proposed to consist of the following steps:

- Excavate 50 x 50cm Pit by hand at agreed location and place artefact in base of pit in contact with soil. Refill Pit with excavated soil.
- Grid location, photos of reburial location taken and report on compliance completed. Site card completed for submission to AHIMS database.

8.2 MANAGEMENT RECOMMENDATIONS

The following recommendations have been developed in regards to the Aboriginal Cultural Heritage values and heritage site located within the project area. Following the implementation of these heritage recommendations development of the area should be able to proceed.

The management recommendations for the project are:

- One heritage site is present within the project area (KST1: 57-3-0538). An Aboriginal heritage Impact Permit (AHIP) will be required to allow works to proceed. No impacts can occur to the heritage site prior to the approval of an AHIP by NSW Heritage. The area of the AHIP will cover the entire area of the project area, as construction impacts will be widespread and extensive. The area of the proposed AHIP area is shown in Figure 9.
- Surface collection of the impacted site within the project area will be required. This applies to site KST1 (57-3-0538). The surface collection will consist of returning to the site locations, marking GPS locations of artefacts, labelling and bagging each artefact for analysis. The surface collection will follow the methodology set out in Section 8.1.
- The recovered artefacts from the surface collection will be returned to country. A return to country protocol is under discussion with the proponents and RAPs. The outcome for these artefacts will be decided by the RAPs and updated with the AHIP application.
- An AHIP Compliance works report submitted to NSW Heritage including the results of the surface collection and return to country at completion of works.
    - Site Impact card with updated details will be submitted to AHIMS for inclusion into the database at completion of works.
- It is an offence to disturb an Aboriginal site without an AHIP as all Aboriginal objects are protected under the NSW *National Parks and Wildlife Act 1974*. Should any Aboriginal objects be encountered during works outside of the AHIP area, then works must cease and a heritage professional contacted to assess the find. Works may not recommence until cleared by NSW Heritage.
- Continued consultation with the RAPs for the project should be undertaken. RAPs should be informed of any major changes in project design or scope, further investigations or finds.

