Appendix 5

Past Traces Heritage Consultants

Residential Subdivision –Aboriginal Cultural Heritage Assessment and Archaeological Report

129 Marys Mount Rd Goulburn.

Report Prepared for RPS

By Lyn O'Brien Past Traces Pty Ltd

LGA: Goulburn - Mulwaree

20 November 2022

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- 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.

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
GPS	Global Positioning System
GSV	Ground Surface Visibility
LALC	Local Aboriginal Land Council
MGA	Map Grid of Australia
PAD	Potential Archaeological Deposit
RAP	Registered Aboriginal Party
SU	Survey Unit

ACKNOWLEDGEMENTS

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- Murawadi
- Didge Ngunnawal
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- Muragadi
- Tim Stubbs
- Guntawang
- Mulwaree
- Gunjeewong
- Corroboree
- Yurwang Gundana
- Buru Ngunawal
- Ginninderra

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EXECUTIVE SUMMARY

RPS have commissioned an Aboriginal Cultural Heritage Assessment and Archaeological Report for the proposed development of 129 Marys Mt Road Goulburn into residential lots and planned open space to be administered by Goulburn-Mulwaree Council. The land parcel is currently used as pastoral land, in northern Goulburn.

The property has been moderately impacted by the construction of farming related infrastructure and the ongoing use of the property. The study area is shown on Figure 1 in a regional context with the project boundary in Figure 2.

Residential development would involve the following impacts:

- Development of the land for residential purposes
- Construction of housing foundations involving removal of top and subsoils within building envelopes
- Construction of access roads into the development and through housing lots
- Connection to infrastructure, such as water, communications, sewerage, and electricity
- Installation of boundary fencing and potential impacts from landscaping
- Maintenance of landscape retained as open space.

A Due Diligence assessment was undertaken in 2022 by Past traces which identified, based on an Aboriginal Heritage Information Management System (AHIMS) search and background reports for the area, three previously registered sites (IF1, IF2 & IF3) within the project area with one area of PAD previously identified by NGH in 2017 (PAD3). The presence of these areas was confirmed by the Due Diligence field survey and a recommendation to progress to an Aboriginal Cultural Heritage Assessment (ACHAR) followed to allow subsurface testing to be undertaken.

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).

The field survey was undertaken by Past Traces in August 2022 in accordance with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCW 2010b) as a component of the due diligence assessment. The field survey covered the extent of the developable area. Ground visibility was low at the time of field survey, with thick grassed ground cover and tall grass in areas. Areas of exposure were limited to fence lines, gates, vehicle tracks and areas of erosion.

The field survey identified no new heritage sites or areas of Potential Archaeological Deposit (PAD) within the project area.

Subsurface testing of the areas of PAD present at IF2, IF3 and PAD3 was undertaken in 2022 resulting in low density quartz artefacts being recovered at IF2 with nil results in the areas of IF3 and PAD3. Both of these areas are not heritage sites, but as a registered site IF3 cannot be impacted without an AHIP.

As a result of the assessment completed for the project, the following recommendations have been developed:

- There are no planned impacts to any of the three recorded heritage sites within the project area. All of the sites occur within planned open space. This applies to sites IF1, IF2 and IF3.
- Barrier fencing will be required for Site IF2 during construction to prevent accidental impacts. This could be applied at the edge of development or the site boundary with a 5m buffer.
- If planning alterations occur, no impacts may occur to any of the identified Aboriginal Heritage sites unless an Aboriginal Heritage Impact Permit (AHIP) has been granted allowing harm to occur. IF3 has been found to not contain subsurface deposits, however as a registered site no impacts can occur to this site without an AHIP
- PAD 3 was found to contain no subsurface deposits and does not meet the criteria for a heritage PAD. There are no further requirements in regards to PAD 3.
- Should any unrecorded Aboriginal objects be encountered during works then works must cease and a heritage professional contacted to assess the find. Works may not recommence until cleared by NSW Heritage. 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*.
- Further archaeological assessment would be required if the proposal activity extends beyond the area of the current investigation. This would include consultation with the RAPs for the project and may include further field survey.
- 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.
- No further heritage investigations are required, other than those listed, should the AHIP be approved, except in the event that unanticipated Aboriginal Objects and/or human remains are unearthed during any phase of the Project.

1 INTRODUCTION

1.1 PROJECT BRIEF

RPS have commissioned an Aboriginal Cultural Heritage Assessment and Archaeological Report for the proposed development of 129 Marys Mt Road Goulburn into residential lots and planned open space. The land parcel is currently used as pastoral land, in northern Goulburn.

The property has been moderately impacted by the construction of farming related infrastructure and the ongoing use of the property. The study area is shown on Figure 1 in a regional context with the project boundary in Figure 2.

Residential development would involve the following impacts:

- Development of the land for residential purposes
- Construction of housing foundations involving removal of top and subsoils within Building envelopes
- Construction of access roads into the development and through housing lots
- Connection to infrastructure, such as water, communications, sewerage, and electricity
- Installation of boundary fencing and potential impacts from landscaping
- Open space within the development.

Development holds the potential to impact on unrecorded Aboriginal heritage located within the project area and to address this an Aboriginal heritage assessment was undertaken to determine the extent of impacts from the project.

The proposed works will involve the substantial displacement and removal of soil and the importation of materials. 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* or historical sites which are protected under the *NSW Heritage Act 1977*. The purpose of the assessment is therefore to investigate the presence of any heritage sites and to assess the impacts and management strategies that may mitigate any impacts, including application for an Aboriginal Heritage Impact Permit (AHIP) if heritage impacts are unavoidable.

The aim of this assessment is to inform the proponent 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. The Archaeological Report (AR) details the investigation and assessment of cultural heritage undertaken for the project. Reporting will follow the guidelines of NSW Heritage, in particular the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCW 2010a).

Preparation of the ACHAR for the project has been undertaken in accordance with the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH 2011).

Consultation with Aboriginal representatives for the project has been undertaken in accordance with the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW 2010).

1.2 PROJECT OBJECTIVES

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

- Identify and consult with Registered Aboriginal Parties (RAPs).
- Search NSW Heritage Aboriginal Heritage Information Management System (AHIMS) register to identify listed Aboriginal cultural heritage sites within the project area
- Review previous heritage reports in the vicinity of the project area in order to recognise any pattern in Aboriginal site distribution.
- Develop a predictive site location model.
- Conduct a site visit across the project area to confirm the previously assessed area of archaeological potential, recorded sites and levels of previous disturbance.
- Through consultation with the Aboriginal community assess the significance of identified heritage sites.
- Undertake sub surface testing of the identified sensitive landforms that occur within the project area to determine their archaeological potential.
- 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

1.3 RESTRICTED AND CONFIDENTIAL INFORMATION

Information in this report is restricted due to cultural sensitivities. Appendix 1 and 2 contain 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.

Appendix 5

Figure 1: Regional Context

Legend

Project

N

1:100,000

0 1.25 2.5 5

Kilometers
Coordinate System:
GDA 1994 MGA Zone 55

Imagery: © Nearmap

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Appendix 5

Figure 2: Study Area

Legend

- Project Area
- Contour -10m
- Minor Road
- Track-Vehicular
- Cadastre

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1:6,000

0 50 100 200

Meters
Coordinate System:
GDA 1994 MGA Zone 55

Imagery: © Nearmap

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1.4 INVESTIGATORS AND CONTRIBUTORS

1.4.1 Lyn O'Brien

This report has been prepared by Lyn O'Brien, Director of Past Traces Pty Ltd with over 20 years' experience in the heritage profession. Since completing her BA (Hons) in Archaeology at the Australian National University (ANU) in 1996, Lyn has held a variety of consulting positions, from field assistant through to regional manager/senior archaeologist. As a senior archaeologist 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) majoring in History 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, test excavations, salvage, and has assisted with excavations in NSW and the ACT.

2 ABORIGINAL CONSULTATION

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). 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
- Completion of any field work or site visits
- 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. Documentation and RAP responses are provided in the Aboriginal Cultural Heritage Assessment Report (ACHAR) to which this AR is appended.

As outlined above, Aboriginal community feedback has been sought during the design of the heritage assessment methodology and findings. The RAPs for the project provided information in relation to cultural values and site significance.

The consultation steps completed are provided in the consultation log for the project attached at Appendix A. A full list of the RAPs is also provided within the consultation log. Details of the steps completed for each of the stages are provided below.

Step 1. A public notice was placed in the local newspaper, the Goulburn Post (20/7/2022) seeking registrations of interest from Aboriginal stakeholders. A copy of this public notice is attached at Appendix A.

Notification letters detailing the project with a request for Aboriginal stakeholders were sent to the Pejar Local Aboriginal Land Council (LALC), and various statutory authorities including NSW Heritage and Goulburn Mulwaree Council, as identified under the consultation requirements on the 21/7/2022. Following feedback from NSW Heritage, notification letters were then sent to identify stakeholders on the 27/72022 with a 14-day registration period of interest ending on 10/8/2022.

In response to the public notice and notification letters, 11 groups registered their interest in participating in the project and holding cultural connection to the project area. The Aboriginal stakeholders who registered for the project (the Registered Aboriginal Parties – RAPs) and the date of their registrations are as follows:

- Murawadi 27/7
- Didge Ngunnawal 27/7
- Pejar LALC 27/7
- Murrabidgee Mullangari 27/7
- Muragadi 27/7
- Tim Stubbs 27/7
- Guntawang 28/7
- Mulwaree 28/7
- Gunjeewong 28/7
- Corroboree 28/7
- Yurwang Gundana 2/8
- Buru Ngunawal 9/8
- Ginninderra 11/8

Step 2. Project pack containing further details and mapping of the project was sent to each RAP on the 1/8/2022.

Step 3. A Methodology Pack outlining the proposed methodology to be followed for the project was sent to all RAPS for review on the 19/8/2022 with a closing date of 6/9/2022. RAPs were invited to provide comments on the proposed methodology and to provide any information that they may hold in relation to the cultural values of the project area.

Step 4. A draft version of this report was supplied on the 15/11/2022 to the RAPs with a timeframe of 28 days to provide feedback on the report and suggest amendments.

2.1 ABORIGINAL COMMUNITY FEEDBACK

Throughout the life of the project Aboriginal community feedback has been sought in regards to the methodology to be undertaken and the results of the heritage assessment. No information has been provided showing that the project area holds specific cultural values or that known heritage sites are located within the project area that have not been identified during the heritage assessment or by previous studies.

All responses received from the RAPs have been incorporated into the final report, with RAPs making the determination on the long-term curation of artefacts and ongoing mitigation measures.

3 LANDSCAPE CONTEXT

3.1 GEOLOGY AND TOPOGRAPHY

The Project Area covers an area of upper to lower slopes with an ephemeral drainage line to the west. No permanent water source crosses the area, and no incised creek line is present. This drainage line drains into the Wollondilly River, and forms part of the Wollondilly catchment area. During wet periods this is a wet marshy area which dries quickly after rain and is dry through summer. It does not provide a water source except in times of floods.

The underlying geology of the Project Area consists of teschenite (dolerite) intrusions which have penetrated the upper Silurian sediments, as well as metamorphosed mudstones and limestone outcrops, forming parts of the Rhyanna and Bishopthorpe Dolerites. These upper Silurian sediments include extensive outcrops of Quaternary limestone consisting of gravel, sand, silt and clay. No stone sources are present that indicate quarries or areas of concentration.

The Geology of the project area is shown on Figure 3.

3.2 SOILS

The soils of the Project Area are classified by Hird (1991) as Monastery Hill in the east and Sooley in the west.

- Monastery Hill - This soil landscape is comprised of fine sandy loams underlain by an orange mottled structured clay. On the crests and side slope landforms are duplex orange-coloured soils with acid to alkaline reaction, no development of A2 horizons and massive to moderately structured upper B horizons. These are similar to yellowish Chocolate Soils. Below about 1 m an alkaline mottled grey clay occurs. Prairie Soils, Grey Clays and Alluvial Soils occur on footslopes and in drainage lines.
- Sooley – This landscape is comprised of a complex soil distribution where Lithosols have formed on crests and upper sideslopes, and prairie soils have formed in the valleys. Nearer to the Sooley Dam, Terra Rossa soils have formed on the extensive limestone outcrop. Minor areas of rock outcrop occur.

These soils have formed *in situ* and from alluvial-colluvial material derived from the parent rock. They are acidic which limits the potential for any organic remains to survive.

The soil landscapes of the Project Area are shown in Figure 4.

