



NGH



ABORIGINAL CULTURAL HERITAGE ASSESSMENT

Jindabyne Education Campus

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ACRONYMS AND ABBREVIATIONS

ACHA	Aboriginal Cultural Heritage Assessment
ACHCRP	Aboriginal Cultural Heritage Consultation Requirements for Proponents
AHIMS	Aboriginal Heritage Information Management System
COLA	Covered outdoor learning area
DECCW	Former Department of Environment, Climate Change, and Water
DP	Deposited Plan
DPIE	Department of Planning, Industry and Environment
EIS	Environmental Impact Statement
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i> (NSW)
Ha	Hectare
HCA	Heritage Conservation Area
Heritage NSW	(formerly OEH) part of the Department of Premier and Cabinet
Km	Kilometres
JSRC	Jindabyne Sports and Recreation Centre
LALC	Local Aboriginal Land Council
LEP	Local Environmental Plan
LGA	Local Government Area
M	Metre
NPW Act	<i>National Parks and Wildlife Act 1974</i> (NSW)
NPWS	National Parks and Wildlife Services
NSW	New South Wales
OEH	(NSW) Office of Environment and Heritage (former), now Heritage NSW
PAD	Potential Archaeological Deposit
RAP	Registered Aboriginal Party
SSD	State Significant Development

EXECUTIVE SUMMARY

Introduction

NGH has been commissioned to prepare an Aboriginal Heritage assessment report for the proposed new education campus at Jindabyne located at 207 Barry Way, Jindabyne NSW (part of Lot 101 DP1019527).

The Aboriginal Cultural Heritage Assessment (ACHA) will support the Environmental Impact Statement (EIS) being prepared for the State Significant Development (SSD) project (SSD-15788005). The Aboriginal heritage assessment was required as part of the Planning Secretary's Environmental Assessment Requirements (SEARs) issued on 7 April 2021.

The Proposal Area includes approximately 9 ha of land currently utilised for the Jindabyne Sport and Recreation Centre. It is also known that the area is currently used as a short golf course and therefore is likely to have undergone some disturbance previously.

Project proposal

The proposal site is shown in Figure 1-1 and Figure 1-2 below; it includes:

- Lot 101 DP1019527

The proposal generally includes the following works:

- Minor demolition, tree removal and site clearing works
- Construction of a primary school to the north of the site with home base units and special education units to meet current and future needs
- Construction of a high school to the south of the site with general learning spaces and special education units to meet current and future needs
- Construction of COLAs, quadrangle and games courts, libraries, staff and administration buildings, halls, canteens, agricultural learning unit and other associated developments:
- Construction of new walkways and active play areas including a sports field
- Construction of a new at-grade car park; and
- Construction of a new pedestrian, cycle and vehicular access route.

The construction methodology is outlined in Section 7.2.

Aboriginal Community Consultation

The consultation with Aboriginal stakeholders was in accordance with clause 60 of the *National Parks and Wildlife Regulation 2019* and the associated guidelines, *Aboriginal cultural heritage consultation requirements for proponents (DECCW 2010)*. Full details of the consultation process followed are provided in Section 3.

The full list of consultation steps, including those groups and individuals that were contacted and a consultation log is provided in Appendix A.

As a result of this process, twenty Aboriginal groups registered their interest in the proposal.

These were:

- Wagonga Local Aboriginal Land Council
- Ngarigu Brajerak
- PD Ngunawal Consultancy
- Yurwang Gundana Cultural Heritage Services
- Gulgunya Ngunawal Heritage Aboriginal Consultancy (GNHAC)
- Didge Ngunawal Clan
- Clive Freeman
- Ngunawal Heritage Aboriginal Corporation
- Ngarigo Nation Indigenous Corporation
- Muragadi Heritage Indigenous Corporation
- Murri Bidgee Mullangari Aboriginal Corporation
- Merrigarn Indigenous Corporation
- Bega Local Aboriginal Land Council
- Wolgalu Umbe Traditional Custodians Cooperation

An additional six groups registered an interest in the project but have requested that their details are not released.

A copy of the draft report will be provided to all the registered parties for comment post completion of the testing program.

Survey Results

The fieldwork was carried out during a single day on Friday 25th June 2021. Several RAP groups participated in the fieldwork, with John Dixon, Ron Thomas, Iris White and Jason Davison attending the survey. NGH Principal Archaeologist Matthew Barber – led the field survey.

The survey was carried out in transects with participants walking parallel and spaced approximately 10 metres apart in lower potential areas and 5 metres apart where the potential was higher.

The strategy therefore was to walk across the landscape and sample as many landform types as possible to achieve maximum coverage in areas where the level of vegetation permitted this to occur.

Visibility was low across the Proposal Area, ranging from 5% to a maximum of 40%. During the ACHA survey four Potential Archaeological Deposits (PAD) were recorded, PAD 1 in the southwestern portion, PAD 2 in the central western, PAD 3 in the central northern portion and PAD 4 in the eastern central portion of the Proposal Area. In addition, four artefact sites were recorded as follows: Jindabyne Campus AFT1 (Isolated find in the southwestern portion), Jindabyne Campus AFT2 (Isolated find outside of the Proposal Area), Jindabyne Campus AFT3 (Artefact Scatter in the central western portion) and Jindabyne Campus AFT4 (Isolated find in the north-eastern corner).

Overall, it is considered that the surface survey of the Jindabyne Education Campus Proposal Area had sufficient and effective survey coverage. The results identified are considered a true reflection of the nature of the Aboriginal archaeological record present within the Proposal Area.

Potential Impacts

The current archaeological investigations of the Proposal Area show that there is the potential for Aboriginal objects to be impacted by the proposal. However, the extent of the sites present and the nature of the subsurface archaeological deposits is unknown. Until a subsurface testing programme is undertaken the

possibility of sub-surface archaeological material and potential harm by the proposed works is not able to be determined. A program of test excavation may be undertaken under the *Code of Practice for Archaeological Investigation of Aboriginal objects in New South Wales* (2010c) to this end.

Surface artefacts recorded during the survey may also be harmed by the project. Because the project is being considered as a major project and subject to State Significance status, an AHIP is not required, although the Aboriginal heritage assessment must be completed to assess the impacts.

Recommendations

The recommendations are based on the following information and considerations:

- Results of the current archaeological survey of the area;
- Consideration of results from other local archaeological studies;
- Results of consultation with the registered Aboriginal parties;
- The assessed significance of the sites;
- Appraisal of the proposed development, and
- Legislative context for the development proposal.

It is recommended that:

1. Test excavation is required to establish the extent and scientific significance of the four identified areas of PAD. Test excavation may be carried out in accordance with the requirements of the *Code of Practice for Archaeological Investigation in NSW* for the four areas of PAD identified within the Proposal Area.
2. Aboriginal community representatives continue to be engaged and consulted about the project and Aboriginal heritage impacts. They should also be provided an opportunity to assist in the test excavation programme.
3. The two sites (Jindabyne Campus AFT 1 and Jindabyne Campus AFT 4) should be avoided if possible by the project. Their presence, although not their exact location, could be used as a teaching tool about Aboriginal use of the land.
4. Jindabyne Campus AFT2 should be barricaded with temporary fencing during the construction phase of the works in order to prevent inadvertent harm to the site. The fencing should be placed at a radius of approximately 5m from the location of the isolated artefact.
5. For any sites not able to be avoided by the development, community collection of surface artefacts should be incorporated into the pre-construction phase.
6. All cultural material recovered from a subsurface testing programme and community collection will be in temporary care until an appropriate time when it can be returned to site. The artefacts must be buried in line with Requirement 26 of the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* and in an appropriate location within the Proposal Area that will not be subject to any ground disturbance. The burial location will be submitted to the AHIMS database.
7. An Aboriginal Site Impact Recording Form must be completed and submitted to AHIMS following the test excavation.
8. In the unlikely event that human remains are discovered during the subsurface testing programme, all work must cease in the immediate vicinity. The appropriate heritage team within Heritage NSW and the local police should be notified. Further assessment would be undertaken to determine if the remains were Aboriginal or non-Aboriginal. If the remains are deemed to be Aboriginal in origin the Registered Aboriginal Parties should be advised of the find as directed by the appropriate heritage team within Heritage NSW. Heritage NSW would advise the Proponent on the appropriate actions required.

9. The subsurface testing results for the Proposal Area should be detailed in an additional Aboriginal Cultural Heritage Assessment Report.
10. Further archaeological assessment would be required if the proposal activity extends beyond the area assessed in this report. This would include consultation with the registered Aboriginal parties and may include further field survey.

1. INTRODUCTION

This Aboriginal Cultural Heritage Assessment (ACHA) accompanies an Environmental Impact Statement (EIS) pursuant to Part 4 of the Environmental Planning and Assessment Act 1979 (EP&A Act) in support of an application for a State Significant Development (SSD No 15788005). The SSDA is for a new education campus at Jindabyne, comprising of a new primary and high school, located at the Jindabyne Sport and Recreation Centre (JSRC).

This report addresses the Secretary's Environmental Assessment Requirements (SEARs), notably:

Table 1-1. SEARs requirements for Aboriginal heritage

SEARs Requirement	Relevant report section
1. identifies and describes the Aboriginal cultural heritage values that exist across the site.	Section 3, 5, 6 To be completed upon RAP review
2. includes surface surveys and test excavations where necessary.	Section 5
3. has been prepared in accordance with the <i>Guide to investigating, assessing and reporting on Aboriginal Cultural Heritage in NSW (OEH, 2011)</i> and <i>Code of Practice for Archaeological Investigations of Aboriginal Objects in NSW (OEH, 2010)</i> .	Whole document
4. incorporates consultation with Aboriginal people in accordance with <i>Aboriginal Cultural Heritage Consultation Requirements for Proponents</i> (Department of Environment, Climate Change and Water, 2010).	Section 3, Appendix A (upon final draft)
5. documents the significance of cultural heritage values of Aboriginal people who have a cultural association with the land.	Section 3, 5, 6
6. identifies, assesses and documents all impacts on the Aboriginal cultural heritage values.	Section 5, 6, 7
7. demonstrates attempts to avoid any impact upon cultural heritage values and identify any conservation outcomes. Where impacts are unavoidable, the ACHAR and EIS must outline measures proposed to mitigate impacts.	Section 7, 8
8. demonstrates attempts to interpret the Aboriginal cultural heritage significance identified into the development.	Proponent responsibility
Any Aboriginal objects recorded as part of the Aboriginal Cultural Heritage Assessment Report must be documented and notified to the Aboriginal Heritage Information Management System (AHIMS) within Heritage NSW of the Department of Premier and	AHIMS cards and numbers pending

SEARs Requirement	Relevant report section
Cabinet.	

1.1. PROPOSAL

The proposed development is for the construction of the Jindabyne Education Campus comprising a new primary school and a new high school at Jindabyne (the proposal). The Proposal Area is located within the JSRC located at 207 Barry Way and will accommodate approximately 925 students with the capacity for expansion in the future.

The new primary school will be located generally in the northern portion of the Proposal Area whilst the new high school will be to the south of the Proposal Area. While the schools are inherently separate identities, with separate student entries, opportunities for integration are provided in a central shared plaza with co-located school administration facilities, as identified in Figure 1-3 below. This outdoor learning space is activated by the school canteen (shared) and separate core facilities including the primary school hall and library, and the high school gym and library, and provides opportunities for shared community use.

The new primary school will provide for a Core 21 school. This will comprise of 20 home base units and 2 support learning units, administration and staff facilities, covered outdoor learning area (COLA), hall, staff and student amenities, out of school care facilities, library and special programs. Landscaped areas include active and passive open space play areas, and a games court.

The new high school will provide for a stream 2 high school. This is to comprise of 20 general/specialised learning spaces and support learning units, administration and staff facilities, covered outdoor learning area (COLA), hall, staff and student amenities, library, an agricultural learning unit. Landscaped areas include active and passive open space play areas, a sports field and multipurpose games courts.

A new access driveway is proposed off Barry way Road along the western boundary of the site and includes car parking, bus and private vehicle drop-off zones, and delivery zones.

1.2. DEVELOPMENT CONTEXT

The Proposal Area is located within the western extent of the existing JSRC at 207 Barry Way (101 DP1019527) within the Snowy Monaro Regional Council local government area, and is approximately 2.2 km south of the Jindabyne town Centre. The Proposal Area is shown in Figure 1-1 and Figure 1-2 below.

The Proposal Area is approximately 9 ha in size, containing a former golf course and three existing workers cottages which were occupied during the construction of the Snowy Hydro Scheme. The majority of the Proposal Area is undeveloped and contains maintained grasslands and scattered trees. Much of the surrounding land comprises remnant grassland, woodland and agricultural land.

As identified above, the Proposal Area is within the existing JSRC which is a high performance and community sport centre located directly east of the Proposal Area. The JSRC has a range of sporting facilities including a synthetic running track, cycling track, netball and tennis courts, fitness and indoor sports centres, and sporting ovals, as well as other services and accommodation facilities. The newly constructed BMX track is located directly east of the site with the new ski jump currently under construction to the northeast.

TAFE NSW have recently lodged a development application for a Connected Learning Centre (CLC) and Mobile Training Unit (MTU) which is proposed to the south of the site. The CLC and MTU will utilise interactive, digitally enabled, flexible, and multipurposed learning environments to provide high-quality training and learning experiences accommodating a maximum of 20-25 students and 3 teachers.

The surrounding locality is generally rural in character with other land uses also including the Jindabyne Aero Club located to the west of the site on Tinworth Drive, an industrial area to the southwest and the Jindabyne Community recycling centre is located east of the JSRC.

The proposal generally includes the following works:

- Minor demolition, tree removal and site clearing works;
- Construction of a primary school to the north of the site with home base units and special education units to meet current and future needs;
- Construction of a high school to the south of the site with general learning spaces and special education units to meet current and future needs
- Construction of covered outdoor learning area (COLA), quadrangle and games courts, libraries, staff and administration buildings, halls, canteens, agricultural learning unit and other associated developments:
- Construction of new walkways and active play areas including a sports field;
- Construction of a new at-grade car park; and
- Construction of a new pedestrian, cycle and vehicular access route.
- Associated infrastructure and services;
- Construction of internal roads which connect Barry Way to the facilities of the site; and
- Landscaping.

The construction methodology is outlined in Section 7.2.

1.3. PROJECT PERSONNEL

This ACHA report was completed by Heritage Consultant Jorge Fuenzalida Miralles and Kirwan Williams of NGH, including research, report preparation, and Aboriginal community consultation. Principal Heritage Consultant Matthew Barber conducted the survey fieldwork the 25th of June 2021 and reviewed the report for quality assurance purposes.

1.4. REPORT FORMAT

The ACHA Report was prepared in accordance with the following guidelines:

- *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH 2011);
- *Code of Practice for the Archaeological Investigation of Aboriginal Objects in New South Wales* (OEH 2010a); and
- *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (OEH 2010b).

The purpose of this ACHA report is therefore to provide an assessment of the Aboriginal cultural values associated with the Proposal Area and to assess the cultural and scientific significance of any Aboriginal heritage sites identified.

The objectives of the assessment were to:

- Conduct Aboriginal consultation as specified in clause 60 of the *National Parks and Wildlife Regulation 2019*, using the consultation process outlined in the ACHCRP;
- Undertake a field survey of the Proposal Area to identify and record any Aboriginal objects within the Proposal Area;
- Undertake an assessment of the archaeological and cultural values of the Proposal Area and any Aboriginal objects therein;
- Assess the cultural and scientific significance of any archaeological material;

- Asses the possible impacts of the development proposal on the archaeological sites, and
- Provide management recommendations for any Aboriginal objects found.

The SEARs issued by the Department of Planning Industry and Environment (DPIE) relating to Aboriginal cultural heritage were identified in section 8 of the SEARs, as outlined above.

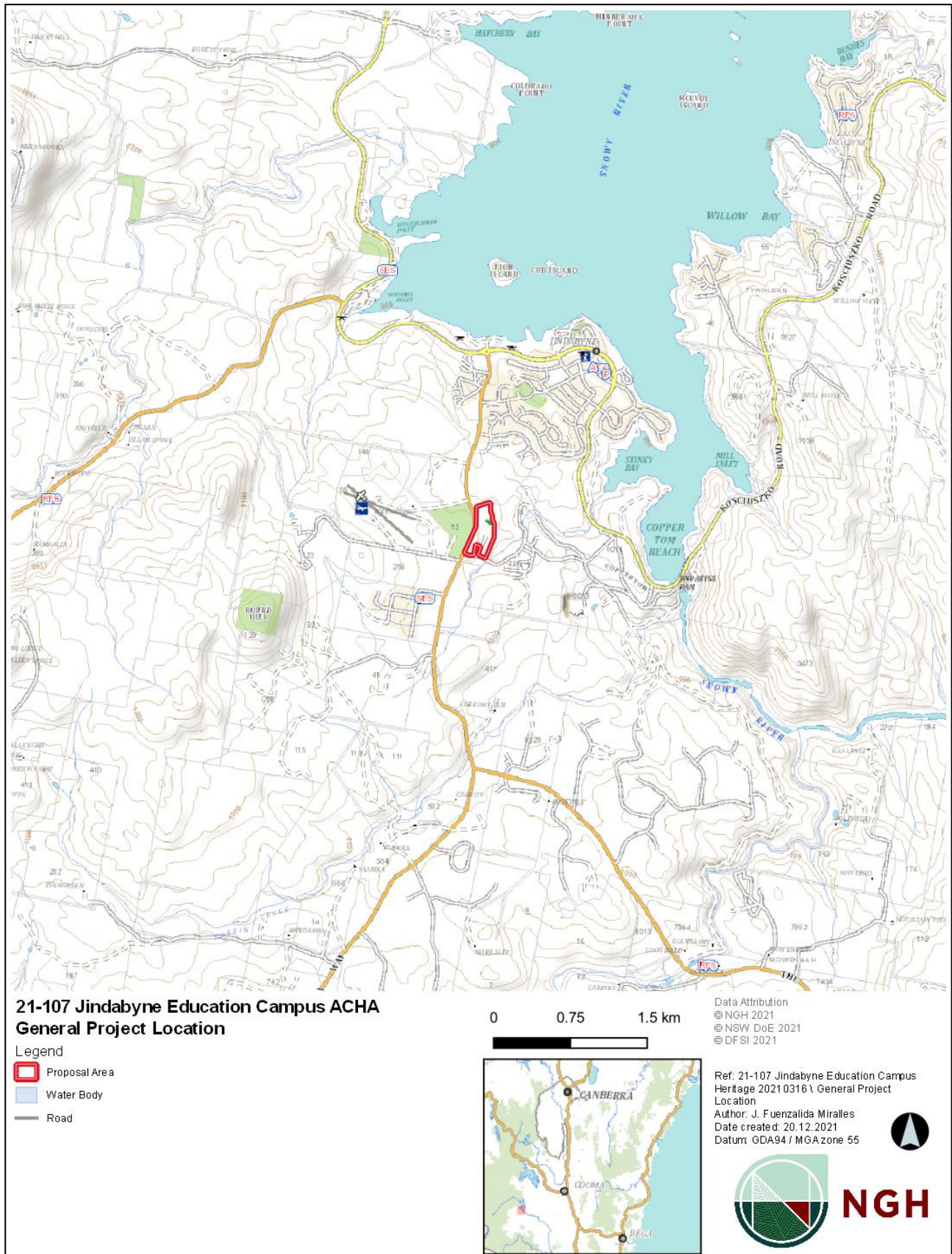


Figure 1-1 General Proposal Area at Jindabyne.