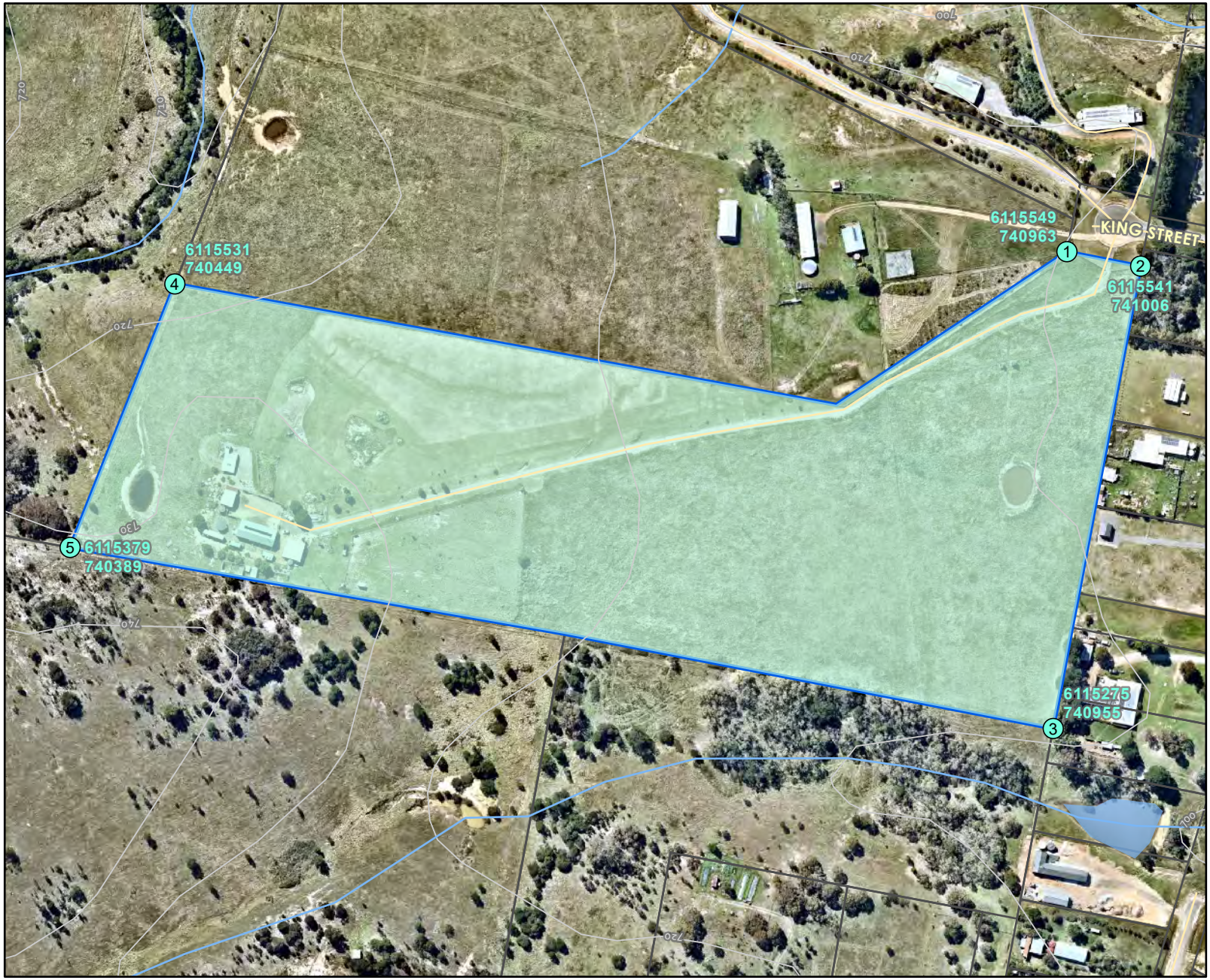

Figure 9: AHIP Area

Legend

- Road
- Watercourse
- Contour - 10m
- Project Area
- Waterbody
- Cadastre
- AHIP Area

N

1:3,280

0 25 50 100

Meters
Coordinate System:
GDA 1994 MGA Zone 55

Imagery: © Nearmap

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A.1 ABORIGINAL CONSULTATION

King Street Tarago

Date/Time	Type of Consultation	Organisation	Response
	Step 1 – Public Notice (	**Goulburn Post – Braidwood Times - 23/8 end 6/9**	Ends 6/9/2023
	Step 2 – Notice to Regulators		**End 11/9/2023**
28/8/2023	**Email to all**		
	Check of online mapping	NNTT	No registrations
	Email	NTSCorp	
	Email	NSW Heritage	
	Email	Goulburn Mulwaree City Council	Response 29/8 – stakeholders in AMBS 2010
	Email	Registrar ALR	Response 28/8 – no stakeholders
	email	Pejar LALC	
	Email	South East Local Land Services	Response 30/8 – no stakeholders and please contact Council rather than LLS for this and future projects
	Step 3 – letter/email to identified stakeholders from Above 14 days end 18/9/2023		
01/09/2023	Pejar LALC		
	Gunjeewong		
	Adrian Brown		Registered
01/09/2023	Yurwang Gundana		
	Konanggo		
	Ngunawal Heritage		
	Gundungurra Heritage Association		
	Buru Ngunawal		Registered
	Duncan Falk		
	Ngunawal Elders Assoc		
	Gundungurra Tribal Council		
	Badu		
	Barraby		
	Bilinga		
	Clive Freeman		Registered
	Clorine Lyons		
	Corroboree		
	Didge Ngunawal		
	Gadhu		
	Gilay		
	Goobah		
	Guntawang		
	Gunyuu		
	Janine Thompson		
	Jason Davison		
	Jerringon		
	Kamilaroi Yankuntjatjara		
	Karrial		
	Maria Williams		
	Merrigarn		
	Mulwaree		Registered