Appendix 5

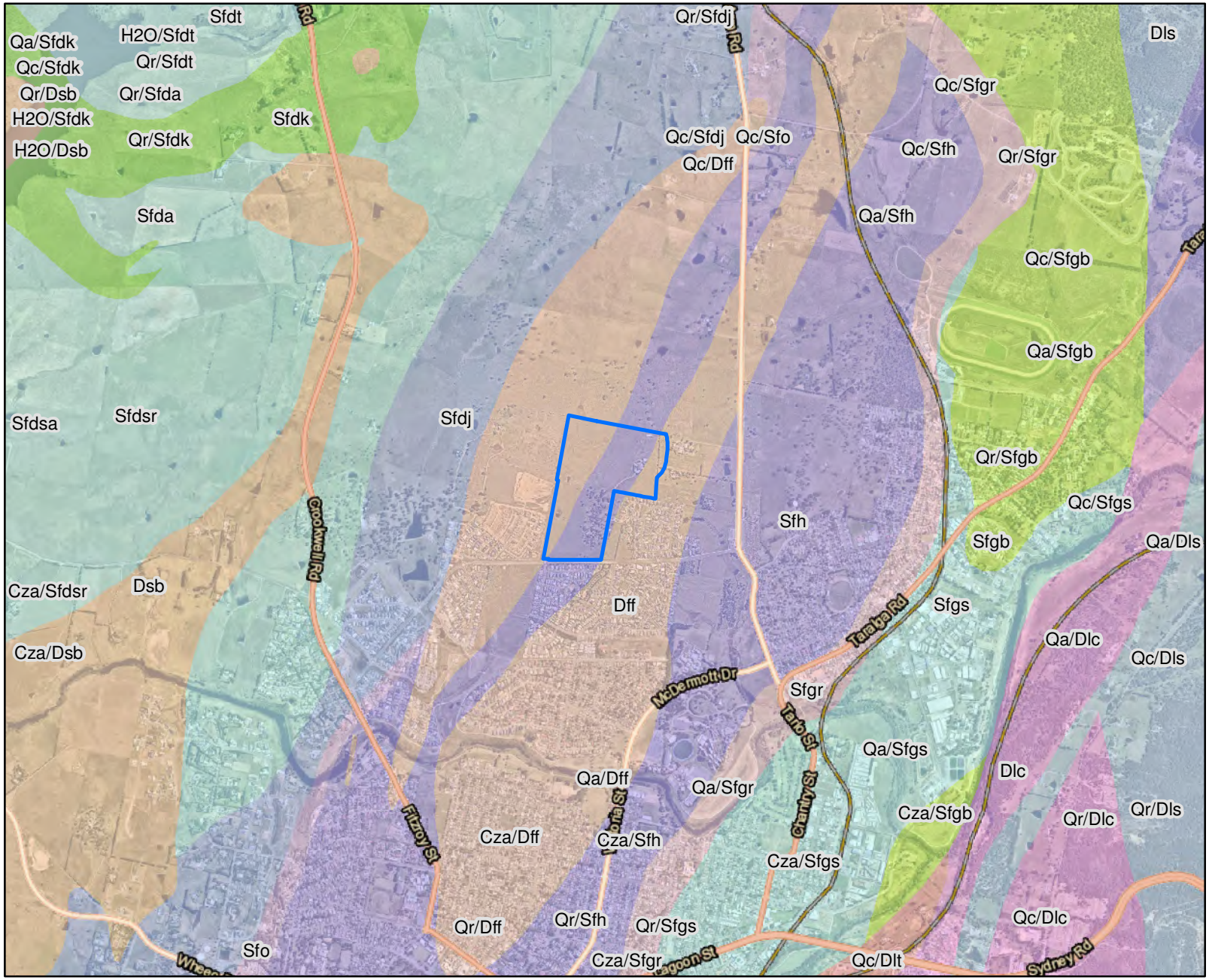

Figure 3: Geology

Legend

Project Area

Geology

- Back Station Ignimbrite
- Bishopthorpe Dolerite
- Bradfordville Volcaniclastic
- Cookbundoon Formation
- Covan Creek Formation
- Forest Lodge Quartz
- Joppa Siltstone Member
- Kingsdale Limestone Member
- Rhyanna Formation
- Strathaird Formation
- Tarlo Formation
- Unnamed

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Kilometers
Coordinate System:
GDA 1994 MGA Zone 55

Imagery: © Nearmap

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Appendix 5

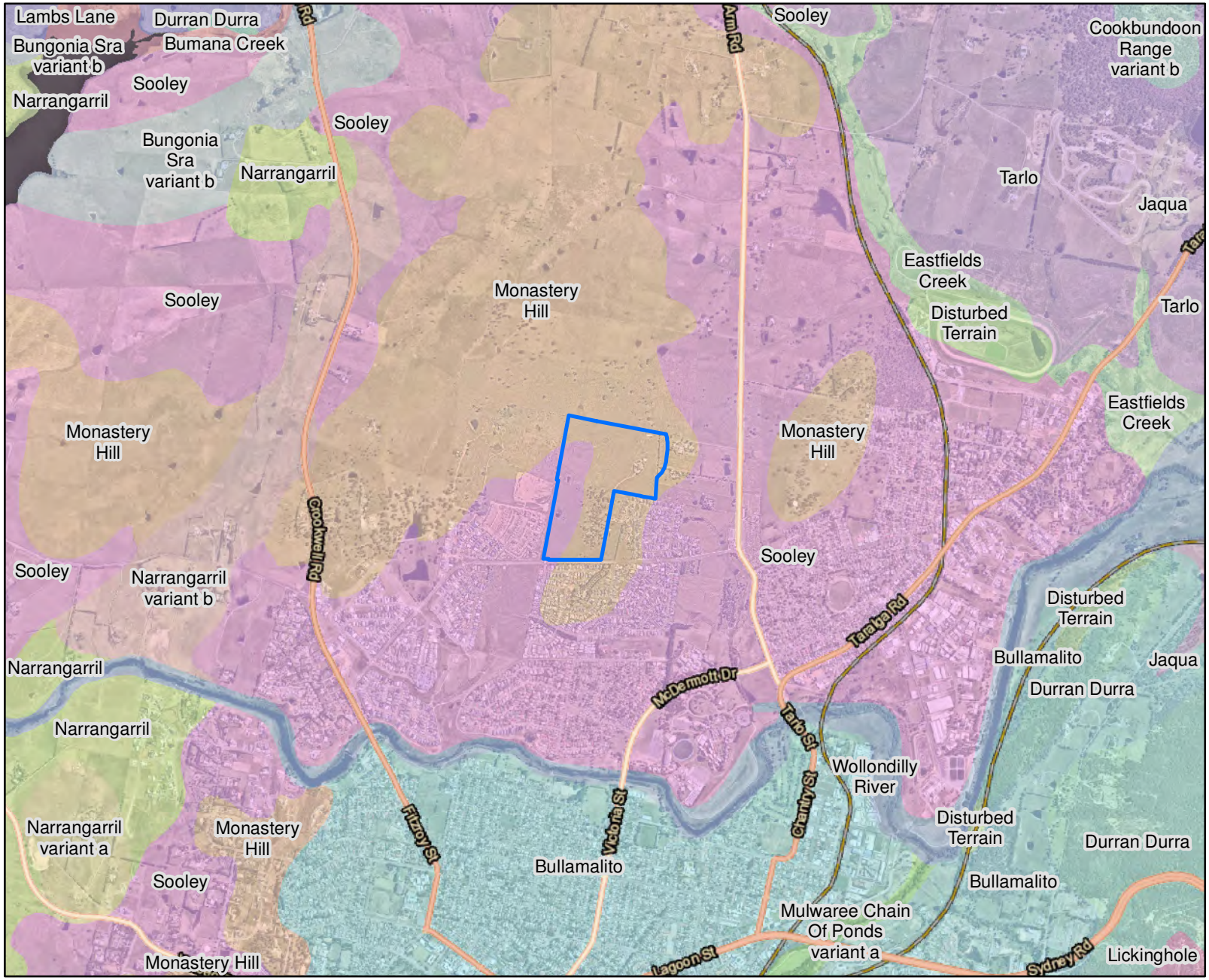

Figure 4: Soils

Legend

Project Area

Name

- Bullamalito
- Bumana Creek
- Bungonia Sra variant b
- Cookbundoon Range variant b
- Disturbed Terrain
- Durran Durra
- Eastfields Creek
- Jaqua
- Lambs Lane
- Lickinghole
- Monastery Hill
- Mulwaree Chain Of Ponds variant a
- Narrangarril
- Narrangarril variant a
- Narrangarril variant b
- Sooley
- Tarlo
- Wollondilly River

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Kilometers
Coordinate System:
GDA 1994 MGA Zone 55

Imagery: © Nearmap

3.3 FLORA AND FAUNA

The Project area is a highly modified landscape currently consisting of improved pasture grasses, weed species and cleared native trees. An ephemeral drainage line runs north to south through the west portion of the project area which may hold water following wet weather but generally is dry with wetter areas. In the past this area, may have supported a wet tussock grassland community.

Prior to clearance areas close to the drainage line would have consisted of grasslands as would have the lower slopes. On the mid to upper slopes, previous woodlands would have provided shelter for Aboriginal groups and a wider range of resources would have been present. Prior to clearing of these mid to upper slope areas, the landscape would have supported savannah woodland communities of Yellow Box (*Eucalyptus melliodora*) and Blakely's Red Gum (*E. blakelyi)*. As a result of this landscape the project area would have provided resources utilised by the Aboriginal community, with higher areas of resource and focus located away from the project area in closer proximity to the Wollondilly River and Lake Sooley, located to the south and west respectively.

3.4 LANDSCAPE CONTEXT

The Project Area has been used historically as a part of larger pastoral holdings. Pastoral impacts in the form of vegetation clearance, ploughing, pasture improvements, stock impacts, dam construction, irrigation infrastructure and increased erosion followed routinely from the inception of pastoral practices and will have affected the preservation of archaeological sites and deposits.

The project area conforms to a low potential area based on Aboriginal site distribution modelling by Fuller (1989). Fuller's model, which has been shown by numerous studies to be valid, indicates that Aboriginal occupation was focused around major watercourses and nearby landforms, such as lower slopes, with cultural material appearing less frequently on other landforms. As a result, the context of the landscape of the project area would be of infrequent visitation or passing impacts as groups travelled through to areas of denser resources.

The previous recorded sites and predictive model for the area are discussed in Section 4.

4 ABORIGINAL ARCHAEOLOGICAL CONTEXT

A desktop assessment has been undertaken to review the existing archaeological record for the project area, and the wider Goulburn region in accordance with Requirements 1 to 4 of the Code of Practice. This information has been used to identify previously recorded sites and to develop an Aboriginal site prediction model for the project area.

4.1 ABORIGINAL GROUPS WITHIN THE PROJECT AREAS

Within the 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 AHIMS SEARCH AND SITE ANALYSIS

A search of the NSW Heritage AHIMS database was undertaken on the 19 July 2022 covering the 1km surrounding area centred on the project area. The extensive search revealed three previously recorded heritage sites (Marys Mount IF1, IF2 & IF3) within the project area with 26 sites within the wider search area. The recorded sites consisted of isolated artefacts with no camp sites, scarred trees or areas of Potential Archaeological Deposit (PAD) recorded within the search area.

Heritage assessments have been undertaken in increasing frequency due to the level of increased development within the Goulburn region and increased legislative requirements within NSW. As a result, a large number of cultural heritage surface surveys and sub-surface excavations have been conducted throughout the Goulburn region. Review of this body of work allows for the development of regional settlement models; landscape usage; the use of resources; group movements; and site locations for the region.

These previous 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. This is directly applicable to the project area. This predictive model is discussed in more detail in Section 4.4.