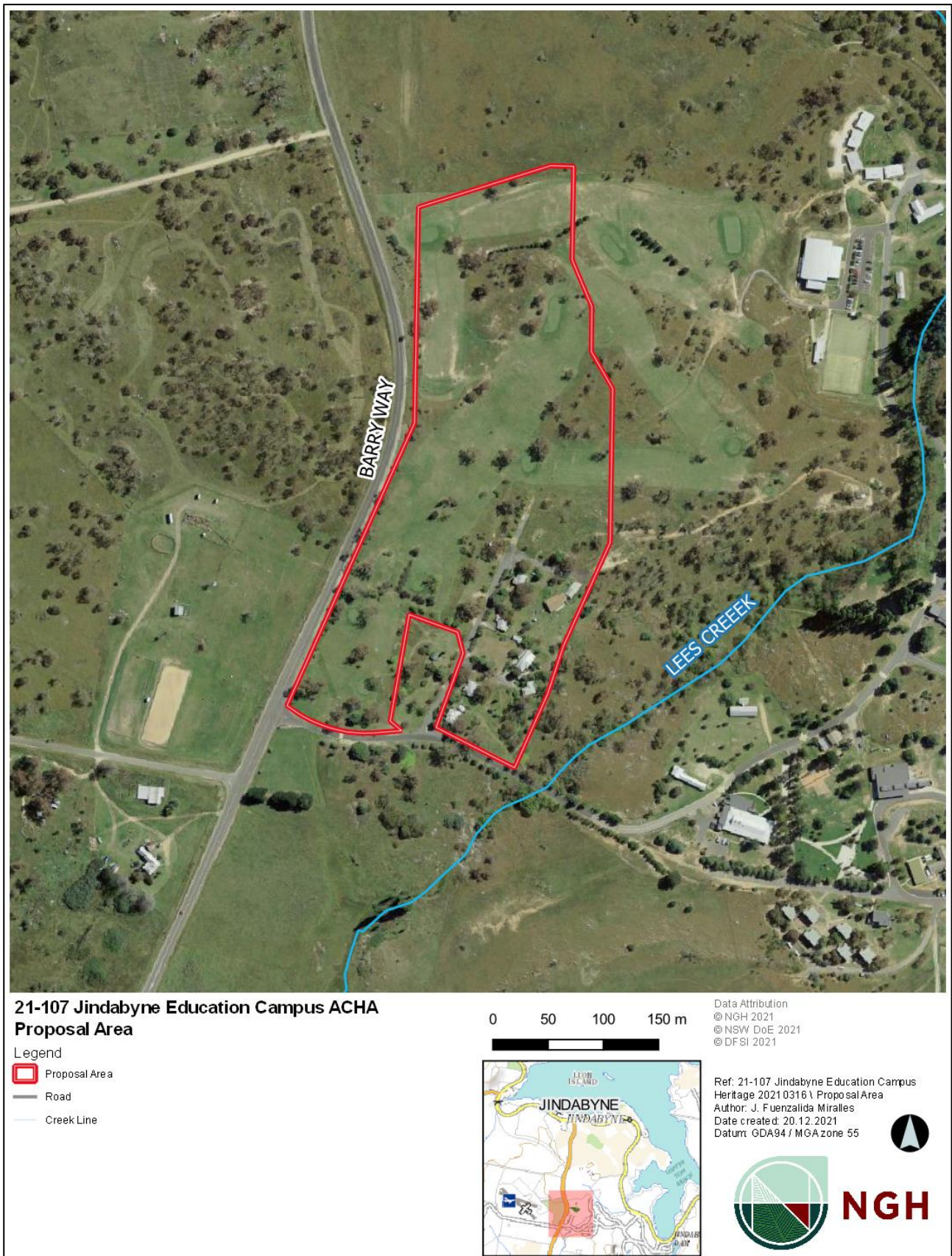


Figure 1-2 Proposal Area at Jindabyne.

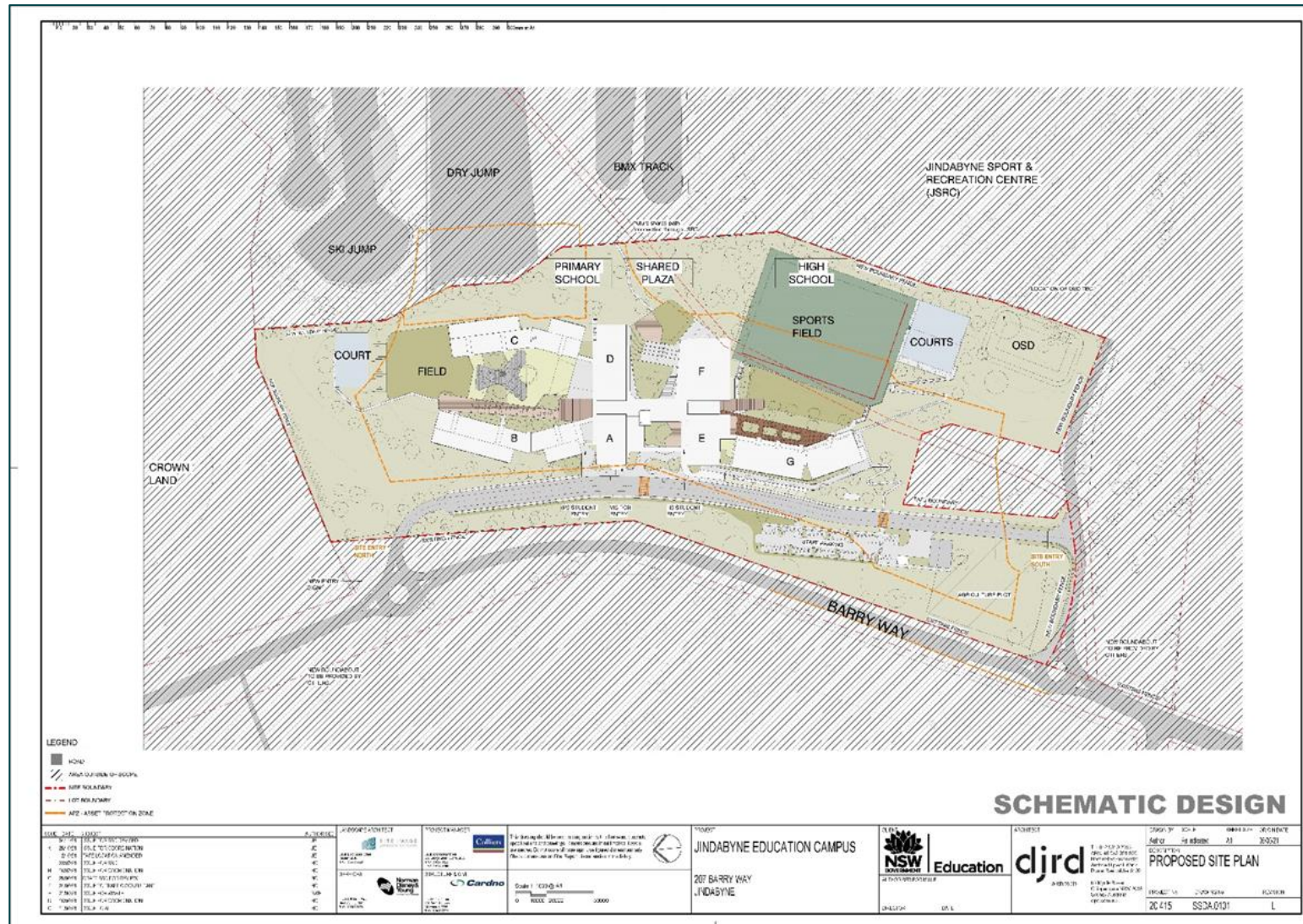


Figure 1-3. Proposed layout of campus (Source: DJRD Architects).

2. LEGISLATIVE CONTEXT

Aboriginal heritage is primarily protected under the NPW Act (1974) and as subsequently amended in 2010 with the introduction of the *National Parks and Wildlife Amendment (Aboriginal Objects and Places) Regulation 2010*. The aim of the NPW Act includes:

The conservation of objects, places or features (including biological diversity) of cultural value within the landscape, including but not limited to places, objects and features of significance to Aboriginal people.

An Aboriginal object is defined as:

Any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or concurrent with the occupation of that area by persons on non-Aboriginal extraction and includes Aboriginal remains.

Part 6 of the NPW Act concerns Aboriginal objects and places and various sections describe the offences, defences and requirements to harm an Aboriginal object or place. The main offences under section 86 of the NPW Act are:

- A person must not harm or desecrate an object that the person knows is an Aboriginal object.
- A person must not harm an Aboriginal object.
- For the purposes of this section, "circumstances of aggravation" are:
 - that the offence was committed in the course of carrying out a commercial activity, or
 - that the offence was the second or subsequent occasion on which the offender was convicted of an offence under this section.
- A person must not harm or desecrate an Aboriginal place.

Under section 87 of the NPW Act, there are specified defences to prosecution including authorisation to harm in accordance with an Aboriginal Heritage Impact Permit (AHIP) or through exercising due diligence or compliance through the regulation.

Section 89A of the Act also requires that a person who is aware of an Aboriginal object must notify the Director-General in a prescribed manner. In effect this section requires the completion of an AHIMS site card for all sites located during heritage surveys.

Section 90 of the NPW Act deal with the issuing of an AHIP, including that the permit may be subject to certain conditions. However, as the Jindabyne Education Campus project is a designated State Significant Development, section 90 of the NPW Act does not apply. There is no requirement to obtain an AHIP to impact Aboriginal heritage objects. Instead, the approval pathway is through DPIE. The SEARs issued for the project guide the level of assessment and provide the framework for assessing the impact to Aboriginal heritage.

NSW Environmental Planning and Assessment Act 1979

The EP&A Act is legislation for the management of development in NSW. It sets up a planning structure that requires developers (individuals or companies) to consider the environmental impacts of new proposals. Under this Act, cultural heritage is a part of the environment. This Act requires that Aboriginal cultural heritage and the possible impacts to Aboriginal heritage that development may have are formally considered in land-use planning and development approval processes.

The proposed Jindabyne Education Campus has been classified as a State Significant development (SSD) and will be assessed under part 4 of the EP&A Act (SSD 9619). SSDs are major projects which require approval from the Minister for Planning or their delegate. An ACHAR report must be prepared in accordance with the SEARs, as outlined in Table 1-1.

3. ABORIGINAL CONSULTATION PROCESS

The consultation with Aboriginal stakeholders for this project was undertaken in accordance with Section 60 of the *National Parks and Wildlife Amendment (Aboriginal Objects and Aboriginal Places) Regulation 2019* and following the process outlined in the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (ACHCRP). The guide outlines a four-stage process of consultation as follows:

- Stage 1 – Notification of project proposal and registration of interest.
- Stage 2 – Presentation of information about the proposed project.
- Stage 3 – Gathering information about cultural significance.
- Stage 4 – Review of draft cultural heritage assessment report.

The full list of consultation steps, including those groups and individuals who were contacted, and a consultation log is provided in Appendix A. A summary of actions carried out in following these stages are as follows.

Stage 1. Letters outlining the development proposal and the need to carry out an ACHA were sent to the Bega LALC and various statutory authorities including Heritage NSW, as identified under the ACHCRP. An advertisement was placed in the local newspaper, the *Monaro Post*, on the 31st of March 2021 seeking registrations of interest from Aboriginal people and organisations. A further series of letters was sent to other organisations identified by Heritage NSW in correspondence with NGH. In each instance, the closing date for submission was 14 days from receipt of the letter.

As a result of this process, twenty Aboriginal groups registered their interest in the proposal.

These were:

- Wagonga Local Aboriginal Land Council
- Ngarigu Brajerak
- PD Ngunawal Consultancy
- Yurwang Gundana Cultural Heritage Services
- Gulgunya Ngunawal Heritage Aboriginal Consultancy (GNHAC)
- Didge Ngunawal Clan
- Clive Freeman
- Ngunawal Heritage Aboriginal Corporation
- Ngarigo Nation Indigenous Corporation
- Muragadi Heritage Indigenous Corporation
- Murri Bidgee Mullangari Aboriginal Corporation
- Merrigarn Indigenous Corporation
- Bega Local Aboriginal Land Council
- Wolgalu Umbe Traditional Custodians Cooperation

An additional six groups registered an interest in the project but have requested that their details are not released. No other party registered their interest, including the other entities and individuals recommended by Heritage NSW.

A copy of the draft report will be provided to all the registered parties for comment.

The Consultation Log in Appendix A will be redacted in all public versions of this report.

Stage 2. On the 11th of May 2021, an *Assessment Methodology* document for the Jindabyne Education Campus was sent to all twenty Registered Aboriginal Parties (RAPs) listed above (nineteen by email and one by registered post) This document provided details of the background to the proposal, a summary of previous archaeological surveys, and the proposed heritage assessment methodology for the proposal. The document invited comments regarding the proposed methodology and sought any information regarding known Aboriginal cultural significance values associated with the Proposal Area and/or any Aboriginal objects contained therein. A minimum of 28 days was allowed for a response to the document.

None of the registered parties raised any objections to the methodology and many expressed interest in participating in fieldwork.

Stage 3. The *Assessment Methodology* outlined in Stage 2 included a written request to provide any information that may be relevant to the cultural heritage assessment of the Proposal Area. It was noted that sensitive information would be treated as confidential. No response regarding cultural information was received in response to the methodology however comments were made regarding the treatment of any cultural materials located.

The survey fieldwork was organised, and four of the twenty registered groups were selected for fieldwork participation by the Proponent. The survey fieldwork was carried out on 25 June 2021 by one archaeologist from NGH and four Aboriginal RAP's. The Aboriginal community representatives who participated in the fieldwork were:

- John Dixon (Ngarigo and Djiringanj people).
- Ron Thomas (Bega LALC)
- Jason Davidson (Ngarigo Elders)
- Iris White (Ngarigo Elders)

Stage 4 A draft version of this *Aboriginal Cultural Heritage Assessment Report* for the proposal (this document) will be forwarded to the RAPs inviting comment on the results, the significance assessment and the recommendations post completion of the testing program. A minimum of 28 days will be allowed for responses to the document and all responses will be incorporated into this document.

3.1. ABORIGINAL COMMUNITY FEEDBACK

Aboriginal community feedback and comments will be added after the conclusion of the 28-day review period.

4. BACKGROUND INFORMATION

4.1. REVIEW OF LANDSCAPE CONTEXT

Understanding the landscape context of the Proposal Area may assist us to better understand the archaeological modelling of the area and assist in identifying local resources which may have been used by Aboriginal people in the past. This information can then potentially be used to predict the nature of Aboriginal occupation across the landscapes within the Proposal Area.

Factors that are typically used to inform the archaeological potential of landscapes include the presence or absence of resources that would have been used by Aboriginal people including; water, animal and plant foods, stone and other resources. The landscape context assessment for the Proposal Area is based on several classifications that have been made at national, regional and local levels to help us better understand the archaeological modelling of the Proposal Area. These site location factors are based on the geology, topography, hydrology, flora and fauna and past land disturbances within and adjacent to the Proposal Area.

4.1.1. Geology and Topography

The landscape context of the Proposal Area is based on Mitchell soil landscapes and NSW geological maps. The combination of these differing resolutions of landform data provides a comprehensive and multi scaled understanding of the landscape within the Proposal Area and its immediate surroundings.

Archaeologically, the geology of any location is important as it informs as to whether there any potential for in-situ deposits of stone material traditionally used for the manufacture of stone tools or whether these materials would have to have been sourced from further afield or even traded with other groups of people.

The now submerged Jindabyne valley floor contains alluvial deposits, with some Tertiary gravels, sand, sandstone, clay and lignite present downstream from the junction of the Eucumbene and Snowy Rivers. Away from the valley, undifferentiated granite, granodiorite, tonalite, breccia, alpie and gneiss is present (NSW Geological Survey, Bega Map Sheet SJ 55-4). Quartz reefs and veins run through the region. Silcrete is available in the Dalgety-Berridale area, the Eucumbene valley and the Adaminaby Plateau (Avery 1997:3). Silcrete is available locally at Kara Creek on the Berridale Plateau and at Mt Gilead, south of Jindabyne. Soils in the region have a high gravel and sand content. The Proposal Area is a part of a sloping to moderately dissected landscape system comprising the mid to upper valley sides flanking the southern Jindabyne (Snowy River) valley.

Aboriginal people may well have used local low gradient crest landforms for casual camping and shelter while in the area travelling through country or hunting and gathering away from base camps. Such occupation, however, is predicted to have been sporadic and infrequent. The surfaces of the spurs subject to impacts display moderate to steep gradient features that exhibit very low archaeological potential.

The major soil landscape associated with the Proposal Area is the Jindabyne Plains Soil Landscape within which the dominant lithology consists of wide-open valleys and plains at a general elevation of 800 to 900m with surrounding low ranges and rounded peaks to 1100m on massive Silurian-Devonian granite and granodiorite.

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Name	Description
Jindabyne Tonalite	Medium-grained tonalite with larger hornblende crystals to 20 mm, tonalite includes quartz, plagioclase, K-feldspar, cordierite, biotite and muscovite.
Leesville Granodiorite	Medium-grained, variably foliated biotite granodiorite to tonalite; tonalite includes quartz, plagioclase, K-feldspar, cordierite, biotite and muscovite; inclusions are of metasedimentary origin.

4.1.2. Soils

As mentioned previously landscape mapping as part of the Mitchell landscapes system (Mitchell 2002) shows the Proposal Area is in the *Jindabyne Plains Soil Landscape* which is characterised by shallow gravelly loams on slopes, extensive red and yellow texture-contrast soils on slopes with two or three terraces marginal to the main streams with dark coloured gritty uniform loams and clays in alluvium.

More recent geotechnical investigations for the Jindabyne Education Campus (Douglas and Partners 2021) revealed a fairly shallow soil profile with topsoil consisting of sandy clay to clayey sand with gravels and rootlets of varying depths between 0.15 and 0.3 metres. Underlying this were some sections of natural soils which also consisted of a sandy clay, the depth ranging from 0.15 to 1.5 metres. There were some mixtures of gravels and cobbles and boulders, with the bedrock of granodiorite and tonalite observed from near surface to depths of about 1.5 metres. The presence of topsoil, likely mixed with natural soils indicates the potential for in situ

archaeological material to remain within the project area. It was also noted that there were parts of the area that contained imported fill material, mostly restricted to the elevated tees and greens of the former golf course.

4.1.3. Hydrology

The Proposal Area is located immediately to the west of the 2nd order drainage channel of Lees Creek and approximately 2km to the west of the course of the Snowy River which has been drowned following the construction of the Jindabyne Dam. The Proposal Area is situated within an area of rolling hills and dissected plateau, within proximity to several freshwater sources including springs, swamps and creeklines.

Such water sources and adjacent relatively flat ground would have provided attractive terrain and ideal conditions for Aboriginal people living in the area. These waterways would also have attracted local fauna to the area as well, providing a food resource for Aboriginal people.

The easy availability of water would not have hindered Aboriginal occupation across the region, with most areas accessible to permanent water. The Snowy River may be expected to have attracted a locally higher degree of Aboriginal occupation as a permanent source of water, but its major tributaries such as Lees Creek would also have provided not only resources but possibly pathways across the local country. Focus of Aboriginal occupation and land use may have been along creeks and waterways.

4.1.4. Flora and Fauna

The information provided herein is intended as a generalised summary of the endemic flora and fauna present within the Proposal Area and is not to be used as a substitute for detailed ecological studies and assessments.

