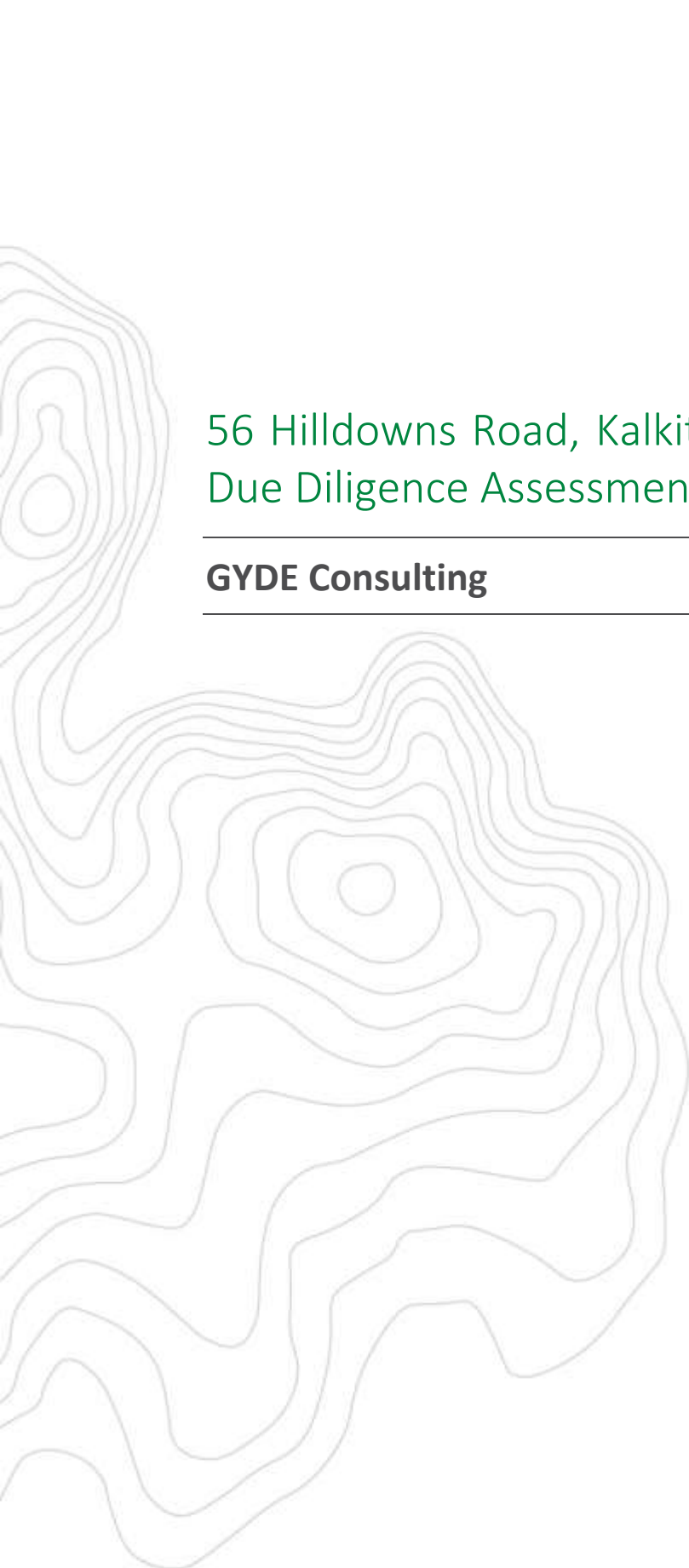


A stylized, light green topographic map with concentric contour lines, resembling a gear or a series of hills, positioned on the left side of the page.

56 Hilldowns Road, Kalkite NSW - Aboriginal Heritage Due Diligence Assessment

GYDE Consulting

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Template 2.8.1

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1. Introduction

1.1 Project background

GYDE Consulting (GYDE), on behalf of John Sacco Enterprise Pty Ltd, engaged Eco Logical Australia Pty Ltd (ELA) to undertake an Aboriginal Heritage Due Diligence Assessment of 56 Hilldowns Road, Kalkite NSW (Lot 5 DP29579) and Lot 190 (DP 756727) (hereafter referred to as 'the study area'; Figure 1) to identify if Aboriginal objects are likely to be located within the area of the proposed works and, if so, whether the proposed works have the potential to harm those objects. ELA understands that this assessment will inform the Planning Proposal for the future development of Kalkite, NSW.

The proposed land zoning has been provided by United Surveyors (Figure 2).

This assessment outlines the findings of the Aboriginal Heritage Due Diligence Assessment of the study area, in accordance with the *Due Diligence Code of Practice for the protection of Aboriginal Objects in New South Wales* (DECCW 2010a).