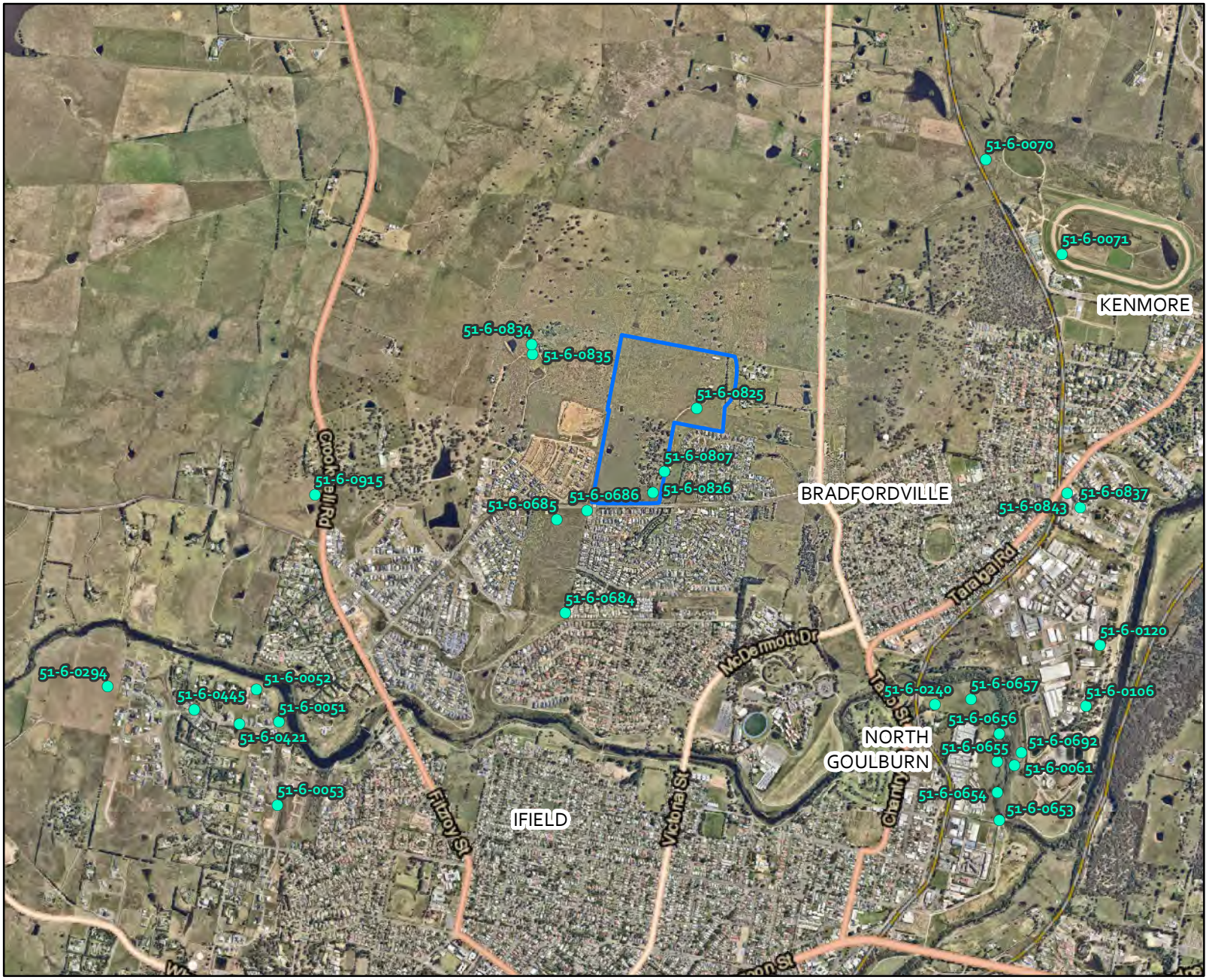
The recorded sites on AHIMs for the project area are listed in Table 1 and shown on Figure 5 in relation to the project area.

Table 1. AHIMS Site Types

Site Type	Number	Percentage
Isolated Find	14	48.3%
Artefact Scatter	7	24.1%
PAD	7	24.1%
Culturally Modified Tree	1	3.5%

Appendix 5

Figure 5: AHIMS Sites



Legend

- AHIMS Site
- Project Area

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Kilometers
Coordinate System:
GDA 1994 MGA Zone 55

Imagery: © Nearmap

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4.3 PREVIOUS ARCHAEOLOGICAL WORK

Heritage assessments have been undertaken in increasing frequency due to the level of increased development within the Goulburn region and increased legislative requirements within NSW. As a result, a number of cultural heritage surface surveys and sub-surface excavations have been conducted throughout the Goulburn region. Review of this body of work allows for the development of regional settlement models; landscape usage; the use of resources; group movements; and site locations for the region.

4.3.1 Regional Overview

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).

A number of Aboriginal cultural heritage investigations have been conducted for the Goulburn region. Models for predicting the location and type of Aboriginal sites with a general applicability to the Goulburn region and thus relevant to the Project Area have been formulated. These assessments have shown a general concentration of large sites adjacent to water bodies and sand bodies with smaller sites distributed in proximity to permanent water ways (Fuller 1989, Packard 1986, Koettig 1983). Due to the large number of studies, only the most relevant of these studies are summarised below.

Koettig in 1983 completed a large-scale surface survey for the Hume Highway bypass of Goulburn, locating 22 artefact scatters and 17 isolated finds. All of Koettig's sites were located within 200m of a watercourse and it was concluded that small sites tended to be located near smaller creeks with larger sites at the verges of larger watercourses. Fifty-four percent of sites were located on slopes with 23% on ridges and creek flats.

Koettig and Lance in 1986 undertook the Aboriginal Resources Planning Study for the City of Goulburn. Based on all available data they developed an Aboriginal site location model for Goulburn. Four landscape zones based on topography (major watercourse, undulating hills and plains, hills and residential areas) were assigned archaeological sensitivity ratings. A review of previously identified sites within the Goulburn region found the majority of these sites are located on basal slopes close to major waterways, with most sites consisting of small artefact scatters.

Fuller in 1989 was engaged by Goulburn City Council to test Lance and Koettig's 1986 model by undertaking sub surface testing at areas designated high sensitivity by the model. The results of this large excavation program, although supporting the overall model, concluded that all areas apart from major watercourses were of low potential and that further subdivisions were necessary in the undulating hills category if it was to be useful for predicting site locations. Fuller's refined model is shown in table 1.

Australian Archaeological Survey Consultants (AASC) in 1993 undertook the archaeological assessment of the proposed Telstra optical fibre cable route from Goulburn to "the Forest" covering a total distance of 5km of linear survey. This survey crossed a variety of landforms consisting of Marys

Mount AR 11 undulating hills, creek lines and flats. The survey resulted in the identification of three surface scatters, four isolated finds and one possible scarred tree. The majority of artefacts were flakes constructed on quartz and chert with a small proportion of silcrete.

Bowen Heritage Management (BHM 2000) undertook surveys for the proposed 11ha industrial estate in Ross Street Goulburn locating one small artefact scatter of two artefacts. These were located approximately 20m above the Wollondilly River in the river flats on a walking track linking the Wollondilly River to the powerline easement. BHM classified the area as holding moderate potential but as highly disturbed by its previous use as a golf course.

Williams in 2004 undertook a surface survey for the Tall Timbers Residential Development in south east Goulburn for the Greater Argyle City Council. He located one large surface scatter (51-6-0123) with approximately 300 artefacts. The site consisted of dispersed artefacts across the entire study area. Being on upper undulating slopes close to a watercourse Williams considered the area to possess high potential for sub surface artefacts but since these artefacts were in a disturbed location, they had low archaeological significance. This disturbed context was the result of the installation of below ground services for the residential development prior to the survey and assessment being undertaken. The area overlooks the Mulwaree River Flats, a rich resource area and was noted to be an attractive place to camp.

New South Wales Archaeology in 2007 completed an assessment of a proposed subdivision of five rural residential lots in Kingsdale. During a survey that was conducted across a range of landforms, total of 13 Aboriginal artefact locales were recorded with 153 artefacts. The predictive model followed from Fuller (1989). The majority of artefacts were found on either spur or ridge crests, and small artefact locales were located on basal slopes and creek margins. Overall low density artefact distribution was explained by most likely people moving through country for a variety of purposes including hunting and gathering forays, but not on long term or repeated basis.

Mills Archaeological and Heritage Services Pty Ltd undertook an Indigenous Heritage Assessment of a Powerline easement from the Rocky Hill Substation to the North Goulburn Sub station in 2009. This assessment identified eight Aboriginal sites and five European sites. The assessment explicitly states that it follows the landform predictive model of Lance and Koettig (1986) and Fuller (1989). The study area ran to the east of the Marys Mount Project Area approximately 2km distance. This study was followed by sub surface testing of the proposed route with additional small density sites being located within the footslopes above a tributary of Gundary Creek, within 600m of the creekline.

Ironbark heritage in 2010 undertook field survey and research over an area of proposed development at 134 Marys Mount Road in Goulburn. The original surveys were undertaken 2005 but then the project halted. They completed the 2010 survey without relocating the 2005 sites and concluded that the area held moderate potential along the creek line for subsurface deposits.

AMBS in 2012 undertook an Aboriginal Heritage Study for the entire Goulburn Mulwaree LGA for the Goulburn Mulwaree Council. This study followed on from the work of Lance and Koettig (1986) and Fuller (1989) and assessed the general importance of different landforms to the Aboriginal community and their sensitivity for archaeological potential. Previous work undertaken within the Goulburn region was concluded to support the predictive model of Fuller, finding that the model was still applicable.

The findings of Fuller were used as the basis for classification of landform potential for predictive archaeological sensitivity mapping within the boundaries of the LGA.

Following the Ironbark 2010 assessments, Biosis in 2013 completed a program of field survey and test excavations at 134 Marys Mt Road. The field survey did not identify any heritage sites and could not relocate the previously identified three sites recorded in 2005 by Ironbark. Areas of potential along the creek flats were sub surface tested with nil deposits in all testpits. As a result of this extensive testing, it is known that no areas of PAD are present within the project area.

Past Traces in 2021 completed a further assessment for the subdivision of 134 Marys Mount Road. Three previously recorded sites (51-6-0684, 51-6-0685 & 51-6-0686) were present within the project area, recorded by Iron Ironbark in 2013 as two isolated finds and one artefact scatter respectively. However, the 2021 field survey could not relocate any of the previously recorded artefacts.

In 2022, Past Traces conducted an Aboriginal Cultural Heritage Assessment for the proposed development of Lot 103 DP 1007433 located on Crookwell Road. This assessment identified four Aboriginal sites and two areas of PAD located in association with drainage lines. These sites consisted of isolated finds and artefact scatters, with the two areas of PAD located within 150m of ephemeral drainage lines.

Numerous other development-based assessments have been completed for the Goulburn area. These numerous studies have over the years provided a body of work supporting the broadscale predictive model ground tested and refined by Fuller (1989) for the Goulburn Plains.

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, NGH Survey (2017) the landforms present within the project area and the degree of disturbance which has occurred historically.

Based on this information, a predictive model has been developed for the project area (Table 2). The definition of each site type is described firstly, followed by the predicted likelihood of this site type occurring within the Project Area.

This site prediction model is based on:

- Site distribution in relation to landscape features within the project area
- Consideration of site type and densities likely to be present within the project area
- Potential Aboriginal use of natural resources present or once present within the project area

Table 2. Site Prediction Model

Probability	Site Type	Definition	Landform
Moderate	Isolated finds and surface scatters of stone artefacts	Stone artefacts ranging from single artefact to high numbers	Creek lines and spur crests. No high potential land forms present.
Moderate	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 spurlines Three areas of PAD recorded.
Low	Culturally Modified Trees (CMTs)	Trees which have been modified by scarring, marking or branch twining	May be present on old remaining trees - most old growth trees have been removed
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
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

Areas of moderate potential may be present in the sections of the project area overlooking the drainage lines and in the vicinity of spur line crests. Determination of the area of potential and degree of disturbance in these areas was one of the major aims of the site visit and field survey.

4.5 LANDFORM AND DISTURBANCE LEVEL ASSESSMENT

The landforms within the project area consist of gentle to moderate undulating hillslopes. Water sources are only present in the form of a 1st order drainage lines to the west. Within the project area no permanent water source is present.

The project area has been impacted by European settlement from the mid nineteenth century. The project area has as a result been under continual grazing and pastoral regimes over a lengthy period of time. These past use impacts are typical for the Goulburn and Southern Tablelands region and consist of the following:

- Vegetation and tree clearance
- Stock impacts
- Fencing
- Vehicle tracks – some consisting of minor roads, other of impact trails
- Extensive impacts in areas of housing including landscaping
- Ploughing of topsoils for pasture improvement or light cropping.

All of these landscape and soil impacts reduce the potential for archaeological or heritage sites to remain intact within the landscape. Confined areas of disturbance are present at gates and along fence lines. Exposed ground is present in areas of stock impact, vehicle tracks, fence lines, under trees and large areas of erosion.

Review of previous Aboriginal sites located in the vicinity indicates a site location model based on level areas in proximity to water resources such as creek lines with smaller sites located on hilltop ridgelines. The study area consists of gentle to moderately undulating hill slopes classified as holding low overall low potential for heritage sites based on Fullers model. As a result of the landform assessment the study area contains low potential to contain any unrecorded heritage sites or areas of PAD and has suffered a moderate degree of previous impact. One surface site and three areas of PAD have been recorded previously and it is considered unlikely that additional sites are present.

5 ARCHAEOLOGICAL FIELD SURVEY

A field survey of the project area was undertaken on the 15th August 2022 by Nathaniel Cracknell and Elisa Scorsini (Past Traces) to verify the findings of the desktop review of landforms and disturbance. The survey covered the entire project area including Stage 1 and 2.

The aim of the investigation was to identify heritage objects or places of potential archaeological Deposit (PAD) located within the project area and assess the potential impacts from the project.

All surveyed areas and items of interest were recorded on a topographic map of the study area (using a GPS and GDA 94 coordinates), along with levels of visibility, erosion, soil conditions, and evidence of land disturbance.