Prior to the European modification of the landscape vegetation within the Proposal Area would have likely consisted of dry tussock grassland of rough and variable spear grasses (*Austrostipa variabilis*) with kangaroo grass (*Themeda triandra*) on valley floors, patches of open snow gum (*Eucalyptus pauciflora*) and black sallee (*Eucalyptus stellulata*) woodland on hills, open forest of yellow box (*Eucalyptus melliodora*), Blakely's red gum (*Eucalyptus blakelyi*), with mixed understorey on moister ranges merging with adjacent landscapes. (Mitchell 2002). Most of the vegetation in the area has been cleared, with some trees remaining in isolated stands around the paddocks.

Importantly, the surrounding forests prior to clearance would have provided a suite of foods and habitats with possums, macropods, reptiles and various species of birds present. Finally, some of the plant species known to be used by Aboriginal people, such as wattle and eucalypts occurred in sclerophyllous woodland.

Given that the Proposal Area is located near to the confluence of a variety of resources, the area may have been targeted for the exploitation of aquatic and terrestrial resources by Aboriginal people. Eucalyptus trees provided gum and oil which was used for medicinal purposes, wood for the manufacture of bowls, shields and canoes, and bark which was used to fishing lines, nets and baskets (Stewart and Percival 1997:8). The fruits and roots of the blue flax lily could be eaten, and the nectar of flowering plants was also harvested for food (Stewart and Percival 1997:10) and in particular, the Murnong Yam Daisy (*Microseris lanceolata*) is a known food from the area. In addition to floral resources, the forests would have created a habitat for numerous animals which were resources for food (meat), clothing (skin) and tools (bones and teeth). Whilst the Proposal Area has been cleared, a number of trees are present within the area. Consequently, there is potential for old growth native trees to be located within or adjacent to the Proposal Area that may contain evidence of Aboriginal cultural modification.

While there is very little remnant native vegetation remaining, the Proposal Area is likely to have formed a small part of a larger resource-rich area in which flora and fauna resources were abundant.

4.1.5. Historic Land Use and Land Disturbance

The NSW NPWS (2003: 94) reports that clearing, grazing, competition with introduced herbivores and predation from introduced carnivores (e.g. foxes and cats), has resulted in a general decrease in the number and species of flora and fauna in the bioregion.

Land disturbances within the Proposal Area are largely associated with the Snowy Mountains Hydro-Electric Scheme, land clearing, and later use as part of the Jindabyne Sports and Recreation Centre including a golf course. Beginning in 1952, the Snowy Mountains Scheme saw the construction of lodges that were built to house employees for the construction of the scheme. It is likely some clearing of the area had been undertaken by the mid-1960s, although it is also likely that the area was not heavily timbered. At the conclusion of the construction of the Snowy Scheme, the In the 1980s, the use of the area as part of the Sports and Recreation Centre so the construction of running tracks, open and closed field, student accommodation and an athlete's village. The site would also have been impacted by the construction of Barry Way, a major road running adjacent to the western boundary of the site.

The Proposal Area today continues to be used as part of the Sports and recreation centre and has been heavily impacted by past uses that involved high levels of ground disturbance including a former golf course. The Proposal Area has also been historically disturbed by the construction and maintenance of roads, houses, dams, fencing and grazing.

There has also been more recent disturbances with earthworks undertaken in part of the proposal area. This includes some clearing of vegetation and stripping of grass and soil and importation of some fill material. This work was undertaken prior to the current survey but has impacted part of the Proposal Area.

	
Plate 1 Earthworks in the Proposal Area.	Plate 2 Pre-existing disturbances in the Proposal Area

4.1.6. Landscape Context

Most archaeological surveys are conducted in a situation where topographic variation can lead to differences in the assessment of archaeological potential and site modelling for the location of Aboriginal objects. The Proposal Area is situated within an area of predominantly rolling hills but includes a large open flat area.

One second order drainage line Lees Creek lies to the south of the Proposal Area with an unnamed tributary of Lees Creek to the north. Lees Creek flows into Stinky Bay, Lake Jindabyne 1 km to the east but would have joined with the Snowy River just over 2 km away prior to the construction of the dam. It is expected that Aboriginal activity would have been focussed on the more permanent drainage lines but as the region is well watered, Aboriginal use of the landscape would not have been restricted to the main water courses.

Given the nature of the terrain, the steeper slopes within the Proposal Area are assessed to be unlikely to have been used by Aboriginal people for occupation. However, there are sections that contain elevated, level terrain that may have been a focus for Aboriginal camping, particularly given the proximity of Lees Creek. These level areas have a higher archaeological potential. Additionally, any old growth mature native trees within the Proposal Area have the potential to have been culturally modified. It is considered that prior to European land modifications, this area may have provided resources, shelter, water and food for Aboriginal people.

4.2. ABORIGINAL AND ARCHAEOLOGICAL BACKGROUND

4.2.1. Ethnographic Setting

Aboriginal people have lived in the Southern Uplands and its environs for at least 20,000 years. The oldest dated site in the region is the Birrigai Rock shelter which has yielded a radiocarbon determination of 21,000±220 years BP (Flood et al 1987). Late Pleistocene occupation sites have also been identified in the coastal hinterland at Bulee Brook 2 (18,810± 160) and Bobs Cave (10,850± 300) west of Jervis Bay (Boot 1996). During the Pleistocene, the environment of the region would have been a cold steppe grassland with vegetated shrubs and scattered groups of Eucalypts located in protected positions (Mulvaney and Kamminga 1999). Between 23,000 and 15,000 years ago, harsh conditions prevailed and the mountains peaks were glaciated above 1,900 metres; periglacial conditions were present to at least 1000 metres above sea level. The alpine zone was a cold desert with scattered fields of perennial *Plantago* herb fields which may have provided some bulbs and tubers for human consumption (Mulvaney and Kamminga 1999). Pleistocene occupation of the Snowy Mountains has been put forward as a theory by Kamminga (1992), however, this remains to be confirmed by further investigations. Flood et al. (1987) has argued that the Birrigai shelter in the ACT on the northern fringes of the Alps has provided evidence of Pleistocene occupation dating from about 21,000 years ago. The scarcity of artefacts in the Pleistocene levels has been interpreted by Flood (1995) as showing seasonal occupation of the site. Flood et al. (1987) have argued that an increase in occupation of the site in the Holocene from about 3,000 years is visible and it is considered that permanent exploitation of the alpine and sub-alpine regions of the Snowy Mountains began from about 5,000 years ago. Lourandos (1987) has argued that the evidence from the uplands of the Snowy Mountains represents ephemeral occupation during the Pleistocene with an increased establishment and occupation of sites following the late Holocene.

Aboriginal language groups including the Wolgal, Djilamatung and Ngarigo occupied the Snowy Mountains during the early period of European settlement (Tindale 1974). White settlers began to move into the Southern Uplands region during the early 1800s. European settlement ultimately resulted in the alienation of Aboriginal people from their traditional lands and changes regarding cultural and economic relationships with country. It is generally understood that the Jindabyne area falls within the boundaries of the Ngarigo cultural and language group. The area occupied by these people extended from the eastern side of Kosciuszko Plateau to the western slopes of the coastal ranges (Tindale 1974). The Ngarigo people maintained social relationships with neighbouring groups including Ngannawal, Djilamatang, Jamathang and coastal groups including the Yuin (Howitt 1904).

Some information is recorded about the nature of Aboriginal occupation of the region during the early period of European occupation. The literature which does exist has presented a biased view of Aboriginal life within the mountains which is focused particularly on Bogong Moth exploitation. Indeed, the ethnohistoric literature has implied to some readers that seasonal exploitation of the moth was the major reason for Aboriginal usage of the Alpine region. The significance of moth consumption has been re-evaluated (Navin Officer Heritage Consultants 2000: 19); Kamminga et al. (1989) have argued that the large inter-tribal gatherings which were associated with moth exploitation acted to mediate and foster political and social linkages between the different language and tribal groups which came together during these occasions.

Flood (1973, 1980) was heavily influenced by the extant ethnohistoric literature which focused on moth exploitation in her seminal study of the region. She constructed a hypothesis of seasonal usage of the highlands based on the exploitation of the moth. The moth, she argued, was important as an economic food source and its exploitation may have been causal as the impetus for the initial usage of the highlands. Flood (1980) suggested that the Ngarigo people occupied low altitude valleys (< than 600m) in winter, moving into higher areas in summer primarily for the purpose of exploiting the bogong moth. She argued that the occupation pattern which resulted from the exploitation of moths is one in which a series of camps extended from the lowest valleys below 300m up to the alpine treeline zone at 1,830m.

A contrary viewpoint to Flood's (1980) model has been provided by Chapman (1977) who argued that there was no evidence which pointed to the moth as being a staple food source; Chapman argued that the importance of the moth as a food resource has been over emphasized by early commentators. She argued that there is no evidence for the moth as being a reliable food source, that it lacked nutritional value to act as a staple and that the moth, in any case was primarily consumed by men. Chapman (1977) instead argued that the significance of moth exploitation was that it fostered social cohesion within the region. Researchers such as Bowdler (1981), Cooke (1988), Gott (1982) and Kamminga et al. (1989) have drawn attention to a variety of vegetable products available locally which are likely to have been utilized as food resources. Bowdler (1981) has argued that the importance of the moth was more ideological than economic, and that the yam daisy (*Microseris*) would have provided a more reliable food source.

A model of seasonal usage of the alpine country continues to have currency within the literature. The seasonal migration to higher altitudes in summer months is accepted, however, the issue regarding Flood's emphasis on moth exploitation is questioned (Navin 1991). During winter small groups of Aboriginal people would have occupied the lower montane valleys and the adjacent tablelands (Mulvaney and Kamminga 1999: 298). The region would have opened considerably however, in summer. It was during this time that people from other areas gathered to perform inter-tribal ceremonies (Mulvaney and Kamminga 1999: 299). Chapman (1977) has argued that the Jindabyne valley would have been occupied on a year-round basis. According to Avery (1994, cited in Avery 1997), Aboriginal people of the Jindabyne area continued until the late 1800's to live in the area and exploit its local resources.

4.2.2. AHIMS Search

The Aboriginal Heritage Information Management System (AHIMS) is a database of previously recorded Aboriginal heritage sites in NSW. A search provides basic information about any sites previously identified within a search area. However, a register search is not conclusive evidence of the presence or absence of Aboriginal heritage sites, as it requires that an area has been inspected and details of any sites located have been added to the register. As a starting point, the search will indicate whether any sites are known within or adjacent to the investigation area.

A search of the AHIMS database was conducted on the 26th of March 2021 over an approximately 6 km north/south x 6 km east/west centred on the Proposal Area. The AHIMS Client Service ID was: 579572. There were 98 Aboriginal sites and one declared Aboriginal Place in the search area results.

The results of the AHIMS search area shown in Figure 4-1 and summarised in Table 4-1 below.

Table 4-1 Breakdown of previously recorded Aboriginal sites in the region.

Site Type	Number
Artefact (1 or more)	92
Artefact and Potential Archaeological Deposit (PAD)	1
Burial	1
Modified Tree and Burial	1
Ceremonial Ring and Grinding Groove	1
Stone Arrangement and Burial	1
Restricted site	1
<u>TOTAL</u>	<u>98</u>

The Aboriginal place is Curiosity Rocks which is not located within or adjacent to the Proposal Area. Curiosity Rocks is approximately 2.7 km north-west of the current Proposal Area. Curiosity Rocks is listed as an Aboriginal Ceremonial complex site encompassing approximately 40 hectares of Lot 161 DP 756686. The site was registered as an Aboriginal Place on the 7th of April 2016. The values for which Curiosity Rocks has been assessed as significant to Aboriginal culture includes but is not limited to it being in sight of Kalkite Mountain and adjacent to a camping area and ceremonial grounds situated along the traditional travel pathways up the Snowy River to the Mt Twynam area. The site is noted to have archaeological evidence of occupation and use by Ngarigo people. The area holds a deep spiritual connection for the Ngarigo people who continue to acknowledge the cultural integrity of this place and the importance of protecting its cultural values for future generations.

No previously recorded AHIMS sites are located within or adjacent to the Proposal Area.

A single restricted site was confirmed by AHIMS on 31/03/2021 to not be within or adjacent to the Proposal Area.

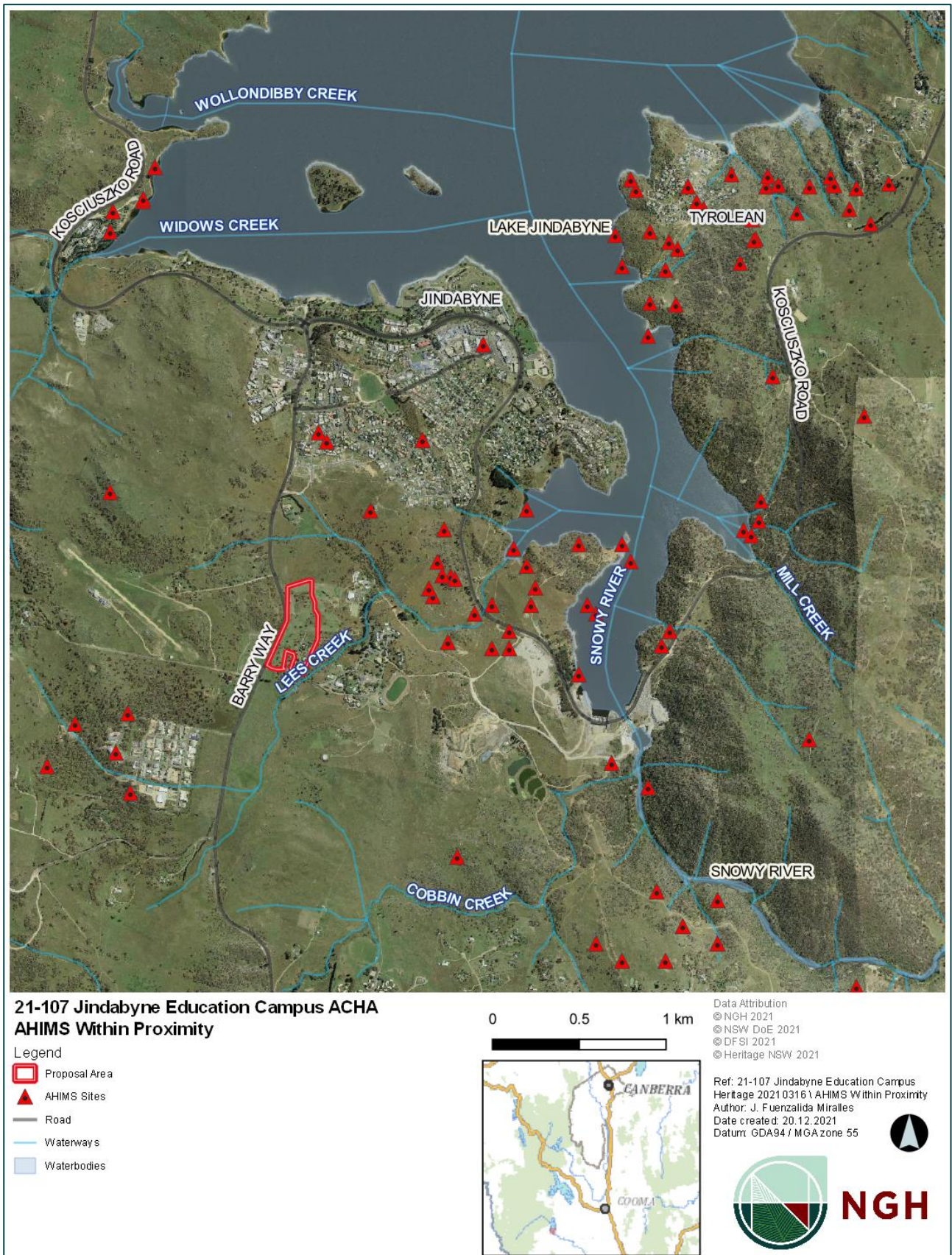


Figure 4-1 AHIMS Sites surrounding the Proposal Area.

4.2.3. Archaeological Context

A relatively large number of archaeological surveys have been undertaken in the vicinity of the townships of Jindabyne. Most of these archaeological surveys have been conducted as part of larger assessments required prior to development approval. The Aboriginal occupation modelling of the area is therefore relatively well understood however relatively few subsurface excavations have been undertaken which limits our understanding. What is clear however, is that Aboriginal sites are found within most survey contexts which indicates that the Aboriginal occupation and land usage was widespread across the landscape. The following summaries are based on previously documented archaeological surveys in the Jindabyne area.

In 1976 Chapman investigated and excavated a hearth on the eastern bank of the Snowy River between Cobbin Creek and the Mowanba River. The hearth was found in association with 123 stone artefacts located on level ground on a small knoll about 60 metres from the river (as cited in Williams Barber Archaeological Services 1993:3)

In 1977 Chapman examined the archaeological evidence that had emerged through erosion around the foreshore of Lake Jindabyne as part of an Honours thesis. The sites were all artefact scatters located on slopes and near creeks and the Snowy River around Lake Jindabyne. A total of 34 sites were recorded, 27 of which contained less than 50 artefacts. Three of the sites recorded by Chapman contained more than 100 artefacts. Chapman recorded a variety of artefacts including pebble choppers, hatchet heads, geometric microliths, bondi points, cores, scrapers and waste flakes. Quartz was the dominate material recorded. Chapman's study showed that there was a large number of sites in the Jindabyne Valley and she argued that Flood's model of only limited occupation during the summer months did not have any environmental, ethnographic or archaeological evidence to support such a theory (as cited in Williams Barber Archaeological Services 1993:3).

In 1982 Djekic conducted the survey for the proposed transmission line from Cooma to Jindabyne. A total of 12 sites were recorded that included six culturally modified trees (none of which were definite), four artefact scatters and two isolated finds. Four of the artefact sites were recorded within 200 meters of the Snowy River on spurs, crests and flats (as cited in Williams Barber Archaeological Services 1993:3-4).

In 1988 Walkington conducted a survey for the proposed Mill Creek subdivision south of Lake Jindabyne in an area characterized by minor drainage lines, low ridges, gentle slopes and marshland. No sites were recorded (as cited in NGH Environmental 2005).

In 1993 Williams Barber Archaeological Services undertook the survey of 183 ha for the proposed Cobbin Estate within Lot 4 DP 817374 approximately 5km south of Jindabyne. A total of four artefact scatters were recorded. The sites were all small, low density scatters with two sites located on a broad flat between ridges, one on the upper slope of spur and the other on a flat spur above a creek. The raw material recorded was all quartz, except for one silcrete piece. The artefact types recorded were generally flaked pieces with very few flakes and cores also recorded.

In 1998 Oakley conducted a survey at the proposed Alpine Air Service Complex at Widows Inlet on the foreshore of Lake Jindabyne. A single artefact scatter was recorded that was noted to have up to 50 artefacts. The assemblage was dominated by quartz (as cited in NGH Environmental 2005).

In 1999 Oakley inspected three sites initially recorded during the survey for Cobbin Estate by Williams Barber Archaeological Services (1993) which had apparently suffered disturbance due to grading of the farm track. Oakley also conducted further survey in areas for proposed access roads but no additional sites were found. Oakley assessed the property to be of low potential to contain subsurface sites, mainly given the shallow soils encountered (as cited in NGH Environmental 2005).

In 2000 Oakley undertook survey for the MR 286 Kosciuszko Road Jindabyne NSW proposed pavement rehabilitation, east of Jindabyne. The survey determined the location of one previously recorded site (AHIMS# 62-1-0019) and recorded a new site which consisted of a single isolated quartz flake. Both sites were outside the area of proposed impact. No Aboriginal archaeological sites or areas with the potential to contain sites were found within the proposed impact area.