1.2 Assessment process

The methodology of this Aboriginal due diligence assessment includes:

- Undertake a search of the Aboriginal Heritage Information Management System (AHIMS) register maintained by Heritage NSW, Department of Premier and Cabinet (Heritage NSW) to establish if there are any previously recorded Aboriginal objects or places within the study area;
- Undertake a search of the Snowy River Shire Local Environmental Plan (LEP) 2013 Schedule 5 (Environmental Heritage), the NSW State Heritage Inventory and the Australian Heritage Database in order to determine if there are any sites of archaeological significance or sensitivity located within the study area;
- Identify any relevant Aboriginal Heritage Impact Permits (AHIP) and review the Snowy River Shire Development Control Plan (DCP) 2013 to determine if there are any controls of relevance to the project;
- Review historic aerial photographs, if available, to determine past land use and any historic disturbances to the study area;
- Undertake a desktop review of relevant previous archaeological assessments to understand the local archaeological context and assist in predicting the likely occurrence of unrecorded archaeological sites or objects, and
- Undertake a site inspection to identify any Aboriginal sites and areas of sensitive landforms.

The aim of this report is to establish whether known or additional unrecorded Aboriginal objects are present within the study area and determine whether further assessment and/or an Aboriginal Heritage Impact Permit is required.

The due diligence process involves “*taking reasonable and practical measures to determine whether your actions will harm an Aboriginal object and, if so, what measures can be taken to avoid that harm*” (DECCW 2010a:4). If harm cannot be avoided, further technical studies and approvals will be required (see section 4).