Ground surface visibility (GSV) is the percentage of ground surface that is visible during the field inspection through the grass and vegetation coverage. GSV increases in areas of exposures such as stock impact trails, roads, gates and along areas of erosion such as creek banks and dam walls. As a result, surveys undertaken in areas with high exposure rates result in a more effective survey coverage.

The field survey aims and sampling strategy are provided below.

5.1 ARCHAEOLOGICAL SURVEY AIMS

The principle aims of the survey were to:

- Provide an opportunity to view the Project Area and to identify/confirm landforms, areas of potential and levels of previous disturbance.
- Complete pedestrian transects of the Project Area visually inspecting areas and landforms with the potential for Aboriginal heritage.
- Identify and record any heritage sites visible on the ground surface.
- Identify and record areas of potential archaeological deposits (PADs).
- Inspect areas of previously recorded sites and area of PAD.

5.2 FIELD SURVEY SAMPLING STRATEGY

The project area covers a range of landforms. The predictive model indicates a significant difference in the potential among the different landforms, particularly with distance from the ephemeral drainage line and lower potential along the long side slopes. Despite this difference, the survey aimed to achieve the greatest coverage possible of all landforms and Survey Units (SU). All landforms within the project area were sampled during the field survey though ground surface visibility (GSV) varied due to grass length and erosional exposures at the time of survey.

The project area consists of undulating lower and middle slopes with the current dwelling located on a descending spur crest in the northeast of the property, as well as an area of creek flats in SU 2 & 4 to the west. A first order drainage line (ephemeral) runs from north to south along the western boundary of the project are, running into two constructed dams.

Survey Units were based on fence lines divisions and areas of similar disturbance. The commencement point of each SU was accessed by pedestrian transects completed (walked) across the SU returning to the vehicle location. As a result, the project area was divided into four main survey units. The distribution of survey units, landforms and pedestrian transects is shown in Figures 5 and 6.

The distribution of landforms within the project area is provided in Table 3 and Figure 8.

Table 3. Landforms across the Project Area

Landform	%	Grand Total (m2)
Crest	1.68	6972.70
Upper Slope	4.73	19593.03
Middle Slope	24.22	100274.99
Lower Slope	41.22	170674.98
Creekflats	23.44	97071.45
Drainage Line	4.71	19482.84
Grand Total	100%	414070

5.3 FIELD SURVEY METHODS

The archaeological survey was conducted on foot in accordance with the archaeological survey requirements of the Code of Practice (DECCW 2010) by Nathaniel Cracknell and Elisa Scorsini (Past Traces). Pedestrian transects covered all sections of the study area and participants were spaced at approximately 10m distance.

Close attention was given to areas of higher potential based on landform and erosional exposures during the survey. All surveyed areas and items of interest were recorded on a topographic map of the study area, along with levels of visibility, erosion, soil conditions, and evidence of land disturbance.

Information that was recorded during the survey included:

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

Transects were positioned to cover all landforms present within the Project Area. Landforms consisted of a spur crest, simple middle and lower slopes and open creek flats in the vicinity of the western drainage line. .

The pedestrian transects, and landforms within the Project Area are shown on Figures 6 and 7.

Appendix 5

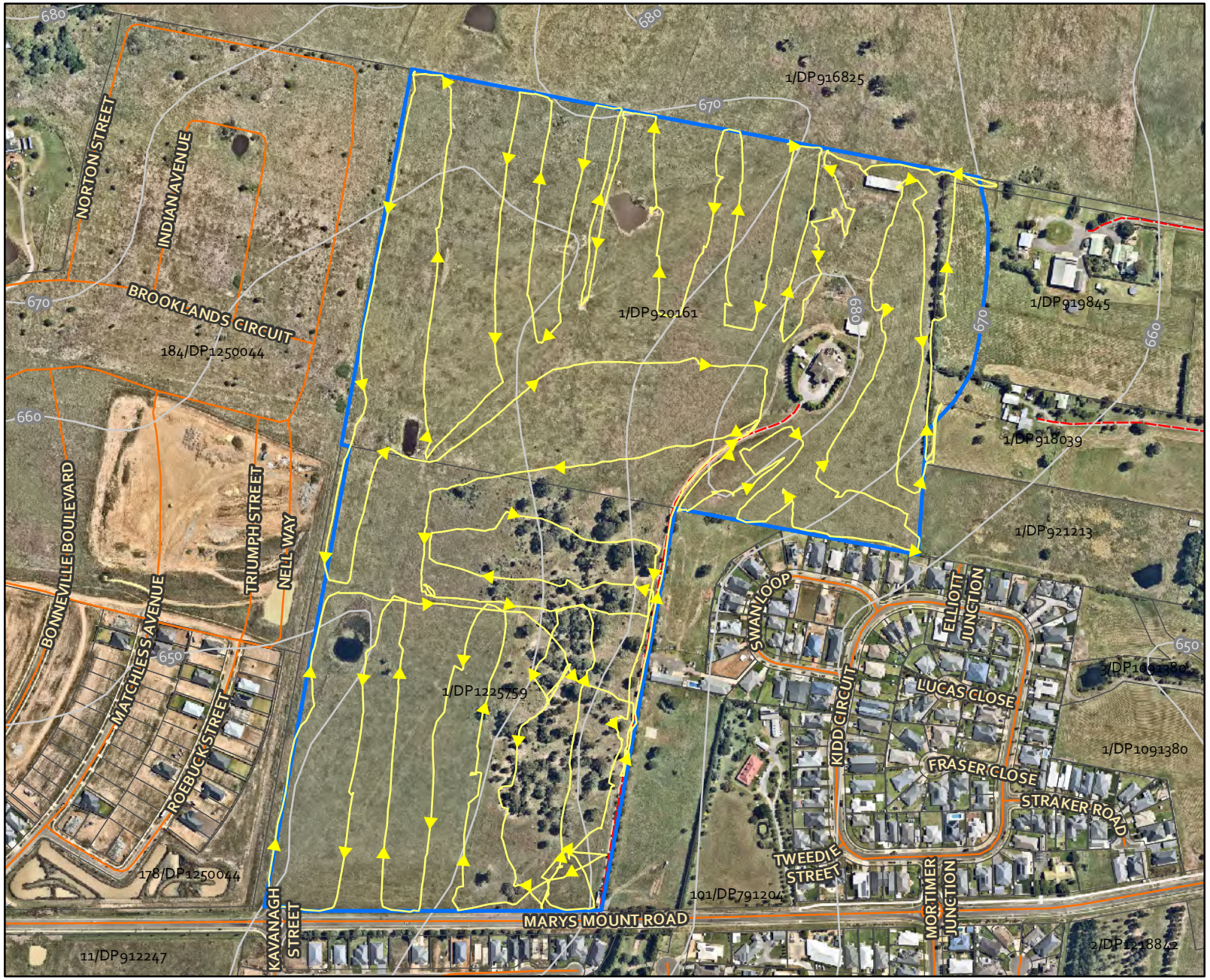

Figure 6: Pedestrian Transects

Legend

- Transect
- Contour -10m
- Minor Road
- Track-Vehicular
- Project Area
- Cadastre

N

1:6,000

0 50 100 200

Meters
Coordinate System:
GDA 1994 MGA Zone 55

Imagery: © Nearmap

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Appendix 5

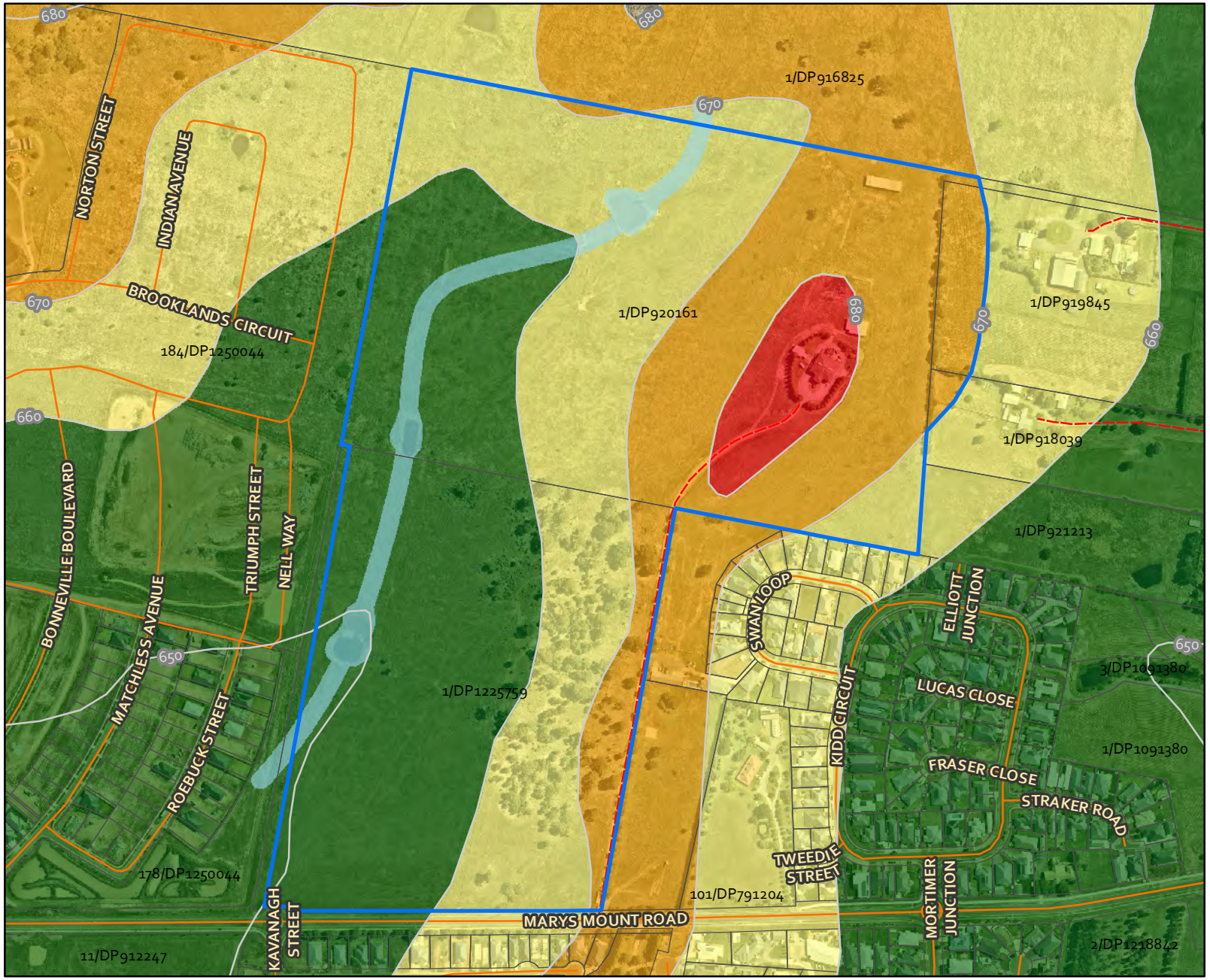

Figure 7: Landforms

Legend

- Contour -10m
- Minor Road
- Track-Vehicular
- Cadastre
- Project Area

Landform

- Crest
- Middle Slopes
- Lower Slopes
- Creek flats
- Drainage

N

1:6,000

0 50 100 200

Meters
Coordinate System:
GDA 1994 MGA Zone 55

Imagery: © Nearmap

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5.4 ARCHAEOLOGICAL SURVEY RESULTS

Field survey was conducted during August 2022 with pedestrian transects aimed to cross different landforms and provide coverage of all landforms and areas of identified potential. The survey was undertaken at a time when surface visibility was extremely low across the project area and grass length was extensive and high, in some sections over hip height. Regular exposures were only present along the vehicle tracks and gates. Various confined stock impact tracks were present across the grassed areas with stock present at the time of survey. The locations of the pedestrian transects and landforms across the project area are shown in Figures 5 and 6.

5.4.1 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 the higher the effectiveness of the field survey. The GSV and exposure rates were estimated based on the guidelines in the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCW 2010b).

Background GSV varied through the project area, due to the degree of erosion and grass coverage. GSV was highest along the areas of vehicle access and area of erosion. GSV was lowest along the slopes and descending spur lines and crest features. Grass coverage was extensive and GSV was generally estimated at 20%. Areas of erosion were present in association with dam features, due to stock impacts and along vehicle tracks. Small areas of exposure were present at gate locations as well as along the vehicle access tracks, but outside of these small sections, the project area consisted of long, extensive grass coverage.

The GSV, degree of disturbance and rate of exposures for each Survey Unit is provided in Table 4. Plates 1 to 6 show indicative areas of landforms and exposures within the project area.