In 2003 Saunders conducted the survey of 14 ha of land adjacent to Rushes Creek. Two sites were recorded which included an extensive artefact scatter with over 100 artefacts on a low gradient, north facing secondary spur crest above Rushes Creek and on the crest of a narrow ridge. The extensive site EJ1 was noted to encompass three previously recorded sites (as cited in Dibden 2017:16)

In 2003 Biosis conducted survey for the proposed new spillway and outlet works for the Jindabyne Dam. Most of the development footprint was associated with areas that had been previously subject to high levels of disturbance that were deemed to have very low or nil archaeological potential. Areas outside the proposed development footprint where transport and construction activity were likely to occur were also inspected. During this assessment the area near Cobbin Creek was identified as an archaeologically sensitive landform and a new site (AHIMS # 62-1-0228/ JB1) was recorded. An addendum to the project was conducted by Barber in 2003 to ensure that additional areas proposed for disturbance outside the initial survey footprint were adequately assessed. Barber (2003) identified 13 new sites that contained a range of artefact types including flakes, cores, backed artefacts and anvil/hammerstones. A range of raw materials was also found including quartz, silcrete, quartzite, volcanics and chert. The sites recorded by Barber (2003) were noted to indicate that the Copper Tom ridgeline and the associated spurs were used by Aboriginal people for camping.

In 2004 Dibden (2004a) conducted survey for the proposed Industrial Estate Leesville on Lot 10 DP 1044719 approximately 1.6 km to the south of Jindabyne. Two low density artefact scatters and two isolated stone artefacts were recorded. Dibden noted that the location of the sites recorded was situated away from reliable water sources and concentrated resource zones, consequently the Aboriginal occupation of the area was noted to likely to have been transient rather than the focus of repeated habitation.

In 2004 Dibden (2004b) conducted survey for the proposed rural tourist recreational facility at Mill Ridge approximately 2 km east of Jindabyne. Two sites were recorded outside the areas proposed for works. The sites recorded were an artefact scatter located on the crest of a ridge and an isolated find located on the upper ridge slope. The artefacts recorded consisted of silcrete flakes and flaked pieces, a volcanic flake and a quartz flake.

In 2005 NGH Environmental conducted an analysis of the natural and archaeological values around Jindabyne, Adaminaby, Berridale, and Dalgety. It was primarily a desktop study that collated previously recorded archaeological information and studies in the area. The desktop study of the Jindabyne area noted that sites were nearly always found during archaeological surveys and that it was clear that stone artefact scatters and subsurface deposits were widely distributed within the Jindabyne area. However, artefact distribution would vary in terms of their density and nature. Flat or gently sloping land situated in elevated contexts adjacent to major creeks and rivers was assessed to have a high potential to contain relative high densities of stone artefacts. Additionally, elevated land situated within proximity to the confluence of a number of different environmental contexts was also noted to likely to have been utilised as base camp locations. Artefact density was noted to likely be relatively sparse further away from a reliable water source, although it should be noted that the region is well watered, and few places are distant from a water source. It was concluded that archaeological sites representing Aboriginal occupation would be present within the Jindabyne area within a variety of environmental contexts. Archaeological sensitivity mapping was also undertaken that noted areas of high and low to moderate archaeological sensitivity. Areas of high archaeological sensitivity were generally within 300 meters of major creek and rivers and along relatively flat spurs and crest near the shore of Lake Jindabyne.

In 2005 Dibden conducted survey for the proposed Highview Estate residential subdivision of Lot 1 DP 1064075 in Jindabyne. A total of six locales with stone artefacts and eight areas of potential archaeological deposit were identified. The artefacts recorded were manufactured from silcrete and quartz with a lesser number of chert artefacts. The sites were predominately located on saddles, elevated spur crest or terraces near a water source. Dibden notes that the focus of Aboriginal occupation within the Proposal Area would likely have been on elevated and flat areas situated near Lees Creek. Further archaeological investigation in the form of subsurface testing was recommended if impacts to the areas with potential archaeological deposit could not be avoided.

In 2005 Saunders surveyed a proposed 6.3 ha residential subdivision to be known as Kunama Ridge that was bordered to the east by Kosciuszko Road and to the west by the Alpine Sands Estate subdivision. A total of three low density artefact scatters were recorded. The sites were recorded on a spur crest and a gently inclined mid to upper north facing slope. It was noted that the sites would likely be more extensive than was visible. A scarred tree site originally recorded by Chapman in 1982 (AHIMS #62-1-0067) was confirmed to not be Aboriginal in origin and was likely the result of European activities.

In 2006 Saunders conducted assessment of Lots 2 and 6 DP 259723 Kunama Drive, East Jindabyne for the residential subdivision to be known as the Ridge Estate. Two small sites and an associated area of potential archaeological deposit were recorded. It was recommended that a testing program was undertaken to determine the extent and significance of the Aboriginal site present with the proposed subdivision area given that the scatters were likely representative of two exposures of a more extensive Aboriginal site in the area.

In 2007 Saunders conducted further assessment of Lots 2 and 6 DP 259723 as part of a subsurface testing and surface collection salvage program. A total of 15 test pits were excavated across three transects with 16 artefacts recovered from the subsurface testing program. The subsurface testing program identified an extensive low density artefact scatter within the upper 25cm of soil deposit across the crest, northern shoulder, and upper northern slope of the spur. Saunders noted that the potential for Aboriginal objects to occur outside the crest, northern shoulder and upper northern slope of the spur was low to very low.

In 2008 Dibden conducted survey for the proposed bridge replacement of Mowamba Creek near Jindabyne. The survey did not identify any sites and the area was deemed to have low archaeological potential given the high levels of previous disturbance.

In 2014 Dibden conducted survey for the proposed subdivision of Lot 15 on DP 236151 approximately 3.7 km northeast of Jindabyne. A total of 59 Aboriginal stone artefacts were recorded at nine locales within Survey Unit 2. Survey Unit 2 was noted to consist of spur crest and simple slopes landforms with a gentle to moderate gradient. The survey unit was also noted to be rocky with boulders in benches across the landform which dropped away steeply towards Rushes Creek. High levels of previous disturbance from clearance, grazing, bike riding, erosion and large areas of active sheetwash erosion were noted. Due to the high levels of prior ground disturbance and the low-density distribution of the artefacts, the heritage value of the proposed impact area was assessed by to be very low.

In 2015 NGH Environmental conducted a due diligence assessment for the proposed upgrade of the Barry Way and Snowy River Way intersection, south of Jindabyne. Three potential extraction sites were also assessed along Barry Way. Two locations were identified to be archaeologically sensitive that may contain Aboriginal objects. These were a small spur crest south of the Barry Way – Snowy River Way intersection and a remnant spur crest at one of the proposed extraction areas. It was recommended that further assessment, including subsurface investigation, would be required if works could not avoid the archeologically sensitive landforms identified.

In 2015 Feary conducted a due diligence assessment for a marine rescue shed proposed to be constructed adjacent to the Widows Inlet boat ramp. Two new sites, both small artefact scatters, were recorded during the survey including one immediately north of the boat ramp (AHIMS #62-1-0351) and another between the boat ramp and the Curiosity Rocks peninsula (AHIMS# 62-1-0352) (as cited in Feary 2018:23).

In 2015 Feary & Niemoeller conducted a survey for the proposed extension of the shared path around Lake Jindabyne from Curiosity Rocks to Hatchery Bay, as part of a larger investigation for the Lower Thredbo valley shared path. Four new sites, all artefact scatters, were recorded between Hatchery Bay and Curiosity Rocks (as cited in Feary 2018:24).

In 2016 Feary conducted a due diligence assessment for the proposed improvements to boating and recreation facilities at three boat ramps in Snowy River Shire, including the Widows Inlet boat ramp. Three quartz flakes were recorded on a low bank immediately north of the unsealed road at the Widows Inlet boat ramp (as cited in Feary 2018:24).

In 2016 Biosis conducted an Aboriginal due diligence assessment for the Alpine Sands residential subdivision. Two new isolated stone artefact sites were recorded along disturbed tracks. One site consisted of a quartz flake on the margins of an access track running along a ridgeline with the other site recorded on the slope of a ridgeline. Biosis suggested that both artefacts were no longer in their original context due to disturbances from the track (as cited in Biosis 2018b:32).

In 2017 Dibden undertook a due diligence assessment for the proposed construction of an additional westbound lane on Kosciuszko Road between Barry Way and Alpine Way on the western outskirts of Jindabyne. The study area contained a series of upper valley side landforms that were assessed to be of low archaeological sensitivity primarily due to the high levels of previous disturbance. Dibden noted that focused Aboriginal occupation in the local area was expected to have occurred in closer proximity to the major rivers and creeks. The Widows Creek corridor was noted to have likely attracted a locally higher degree of Aboriginal occupation, both as a water source and as a potential route of movement between the river valley and the more elevated terrain to the south. The proposed road corridor was assessed to have low archaeological potential given the highly disturbed context.

In 2018 Ecological Australia conducted a due diligence assessment of the proposed residential development concept plan of 415-417 Barry Way Jindabyne of approximately 83ha within Lots 50, 95, 111, 140 and 142 DP756686. Four Aboriginal sites were noted during an AHIMS search as being recorded within 700 meters of the study area including two artefact scatters and two isolated finds. A burial and stone arrangement site was also noted to be located approximately 400m to the east of the study area. During the field inspection of the study area two areas of potential archaeological deposit (Coobon Farm PAD 1 and 2) were recorded. These two areas of potential archaeological deposit were noted to be located on a gently sloping terrace above the western banks of Cobbin Creek. No other sites or areas or potential archaeological deposit were recorded within the area assessed.

In 2018 Cultural Heritage Management Australia (CHMA) undertook an assessment of a portion of the proposed Highview residential estate at Lot 23 DP 12270747. The area had been previously assessed by Dibden in 2005 however to meet legislative guidelines a new assessment was required. A test excavation program in line with the recommendations and areas of archaeological potential noted in Dibden's (2005) assessment was undertaken. The test pitting program excavated 71 test pits and recovered 436 stone artefacts. A total of 263 artefacts were recovered from a single pit (Pit 83) and it was noted that the 320 of the 374 artefacts recovered from the broad flat crest of a spur between large granite boulders and outcrops were from two test pits located with 5 meters of each other (pit 83 and 86), with the other pits located 10-15 meters from this concentration of subsurface artefacts containing less than 10 artefacts. This high-density concentration of artefacts at Pit 83 and 86 were noted not to be representative of the occupation of the wider landform which had a significantly lower density of artefacts. Most of the artefacts were recovered from the upper 25 cm of the deposit. The spatial distribution of the artefacts was noted to support the predictive models of the area with focussed occupation occurring on crest and flat landforms in elevated positions near a water source.

In 2018 Past Traces (2018a, 2018b) undertook an assessment for the proposed Alpine Sands Residential Development located on Lot 32 DP1215502 Kunama Drive East Jindabyne. Two previously recorded AHIMS sites were known with the study area which consisted of an isolated artefact (AHIMS #62-1-0161) and a large artefact scatter (AHIMS #62-1-0064). A due diligence survey was undertaken by Biosis in 2016 over the study area that identified an additional two isolated finds and recommended that a test pitting program occur within the site AHIMS #62-1-0064 and along the crest line. Past Traces undertook survey of the study area and a test pitting program within the extent of the site AHIMS #62-1-0064 and along the crest line. The test pitting program identified that low density cultural deposits are present associated with the site AHIMS # 62-1-0064 that extend across the lower slopes and Lake Jindabyne foreshore. Given the results of the testing program and survey of the study area Past Traces concluded that five low density Aboriginal sites and a large surface scatter of artefacts (AHIMS #62-1-0064) were located within the study area.

In 2018 Feary conducted survey for the proposed upgrade of parking and recreational facilities at the Widows Inlet boat ramp on the western shores of Lake Jindabyne. Feary's assessment was after a due diligence survey

in 2016 that identified a small artefact scatter located close to the existing unsealed access road to the boat ramp. During the fieldwork conducted by Feary in 2018 the previously recorded artefacts were re-located, and several previously unrecorded artefacts were identified across the flat benched area below Kosciuszko Road, all of which were assigned to the existing recorded site AHIMS #62-1-0362. Most of the artefacts recorded were quartz flakes.

In 2018 Biosis (2018 a and b) undertook a survey and testing program for the proposed Stage 2 Kunama Ridge residential development which would include the subdivision of approximately 3.2 ha of part of Lot 2 DP 858483. No additional surface objects were identified during the survey and testing was conducted within the area of potential archaeological deposit associated with the previously recorded site AHIMS #62-1-0286 on a crest landform. A total of 23 test pits were excavated across the crest, mid-slope and lower slope landforms with a total of 165 artefacts recovered from 17 of the test pits. Most of the artefacts were recovered from between 10 – 30 cm below the surface. The test excavations revealed the presence of three relatively intact knapping floors (one of quartzite material and two of silcrete material) identified in three different test excavation units and the site was assessed to have high scientific significance. The subsurface assemblage was dominated by angular fragments or debitage with lesser numbers of broken flakes, complete flakes, cores, geometric microliths, and retouched flakes.

In 2019 Biosis conducted the archaeological salvage excavation for the site AHIMS # 62-1-0286 located within Lot 2 DP 858483, East Jindabyne. Four open areas (OA 1-4) and 12 mechanical excavation areas (MA 1-12) were excavated within the extent of the site AHIMS # 62-1-0286. A total of 4925 Aboriginal artefacts were recovered from approximately 102 square metres of deposit excavated across the site. The average artefact density was 43.97 artefacts per square metre. The artefact assemblage was dominated by angular fragments, complete flakes and broken flakes. Artefacts were manufactured predominately from silcrete with lesser numbers of quartz, basalt, crystal quartz, quartzite, rhyolite and chert. Three stratigraphic layers were noted during the excavation with artefacts concentrated at 10-30 cm below the surface within a moderately compacted brown sandy loam deposit. The results of the testing and salvage excavations were noted to indicate a relatively intact archaeological deposit. One charcoal sample was collected during the excavation that while not associated with a hearth feature was associated with several in-situ artefacts. The charcoal sample was dated to 4188 +/- 17 BP. This date indicates that the archaeological deposits fall within the mid Holocene period which supports the archaeological occupation model for the area. Biosis concluded that the site AHIMS # 62-1-0286 was representative of a long-term camp site with evidence that backed artefact manufacturing activities, food processing activities and other activities such as woodworking and hide working were occurring at the site. The site was located on a level crest landform overlooking where the Snowy River would have originally flowed. The crest landform would have provided an elevated vantage point over the Snowy River valley with easy access to resources such as water and food.

4.2.4. Studies over the current Proposal Area

The following studies have taken place over the current Proposal Area.

In 1999, Central West Archaeological and Heritage Services Pty Ltd (CWAHS) conducted an archaeological study of the proposed Jindabyne effluent reuse scheme; a portion of this study covered the existing Proposal Area. As a part of this assessment, CWAHS conducted a pedestrian survey of the area of proposed works, including the current Proposal Area. With an effective survey coverage of 46.72% for on-foot areas (approximately 88.8 ha), it was found that there was a general surface visibility of between 60 to 70% due to the disturbed state of the survey area; it was noted that this rose to 100% within ploughed and graded fire breaks, areas of manicured grasses (associated with the nearby golf course), road edges, and cultivated paddocks. Furthermore, CWAHS estimated that approximately half of the assessment area had been degraded due to landscape changes such as gully and creek erosion, grazing, fire break construction, the golf course, and other associated European land management activities. It was also noted that the banks of Lees Creek were so heavily disturbed that it was unlikely to contain archaeological sensitivity; the origin of this disturbance was not identified by CWAHS. As a result, there was less than 10% exposure visibility across the assessment area.

No new Aboriginal sites were recorded during the survey, however a Bora/ceremonial axe/grinding groove site (AHIMS #62-1-0018) within the assessment area was unable to be relocated. All areas within the assessment area were assessed as containing a low potential for archaeological sites with the exception of a 3 ha area of sensitivity located along the low, flat to gently sloping alluvial creek flats to gently sloping alluvial creek flats and adjacent low hillslopes associated with Lees Creek near the golf-course (see Figure 4-2 below).

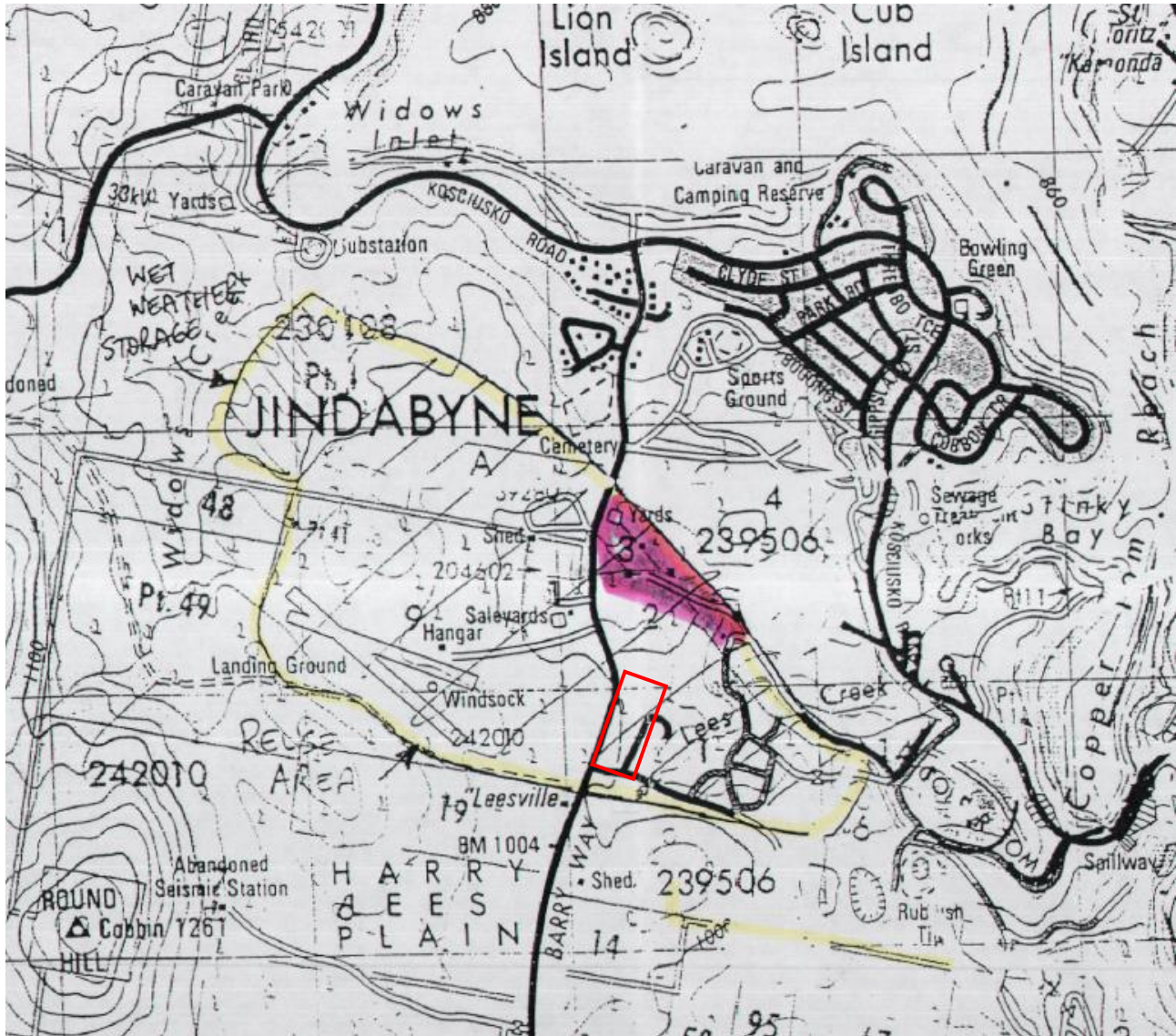


Figure 4-2 Archaeological sensitive landform mapped in pink by CWAHS (1999:36). Note the extent of the archaeological survey performed by CWAHS (in yellow) and the presence of the current Proposal Area (in red) within the southern parts of this area that were deemed as containing low archaeological sensitivity.