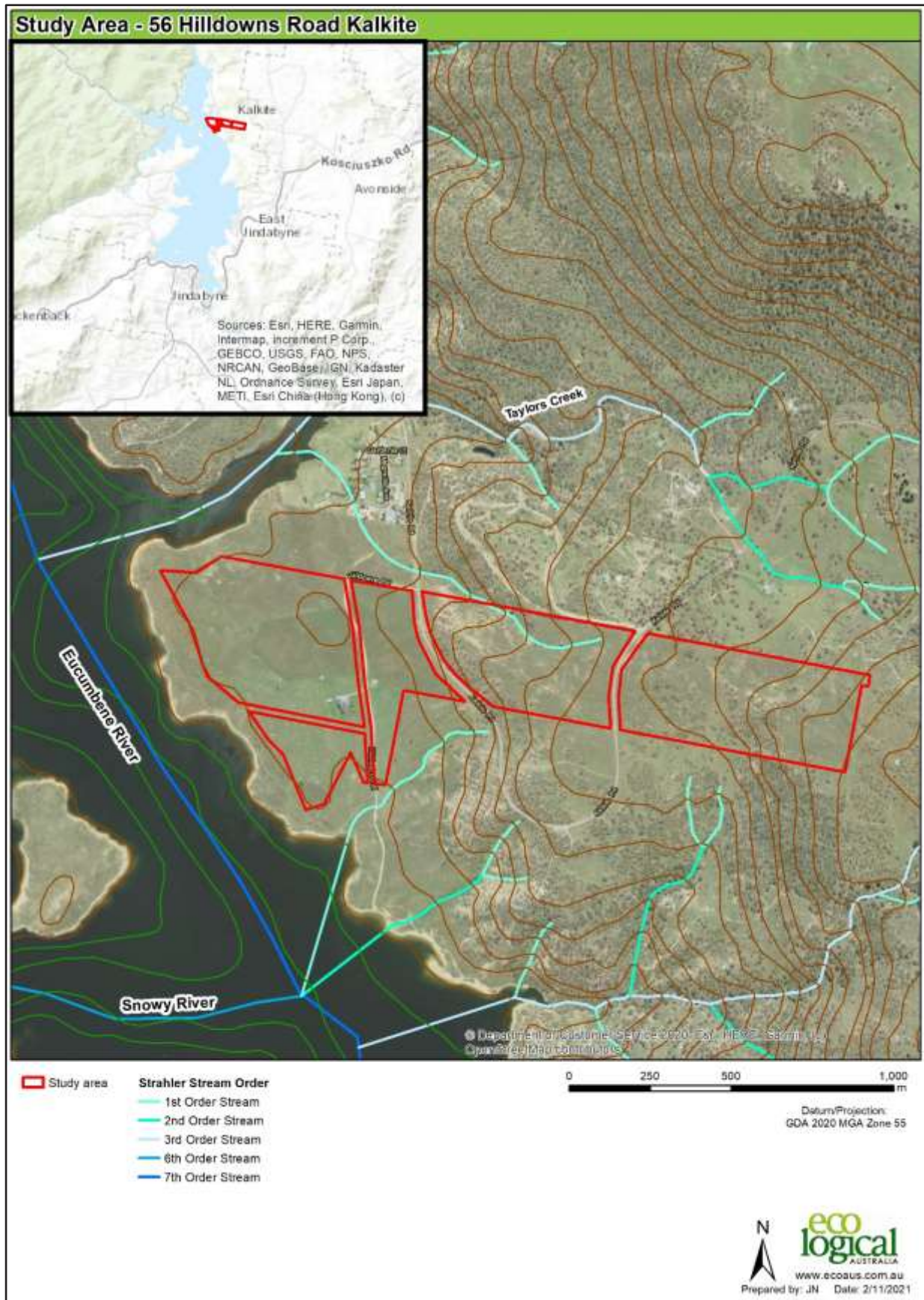


Figure 1: The Study Area

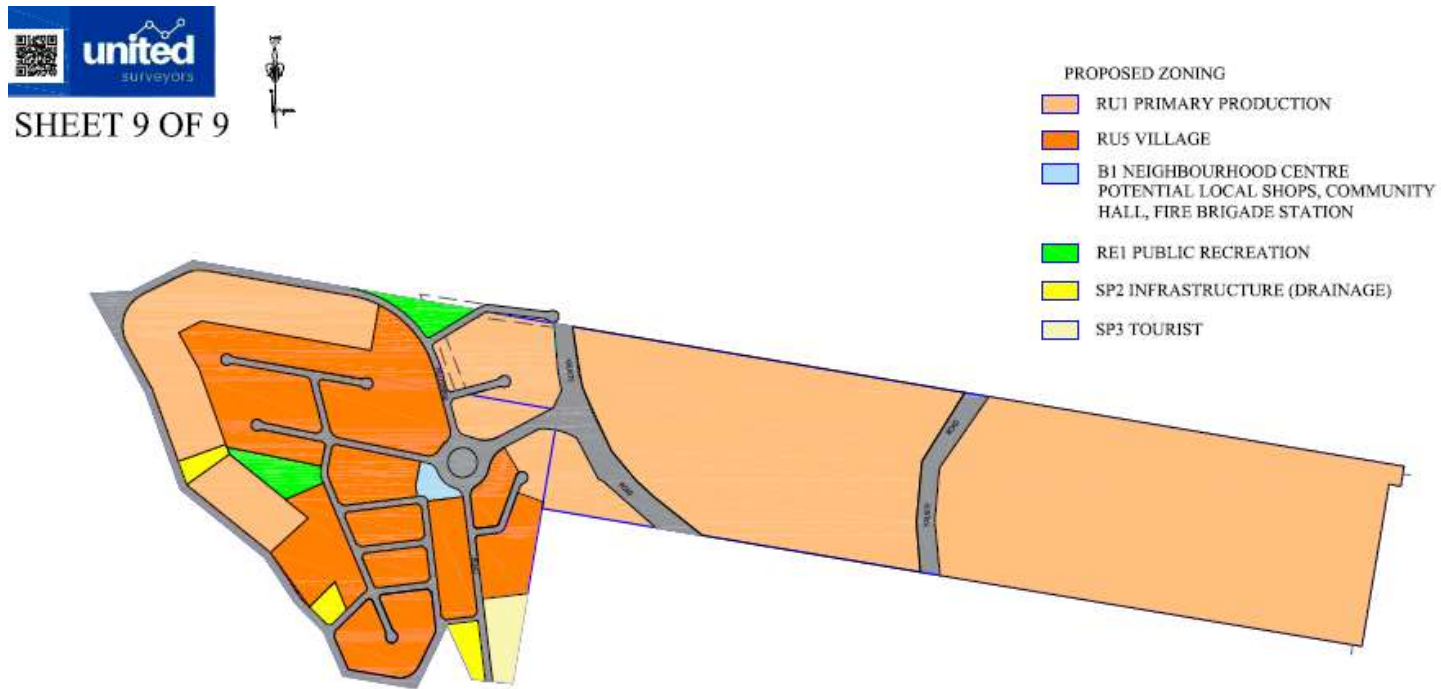


Figure 2: Proposed Land Zoning (source: United Surveyors [no date])

2. Basis for cultural heritage management

Places of cultural significance enrich people's lives, often providing a deep and inspirational sense of connection to community and landscape, to the past, and to lived experiences ... they are irreplaceable and precious (Australia ICOMOS Burra Charter 2013:1).