Table 4. Ground Surface Visiblity Rating

Survey Unit	GSV	Exposure Rate	Degree of Disturbance	Mechanism of disturbance
SU1 – Crest/Upper	20%	40%	High	Landscaped crest and house block Introduced tree species windbreak
SU2 - Middle	30%	30	Moderate	Concrete slab shed and farming infrastructure including yards to north. Access road. Vegetation clearing in past. Grass coverage with several erosion exposures. Numerous stock impact trails, vehicle tracks.
SU3 – Lower	30%	30%	Moderate	Vegetation clearing in past, animal impacts, previous vehicle track Decreased in areas of woodland.
SU4 – Creek flats	10%	20%	Moderate	Vegetation clearing in past. thick grass coverage, wet boggy conditions.

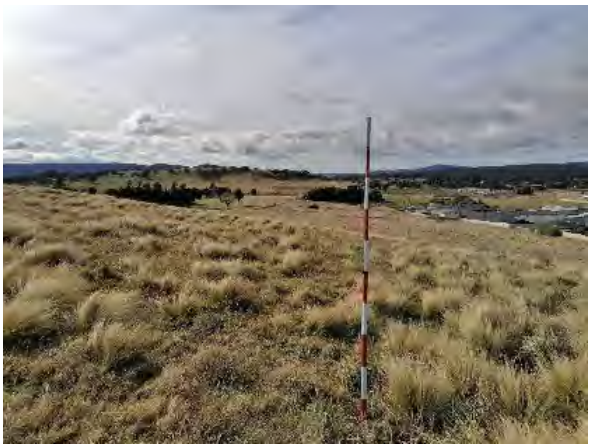

Plate 1: View downslope with moderate to gentle gradient (Facing East)

Plate 2. Northern boundary mid to low slopes, with orange clay areas of disturbance (West)

Plate 3: Very low GSV overlooking woodland area of native regeneration (East)

Plate 4: Photo taken from driveway overlooking the wooded area in SU3 (West)

Plate 5: Driveway, photo taken from a gentle rise (North)

Plate 6: Vehicle track exposure at gate (South)

5.4.2 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.

Two team members completed the field survey, inspecting an area of 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 low, but has acted to confirm the previous field survey results and landform assessment.

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 5. 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)
Crest	6972.70	20%	40%	557.82	8%
Upper Slope	19593.03	20%	30%	1175.58	6%
Middle Slope	100274.99	30%	30%	9024.75	9%
Lower Slope	170674.98	20%	15%	5120.25	3%
Creekflats	97071.45	15%	15%	2184.11	2%
Drainage Line	19482.84	10%	40%	779.31	4%
Total	414070			18841.82	5%

Table 6. Landform Summary

Landform	Area (m2)	effective coverage area (m2)	% of landform surveyed	no of sites	No of PAD
Crest	6972.70	557.82	8%	0	0
Upper Slope	19593.03	1175.58	6%		
Middle Slope	100274.99	9024.75	9%	1	1
Lower Slope	170674.98	5120.25	3%	0	2
Creekflats	97071.45	2184.11	2%		
Drainage Line	19482.84	779.31	4%	0	0
Total	414070	18841.82	5%	1	3

Details of the results of the field survey in relation to the previously recorded sites and the areas of PAD are provided in the following sections.

5.5 PREVIOUSLY RECORDED HERITAGE SITES

Originally recorded by NGH in 2017, one Aboriginal heritage site (Marys Mount IF1) and three areas with Potential Archaeological Deposits (PAD) (Marys Mount IF2, IF3 & PAD3) are located within the project area.

Areas of PAD are defined as landforms that hold higher potential than their surrounds to contain subsurface deposits of past Aboriginal occupation. Based on a review of previous studies completed for the region, areas of PAD would be located in association with waterways (1st or 2nd order streams) on level ground or along spur crest and ridge lines within level areas of saddles or slopes.

During the field survey, these four areas were revisited, and their boundaries better defined.

5.5.1 Site Marys Mount IF1 (51-6-0807): GDA94 MGA55 749303. 6154253

Site Marys Mount IF1 was described by NGH (2017) as a single chert flake located along the edge of the access road on an upper slope adjacent to a hill crest.

The current survey revisited the area of the site, however despite a careful search of the area, no artefacts were identified with the road verges containing a large number of natural gravels as well as imported road base material. The coordinate location for the site is shown in Plate 7.

Plate 7: Entrance road and site of Marys Mount IF1 (Facing South)

5.5.2 Site Marys Mount IF2 (51-6-0825): GDA94 MGA55 749473. 6154587

Site Marys Mount IF2 was originally recorded (NGH 2017) as a relatively flat and undisturbed portion of the upper slopes/ crest measuring approximately 100x30m in size.

This area of PAD, situated on a gentle sloping to level section of middle/upper slopes to the south of the house was inspected during the field survey. While no artefacts were identified, the dimensions of 51-6-0825 were better defined to an area 100x40m where the western boundary follows the existing fenceline. The area of PAD is shown in Plates 8 and 9 and mapped on Figure 8.

Plate 8: View from internal corner of Project Area looking across upper slope. PAD Marys Mount IF2 begins on the upper slope above the orange clay exposure (Facing Northeast)

Plate 9: View across the north of Marys Mount IF2 (Northeast)

5.5.3 Site Marys Mount IF3 (51-6-0826): GDA94 MGA55 749241. 6154140

This site was originally recorded (NGH 2017) as a broad flat saddle between two ridge crests in the southeast corner of the project area. Due to saddle features in the area often being used as desirable pathways and Aboriginal camp sites, this area was designated as an area of PAD.

This area of PAD situated on a flat saddle feature, where the landscape slopes up to the north/northeast, and slopes down to the west/northwest towards the creekflats. The dimensions of 51-6-0826 were better defined to an area 70x65m where the east and south boundaries follow the existing fencelines. Plates 10 and 11 show the landform.

Plate 10: Northwest extent of PAD (East)

Plate 11: Southeast extent (North)

5.5.4 Site Marys Mount PAD3: GDA94 MGA55 749177. 6154264

This site was originally recorded by NGH in 2017 as PAD3, but does not have a NSW Heritage registration. The area was described as a broad flat area on a low basal slope measuring approximately 100x40m. The area of PAD shown on Plates 12 and 13 and mapped on Figure 8.

Plate 12: Area of PAD3 from northeast point. (Facing Southwest)

Plate 13: Southwest paddock, with low to moderate GSV overlooking the western boundary of PAD3 (North)

5.6 SUMMARY OF ARCHAEOLOGICAL SURVEY RESULTS

The survey and review of landforms resulted in the following findings:

- No new areas of Aboriginal heritage were identified by the field survey.
- One Aboriginal heritage site (IF1) is recorded within the project area but could not be identified during the field survey
- GSV was generally low across the project area due to very high levels of grass coverage and confined small areas of erosion scours and vehicle impact tracks.
- Three areas of PAD are present within the project area consisting of a spur crest (IF2), a flat saddle (IF3), and a flat area overlooking creek flats (PAD3) based on regional modelling to hold potential.
- Subsurface testing is therefore required in the identified areas of PAD to determine the presence, extent, and significance of any deposits in these areas if impacts are planned to occur within their boundaries.

Based on the predictive modelling, any identified Aboriginal sites are likely to be small in area and to contain low densities of common materials and artefact types on crest landforms with larger sites potentially located on level areas (terraces, raised contexts) near creek confluences.

The results of the field survey are displayed in Figure 8.

Appendix 5

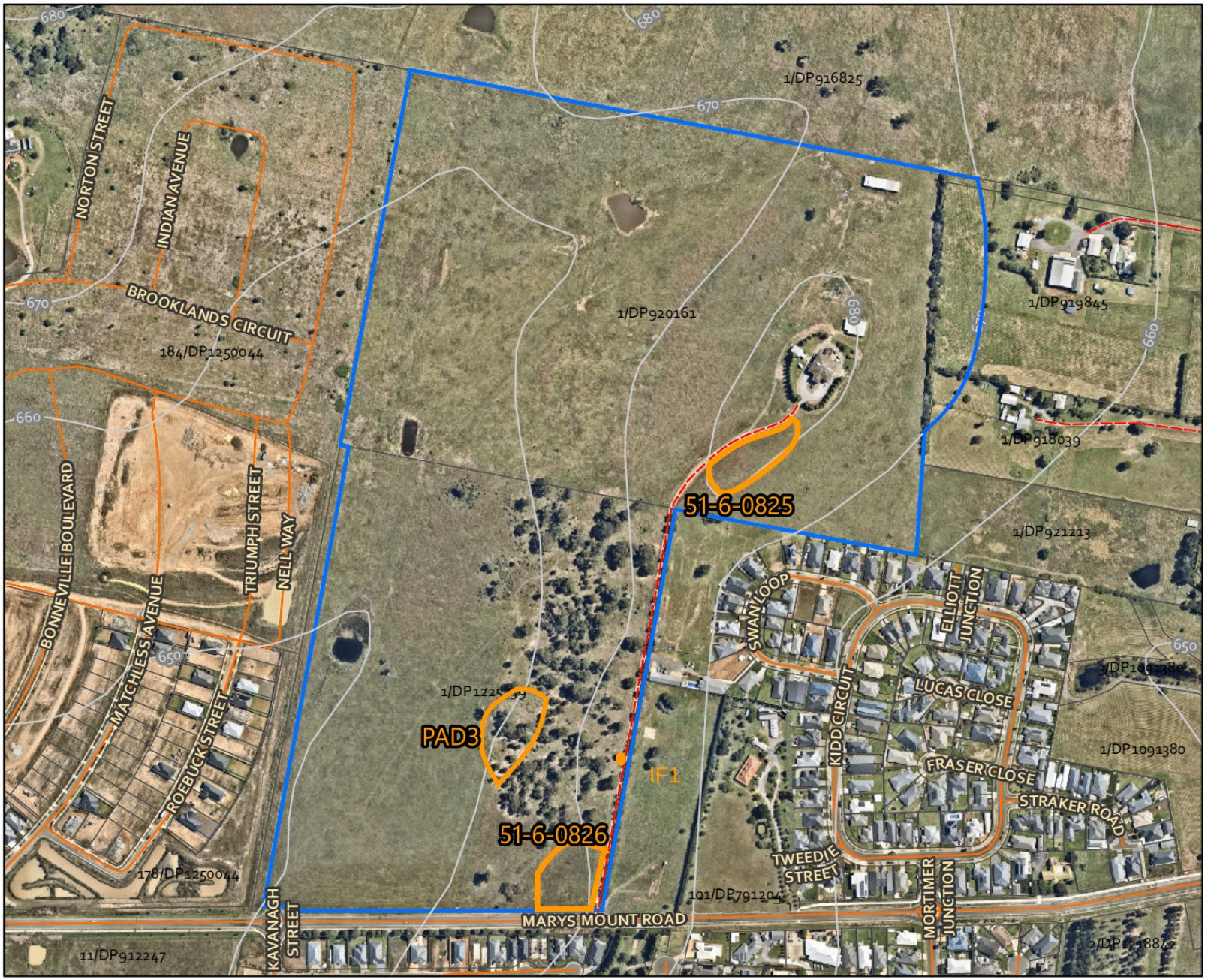

Figure 8: Survey Results

Legend

- Contour -10m
- Minor Road
- Track-Vehicular
- Project Area
- Cadastre
- Area of PAD

N

1:6,000

0 50 100 200

Meters
Coordinate System:
GDA 1994 MGA Zone 55

Imagery: © Nearmap

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6 SUBSURFACE TESTING OF PADS

As defined previously in Section 4.5, areas of PAD are landforms with a higher potential to contain subsurface deposits of past Aboriginal occupation than the surrounding landscape. NOHC in 2003 (Bungendore HQ assessments) stated:

> "A potential archaeological deposit, or PAD, is defined as any location where the potential for sub-surface archaeological material is considered to be moderate or high, relative to the surrounding study area landscape" (NOHC 2003:7).

Three areas of PAD are present within the current project area and required testing to determine the presence, extent and significance of subsurface deposits. This testing was carried out in September and October 2022, in accordance with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCW 2010) and the methodology detailed in Section 6.2.

As set out in Section 3.1 of the Code of Practice (DECCW 2010), subsurface testing is only permissible where "*sub-surface objects have a high probability of being present and the area cannot be avoided by the proposed development*". The purpose of subsurface testing is *"to collect information about the nature and extent of sub-surface deposits based on a sample recovered from the sub-surface investigations*". Based on the recovered sample, the archaeologist uses the sample's data to calculate the probability of the site continuing in area. By extrapolating artefact density from the excavated testpits, the probability of further subsurface deposits being present, and their significance is assessed.

Requirement 15b of the Code states that the excavation strategy must:

"Describe the differentiation of the PAD to be test-excavated from the surrounding archaeological landscape (i.e. explain why the PAD is anticipated to be of higher significance than the continuous distribution of archaeological material in which it exists)" (DECCW 2010: 25).

Under this requirement, if a large landform with high potential is identified, an area of PAD within that landform must hold an additional feature indicating the need and/ or appropriateness of undertaking test excavations within the broad landform.