In 2019 NGH completed the Environment and Heritage Study for the Go Jindabyne 2036 Master plan. As part of the study NGH summarised the Aboriginal heritage investigations which had been undertaken in the area reviewed site predictive modelling and sensitivity mapping to create a preliminary predictive model of archaeological potential within the study area which extends over the current Proposal Area. A program of ground truthing the heritage constraints modelling and locations of community identified sites of cultural significance as identified and refined during the desktop assessment and subsequent community consultation workshops was undertaken where possible. NGH determined that the mapping of Aboriginal Cultural Heritage constraints should be divided into areas of high, medium and low value. These values are based upon the likelihood to identify specific types of archaeological sites and subsequently the landforms in which these site types are more likely to occur. These values are outlined in Table 4-2 below and current Proposal Area is

mapped within this modelling in Figure 4-3. The current Proposal Area was mapped as having high to moderate archaeological constraints. The areas of high constraints are within 200 m of Lees Creek.

Table 4-2 NGH 2019 Go Jindabyne study archaeological site values and landforms modelling.

Archaeological Site Value	Site Description	Landforms in which sites are most likely to occur
High Value	High density and frequency artefact scatters representing long term or repeated occupation events. Increased variability of raw materials and frequency of formal tool types and manufacturing areas. These sites have high research and educational values and present the highest development assessment constraints.	Within 200 meters of major water source Ridge or spur lines leading to the Snowy River Flat ground between two major water sources
Medium Value	Medium to small density occupation sites with moderate artefact and site frequency across the landscape. Moderate artefact densities with reduced or absence of formal tool types and more restricted raw material sources.	Ridge or spur lines 200-500 meters from major water sources 200 meters from minor water sources Slope must be <10 degrees
Low Value	Small, low density or single artefact sites representing transient movement through the landscape and/or accidental discard events. Tend to have very limited raw material types. These sites tend to have the lowest development constraints.	Over 500 meters from major water source Slope > 10 degrees Over 200 meters from minor water sources
Disturbed	Areas where extensive ground disturbance has occurred, modifying the original topography. Does not remove the potential to identify archaeological sites, however they are likely to have been disturbed.	

In 2020 EcoLogical completed a desktop assessment for Aboriginal and Historical constraints on the proposed Jindabyne central school location at 207 Barry Way which covers the current Proposal Area. While no previously recorded sites were registered within the study area there were landforms which were considered to have potential for Aboriginal sites, particular given the proximity of Lees Creek. It was recommended that further assessment in the form of an ACHA would be required. The current assessment is in line with this recommendation.

In 2021 OzArk undertook an Aboriginal cultural heritage assessment for the Snowy Mountains Special Activation Precinct (Snowy SAP) on behalf of the Department of Planning, Industry and Environment (DPIE). The Snowy SAP study area included a large 72,211 hectare area which was primarily assessed at a desktop level however some opportunities for field survey were available in Jindabyne and several locations in the Kosciuszko National Park. The primary aim of the heritage study was to identify opportunities to conserve significant Aboriginal cultural heritage values within development opportunity areas and to devise strategic mapping to allow planning options to be included in the masterplan for the future development of the larger area. As part of the archaeological predictive modelling for the project OzArk initially mapped the current Proposal Area as having moderate potential as shown in Figure 4-4. Following the survey the modelling of the area was refined where possible and the current Proposal Area was reassessed to have low potential for Aboriginal cultural heritage as it has been observed that there was lower potential due to the disturbance of the area. The refined mapping is shown in Figure 4-5. No sites were recorded within the current Proposal Area however OzArk noted that while the surveys undertaken for the project were comprehensive that there was still the possibility for Aboriginal objects to be present in all landforms of the survey areas outside of those classified as 'disturbed lands'. Given the current Proposal Area was assessed as having low potential it is still possible for Aboriginal objects to be present in the area. The survey undertaken by OzArk recorded four new sites near Lees Creek outside the current Proposal Area which included one artefact scatter with a moderately

dense artefact assemblage, two low-density artefact scatters and one isolated find. It was recommended that works within areas defined as 'low potential' should be assessed at a time when the impacts are known by following the appropriate assessment guidelines, currently the Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW. This assessment may involve a visual inspection of the impact area and may involve the assistance of a member from the Aboriginal community.

4.2.5. Summary of Aboriginal Land Use

Results of previous surveys show that the Jindabyne area contains a widespread distribution of archaeological material, the majority of which are stone artefacts.

The landforms which are predicted to contain relatively higher artefact densities are flats and gentle slopes situated above the flood zone in reasonable proximity (≤ 200 metres) to major streams and rivers. Flats and elevated ground near the confluence of major streams are of high sensitivity while ridge crests which possess flat or gentle gradients are also archaeologically sensitive. Slopes with higher gradients (<10 - $15+$ degrees) are considered to have lower archaeological sensitivity.

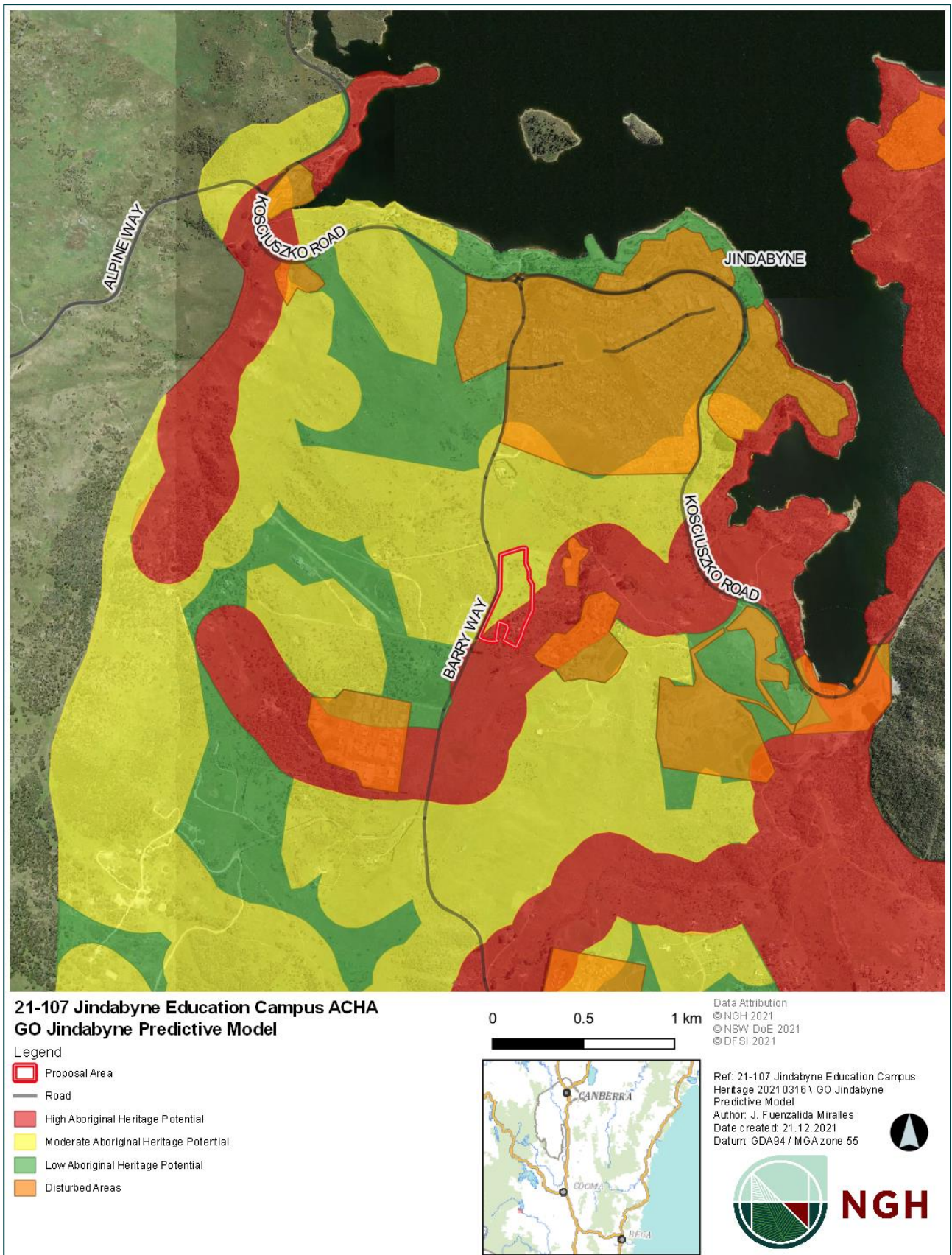


Figure 4-3 NGH 2019 GO Jindabyne archaeological constraints modelling over the current Proposal Area. Note that according to this modelling, the Proposal Area lies within areas of high and moderate Aboriginal Heritage potential.

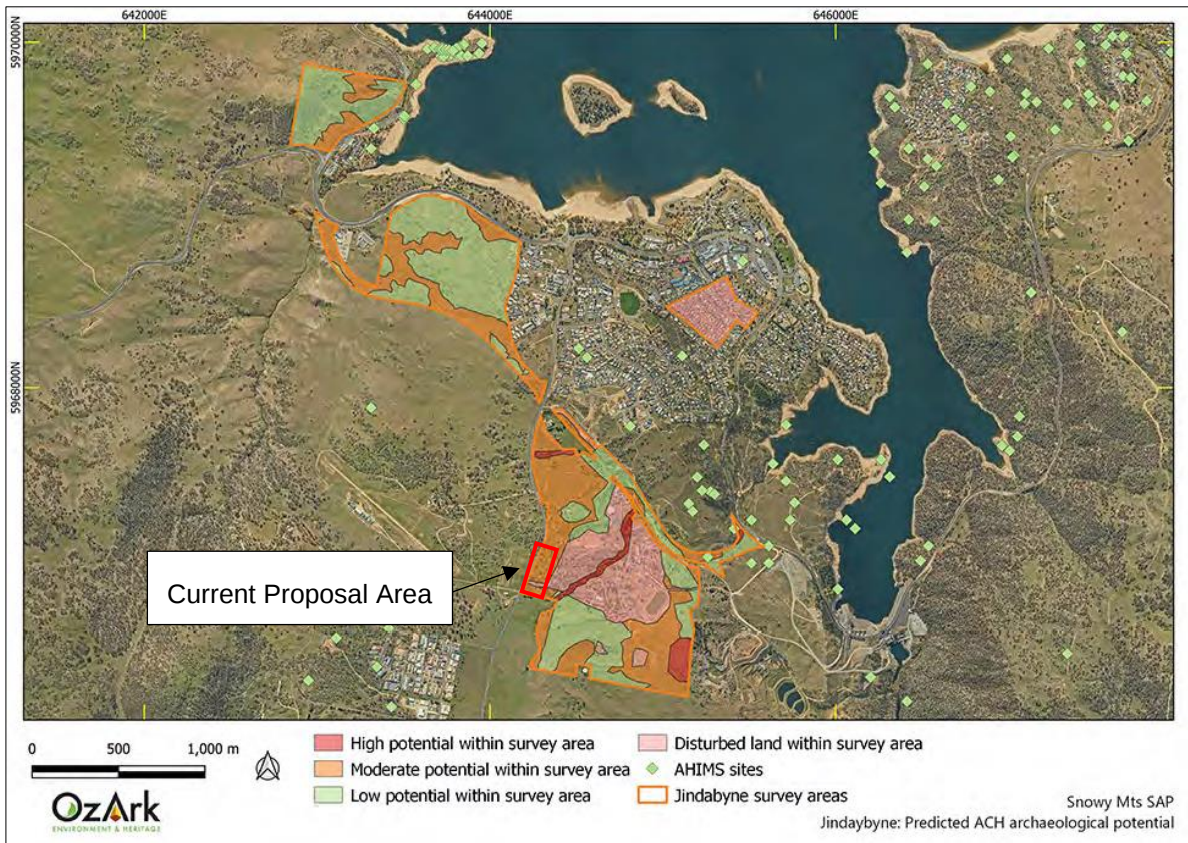


Figure 4-4 Oz Ark 2021 predictive modelling over the Proposal Area.

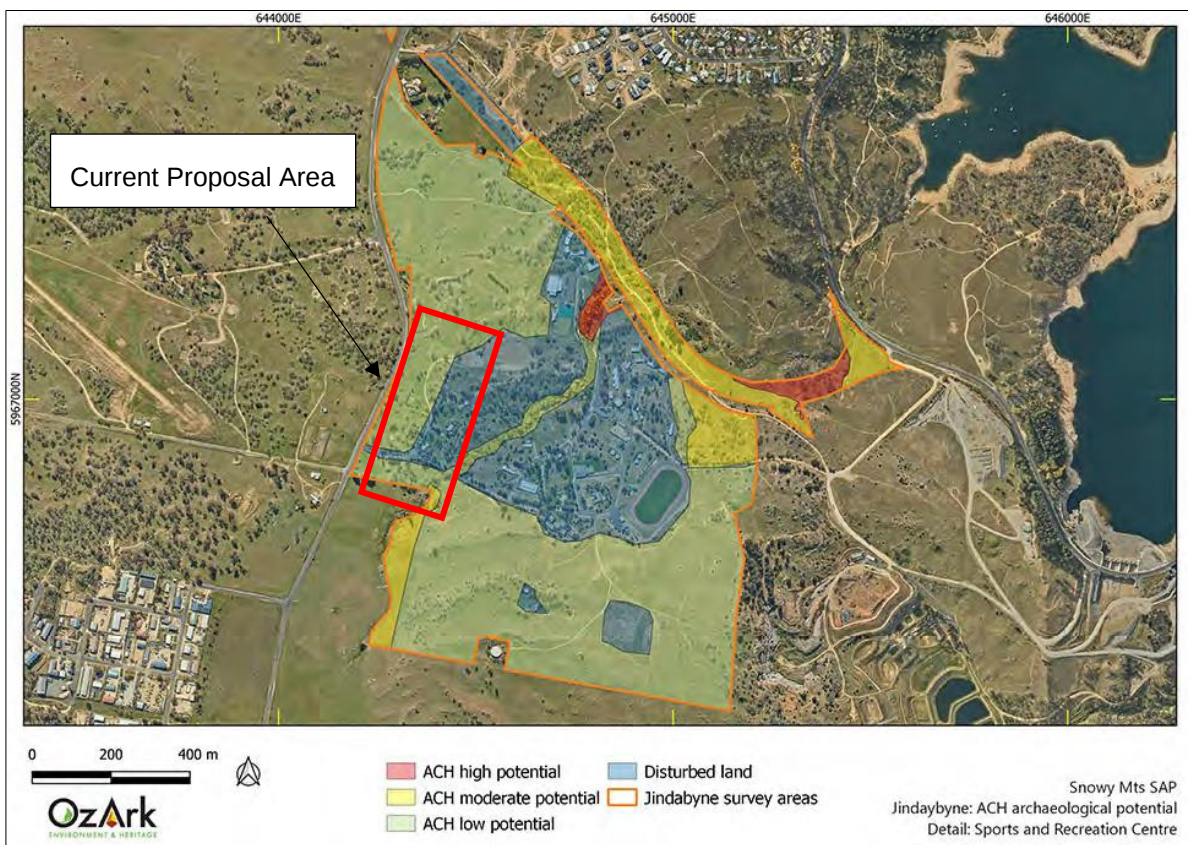


Figure 4-5 Oz Ark 2021 refined predictive modelling over the Proposal Area after survey.

4.3. ABORIGINAL SITE PREDICTION

The Aboriginal site modelling for the region to date suggests that Aboriginal sites are highly common within proximity to waterways and any associated elevated terraces or gentle slopes. These studies also suggest that most site types in the region are comprised of isolated artefacts and artefacts scatters, with some landforms also containing potential for subsurface archaeological deposits. The previously recorded AHIMS sites in the region support this conclusion. While the historical land use of the Proposal Area has caused significant surface disturbances, it is unknown to what extent this has impacted subsurface deposits.

The presence of the 2nd order channel of Lees Creek and the larger channel of the Snowy River to the east and associated elevated flats significantly increases the likelihood of encountering Aboriginal heritage sites within the current Proposal Area.

The likely archaeological site types for the local area, and the potential for their presence within the Proposal Area, is outlined in

Table 4-3 below.

Table 4-3 Aboriginal Site Prediction Statements.

Site Type	Site Description	Potential
Stone artefact scatters and isolated artefacts	Artefact scatter sites can range from high-density concentrations through to isolated finds.	Artefact scatters have potential to occur in low to moderate densities on low gradient spur crests, slopes and elevated flats in close proximity to drainage lines and on flat ridges. Isolated finds may occur throughout the Proposal Area.
Potential Archaeological Deposits (PADs)	Potential subsurface deposits of archaeological material	PADs have potential to occur in areas that are likely to have reasonable subsurface deposits archeologically sensitivity landforms such as on spur crests, flats, basal slopes and alluvial terraces.
Modified trees	Trees that have undergone cultural modification.	Potential to occur within areas where there are remnant mature native trees, isolated paddock trees, and dead or fallen mature trees.
Burials	Generally found in soft sediments such as aeolian sand, alluvial silts and rock shelter deposits. In valley floor and plains contexts, burials may occur in locally elevated topographies rather than poorly drained sedimentary contexts.	The potential for burial sites to occur within the Proposal Area are assessed as low however the possibility cannot not be discounted given that burial sites have been identified within the local area of Jindabyne.

5. ARCHAEOLOGICAL INVESTIGATION RESULTS

5.1. SURVEY STRATEGY

The survey strategy was to cover as much of the ground surface and existing landforms within the Proposal Area as possible. Consequently, the survey strategy was to walk a series of transects across the Proposal Area, to achieve maximum coverage. Because the Proposal Area was generally a cleared area transects were designed based on existing landforms. Transects were spaced evenly with the survey team spread apart at 5 m intervals within areas of higher potential and 10 m within areas of lower potential, walking in parallel lines at a similar pace. At the end of each transect, the team would reposition along a new transect line. The nature of the Proposal Area made this an ideal survey strategy allowing for maximum survey coverage and opportunity to identify any heritage objects.

Any mature native trees within the Proposal Area were also inspected for any evidence of Aboriginal scarring (c.f Long 2005). Due to the low visibility across the Proposal Area any exposures or areas of visibility were also targeted during the survey.

The survey team consisted of one NGH archaeologist with four Aboriginal representatives (listed below) on the 25th of June 2021.

- John Dixon (Ngarigo and Djiringanj people).
- Ron Thomas
- Jason Davidson
- Iris White (Ngarigo Elders)

We believe that the survey strategy was comprehensive and the most effective way to identify the presence of Aboriginal heritage objects and sites. Notes were made about visibility, photographs were taken, and any possible Aboriginal objects or features identified were inspected, assessed and recorded if deemed to be Aboriginal in origin.

5.2. SURVEY COVERAGE

The survey was impeded by a general dense cover of grass and weed across the majority of the Proposal Area. The ground surface was found to be generally highly disturbed in areas where earthworks have been undertaken during the formation of the golf course, the construction and removal of buildings, existing houses, sealed roads and associated underground infrastructure such as water pipelines and telecommunications.