Date/Time	Type of Consultation	Organisation	Response
	Mundawari		
	Munyunga		
	Muragadi		
	Murrabidgee Mullangarri		
	Ngunawal Consultancy		
	Ngurambang		
	Nundagurri		
	Oak Hill		
	Pemulwuy		
	Thauaira		
	Thomas Dahlstrom		
	Thoorga Nura		
	Thunderstone		
	Timothy Stubbs		
	Walbunja		
	Wingikara		
	Wullung		
	Yerramurra		
	Yukembruk		
	Yurrandaali		
	Teena Riley		Registered
	Bradley Bell		
	Mura Culture Services		
	Sonione Rogers		
	Girragirra Murun		
	Wingarra Wilay		
	Step 3A – List of Registrations		
1/9	Teena Riley		
2/9	Adrian Brown		
5/9	Mulwaree		
5/9	Clive Freeman		
6/9	Buru Ngunawal		
12/9	Yurwang Gundana		
	Step 3A - List of RAPs to NSW Heritage and LALC (by 28 days from Step 4)		
28/9	Email	NSW Heritage	
28/9	Email	Pejar LALC	
22/9	**Step 4 – Project Pack**		
	Emailed all RAPS		
25/9/2023	**Step 5 – Methodology pack (end review period 23/10/2023)**		
	All RAPs emailed		23/10 – Email from Mulwaree Corporation – supports methodology
	Step 6 - Draft Reports (ends 8/12/2023)		
9/11/2023	All RAPS emailed		No Responses received

A.2 AHIMS SITE SEARCH

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : 2023/075

Client Service ID : 832923

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
57-3-0348	Crisps Creek 2	AGD	55	740280	6113970	Open site	Valid	Artefact : -	Open Camp Site	98643,102136
	Contact	**Recorders**	Kerry Navin,Mr.Kelvin Officer					**Permits**	1543,1544	
57-3-0350	Crisps Creek 4	AGD	55	740400	6114350	Open site	Valid	Artefact : -	Open Camp Site	98643
	Contact	**Recorders**	Kerry Navin,Mr.Kelvin Officer					**Permits**	1543,1544	
57-3-0005	Lake Bathurst;	AGD	55	745600	6114700	Open site	Valid	Artefact : -	Open Camp Site	556
	Contact	**Recorders**	ASRSYS					**Permits**		
57-3-0465	Tarago 2	GDA	55	741326	6116030	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Kayandel Archaeological Services					**Permits**		
57-3-0412	Tarago Survey Unit 3/Locale 1 T SU3/L1	AGD	55	742482	6111406	Open site	Valid	Artefact : 25		101377
	Contact	**Recorders**	Doctor.Rebecca Parkes					**Permits**	3127	
57-3-0349	Crisps Creek 3	AGD	55	740120	6114140	Open site	Valid	Artefact : -	Open Camp Site	98643,102136
	Contact	**Recorders**	Kerry Navin,Mr.Kelvin Officer					**Permits**		
57-3-0347	Crisps Creek 1	AGD	55	740420	6114420	Open site	Valid	Artefact : -	Isolated Find	98643
	Contact	**Recorders**	Kerry Navin,Mr.Kelvin Officer					**Permits**	1543,1544	
57-3-0410	Tarago Survey Unit 1/Locale 1 T SU1/L1	AGD	55	742475	6112031	Open site	Valid	Artefact : 300		101377
	Contact	**Recorders**	Doctor.Rebecca Parkes					**Permits**	3127	
57-3-0538	KST1 - King St Tarago 1	GDA	55	740557	6115357	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Lyn O'Brien,Past Traces Pty Ltd					**Permits**		
57-3-0411	Tarago Survey Unit 2/Locale 1 T SU2/L1	AGD	55	742430	6111607	Open site	Valid	Artefact : 18		101377
	Contact	**Recorders**	Doctor.Rebecca Parkes					**Permits**	3127	
57-3-0464	Tarago PAD1	GDA	55	741350	6115760	Open site	Valid	Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	Kayandel Archaeological Services					**Permits**		
57-3-0380	WL15	AGD	55	738249	6113469	Open site	Valid	Artefact : 15		99321,99582,102136
	Contact Searle	**Recorders**	Mr.Jamie Reeves					**Permits**		
57-3-0466	Tarago 1	GDA	55	741500	6115865	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Kayandel Archaeological Services					**Permits**		

**** 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 25/10/2023 for Lyn O'Brien for the following area at Lat, Long From : -35.1108, 149.579 - Lat, Long To : -35.0405, 149.7026. Number of Aboriginal sites and Aboriginal objects found is 13