Requirement 16a of the Code states that the,

"Test excavation should be sufficiently comprehensive to allow characterisation of the Aboriginal objects present without having a significant impact on the archaeological value of the subject area" (DECCW 2010:27).

Requirement 17 (DECCW 2010:28) provides guidance on when a test excavation is to cease:

"Any test excavation carried out under this Requirement must cease when:

1. Suspected human remains are encountered (see Section 3.6), or
2. Enough information has been recovered to adequately characterise the objects present with regard to their nature and significance."

Enough information is defined in the explanatory notes: "*the sample of excavated material clearly and self-evidently demonstrates the deposit's nature and significance*" (DECCW 2010: 28). Consequently,

test excavation must cease when the archaeologist has recovered sufficient information from the test excavations, irrespective of whether all planned test pits have been completed or the extent of the entire impact area has been physically investigated. Continuance is only permitted if there is reason to believe that a significant variance may occur within the investigation area.

6.1 AIMS OF THE SUBSURFACE TEST EXCAVATIONS

Subsurface testing was undertaken to determine the presence, significance and extent of any archaeological subsurface deposit which may be present within the identified areas of potential archaeological deposit (PAD). Subsurface testing ceased when enough information has been gathered to fulfil these aims.

The aims of the testing program were to:

- Investigate whether sub surface deposits are present which may be impacted by the development.
- If identified, to determine the extent and nature of the deposits.
- Identify the degree of disturbance within the PAD area by examining the soil profile and stratigraphy.
- Analyse any Aboriginal material recovered.
- In consultation with RAPs determine the significance of any cultural material.
- Develop management strategies for any heritage items identified by the subsurface testing program.

6.2 EXCAVATION METHODOLOGY

The following excavation methodology was developed in consultation with RAPs and the requirements of the Code of Practice (DECCW 2010). As a result of this process a series of test pits measuring 50 x 50cm were excavated across the identified areas of sensitivity, sampling the different landforms to determine the presence of subsurface deposits and to locate any areas of differing density of artefacts.

The following methodology was followed:

- Transect lines of 50 x 50cm test pits were placed across the PAD area at a spacing of 10m apart. Depending on the extent of the surface area of the PAD these varied from a single transect to a series of transects forming a grid across the area of PAD.
- To determine extent of site, additional test pits will be placed at 10m distance to any testpit that within subsurface artefacts are identified. This process will continue till no artefacts are present.
- Based on previous research in the project area (NOHC 2010) cultural material is most likely to occur in the upper layers prior to 50cm depth. As a result each test pit was

excavated to a maximum of 50cm or if cultural material was located to a culturally sterile layer below the artefactual layers. In the absence of any cultural material the excavation ceased at this 50cm level ow when underlying clay levels or bedrock were reached.

- A trigger for expansion of test pits would occur in the event of high-density deposits. Should a test pit reveal high density artefact concentrations (i.e. greater than 40 artefacts per square metre) or archaeological features such as hearths, the test pit will be expanded up to a maximum of $3m^2$ in order to establish the nature of the archaeological deposits or features.
- Pits were hand excavated (shovel and trowel) with recording of spit levels, presence of artefacts, and any stratigraphic features. Each test pit was photographed at end and pH measurements for each excavation level recorded.
- Spit intervals were 50mm for the first spit then 100mm unless cultural or stratigraphic features required this interval to be varied as set out in the Code of Practice.
- All excavated material was dry sieved through a 5mm mesh. West sieving was undertaken on sandy deposits. The excavation and sieving stations were under the direction of heritage staff assisted by representatives of the RAPs.
- Any cultural material recovered was labelled with its location and depth, removed for temporary storage and analysis, recorded and analysed. The artefacts will be reburied in accordance with the Code of Practice in each excavated square, unless an AHIP is issued for the project. Under the AHIP a return to country protocol will be developed.
- If human bone materials were encountered, then work would cease immediately in that testpit.
- As soon as possible after completion test pits were backfilled with excavated soil.

6.3 ANALYSIS OF CULTURAL MATERIAL

Any faunal material recovered would be sorted to species and minimum number of individuals. All lithic items were examined in detail using a low-power hand lens and microscope. A basic analysis of lithic variables such as raw material, size, primary and secondary flaking characteristics (platform and termination type, degree of retouch) was undertaken on recovered lithics from subsurface contexts for the study area as an assemblage.

On completion of the lithic analysis the items were stored individually in resealable plastic bags marked with their identification number and provenance. Artefacts are being held in temporary storage at the office of Past Traces for analysis while the AHIP process is undertaken.

Lithic categories are based as follows:

- Flakes – dorsal and ventral face, platform and termination
- Retouched flakes – negative scars removed after ventral face creation (flake detachment)
- Flaked pieces – negative scars on dorsal face but ambiguous ventral face and striking platform
- Cores – one or more negative scars but no positive scars
- Angular shatter – indistinct scar faces assumed to be cultural based on association with cultural material

6.4 RESULTS OF SUBSURFACE TESTING PROGRAMME

The subsurface testing program was undertaken in September and October 2022. The location of the three areas of PAD that required testing to determine if any heritage deposits are present have been shown in Figure 8.

The results of the test pitting programme for each of the areas of PAD are provided in the following sections under each PAD designation. Appendix 3 contains test pit photos and sections for each testpit and the recovered artefact database is located in Appendix 4.

6.4.1 Marys Mount IF2 (51-6-0825): GDA94 MGA55 749473. 6154587

Site Marys Mount IF2 was originally recorded by NGH in 2017. This area of PAD is situated on a flat spur crest to the south east of the current house site. While no artefacts were identified on the surface at the time of survey, eight test pits were placed across the landform in two transect lines to test for subsurface deposits.

Where artefacts were encountered additional test pits were excavated at 10m to determine the site extent. This resulted in an additional 7 test pits due to artefact recovery. The location of the test pits is shown in Figure 9.

The testing program showed the area of PAD to be smaller in its extent than recorded in 2017, centred on 749444.6154567 and extending for an area of approximately 40 x 30m. The extent of the area of PAD is also shown on Figure 9.

During the subsurface testing program, the basal clay levels were consistently reached at 20-30cm in each test pit. Soil depths consisted of sandy loams overlaying a mottled tan/orange clay substrate. Test pits were excavated to a depth of 30cm in most test pits.

The representative stratigraphy of PAD IF2 is shown in Test pit 6, provided in Table 7. The soils within the test pit consisted of fine-grained sandy brown loam overlain on a compacted mottled orange clay base. Test pit photos and sections are provided in Appendix 3 for all excavated test pits within PAD IF2.

Appendix 5

Figure 9: Test Pits in IF2

Legend

- Test Pit
- Project Area
- Track-Vehicular
- Site Boundary
- Cadastre

N

1:700

0 5 10 20

Meters
Coordinate System:
GDA 1994 MGA Zone 55

Imagery: © Nearmap

PastTraces Heritage Consultants

Table 7. PAD IF2 Test pit 6 Section

Spit	Soil Description	Section Photo
1a. 0-5cm	Fine-grained sandy brown loam, with high frequency of natural gravels and shale.	
1b. 5-10cm	Same as above.	
2. 10-20cm	Same as above, with mixed soils with no clear transitions between brown loam.	
3. 20-30cm	Increasing orange clay content with depth to a basal clay layer at 30cm.	

6.4.2 Artefact Assemblage Marys Mount IF2

A total of seven (7) artefacts were recovered from five of the 15 excavated test pits within Marys Mount IF2. All of the recovered artefacts consisted of small flakes constructed on quartz (quartz = 100%). This is consistent with findings from the region and the southern tablelands that flakes dominate (flakes = 83.3%) (Packard 1988, Stone 1988, Lance 2009). A lack of silcrete and cores within the assemblage is unusually low, but most likely due to the small assemblage. Whilst the assemblage is too small to be analysed statistically the breakdown of the artefacts by main category and test pit location is shown in Table 8. Full details of the lithics recovered are provided in Appendix 4.

Table 8. Recovered artefacts PAD IF2.

PAD	Square	Spit	No. Artefacts
IF2	3	1	1
IF2	6	1	3
IF2	10	1	1
IF2	11	1	1
IF2	12	1	1
Total			7

6.4.3 Marys Mount IF3 (51-6-0826): GDA94 MGA55 749241. 6154140

This site was originally recorded (NGH 2017) as a broad flat saddle between two ridge crests in the southeast corner of the project area. Due to saddle features in the area often being used as desirable pathways and Aboriginal camp sites, this area was designated as an area of PAD.

This area of PAD situated on a flat saddle feature, where the landscape slopes up to the north/northeast, and slopes down to the west/northwest towards the creekflats. As described in Section 5.5.3 while no surface artefacts were identified during the survey, the dimensions of 51-6-0826 were better defined to an area 70 x 65 m. To test this section of PAD twelve (12) test pits were placed across the landform in three transects. The location of the test pits is provided in Figure 10.

During the subsurface testing program, the basal clay levels were reached at 40-50cm in each test pit, dependant on their location within the landform. Soil depths consisted of sandy clay loams overlaying a mottled tan/orange clay substrate with underlying shale and small pebbled quartz gravels present. Test pits were excavated to a depth of 50cm in most test pits

The representative stratigraphy of PAD IF3 is shown in Test pit 9, provided in Table 9. The soils within the test pit consisted of sandy clay loam overlain on a compacted mottled orange clay base. Test pit photos and sections are provided in Appendix 3 for all excavated test pits within PAD IF3.

The excavation of the 12 test pits separated into three 10m spaced transects yielded no artefacts, despite a careful analysis of excavated and sieved material. As a result, this area does not meet the designation of an area of potential.

Table 9. PAD IF3 Test pit 9 Section

Spit	Soil Description	Section Photo
1a. 0-5cm	Brown sandy clay loam, thick with grass roots.	
1b. 5-10cm	Dark brown rich loam, buttery or silky texture with continued grass rootlets.	
2. 10-20cm	Same as above.	
3. 20-30cm	Same as above, with increasing clay content with depth.	
4. 30-40cm	At approximately 30cm depth, larger fine-grained volcanic rocks and gravels, with a slight colour and texture change associated with the volcanic rocks.	
5. 40-50cm	Light brown clay sandy loam, saprolitic soil. Increased clay and sand content from the decomposing rock.	
6. 50-60cm	Basal clay layer at around 50cm, with excavation continued to 55cm to confirm basal clay layer.	

Appendix 5

Figure 10: Test Pits IF3

Legend

- Test Pit
- Project Area
- Minor Road
- Track-Vehicular
- Site Boundary
- Cadastre

N

1:750

0 5 10 20

Meters

Coordinate System:
GDA 1994 MGA Zone 55

Imagery: © Nearmap

PastTraces Heritage Consultants

6.4.4 Marys Mount PAD3: GDA94 MGA55 749177. 6154264

This site was originally recorded by NGH in 2017 as PAD3, but has not been registered as a site with NSW Heritage. The area was described as a broad flat area on a low basal slope measuring approximately 100x40m with a west aspect facing toward the ephemeral drainage line. No surface artefacts were identified during the survey, the coordinates for the approximate edges of the PAD shown in Table 6.

During the subsurface testing program, the basal clay levels were reached at 30-40cm in each test pit, dependant on their location within the landform. Soil depths consisted of light brown/tan fine sandy silt overlaying a natural gravel layer on a mottled orange clay substrate. Test pits were excavated to a depth of 40cm in most test pits. Results for a representative test pit are provided in the following section and results (photos and stratigraphy) for each test pit is provided in Appendix 3. Details of the recovered artefacts are provided in Appendix 4.

The representative stratigraphy of PAD3 is shown in Test pit 1. The soil section is provided in Table 10. The soils within the test pit consisted of sandy clay loam overlain on a compacted mottled orange clay base. Test pit photos and sections are provided in Appendix 3 for all excavated test pits within PAD IF2.