Areas of visibility were limited to disturbed exposures and patches of bare ground. Overall exposures within the area was very low and generally averaged about 10%. Visibility within exposures ranged from 10% to 50%.

Table 5-2 below shows the calculations of effective survey coverage for the survey and Plates 3-18 show examples of the transects, landforms and visibility for the Proposal Area. Over the course of the field survey, approximately 1.523 km of transects were walked across the Proposal Area by each team member. Between the 5 team members a total of approximately 7.614 km was walked across the Proposal Area. Allowing for an effective view width of 5 m for each survey member this equates to a total surface area examined of 4.5 hectares. However, allowing for the visibility restrictions, the effective survey coverage overall is reduced to 2.51 ha, or 2.5% of the total Proposal Area. Noting that the proposal area was then amended and one area in the south was excised, it is considered that the effective coverage remains approximately the same.

Overall, it is considered that while the surface visibility was limited, the survey of the Proposal Area had sufficient survey coverage.

Table 5-1 Survey images

	
Plate 3 Transect 1 view north from entrance road.	Plate 4 Transect 1 view north to saddle and area of current earthworks.
	

Plate 5 Transect 2 view south showing exposure and built up former golf tee.	Plate 6 Transect 2 view north from elevated golf green at northern end of Proposal Area.
	
Plate 7 Transect 3 view south upslope to knoll.	Plate 8 Transect 3 view north downslope to proposal boundary.
	
Plate 9 Transect 4 view west upslope showing current earthworks disturbance.	Plate 10 Transect 4 view south along street where former houses were situated.
	
Plate 11 Transect 5 view south above Lees Creek	Plate 12 Transect 5 view north above Lees Creek.



Plate 13 Transect 6 view south across edge of disturbance.



Plate 14 Transect 6 view south where former houses were situated. Underground services in this area.



Plate 15 Transect 7 view south along crest to disturbance.



Plate 16 Transect 7 view north along crest showing extent of disturbance.



Plate 17 Transect 8 view north along edge of golf disturbance.

Table 5-2 Survey Coverage Data.

Survey unit - landform	Survey unit total area (m ²)	Surveyed area (length x width) m	Area covered by transects (m ²)	Exposure %	Average Visibility %	Effective coverage area (m ²)	Effective coverage %	Survey result
1 – Gully	4,015	100 x 25	2,500	5	25	31.25	0.78	
2 – Hill Crest	7,790	100 x 20	2,000	50	10	100	1.28	Part PAD3
3 – Level Crest	14,874	235 x 25	5,875	5	20	58.75	0.4	AFT1 (isolated find), PAD 1 and PAD 2
4 – Saddle	13,405	200x 20	5,000	40	40	800	5.97	AFT3 (Artefact Scatter), part PAD3
5 – Side Slope above Creek	7,213	180 x 20	3,600	10	10	36	0.5	Nil
6 – Side Slope	10,837	240 x 25	6,000	25	50	750	6.92	AFT4 (Isolated Find), PAD 4
7 – Upper Slope	43,441	620 x 25	13,821	20	25	775	1.78	AFT2 (isolated find)
TOTAL	101,575		40,475			2,551	2.51	

5.3. SURVEY RESULTS

The survey was impeded by poor visibility due to a low dense grass cover across the majority of the Proposal Area. Despite this, four artefact sites were identified (see Figure 5-1 and Table 5-3). The soils across the Proposal Area were generally noted to be a dark brown loams to gravelly loams and clays.

The discovery of stone artefacts within the Proposal Area during the current assessment indicates that the survey technique was effective enough to relocate evidence of Aboriginal occupation within the Proposal Area despite the land use history, the poor surface visibility during the assessment, soil type and levels of disturbance within the Proposal Area.

It was also noted that there was current earthwork partly within the Proposal Area, extending across the Hill crest and upper slopes. It is unclear if this work had been assessed for heritage sites prior to commencing. The work appears to involve stripping of vegetation and topsoil and some importation of other fill material. Exposures within the disturbance were examined but little evidence of the natural soil profile was able to be viewed due to some mixing of material.

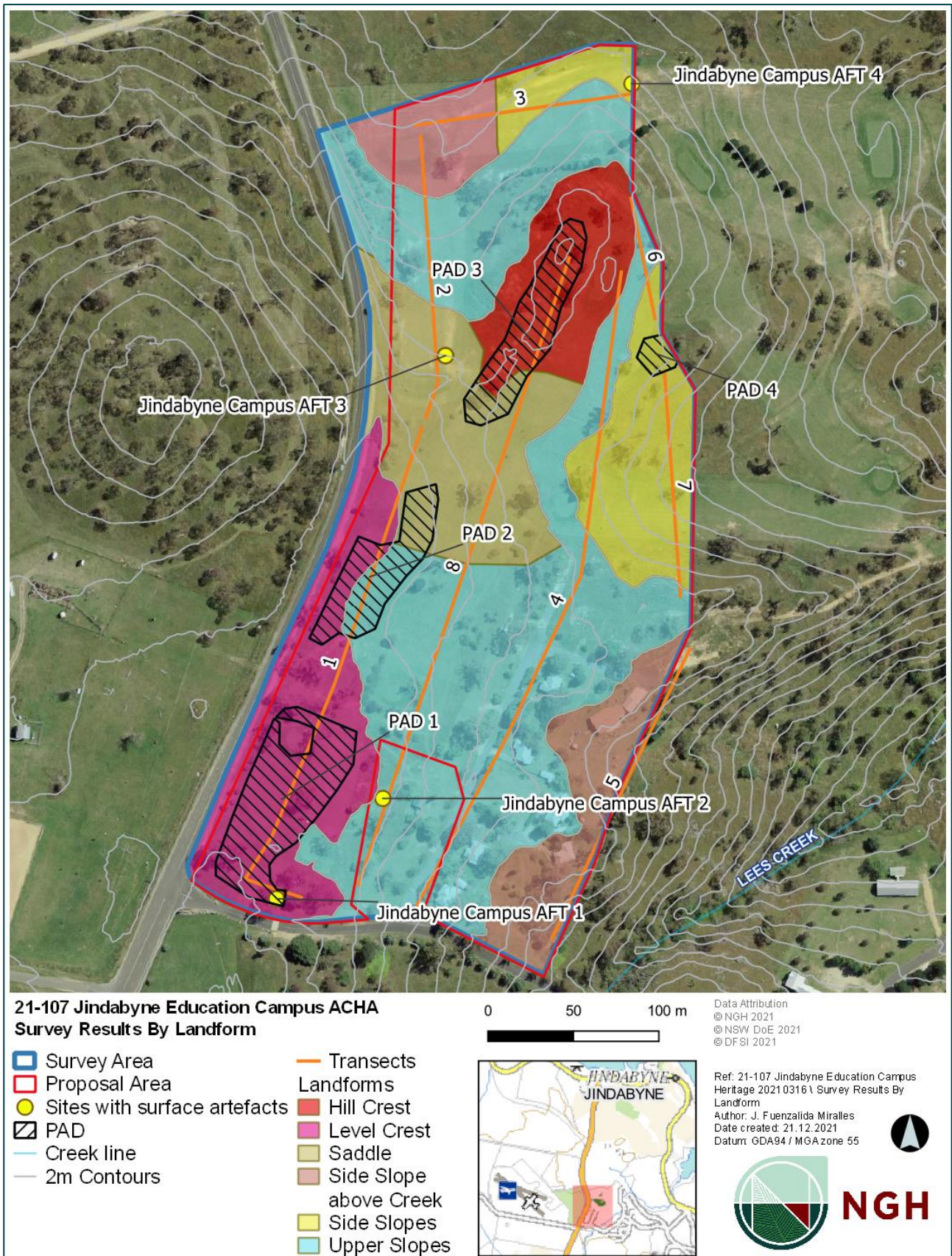


Figure 5-1 Survey Results by Landform.

Table 5-3 Artefact sites located during the survey

Site	Image
Jindabyne Campus AFT1. Flake found in small exposure at base of mature tree on flat ground close to entrance road. Soils appear intact and undisturbed due to presence of mature tree and therefore there is some subsurface potential. Quartz flake 14 x 10 x 3 mm, no cortex, broad platform on a negative scar with feather termination.	
Jindabyne Campus AFT2. Situated in a small exposure at base of former golf tee that has been built up with fill. Artefact not likely to be in situ and low potential for further artefacts or subsurface deposits due to previous disturbances. Quartz flaked piece <30 mm no cortex. This area was subsequently excised from the proposal area.	

Jindabyne Campus AFT3. Artefacts appear to be eroding from gravelly substrate with little original topsoil present. Site is below steep bank of elevated golf tee and therefore likely to be in highly disturbed area. Slope is moderate, extending northward down to wide gully but on edge of saddle landform. Quartz flake 18 x 8 x 4 mm with flake scar focal platform and feather termination. Grey volcanic medial flake fragment <30 mm no cortex but dorsal ridge Quartz flake 10 x 10 x 4 mm flake scar surface and focal platform with feather termination no cortex	
Jindabyne Campus AFT4. Artefact found on steeper basal slope of knoll, in eroded context and therefore unlikely to be in situ. Soil erosion shows B deposit of gravelly clay, nil potential for subsurface deposits. Quartz broken flake <30 mm no cortex	

5.3.1. Consideration of Potential for Subsurface Archaeological Material

The Proposal Area has been subject considerable ground disturbance during recent times and as such the sensitivity of the landscape has been significantly reduced. However, the presence of surface artefacts within the Proposal Area suggests the possibility of PAD in portions of the Proposal Area that have not been subject to disturbance and within landforms that are suggestive of potential for Aboriginal habitation. Four such areas were located within the Proposal Area as detailed below in Figure 5-2 and Table 5-4.

It is recognised that the PAD areas are indicative only, further refinement of mapping may be possible but are shown to indicate the potential extent of subsurface deposits.

Table 5-4 Identified areas of PAD

Site	Dimensions (m)	Description
Jindabyne Campus PAD1	115 north to south x 50 east to west	Extends across broad ridge flat of crest, Although encompassing part of golf course, some areas remain clearly undisturbed, evidenced by the mature trees present. Deposits dark brown loamy and appear to offer potential for subsurface artefacts. Areas of obvious disturbance are excluded from the PAD.
Jindabyne Campus PAD2	115 north to south x 35 east to west	Similar to PAD 1, some areas disturbed, others undisturbed with similar soils. Divided from PAD 1 by previous disturbance corridor including former roadway, areas of obvious disturbance excluded.
Jindabyne Campus PAD3	135 north to south x 25 east to west	Extends from level within saddle onto flat crest of ridge. This area has been largely impacted by current earthwork and thus likely compromised. However, there remains some potential for sites to remain in areas not subject to the recent activity. Soil likely to be shallow based on the topography but areas of brown loam noted.
Jindabyne Campus PAD4	25 north to south x 30 east to west	Small flat bench on otherwise moderate slopes, elevated above Lees Creek with expansive views to east and Snowy River valley. Appears intact with some trees present and no evidence of golf course disturbances. Extends outside the Proposal Area to east.

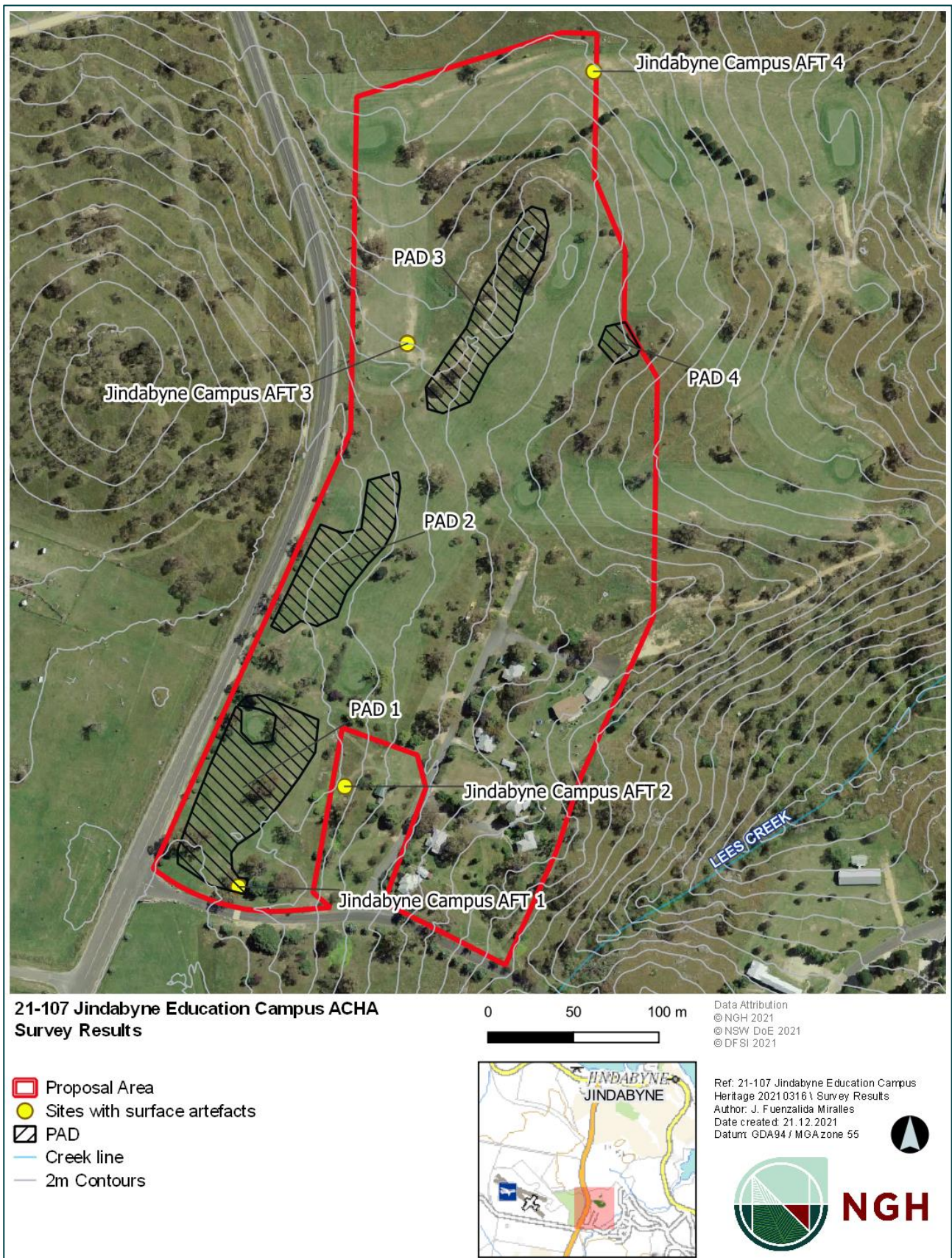


Figure 5-2 Survey Results.

5.4. DISCUSSION

5.4.1. Identified Sites

The prediction, based on modelling for the Proposal Area suggests that Aboriginal sites are common within proximity to waterways and any associated elevated terraces or gentle slopes. These studies also suggest that most site types in the region are comprised of isolated artefacts and artefacts scatters, with some landforms also containing potential for subsurface archaeological deposits. The previously recorded AHIMS sites in the region support this conclusion. While the historical land use of the Proposal Area has caused significant surface disturbances, it is unknown to what extent this has impacted subsurface deposits. The presence of the 2nd order channel of Lees Creek and the larger channel of the Snowy River to the east and associated elevated flats significantly increases the likelihood of encountering Aboriginal heritage sites within the current Proposal Area.

The results of this Aboriginal heritage assessment have confirmed that there are still Aboriginal objects within the Proposal Area through the identification of four new sites. Quartz artefacts have previously been recorded within the region and the geology of the area, so the identification of artefacts manufactured from quartz is considered to be common.

5.4.2. PADs

The poor visibility and the presence of relatively less disturbed and even intact portions of landforms indicates there is potential for subsurface deposits containing stone artefacts to occur. This has led to the identification of four areas considered to be PAD, although it is acknowledged that parts of these have also been disturbed, most notably by the preparation for the golf course. Nevertheless, there is also evidence to suggest some portions of the sensitive landforms remain relatively intact.

It is likely that the archaeological evidence present within the PAD areas consists of low-density stone artefacts, probably debitage from incidental flaking activity by Aboriginal people camping or traversing the landscape. There is no surface evidence to suggest that extensive and thus scientifically significant archaeological deposits are present. Nonetheless, the poor visibility and the context of the landforms with some stone artefacts present identifies these landforms as likely to contain Aboriginal stone artefacts. To investigate their content, extent and character and to make clearer impact assessment conclusions, a limited subsurface testing programme would be warranted.

The extent and density of any archaeological material is likely to be limited and therefore it is considered that the risk to the project proceeding would be low, although to be confirmed through additional assessment.

6. CULTURAL HERITAGE VALUES AND STATEMENT OF SIGNIFICANCE

6.1. ASSESSMENT CRITERIA

The assessment of the significance of Aboriginal archaeological sites is currently undertaken largely with reference to criteria outlined in the ICOMOS Burra Charter (Marquis-Kyle and Walker 1994). Criteria used for assessment are:

- **Social or Cultural Value:** In the context of an Aboriginal heritage assessment, this value refers to the significance placed on a site or place by the local Aboriginal community –either in a contemporary or traditional setting.
- **Scientific Value:** Scientific value is the term employed to describe the potential of a site or place to answer research questions. In making an assessment of scientific value issues such as representativeness, rarity and integrity are addressed. All archaeological places possess a degree of scientific value in that they contribute to understanding the distribution of evidence of past activities of people in the landscape. For example, flaked stone artefact scatters, larger sites or those with more complex assemblages are more likely to be able to address questions about past economy and technology, giving them greater significance than smaller, less complex sites. Sites with stratified and potentially in situ sub-surface deposits, such as those found within rock shelters or depositional open environments, could address questions about the sequence and timing of past Aboriginal activity, and will be more significant than disturbed or deflated sites. Groups or complexes of sites that can be related to each other spatially or through time are generally of higher value than single sites.
- **Aesthetic Value:** Aesthetic values include those related to sensory perception and are not commonly identified as a principal value contributing to management priorities for Aboriginal archaeological sites, except for art sites.
- **Historic Value:** Historic value refers to a site or places ability to contribute information on an important historic event, phase or person.
- **Other Values:** The Burra Charter makes allowance for the incorporation of other values into an assessment where such values are not covered by those listed above. Such values might include Educational Value.

All sites or places have some degree of value, but of course, some have more than others. In addition, where a site is deemed to be significant, it may be so on different levels or contexts ranging from local to regional to national, or in very rare cases, international. Further, sites may either be assessed individually, or where they occur in association with other sites the value of the complex should be considered.

6.2. SIGNIFICANCE ASSESSMENT

Social or Cultural Value

While the true cultural and social value of Aboriginal sites can only be determined by local Aboriginal people, as a general concept, all sites hold cultural value to the local Aboriginal community. An opportunity to identify cultural and social value was provided to all the registered Aboriginal stakeholders for this proposal through the draft reporting process. It was noted during the survey by the Aboriginal parties present that the discovery of surface artefacts leads to the question of whether there are subsurface artefacts present and the representatives indicated that it was important to check this through test excavation.

Scientific (Archaeological) Value

As described in this report, four new archaeological sites (an artefact scatter and three isolated finds) and four areas of PAD have been recorded within the Proposal Area. Of these, one of the isolated finds was identified in an area that was later excised from the Proposal Area. These sites contain a majority of quartz artefacts which is completely representative of the material found in site within the surrounding region. The research potential of the artefacts themselves is low, given some are likely out of context and there are limited numbers, too few to make a detailed analysis. Similarly, the site locations have low scientific value due to their generally disturbed nature. While each site may have additional artefacts present, they are unlikely to be in large numbers enough to undertake detailed studies.