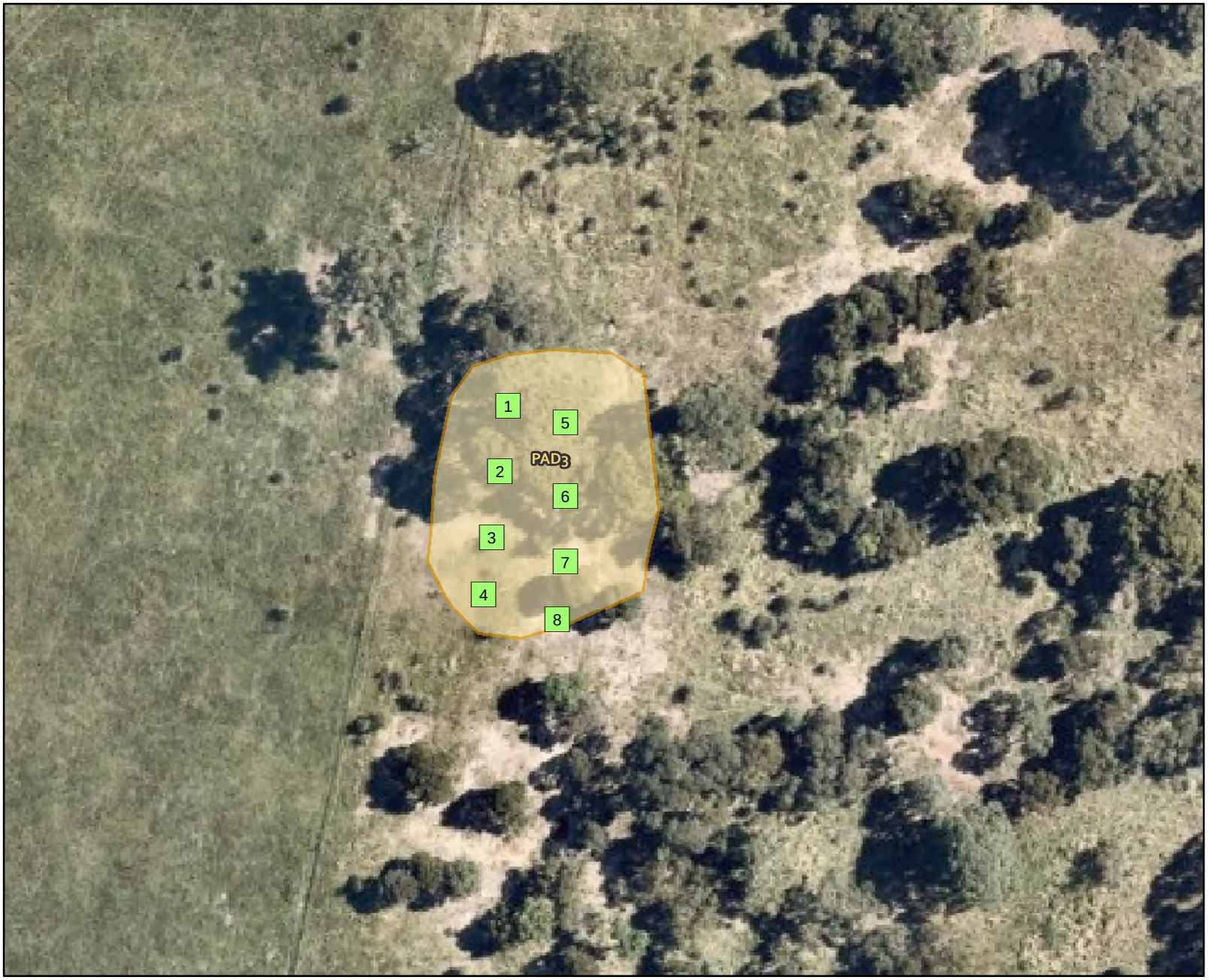
The excavation of 8 Test pits separated into two 10m spaced transects yielded no artefacts, despite a careful analysis of excavated and sieved material. As a result, this area does not meet the definition of a PAD and does not pose a heritage constraint.

Table 10. PAD3 Test pit 1 Section

Spit	Soil Description	Section Photo
1a. 0-5cm	Light brown/tan fine sandy silt	
1b. 5-10cm	Same as above.	
2. 10-20cm	Tan fine sandy silt with increased clay content. Small gray silt inclusions.	
3. 20-30cm	Same as above, with increasing clay content with depth.	
4. 30-40cm	Natural gravel layer at approximately 30cm with orange clay layer reached at 40cm.	

Appendix 5

Figure 11: Test Pits
PAD 3



Legend

- Test Pit
- Project Area
- Site Boundary
- Cadastre

N

1:694

0 5 10 20

Meters
Coordinate System:
GDA 1994 MGA Zone 55

Imagery: © Nearmap

PastTraces Heritage Consultants

6.5 SUMMARY OF TEST PIT RESULTS

The test pitting program has shown that no deposits are present at PAD 3 or site IF3 (51-6-0826) with a low density dispersal of quartz artefacts is present at IF2 (51-6-0825).

With the nil findings at the two areas of IF3 and PAD3 these areas do not meet the criteria for heritage sites. PAD 3 has no registration with NSW Heritage and is not a heritage constraint. Site IF3 is registered with NSW Heritage and as a registered site cannot be impacted unless an Aboriginal Heritage Impact Permit (AHIP) has been approved by NSW Heritage. As a result, this site IF3 along with the site at IF2 are both protected from harm until an AHIP is approved by NSW Heritage.

7 SIGNIFICANCE ASSESSMENT

7.1 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 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.
- 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 within its regional or local setting.

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

7.2 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. Table 11 provides the results of the archaeological significance assessment.

Table 11: Scientific significance assessment of archaeological sites recorded within the Project Area.

AHIMS	Site name	Research Potential	Representativeness	Condition	Scientific Significance
51-6-0807	Marys Mount IF1	Low	Common	Destroyed	Nil
51-6-0825	Marys Mount IF2	Low	Common	Fair	Low
51-6-0826	Marys Mount IF3	Nil	-	-	Nil
-	Marys Mount PAD3	Nil	-	-	Nil

7.3 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 if important enough cultural transmission of knowledge.

The sites within the project area are small and common in their nature. They conform to the known preferred camping locations 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.

The Aboriginal RAPs have been asked to provide feedback on cultural significance as a component of review of this report. Generally is it understood that all sites hold significance and that impacts should be minimised and if unavoidable surface artefacts collected and reburied to maintain their connection to country.

7.4 STATEMENT OF ARCHAEOLOGICAL SIGNIFICANCE

The Project Area overall has two Aboriginal heritage sites (IF1 - 51-6-0807 & IF2 – 51-6-0825) consisting of an isolated find and one area with low density subsurface deposit. These two sites are within proximity of proposed impacts. The potential impacts on these sites is discussed in Section 8.

The stone artefact sites located within the study area represent common site types found throughout New South Wales and consist of common materials and artefact types for the Goulburn region. The recorded sites are considered to hold low 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 sites they are considered to hold a local level of significance not warranting conservation within the disturbed areas.

Any recovered artefacts should be curated by the Aboriginal community to aid in the continuation of cultural and traditional knowledge, however it is the stated wish of the RAPs, that a return to country protocol be investigated to maintain the cultural connection to country. In line with these wishes, this option is currently being investigated with the proponent and Council.

8 IMPACT ASSESSMENT

8.1 DEVELOPMENT IMPACTS

The proposed development requires a high level of disturbance within the Project Area. The proposed residential 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 extensive across the areas of building envelopes, access roads 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 roads and fire trails

Areas away from the proposed construction areas will continue as open space with no additional impacts from the proposed subdivision. Heritage sites in these locations will not be impacted by the development. Sites IF1 and IF2 are located within these areas of open space and should not be impacted by the proposed development. Site IF3 – although found to contain no deposits is also located within these areas of open space and should also be avoided by the proposed development.

Based on the extensive impacts from residential development, and the planned large areas of open space within the project area, the assessed statement of impact for the Aboriginal archaeological sites has been summarised in Table 12.

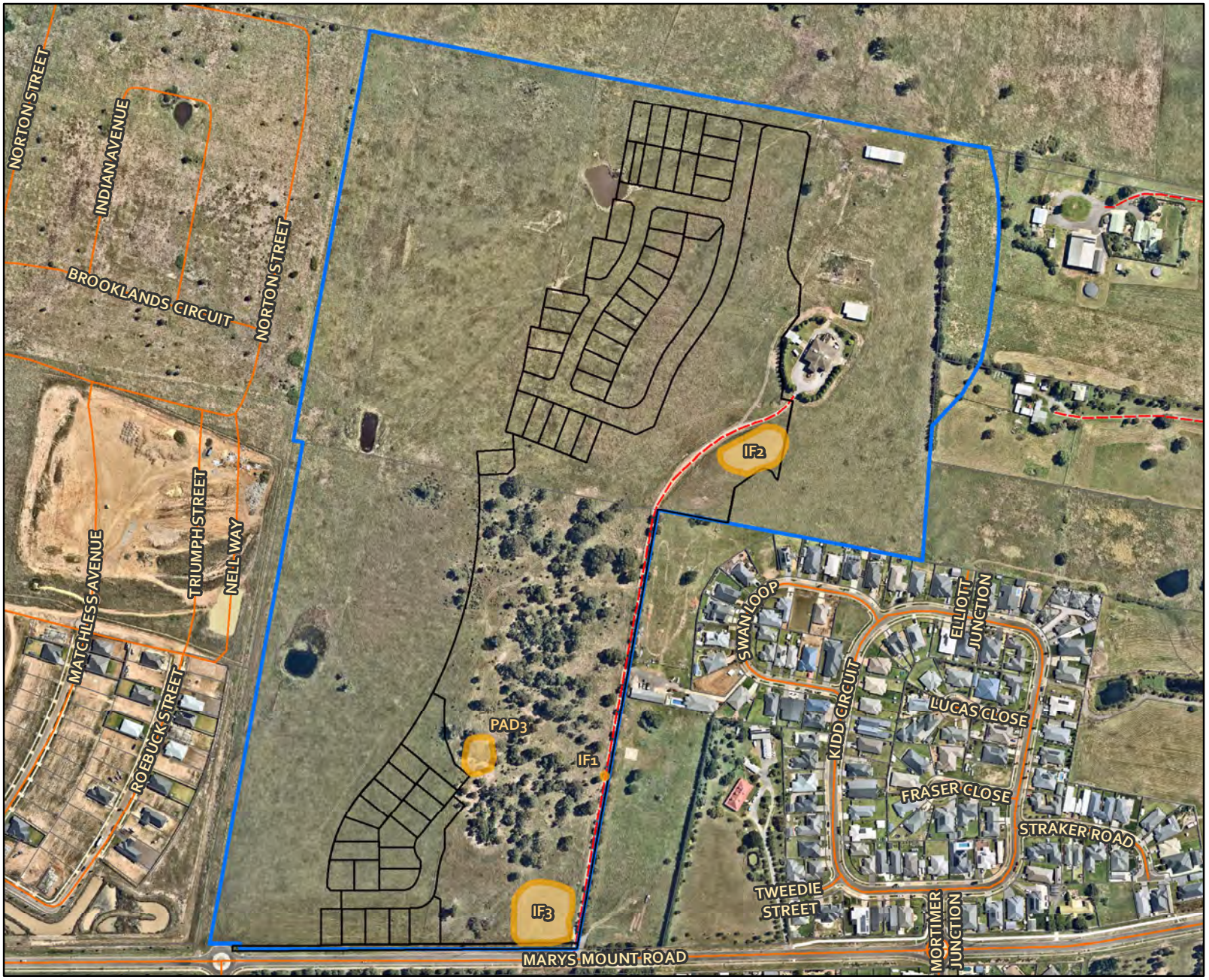
Table 12: Summary of potential archaeological impact

AHIMS	Site name	Type of Harm	Degree of Harm	Result of Harm
51-6-0807	Marys Mount IF1	Nil	Nil	Nil impact
51-6-0825	Marys Mount IF2	Indirect	Nil	Potential lessening of values
51-6-0826	Marys Mount IF3	Nil	Nil	Nil impact
-	Marys Mount PAD3	N/A	N/A	N/A

The location of the recorded three heritage sites and the proposed plan layout is provided in Figure 12 to allow for assessment of impacts.

Appendix 5

Figure 12: Heritage Sites



Legend

- Site Boundary
- Site Plan - Stage 2
- Project Area
- Minor Road
- Track-Vehicular
- Cadastre

N

1:5,500

0 50 100 200

Meters
Coordinate System:
GDA 1994 MGA Zone 55

Imagery: © Nearmap

PastTraces Heritage Consultants

9 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 has been implemented. 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 suggested mitigation options.

9.1 AVOIDANCE OF IMPACTS

For this project, the small size of the surface sites and the large areas of open space within the development has enabled the area of the sites to be excluded from the area of impact in the form of a conservation area. The contents of the sites (IF1 and IF2) are considered to be low in significance, consisting of common artefact types and materials. Site IF3 has been found to hold no subsurface deposits, but as a registered site on AHIMS must be avoided.

If planning changes result in impacts to any of the three recorded site locations then salvage should be undertaken if impacts cannot be avoided. An AHIP should be sought to allow for salvage and destruction of the sites.

9.2 MITIGATION MEASURES

9.2.1 Barrier Fencing

No heritage impacts are anticipated for the three sites located within the project area. However, if works are to be undertaken in their immediate vicinity accidental impacts may occur. For the three sites that are located within the project area if works are to be undertaken within 20m of their boundary then barrier fencing will be required at a 5m buffer to prevent accidental impacts during construction. This applies under the current plan layout to site IF2. The area of PAD at IF2 that needs to be protected is shown on Figure 12.