The sites are not considered to be rare as many others have been recorded in the region and still more remain unrecorded. They are also not particularly representative, given their mostly disturbed contexts, other better preserved examples will exist outside development footprints.

The research potential of the PAD's is unable to be determined until testing shows the presence and nature of the archaeological record if present. The remainder of the Proposal Area has low archaeological potential. This is due to the level of previous disturbance including the earthworks associated with the construction of structures, roads, underground services and the golf course.

The presence of the sites can and has been used to assist in the development of site modelling for the local landscape and could be used to compare against other artefact site locations in the region and if further investigations located archaeological deposits within the identified areas of PAD.

The impact to the scientific values if the artefacts were to be impacted by the current proposal is considered low. The identified areas of PAD have the potential to hold intact contextual information that could provide information regarding past Aboriginal land use within the Proposal Area but this is yet to be defined.

Any unexpected finds that are encountered are likely to be located within highly disturbed contexts and therefore may not provide any further information about Aboriginal occupation of the area other than their existence within the landscape.

Aesthetic Value

There are no aesthetic values associated with the identified sites or areas of PAD. However, it should be noted that the Jindabyne area is culturally significant to many Aboriginal communities. Therefore, any aesthetic settings that exist at present should be maintained after the works have been completed.

Historic Value

There are no historic values associated with the identified archaeological sites.

Other Values

There are no other known heritage values associated with the Proposal Area.

7. IMPACT ASSESSMENT

7.1. HISTORY AND LANDUSE

It has been noted above in Section 4.1.5 that historically the Proposal Area and the area has been substantially impacted since European arrival, specifically within the last 50 years. The Proposal Area has also been impacted through the construction and maintenance of the roads, construction of buildings and associated services and recreation facilities in the area including the golf course.

The implications for the previous activities and disturbance to the Proposal Area is that the archaeological record has been compromised in terms of the potential for *in situ* Aboriginal objects to occur within the known disturbed areas. Consequently, objects that may be located within these areas of disturbance are likely to have been damaged and/or moved but they are likely to still be present and remain in the general area.

Despite these impacts, there are portions of the Proposal Area which appear not to have been previously impacted that are considered to still have some potential for *in situ* material to be present. Without undertaking a limited programme of subsurface testing further information about the true extent and nature of disturbance is unable to be assessed.

7.2. PROPOSED DEVELOPMENT ACTIVITY

The proposal site is shown in Figure 1-1 and Figure 1-2 and the proposed layout of the school is shown in Figure 7-1 and includes:

- Lot 101 DP1019527

The proposal generally includes the following works:

- Minor demolition, tree removal and site clearing works
- Construction of a primary school to the north of the site with home base units and special education units to meet current and future needs
- Construction of a high school to the south of the site with general learning spaces and special education units to meet current and future needs
- Construction of COLAs, quadrangle and games courts, libraries, staff and administration buildings, halls, canteens, agricultural learning unit and other associated developments:
- Construction of new walkways and active play areas including a sports field
- Construction of a new at-grade car park; and
- Construction of a new pedestrian, cycle and vehicular access route.

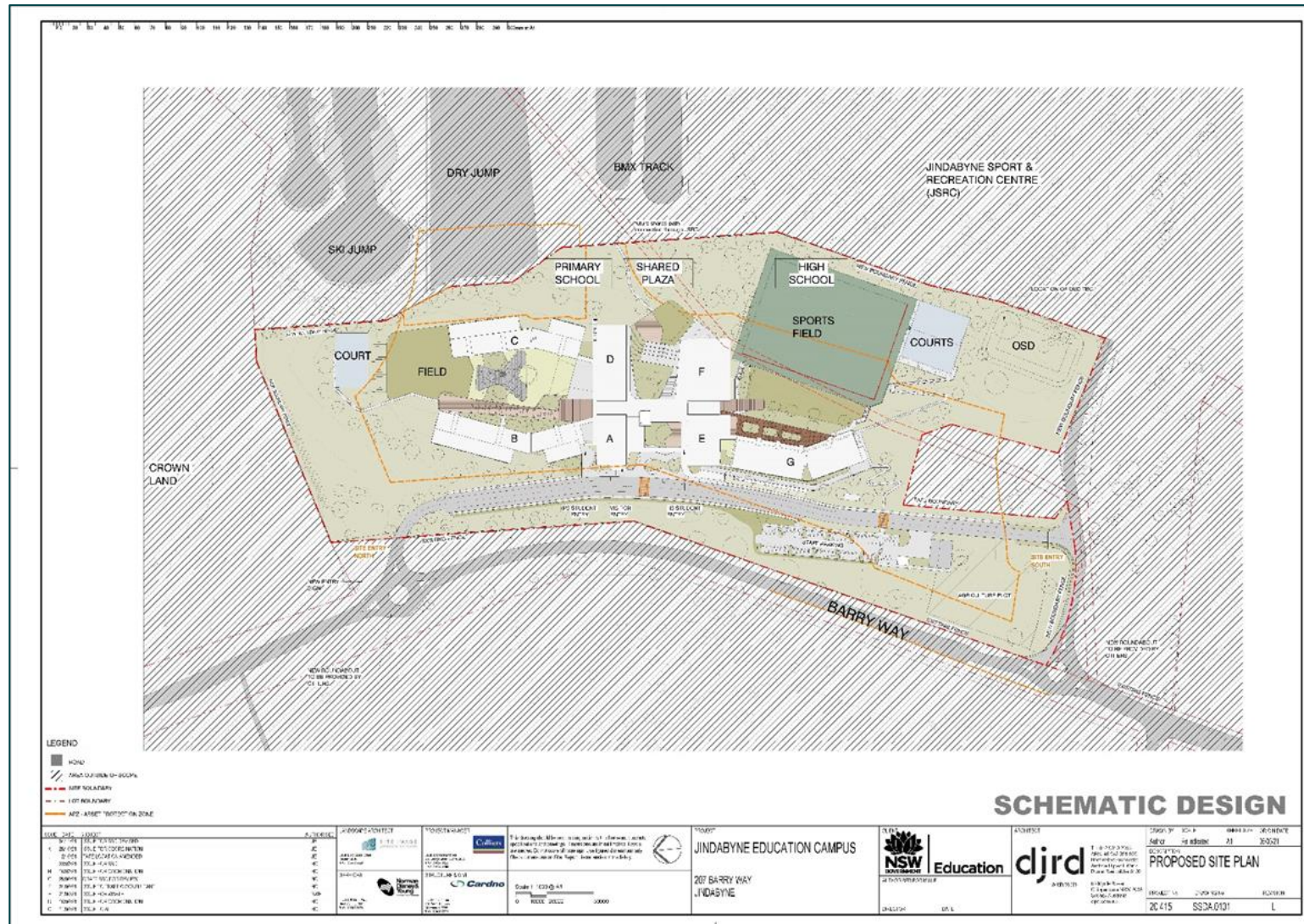


Figure 7-1. Proposed layout of campus (Source: DJRD Architects).

7.3. ASSESSMENT OF HARM

The archaeological assessment has identified four new archaeological sites (an artefact scatter and three isolated finds) and four areas of PAD within the Proposal Area. Of these, one of the isolated finds was identified in an area that was later excised from the Proposal Area. The assessment of significance has been undertaken with reference to the criteria outlined in the International Council on Monuments and Sites Burra Charter (Marquis-Kyle and Walker 1994).

A copy of the draft report will be provided to all the registered parties for comment post completion of the testing program.

The scientific values are generally assessed to be low for the four identified sites, unknown at the moment for the four areas of PAD and low for the remaining portions of the Proposal Area.

When assessing proposed harm to these sites it should be noted that this relates to the current information available about the site, including the presence of PAD, which has not yet been subject to archaeological investigation to determine the extent of nature of any archaeological deposit if present.

The development proposal would likely require extensive earthworks and in its current form result in total direct harm to the identified sites and most of the PAD areas through excavation and development works. The harm therefore is likely to be high to the Aboriginal sites present if left unmitigated.

7.4. IMPACTS TO VALUES

The values potentially impacted by the proposed works are any social and cultural values attributed to the areas by the local Aboriginal community. The extent to which the total or further partial loss of the site would impact on the community is only something the Aboriginal community can articulate.

The impact to scientific values for this development are summarised in Section 6 and detailed in Table 7-1. Until a testing programme is completed however it is not possible to accurately assess the significance or harm to the four identified areas of PAD within the Proposal Area by the development works. The research potential of any remaining portions of the Proposal Area outside the areas of existing extensive disturbance is low. It is however argued that any impact to the site as part of the subsurface testing programme is likely to be outweighed by the scientific value that is gained.

The stone artefacts recorded on the surface during the current field inspection is noted to have little research value beyond what has already been gained during the present assessment. The intrinsic values of the artefacts will be affected by the development of the Proposal Area however this could be mitigated by the community collection of artefacts identified within the four new sites prior to disturbance. Any removal or impact to the artefacts by the proposed development works including artefact breakage would reduce the already low scientific value however NGH considers that this would impact only minimally on the archaeological record of the area.

The values at risk from the proposal include any cultural values which may be attributed to the PAD (following its confirmation) by RAPs, and the potential scientific data which could be present within the subsurface assemblage if present.

Table 7-1 Identified risk to known sites by the proposed subsurface testing programme

Aboriginal Cultural Heritage Assessment
Jindabyne Education Campus

AHIMS #	Site name	Site integrity	Scientific significance	Type of harm	Degree of harm	Consequence of harm	Recommendation
Pending	Jindabyne Campus AFT1	Moderate	Low	Indirect	Total	Total	Community collection of artefacts following the sub-surface assessment of PAD locations
Pending	Jindabyne Campus AFT2	Low	Low	Nil	Nil	Nil	Site to be registered and fenced during construction to prevent inadvertent harm.
Pending	Jindabyne Campus AFT3	Low	Low	Direct	Total	Total	Community collection of artefacts following the sub-surface assessment of PAD locations
Pending	Jindabyne Campus AFT4	Low	Low	Direct	Total	Total	Community collection of artefacts following the sub-surface assessment of PAD locations
NA until confirmed	Jindabyne Campus PAD1	Unknown	Unknown	Direct	Total	Unknown	Programme of sub-surface testing under the Code of Practice for Archaeological Investigation of Aboriginal objects in New South Wales (OEH 2010c)

Aboriginal Cultural Heritage Assessment
Jindabyne Education Campus

AHIMS #	Site name	Site integrity	Scientific significance	Type of harm	Degree of harm	Consequence of harm	Recommendation
NA until confirmed	Jindabyne Campus PAD2	Unknown	Unknown	Direct	Total	Unknown	Programme of sub-surface testing under the Code of Practice for Archaeological Investigation of Aboriginal objects in New South Wales (OEH 2010c)
NA until confirmed	Jindabyne Campus PAD3	Unknown	Unknown	Direct	Total	Unknown	Programme of sub-surface testing under the Code of Practice for Archaeological Investigation of Aboriginal objects in New South Wales (OEH 2010c)
NA until confirmed	Jindabyne Campus PAD4	Unknown	Unknown	Indirect	Total	Unknown	Programme of sub-surface testing under the Code of Practice for Archaeological Investigation of Aboriginal objects in New South Wales (OEH 2010c)

8. AVOIDING OR MITIGATING HARM

8.1. CONSIDERATION OF ESD PRINCIPLES

Consideration of the principles of Ecologically Sustainable Development (ESD) and the use of the precautionary principle was undertaken when assessing harm to the sites and the potential for mitigating impacts to the sites recorded within the Proposal Area. The main consideration was the cumulative effect of the proposed impact to sites and the wider archaeological record. The precautionary principle in relation to Aboriginal heritage implies that proposed works should be carefully evaluated to identify possible impacts and assess the risk of potential consequences.

The results of this ACHA have confirmed to some extent the proposed model of site location, type, and distribution, whereby sites can be expected to occur within level landforms in general proximity to a reliable water source. However, confirmation of the four areas of PAD is yet to occur and will require further investigation to characterise the nature of any archaeological deposit if present. Given the nature of the local area, it can be reasonably expected that similar such sites are likely to be present within similar, but less disturbed landforms units outside of the developed portions of Jindabyne and neighbouring townships. The distribution of AHIMS data shows this to be true, although many of these sites have also been subject to development impacts.

As noted above, the archaeological values of the sites within the development footprint considering the scientific, representative and rarity values were assessed to be low and low in all other impact areas. At present it is not clear what the true nature of the identified PAD's is and as such, an assessment of the extent to which the development may adversely impact the archaeological significance of the broader archaeological record cannot be confidently stated.

The sustainability principle of inter-generational equity as applied to the archaeological resource requires that the present generation takes measures to ensure that the health and diversity of the archaeological record is maintained or enhanced for the benefit of future generations. Subsurface archaeological material associated with the identified areas of PAD will provide an opportunity to extrapolate information about the use of the Proposal Area by Aboriginal people prior to colonisation. Owing to the disturbance of much of the area due to human modification to create recreational spaces, this site provides scientific potential, but is unlikely to be the best example of its kind. The implications for the ESD principles are that while the Proposal Area represents a unique location within the immediate area for accessibility and access to resources, being on a level to gently sloping natural landform adjacent to a source of water, there are likely to be several other similar landforms that are not within a modified landscape which would be less disturbed and have similar potential for archaeological deposits.

The Diversity principle mandates that the conservation of archaeological diversity and integrity should be a fundamental consideration in decision making. This assessment therefore will consider the diversity of the archaeological record and the impact that the proposed development would have upon it.

With every site that is disturbed and impacted the diversity and integrity of the archaeological record is compromised and the diversity reduced. It is consequently important to consider the ways in which the impact to this record can be mitigated. It is considered that it is generally acceptable to lose sections of the record that have low value due to their commonness within a landscape or have already been compromised if the data recovered from such sites is maximised. Sites with high value or that are rare within a landscape such as modified trees, stone resources and burials should be protected as the loss of such sites would unacceptably compromise the archaeological record. Conversely however, the partial impact of such sites to facilitate conservation and ongoing preservation should be considered where the outcome exceeds the loss through impact.

It is also important to understand that preservation of one site type, at the expense of others, is opposed to the diversity principle. All sites should be considered as part of the management outcomes to ensure a range of sites in both type and landform context are conserved for the future. It is not enough to merely prioritise one site type or one landform or even one action without a plan to accommodate other site types.

8.2. CONSIDERATION OF HARM

Avoiding harm to the site is technically possible through abandoning the proposal, or by utilising another location, however this would result in significant added expenses and time delays to the project and this could not be considered feasible for the types and significance of the sites recorded. However, subsurface testing of the PADs may require a revision of the significance and impact assessment, so a complete understanding of the impacts are not currently possible.

It should also be noted that most of the Proposal Area is modified land or land which is not considered to be archaeologically sensitive.

A copy of the draft report will be provided to all the registered parties for comment post completion of the testing program.

8.3. MITIGATION OF HARM

Mitigation of harm to cultural heritage sites generally involves some level of detailed recording to preserve the information contained within the site (or within the portion of the site to be impacted) or setting aside areas as representative samples of the landform to preserve a portion of the site. Mitigation can be in the form of minimising harm, through slight changes in the development plan or through direct management measures for the Aboriginal objects.

The primary value of this site is its scientific potential related to the determination of the nature and extent of the archaeological deposit. Through subsurface investigation there is potential to extrapolate information about the use of the Proposal Area by Aboriginal people prior to colonisation with particular regard to the subsistence practices and use of resources in mountain environments.

Complete avoidance of two of the four identified sites (Jindabyne Campus AFT 1 and Jindabyne Campus AFT 4) may be possible based on the design shown in Figure 7-1, however the other two sites would be unavoidably impacted. Mitigation of harm to those sites would be possible through collection of artefacts prior to impact to ensure their preservation. This was advised by the Aboriginal representatives on site as a preferred method for retaining the cultural value of the artefacts.

The complete avoidance of one archaeological site (Jindabyne Campus AFT2) has been achieved by amendment of the project design, and currently lies outside of the Proposal Area.

To understand the level of harm to any sites within the PADs, testing would have to be completed. Only then would it be possible to provide advice about mitigation of harm.

9. CONCLUSION AND RECOMMENDATIONS

The recommendations are based on the following information and considerations:

- Results of the current archaeological survey of the area;
- Consideration of results from other local archaeological studies;
- Results of consultation with the registered Aboriginal parties;
- The assessed significance of the sites;
- Appraisal of the proposed development, and
- Legislative context for the development proposal.

It is recommended that:

1. Test excavation is required to establish the extent and scientific significance of the four identified areas of PAD. Test excavation may be carried out in accordance with the requirements of the *Code of Practice for Archaeological Investigation in NSW* for the four areas of PAD identified within the Proposal Area.
2. Aboriginal community representatives continue to be engaged and consulted about the project and Aboriginal heritage impacts. They should also be provided an opportunity to assist in the test excavation programme.
3. The two sites (Jindabyne Campus AFT 1 and Jindabyne Campus AFT 4) should be avoided if possible by the project. Their presence, although not their exact location, could be used as a teaching tool about Aboriginal use of the land.
4. Jindabyne Campus AFT2 should be barricaded with temporary fencing during the construction phase of the works in order to prevent inadvertent harm to the site. The fencing should be placed at a radius of approximately 5m from the location of the isolated artefact.
5. For any sites not able to be avoided by the development, community collection of surface artefacts should be incorporated into the pre-construction phase.
6. All cultural material recovered from a subsurface testing programme and community collection will be in temporary care until an appropriate time when it can be returned to site. The artefacts must be buried in line with Requirement 26 of the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* and in an appropriate location within the Proposal Area that will not be subject to any ground disturbance. The burial location will be submitted to the AHIMS database.
7. An Aboriginal Site Impact Recording Form must be completed and submitted to AHIMS following the test excavation.
8. In the unlikely event that human remains are discovered during the subsurface testing programme, all work must cease in the immediate vicinity. The appropriate heritage team within Heritage NSW and the local police should be notified. Further assessment would be undertaken to determine if the remains were Aboriginal or non-Aboriginal. If the remains are deemed to be Aboriginal in origin the Registered Aboriginal Parties should be advised of the find as directed by the appropriate heritage team within Heritage NSW. Heritage NSW would advise the Proponent on the appropriate actions required.
9. The subsurface testing results for the Proposal Area should be detailed in an additional Aboriginal Cultural Heritage Assessment Report.
10. Further archaeological assessment would be required if the proposal activity extends beyond the area assessed in this report. This would include consultation with the registered Aboriginal parties and may include further field survey.