9.2.2 Aboriginal Heritage Impact Permit (AHIP)

If planning is altered such that impacts will directly occur at any of the three heritage sites then an AHIP will be required to allow impacts. No impacts can occur to any of the recorded sites until an AHIP has been issued by NSW Heritage.

The mitigation measures have been discussed with the RAPs on site on the 30/09/2022 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 each of 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 measures have been developed for the impacted sites:

1. Surface collection of all impacted surface sites should be undertaken. This applies to surface site IF1. This would require approval of an Aboriginal Heritage Impact Permit (AHIP) to allow for collection. 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) and an AHIP Compliance works report submitted to NSW Heritage including the results of the surface collection.

Sites IF2 and IF3 have no further mitigation measures and following approval of an AHIP, impacts may occur.

9.3 MANAGEMENT RECOMMENDATIONS

Based on results of the archaeological program and consultation with the Registered Aboriginal Parties the following recommendations have been developed in regards to Aboriginal Cultural Heritage values and heritage sites located within the Project Area.

The management recommendations for the project are:

- There are no planned impacts to any of the three recorded heritage sites within the project area. All of the sites occur within planned open space. This applies to sites IF1, IF2 and IF3.
- Barrier fencing will be required for Site IF2 during construction to prevent accidental impacts. This could be applied at the edge of development or the site boundary with a 5m buffer.
- If planning alterations occur, no impacts may occur to any of the identified Aboriginal Heritage sites unless an Aboriginal Heritage Impact Permit (AHIP) has been granted allowing harm to occur. IF3 has been found to not contain subsurface deposits, however as a registered site no impacts can occur to this site without an AHIP
- PAD 3 was found to contain no subsurface deposits and does not meet the criteria for a heritage PAD. There are no further requirements in regards to PAD 3.
- Should any unrecorded Aboriginal objects be encountered during works then works must cease and a heritage professional contacted to assess the find. Works may not recommence until cleared by NSW Heritage. 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*.

- Further archaeological assessment would be required if the proposal activity extends beyond the area of the current investigation. This would include consultation with the RAPs for the project and may include further field survey.
- 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.
- No further heritage investigations are required, other than those listed, should the AHIP be approved, except in the event that unanticipated Aboriginal Objects and/or human remains are unearthed during any phase of the Project.

10 REFERENCES

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A.1 CONSULTATION LOG AND DOCUMENTATION

Appendix 5

Date/Time	Type of Consultation	Organisation	Response
	Step 1 – Public Notice (insert name of paper) and end of review period date	**Goulburn Post 20/7/2022 end period 3/8/2022**	
	Step 2 – Notice to Regulators		
21/7			
		NNTT	
		NTSCorp	
		NSW Heritage	26/7 – email received
		Local Council	21/7 – email received
		Registrar ALR	
		Pejar LALC	
	Step 3 – letter/email to identified stakeholders from Above		
27/7	Email to all		
	Hard copy to	Ngunnawal Elder	
		Serena Williams	
		Sharyn Halls	
		Clorine Lyon	
	Step 4 – List of Registrations		
27/7	Muragadi		
27/7	Didge Ngunawal Aboriginal Corporation		
27/7	Pejar LALC		
27/7	Murrabidgee Mullangarri		
27/7	Tim Stubbs		
28/7	Guntawang		
28/7	Mulwaree Aboriginal Corporation		
28/7	Corroboree Aboriginal Corporation		
2/8	Yurwang Gundana		
9/8	Buru Ngunawal Aboriginal Corporation		
11/8	Ginninderra Aboriginal Corporation		
1/8/2022	Step 5 – Project Pack	To all RAPS	
9/8	BNAC	Project pack provided on registration	
12/8	Ginninderra Aboriginal Corporation	Project pack provided on registration	
19/8/2022	Step 6 – Methodology pack (end review period 16/9/2022)		
3/9/2022	**Ginninderra Aboriginal Corporation**	**Email – agrees with methodology**	
5/9/2022	Guntawang Aboriginal Corporation	Email – agrees with methodology	

Appendix 5

Date/Time	Type of Consultation	Organisation	Response
30/8/2022	**Step 6 - List of RAPs to NSW Heritage and LALC (by 28 days from Step 4)**		
16/9/2022	**Notification of testing to NSW Heritage**		Notified to commence on the 29/9 – completed two days then halted due to rain – recommenced on 4-6 October.
18/9/2022	**Invitation to field work to Murrabigee Mullangarri Pejar LALC Gunjeewong Yurwang Gundana**		
26/10/2022	**Notification of recommencement of testing to NSW Heritage**		Notified recommencing on the 31/10/2022
	Field work/ SST		
29/30 September & 4-6 October	**Gungeewong,Yurwang Gundana, Muragadi**		
25/11/2022	**Draft Reports for review – ends 23/12/2022**		Ginninderra Aboriginal Corporation – 27/11/2022 – will review and respond if any issues with report. Tim Stubbs 29/11/2022 – agrees with report recommendations No further responses.

A.2 AHIMS SITE SEARCH

AHIMS Web Services (AWS)

Extensive search - Site list report

Appendix 5

Your Ref/PO Number : marys mt 1

Client Service ID : 701415

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
51-6-0294	WRA 1	AGD	55	746366	6153116	Open site	Valid	Artefact : 5, Potential Archaeological Deposit (PAD) : -		103490
	Contact Searle	**Recorders**	Ms.Trish Saunders					**Permits**	3960	
51-6-0051	GC15	AGD	55	747270	6152930	Open site	Valid	Artefact : -	Open Camp Site	1578
	Contact	**Recorders**	Ms.N Fuller					**Permits**		
51-6-0686	MG5/1	GDA	55	748895	6154047	Open site	Valid	Artefact : -		102238,103052,103053
	Contact	**Recorders**	Ironbark Heritage & Environment,Mr.Glenn Willcox					**Permits**	3662	
51-6-0070	ISF1, Windy Hollows	AGD	55	751000	6155900	Open site	Valid	Artefact : -	Isolated Find	
	Contact	**Recorders**	Sue Effenberger					**Permits**		
51-6-0653	WR-OS-3 (Pole 36)	AGD	55	751070	6152410	Open site	Valid	Artefact : 3		101434
	Contact	**Recorders**	Mills Archaeological & Heritage Services Pty Ltd					**Permits**	3222	
51-6-0061	GSP 1	AGD	55	751150	6152700	Open site	Valid	Artefact : -	Open Camp Site	1845,1975
	Contact	**Recorders**	Rex Silcox					**Permits**		
51-6-0052	GC16	AGD	55	747150	6153100	Open site	Valid	Artefact : -	Open Camp Site	1578
	Contact	**Recorders**	Ms.N Fuller					**Permits**		
51-6-0915	Impacted Chert Bedrock	GDA	55	747460	6154130	Open site	Valid	Artefact : -		105056
	Contact	**Recorders**	Doctor.Peter Kabaila,Black Mountain Projects Pty Ltd					**Permits**		
51-6-0835	Teneriffe ISO 2	GDA	55	748607	6154872	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Biosis Pty Ltd - Wollongong,Mrs.Samantha Keats					**Permits**		
51-6-0685	MG5/IF2	GDA	55	748734	6154001	Open site	Valid	Artefact : 1		102238,103052,103053
	Contact	**Recorders**	Ironbark Heritage & Environment,Mr.Glenn Willcox					**Permits**	3662	
51-6-0807	Marys Mount IF1	GDA	55	749303	6154253	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,NGH Heritage - Fyshwick					**Permits**		
51-6-0654	WR-OS-4 (Pole 37)	GDA	55	751060	6152560	Open site	Valid	Artefact : 5		101434
	Contact	**Recorders**	Mills Archaeological & Heritage Services Pty Ltd					**Permits**	3222	
51-6-0071	ISF2, Windy Hollows	AGD	55	751400	6155400	Open site	Valid	Artefact : -	Isolated Find	
	Contact	**Recorders**	Sue Effenberger					**Permits**	689	
51-6-0837	Site 1 - 153 Taralga Road, Goulburn	GDA	55	751496	6154061	Open site	Valid	Artefact : 2		
	Contact	**Recorders**	Miss.Jackie Taylor					**Permits**	4460	
51-6-0053	GC17	AGD	55	747261	6152492	Open site	Valid	Artefact : -	Open Camp Site	1578
	Contact	**Recorders**	Ms.N Fuller					**Permits**		
51-6-0657	WR-OS-7 (Plole 40)	AGD	55	750920	6153050	Open site	Valid	Artefact : 1		101434
	Contact	**Recorders**	Mills Archaeological & Heritage Services Pty Ltd					**Permits**	3222	
51-6-0445	Clyde Steet Pipeline 3	AGD	55	746822	6152996	Open site	Valid	Artefact : 1		
	Contact S Scanlon	**Recorders**	Pejar Local Aboriginal Land Council					**Permits**		

Report generated by AHIMS Web Service on 19/07/2022 for Lyn O'Brien for the following area at Lat, Long From : -34.7384, 149.691 - Lat, Long To : -34.7031, 149.7528. Number of Aboriginal sites and Aboriginal objects found is 29

AHIMS Web Services (AWS)

Extensive search - Site list report

Appendix 5

Your Ref/PO Number : marys mt 1

Client Service ID : 701415

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
51-6-0421	Clyde Street Pipeline 1 (CSP 1)	GDA	55	747061	6152920	Open site	Valid	Artefact : -		
	Contact Searle	**Recorders**	Mr.Justin Boney					**Permits**		
51-6-0655	WR-OS-5 (Pole 38)	AGD	55	751060	6152720	Open site	Valid	Artefact : 7		101434
	Contact	**Recorders**	Mills Archaeological & Heritage Services Pty Ltd					**Permits**	3222	
51-6-0834	Teneriffe ISO 1	GDA	55	748603	6154925	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Biosis Pty Ltd - Wollongong,Mrs.Samantha Keats					**Permits**		
51-6-0684	MG5/IF1	GDA	55	748780	6153506	Open site	Valid	Artefact : 1		102238,103052,103053
	Contact	**Recorders**	Ironbark Heritage & Environment,Mr.Glenn Willcox					**Permits**	3662	
51-6-0692	WR-OS-8	GDA	55	751187	6152768	Open site	Valid	Artefact : 3		102280
	Contact	**Recorders**	South East Archaeology,Mr.Leigh Bate					**Permits**		
51-6-0826	Marys Mount IF3	GDA	55	749241	6154140	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,NGH Heritage - Fyshwick					**Permits**		
51-6-0825	Marys Mount IF2	GDA	55	749473	6154587	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,NGH Heritage - Fyshwick					**Permits**		
51-6-0240	Ross Street 1	AGD	55	750729	6153024	Open site	Valid	Artefact : 1		99848
	Contact T Russell	**Recorders**	Mr.Justin Boney					**Permits**		
51-6-0656	WR-OS-6 (Pole 39)	AGD	55	751070	6152870	Open site	Valid	Artefact : 2		101434
	Contact	**Recorders**	Mr.Peter Kuskie,South East Archaeology,Mills Archaeological & Heritage Services P					**Permits**	3222	
51-6-0843	Taralga Road Artefact Site 2	GDA	55	751428	6154138	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Lyn O'Brien,Past Traces Pty Ltd					**Permits**	4460	
51-6-0106	Wollondilly River Scar Tree 1	AGD	55	751527	6153014	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	Contact	**Recorders**	Mr.Tim Hill					**Permits**		
51-6-0120	WR IF 1 (Wollondilly River Isolated Find 1)	AGD	55	751600	6153335	Open site	Valid	Artefact : 1		98374
	Contact	**Recorders**	Dominic Steele Archaeological Consulting					**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 19/07/2022 for Lyn O'Brien for the following area at Lat, Long From : -34.7384, 149.691 - Lat, Long To : -34.7031, 149.7528. Number of Aboriginal sites and Aboriginal objects found is 29

A.3 TESTPIT PHOTOS

Appendix 5

IF2










	

PAD 3

	
	
	
	

Appendix 5

IF3

Appendix 5

	

A.4 ARTEFACT DATABASE

Appendix 5

Test-Pit	Spit	Material	Type	Platform type	Features	Termination	Retouch	Maximum length	Maximum width	Thickn
10	1	Quartz	Flake	Flat	Dorsal	Step	Nil	15mm	8mm	3mm
6	1	Quartz	Distal	N/A	Dorsal	Feathered	Denticulate	20mm	12mm	6mm
11	2	Quartz	Flake	Flat	Dorsal	Feathered	Denticulate	13mm	11mm	1mm
3	3	Quartz	Flake	Facetted	Ventral	Hinge	Denticulate	20mm	18mm	4mm
3	3	Quartz	Distal	N/A	Dorsal	Hinge	Nil	8mm	6mm	4mm
12	1	Quartite	Flake	flaked	Dorsal	Hinge	Denticulate	17mm	10mm	1mm