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APPENDIX A CONSULTATION LOG AND DOCUMENTATION

Aboriginal Cultural Heritage Assessment
Jindabyne Education Campus

Date	Action	Organisation	Method of Contact	Details	Action Required
Stage 1 (Agency Letters)					
18/03/2021	Letter sent requesting information for Aboriginal stakeholders	Heritage NSW	Email	Letter sent to relevant agencies requesting for the information of Aboriginal Stakeholders	Deadline for receipt of information by 1st April 2021
18/03/2021	Letter sent requesting information for Aboriginal stakeholders	Bega LALC	Email	Letter sent to relevant agencies requesting for the information of Aboriginal Stakeholders	Deadline for receipt of information by 1st April 2021
18/03/2021	Letter sent requesting information for Aboriginal stakeholders	NTS Corp	Email	Letter sent to relevant agencies requesting for the information of Aboriginal Stakeholders	Deadline for receipt of information by 1st April 2021
18/03/2021	Letter sent requesting information for Aboriginal stakeholders	Office of the Registrar	Email	Letter sent to relevant agencies requesting for the information of Aboriginal Stakeholders	Deadline for receipt of information by 1st April 2021
18/03/2021	Letter sent requesting information for Aboriginal stakeholders	Snowy Monaro Regional Council	Email	Letter sent to relevant agencies requesting for the information of Aboriginal Stakeholders	Deadline for receipt of information by 1st April 2021
18/03/2021	Letter sent requesting information for Aboriginal stakeholders	South East Local Land Services	Email	Letter sent to relevant agencies requesting for the information of Aboriginal Stakeholders	Deadline for receipt of information by 1st April 2021
24/03/2021	Received DPC RAP list from Heritage NSW	NGH	Email	Received list of potential RAPs to contact for project	Contact RAPs with ROI letter, due date 7th April 2021
Newspaper Advertisement					
31/03/2021	Advertisement placed in the classifieds section of the Monaro Post	Monaro Post	Email	Advertisement placed in the Monaro Newspaper	Deadline for receipt of information by 14th April 2021. Tearsheet saved in the project folder
Stage 1 (Registrations of Interest)					

Date	Action	Organisation	Method of Contact	Details	Action Required
19/03/2021	Registered interest	Wagonga Local Aboriginal Land Council			NGH added to list of parties
19/03/2021	Registered interest	Confidential		requested to keep details confidential	NGH added to list of parties
19/03/2021	Registered interest	Confidential		requested to keep details confidential	NGH added to list of parties
19/03/2021	Registered interest	Ngarigo and Djiringanj people			NGH added to list of parties
22/03/2021	Registered interest	Confidential		requested to keep details confidential	NGH added to list of parties
22/03/2021	Registered interest	Confidential		requested to keep details confidential	NGH added to list of parties
22/03/2021	Registered interest	Ngarigu Brajerak			NGH added to list of parties
22/03/2021	Registered interest	PD Ngunawal Consultancy	-		NGH added to list of parties
22/03/2021	Registered interest	Yurwang Gundana Cultural Heritage Services			NGH added to list of parties
24/03/2021	Registered interest	Gulgunya Ngunawal Heritage Aboriginal Consultancy (GNHAC)			NGH added to list of parties
24/03/2021	Registered interest	Didge Ngunawal Clan			NGH added to list of parties

Aboriginal Cultural Heritage Assessment
Jindabyne Education Campus

Date	Action	Organisation	Method of Contact	Details	Action Required
25/03/2021	Registered interest	Clive Freeman			NGH added to list of parties
25/03/2021	Registered interest	Ngunawal Heritage Aboriginal Corporation			NGH added to list of parties
29/03/2021	Registered interest	Ngarigo Nation Indigenous Corporation			NGH added to list of parties
30/03/2021	Registered interest	Muragadi Heritage Indigenous Corporation			NGH added to list of parties
30/03/2021	Registered interest	Murri Bidgee Mullangari Aboriginal Corporation			NGH added to list of parties
30/03/2021	Registered interest	Merrigarn Indigenous Corporation			NGH added to list of parties
31/03/2021	Registered interest	Bega Local Aboriginal Land Council			NGH added to list of parties
1/04/2021	Registered interest	Wolgalu Umbe Traditional Custodians Cooperation			NGH added to list of parties
6/04/2021	Registered interest	Confidential		requested to keep details confidential	NGH added to list of parties
Stage 2_3 (Methodology)					
11/05/2021	Methodology sent to 19 RAPs for their review. Comments due back by the Tuesday 8th June 2021	NGH	Email	Sent via email as BCC to 19 RAPs who registered an interest in the project	Comments due by Tuesday 8th June 2021

Date	Action	Organisation	Method of Contact	Details	Action Required
11/05/2021	Methodology sent to one RAP for their review via registered post. Comments due back by Tuesday 8th June 2021. Tracking Number can be found in TAB 3	NGH	Registered Post	Sent methodology via registered post to one RAP who registered an interest in the project	Comments due by Tuesday 8th June 2021
12/05/2021	Response received from Djirringanj Elders Federation with rates and insurances, wished to be considered for fieldwork. No comments were received regarding the methodology	Ngarigo and Djiringanj people	Email	Responded with their rates and insurances but didn't provide any comments on the methodology.	Email sent back thanking them for their rates and insurances and requesting if they had any comments regarding the methodology
18/05/2021	Response received from Clive Freeman with no comments on the existing methodology	Clive Freeman	Email	Responded with no additional comments to the original methodology	Email sent back thanking them for their response
18/05/2021	Response received from Djirringanj Elders Federation with no comments of the existing methodology. Provided rates and insurances and wished to be considered for fieldwork	Ngarigo and Djiringanj people	Email	Responded with no additional comments to the original methodology. Wished for RAPs to be consulted regarding the long term management of any cultural materials that surface during the investigations, however wanted objects to be returned to country thereafter.	Email sent back thanking them for their response
27/05/2021	Response received from Unidentified Party, no comments on the existing methodology. Wished to be considered for fieldwork but did not provide their rates and insurances	RAP	Email	Responded with no additional comments to the original methodology	Email sent back thanking them for their response and requested for their rates and insurances.
1/06/2021	Rates and insurances received from Unidentified Party	RAP	Email	Previously agreed with methodology. Provided rates and insurances	Email sent back thanking them for their response
7/06/2021	Response received from Yurwang Gundana Cultural Heritage Services, agreed with the methodology. Raised one question regarding NGH's protocol with encountering areas of high potential	Yurwang Gundana Cultural Heritage Services	Email	Responded to the methodology, agreeing with all points. Asked one question regarding assessed areas of potential	Email sent back answering questions (08/06/2021)

Date	Action	Organisation	Method of Contact	Details	Action Required
8/07/2021	Email sent out to RAPs who have not already responded requesting any comments on the methodology and the rates and insurances for the groups who wished to be considered for fieldwork	NGH	Email	Email sent out to RAPs who have not yet responded to the methodology requesting their comments and the rates and insurances of groups who wished to be considered by our client for fieldwork	N/A
8/06/2021	Ngarigo Nation provided response to methodology including additional questions regarding fieldwork and rates	Ngarigo Nation Indigenous Corporation	Email	Provided comments on methodology with additional questions regarding fieldwork	Email sent back answering questions raised by Ngarigo Nation (09/06/2021)
8/06/2021	Bega LALC responded with rates and insurances and apologised for the delay. Have said will review the methodology over the next couple days.	Bega Local Aboriginal Land Council	Email	Provided rates and insurances for Bega LALC site officers and wished to be considered for fieldwork	Sent email back thanking them and will await for reply on methodology
8/06/2021	DNC responded to the methodology, no comments on the existing methodology. Provided rates and insurances and wished to be considered for fieldwork.	Didge Ngunawal Clan	Email	Responded to the methodology with no comments. Provided rates and insurances and wished to be considered for fieldwork	Email sent back thanking them for their response
8/06/2021	Ryan Johnson responded to the methodology, no comments on the existing methodology. Provided rates (no insurances) and wished to be considered for fieldwork	Murri Bidgee Mullangari Aboriginal Corporation	Email	Responded to the methodology with no comments. Provided rates and wished to be considered for fieldwork	Email sent back thanking them for their response and requested their insurances
8/06/2021	PD Ngunawal Consultants responded to the methodology, no comments on the existing methodology. Provided rates and insurances and wished to be considered for fieldwork	PD Ngunawal Consultancy	Email	Responded to the methodology with no comments. Provided rates and wished to be considered for fieldwork	Email sent back thanking them for their response
11/06/2021	Bega LALC responded to the methodology, no comments were made on the existing methodology. Also wished to ensure that Uncle Chris Griffiths had been contacted and offered an opportunity to engage with the ACHA project	Bega Local Aboriginal Land Council	Email	Responded to the methodology with no comments. Wanted to ensure that Uncle Chris Griffiths had been contacted regarding the works.	Email sent back thanking them for their response and requesting for contact information for Uncle Chris Griffiths as he was not including in the Heritage NSW list provided during stage 1 of the consultation process (15/06/2021)

Date	Action	Organisation	Method of Contact	Details	Action Required
16/06/2021	Phone conversation with Bega LALC regarding the contact information for Uncle Chris Griffiths	Bega Local Aboriginal Land Council	Phone	Phone conversation with Bega LALC regarding the contact information for Uncle Chris Griffiths	Bega LALC will provide contact information to NGH
Stage 2_3 (Fieldwork)					
18/06/2021	Phone conversation with Bega LALC, John Dixon, and Unidentified Party to inform them that the proponent wishes to invite them to attend fieldwork	NGH	Phone	Contacted three organisations at the request of the Proponent to invite them for fieldwork. All agreed in principle but would confirm Monday due to short notice	Confirm fieldwork on Monday by email to all RAPs
21/06/2021	Email sent out to Bega LALC, John Dixon, and Unidentified Party at the request of the client to invite them to attend fieldwork on Friday 25th June 2021.	NGH	Email	Email sent out to Bega LALC, John Dixon, and Unidentified Party to invite them to attend fieldwork on Friday 25th June 2021.	Await Responses from the three RAP groups
21/06/2021	John Dixon confirmed attendance for fieldwork via email	Ngarigo and Djiringanj people	Email	Confirmed availability to attend fieldwork	Send follow up email confirming the time and location to meet the NGH representative for fieldwork on Friday
21/06/2021	Unidentified Party confirmed attendance for fieldwork via phone	RAP	Phone	Confirmed availability to attend fieldwork pending the payment of an unpaid invoice	Send follow up email confirming the time and location to meet the NGH representative for fieldwork on Friday
21/06/2021	Contacted Bega LALC to confirm their attendance for fieldwork	NGH	Phone	Bega LALC confirmed that they are unable to provide a site officer to attend site on such short notice. Have indicated that they are ok for the fieldwork to go ahead in their absence	Send follow up email confirming the details of the phone discussion. Also send email confirming the time and location to meet for fieldwork in case a site officer becomes available
21/06/2021	Sent email to all other RAPs who were not invited by the proponent to attend fieldwork to inform them of that fact. Emailed as BCC	NGH	Email	Sent email informing the RAPs who were not invited by the proponent for fieldwork. Informed that they will still be consulted for the remainder of the project and that any cultural information was welcome.	Await responses

Date	Action	Organisation	Method of Contact	Details	Action Required
21/06/2021	Received phone call from DNC. Wished to know why they were not invited by the proponent for fieldwork.	Didge Ngunawal Clan	Phone	DNC wished to know why they were not invited for fieldwork by the proponent. NGH informed them that it is a purely commercial decision by the proponent. DNC wished to be put in contact with the proponent	Sent follow up email confirming the topic of discussion via phone. Email sent to Colliers to request the contact details of the most appropriate person to be put in contact with DNC
21/06/2021	Received email from Yurwang Gundana CHS. Wished to know why they were not invited by the proponent for fieldwork. Also wished to be consulted at further stages of the ACHA.	Yurwang Gundana Cultural Heritage Services	Email	Yurwang Gundana CHS wished to know why they were not invited for fieldwork by the proponent. NGH informed them that it is a purely commercial decision by the proponent and informed them that should they wish to NGH can pass on the contact details for the proponent.	
22/06/2021	Phone call with Ngarigo and Djiringanj people (John Dixon) confirming availability for fieldwork and rates. Sent follow up email with confirmation of date, time, and meeting location for fieldwork.	Ngarigo and Djiringanj people	Phone/email	Phone call with Ngarigo and Djiringanj people (John Dixon) confirming availability for fieldwork and rates. Sent follow up email with confirmation of date, time, and meeting location for fieldwork.	No further action required
22/06/2021	Phone call with Bega LALC to confirm that they will be able to send a site officer to site. Requested that they be allowed two representatives on site as one is unable to drive. Also confirmed that he is still trying to get in contact with Uncle Chris Griffiths. Sent follow up email with confirmation of date, time, and meeting location for fieldwork.	Bega Local Aboriginal Land Council	Phone/email	Phone call with Bega LALC to confirm that they will be able to send a site officer to site. Requested that they be allowed two representatives on site as one is unable to drive. Also confirmed that he is still trying to get in contact with Uncle Chris Griffiths. Sent follow up email with confirmation of date, time, and meeting location for fieldwork.	Pass on Bega LALCs request for two site officers on to Colliers.

Date	Action	Organisation	Method of Contact	Details	Action Required
22/06/2021	Freeman & Marx Pty Ltd responded to the above email with thanks for the information	Clive Freeman	Email	-	No further action required
24/06/2021	Received the contact information from Uncle Chris Griffiths from Bega LALC with permission to contact him regarding the project.	RAP	Email	Received the contact information from Uncle Chris Griffiths from Bega LALC with permission to contact him regarding the project.	Contact Uncle Chris Griffiths ASAP regarding the state of the project
25/06/2021	Called Uncle Chris Griffiths to confirm that he wished to be registered as an interested party for the project. Updated Chris on the state of the project and informed him that the methodology period had closed and that fieldwork has already been organised. Sent out a follow up email with the methodology and confirmed his registration and that we will provide him the draft ACHA for his review	RAP	Email	Called Uncle Chris Griffiths to confirm that he wished to be registered as an interested party for the project. Updated Chris on the state of the project and informed him that the methodology period had closed and that fieldwork has already been organised. Sent out a follow up email with the methodology and confirmed his registration and that we will provide him the draft ACHA for his review	Register Uncle Chris Griffiths as a RAP, send a copy of the methodology to his email address for his records and email him a copy of the draft ACHA for him to comment on along with other RAPs
25/06/2021	Fieldwork for the Jindabyne ACHA took place with RAPs from three groups	NGH/RAP	-	Fieldwork took place	No further action required
Stage 4 (Draft Report)					
	Draft ACHA report sent to all RAPs	NGH	Email	Draft ACHA provided to RAPs for mandatory 28-day review period	Response

APPENDIX B UNEXPECTED FINDS PROTOCOL

B.1 INTRODUCTION

This unexpected find protocol has been developed to provide a method for managing unexpected Aboriginal heritage items identified during the construction and maintenance of the Project. The unexpected find protocol has been developed to ensure the successful delivery of the Project while adhering to the NSW *National Parks and Wildlife Act 1974* (NPW Act) and the NSW *Heritage Act 1977* (Heritage Act).

All Aboriginal heritage objects are protected under the NPW Act, however an AHIP may be issued under Part 6 of the Act allows for conditional harm to objects. There are, however, some circumstances where despite undertaking appropriate heritage assessment prior to the commencement of works Aboriginal cultural heritage items or places are encountered that were not anticipated which may be of scientific and/or cultural significance.

Therefore, it is possible that unexpected heritage items may be identified during construction, operation and maintenance works. If this happens the following unexpected find protocol should be implemented to avoid breaching obligations under the NPW Act. This unexpected find protocol provides guidance as to the circumstances under which finds may occur and the actions subsequently required.

B.2 WHAT IS AN UNEXPECTED FIND?

An unexpected heritage find is defined as any possible Aboriginal heritage object or place, that was not identified or predicted by the project's heritage assessment and is not covered by appropriate permits or development consent conditions. Such finds have potential to be culturally significant and may need to be assessed prior to development impact.

Unexpected heritage finds may include:

- Aboriginal stone artefacts, shell middens, modified trees, mounds, hearths, stone resources and rock art;
- Human skeletal remains; and
- Remains of historic infrastructure and relics.

B.3 ABORIGINAL HERITAGE PLACES OR OBJECTS

All Aboriginal objects are protected under the NPW Act.

An Aboriginal object is defined as:

Any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or concurrent with the occupation of that area by persons on non-Aboriginal extraction and includes Aboriginal remains.

All Aboriginal objects are protected, and it is an offence to harm or desecrate an Aboriginal object or place.

B.4 UNEXPECTED FINDS MANAGEMENT PROCEDURE

In the event that any unexpected Aboriginal heritage places or objects are unexpectedly discovered during the Project, the following management protocols will be implemented. **Note: this process does not apply to human or suspected human remains. Follow Section A.6 Human Skeletal Remains below if remains or suspected remains are encountered.**

1. Works within the immediate identified heritage location will cease. Personnel should notify their supervisor of the find, who will notify the project manager.

2. Establish whether the unexpected find is located within an area covered by an approved AHIP or whether it is outside based on Appendix B.
3. **If the find it is determined to be covered under an approved AHIP undertake the following steps.**
 - a. Establish an appropriate buffer zone of at least 20 metres to allow for the assessment and management of the find. All site personnel will be informed about the buffer zone with no further works to occur within the buffer zone.
 - b. A heritage specialist or the project archaeologist will be engaged to assess the Aboriginal place or object encountered and undertake appropriate salvage of the site in line with the mitigation methods and approval requirements of the AHIP
 - c. Following appropriate salvage of the unexpected find works may continue at this location
4. **If the unexpected find is not covered under the existing approved AHIP undertake the following steps.**
 - a. All works at this location must cease.
 - b. An appropriate buffer zone of at least 20 metres to allow for the assessment and management of the find must be established. All site personnel will be informed about the buffer zone with no further works to occur.
 - c. A heritage specialist or the project archaeologist will be engaged to assess the Aboriginal place or object encountered. Registered Aboriginal Party (RAP) representatives may also be engaged to assess the cultural significance of the place or object.
 - d. The discovery of an Aboriginal place or object will be reported to the local office of the DPIE and works will not recommence at the heritage place or object until advised to do so by DPIE.
 - e. If the unexpected find can be managed *in situ*, works at the location will not recommence until appropriate heritage management controls have been implemented, such as protective fencing.
 - f. If the unexpected find cannot be managed *in situ*, works at the heritage location will not recommence until further assessment is undertaken and appropriate permits to impact Aboriginal cultural heritage are approved and issued by DPIE.
5. Depending on the nature of the discovery, additional assessment may be required prior to the recommencement of work in the area. At a minimum, any find should be recorded by an archaeologist.

B.5 HUMAN SKELETAL REMAINS

If any human remains or suspected human remains are discovered during any works, all activity in the area must cease immediately. The following plan describes the actions that must be taken in instances where human remains, or suspected human remains are discovered. Any such discovery at the activity area must follow these steps.

Discovery:

- If any human remains or suspected human remains are found during any activity, works in the vicinity **must** cease and the Project Manager must be contacted immediately.
- The remains must be left in place and protected from harm or damage.
- All personnel should then leave the area immediately.

- Where there is doubt to the species of bone material encountered, a physical anthropologist may be consulted to make an assessment as to whether bone material is likely to be of human origin.

Notification:

- Where the bone material is determined to be likely of human origin, the NSW Police must be notified immediately. Details of the location and nature of the human remains must be provided to the relevant authorities.
- If there are reasonable grounds to believe that the remains are Aboriginal, the following must occur:
 - a. The DPIE must be contacted as soon as practicable and provide any available details of the remains and their location. The DPIE's Environment Line can be contacted on 131 555;
 - b. The relevant Aboriginal community groups must be notified immediately (at a minimum all the RAPs);
 - c. The relevant project archaeologist may be contacted to facilitate communication between the police, DPIE and Aboriginal community groups.

Process:

- If the remains are considered to be Aboriginal by the Police and DPIE no work can recommence at the particular location unless authorised in writing by DPIE.
- Recording of Aboriginal ancestral remains must be undertaken by, or be conducted under the direct supervision of, a specialist physical anthropologist or other suitably qualified person.
- Archaeological reporting of Aboriginal ancestral remains must be undertaken by, or reviewed by, a specialist physical anthropologist or other suitably qualified person, with the intent of using respectful and appropriate language and treating the ancestral remains as the remains of Aboriginal people rather than as scientific specimens.

If the remains are considered to be Aboriginal by the Police and DPIE, an appropriate management and mitigation, or salvage strategy will be implemented following further consultation with the Aboriginal community and DPIE.