Traditionally, heritage and archaeological assessments have focused on the significance of the tangible elements of cultural heritage (Brown 2008). Items such as structures and archaeological artefacts have been considered predominantly in terms of their scientific/research potential and representativeness (New South Wales Heritage Office 2015:20-24). By focusing on the scientific qualities of heritage, many of the intangible qualities of heritage were not considered. This is especially crucial when participating in the management and protection of Aboriginal cultural heritage. By nature, Aboriginal cultural heritage is multi-faceted: it consists not only of tangible structures and objects of value for scientific investigations, but also of a deeply complex array of intangible expressions, such as stories, memories, and traditions. Many of the rights and interests of Aboriginal communities in their own heritage is formed on the basis of this intangibility. It stems from their spirituality, customary law, original ownership, and continuing custodianship (Australian Heritage Commission 2002:5). These intangible expressions often share a strong link with the landscape. Byrne *et al.* (2003:3) describe this connection in the form of a map, where individuals:

Carry around in [their] heads a map of the landscape which has all these places and their meanings detailed on it. When we walk through our landscapes the sight of a place will often trigger the memories and the feelings [that] go with them ... it is the landscape talking to us.

Crucially, those who are not connected to the landscape in question will not be able to discern these intangible meanings embedded in the landscape; they can only come to recognise the significance by consulting with local knowledge holders (Byrne *et al.* 2003:3). And, even so, they may vary between individuals, reflecting unique experiences.

By recognising the rights and interests of Aboriginal knowledge holders and community members in their cultural heritage, all parties involved in the identification, conservation, and management of this cultural heritage must acknowledge that Aboriginal people (Australian Heritage Commission 2002:6):

- Are the primary source of information on the value of their heritage and how this is best conserved;
- Must have an active role in any heritage planning processes;
- Must have input into primary decision-making in relation to their heritage so that they can continue to fulfil their obligations towards this heritage; and
- Must control the intellectual property and other information relating specifically to their heritage, as this may be an integral aspect of its heritage value.

As such, cultural heritage sites and objects are fundamental elements of Aboriginal peoples' identities, connections, and belonging to their communities. The careful protection and management of this heritage is essential for the preservation of connection between past, present, and future.

3. Assessment process

3.1 Identify if the proposed activity will disturb the ground surface

The initial land zoning will not disturb the ground surface, however any future construction work associated with roads, service installation and residential and commercial building will result in impacts.

3.2 Database searches and known information sources

3.2.1 AHIMS search

The AHIMS database maintained by Heritage NSW and regulated under Section 90Q of the *National Parks and Wildlife Act 1974*. The AHIMS database holds information and records regarding the registered Aboriginal archaeological sites (Aboriginal objects, as defined under the Act) and declared Aboriginal places that exist in NSW.

A search of the AHIMS database was conducted on 2 November 2021 to identify if any registered Aboriginal sites were present within, or adjacent to, the study area (**Appendix A**). This represents 6km around the study area.

The AHIMS database search was conducted within the following coordinates:

Table 1: Search Parameters for the AHIMS database search

Search Parameters	
GDA Zone	55
Eastings	641408-653408
Northings	5970749-5982749
Buffer	0m

The AHIMS search result showed:

Table 2: Search results for the AHIMS database search

Search Results	
Aboriginal sites recorded	59
Aboriginal places declared	0

No Aboriginal sites have previously been recorded within the study area. One site, AHIMS ID 62-1-0252, is listed as a 'restricted site'. This will not be impacted by the proposed works.

The distribution of recorded Aboriginal sites within the vicinity of the study area is shown in Figure 3. The frequencies of site types recorded within the AHIMS database search area are listed below.

Table 3: Frequencies of site types

Site Features	Number	%
Artefact	58	98.30
Restricted Site	1	1.70
Total	59	100

3.2.2 Local, State and National heritage registers

Searches of the Australian Heritage Database, the State Heritage Register (SHR) and the Snowy River LEP 2013 utilising the terms “Kalkite/Jindabyne” were conducted on 2 November 2021 in order to determine if any places of archaeological significance are located within the study area.

No Aboriginal archaeological sites or heritage items were recorded on these databases within the study area.

Two heritage items are listed on the Snowy River LEP as being within the vicinity of the study area. These items are:

- ‘Lake Jindabyne Conservation Area, item number C4 and located, at its closest point, approximately 90m to the west of the study area. Lake Jindabyne Conservation Area also listed on the non-statutory Register of the National Estate, Place ID 1054.
- ‘Wee Wah’, item number I39 is located at 375 Eucumbene Road, within 2km of the study area.

Lake Jindabyne is a man made lake with a capacity of 689,900 and a dam wall height of 72 metres. Inundation of the valley began in 1967. The foreshores comprise areas of parkland with walking tracks and a focus for tourism and water sports. Lake Jindabyne Conservation Area is listed for its importance to the Snowy Scheme and contribution to the landscape value of the town of Jindabyne.

Wee Wah is an 1880s single storey weatherboard building designed in an L shape with stone chimneys, corrugated iron roof and verandahs on two sides. Modified over the years it is a representative example of a late 19th or early 20th century Monaro rural dwelling.

The Lake Jindabyne Conservation Area and Wee Wah will not be impacted by the proposed works. Please see the Historical Assessment for further details (ELA 2021, *56 Hilldowns Road Kalkite Historical Heritage assessment*).

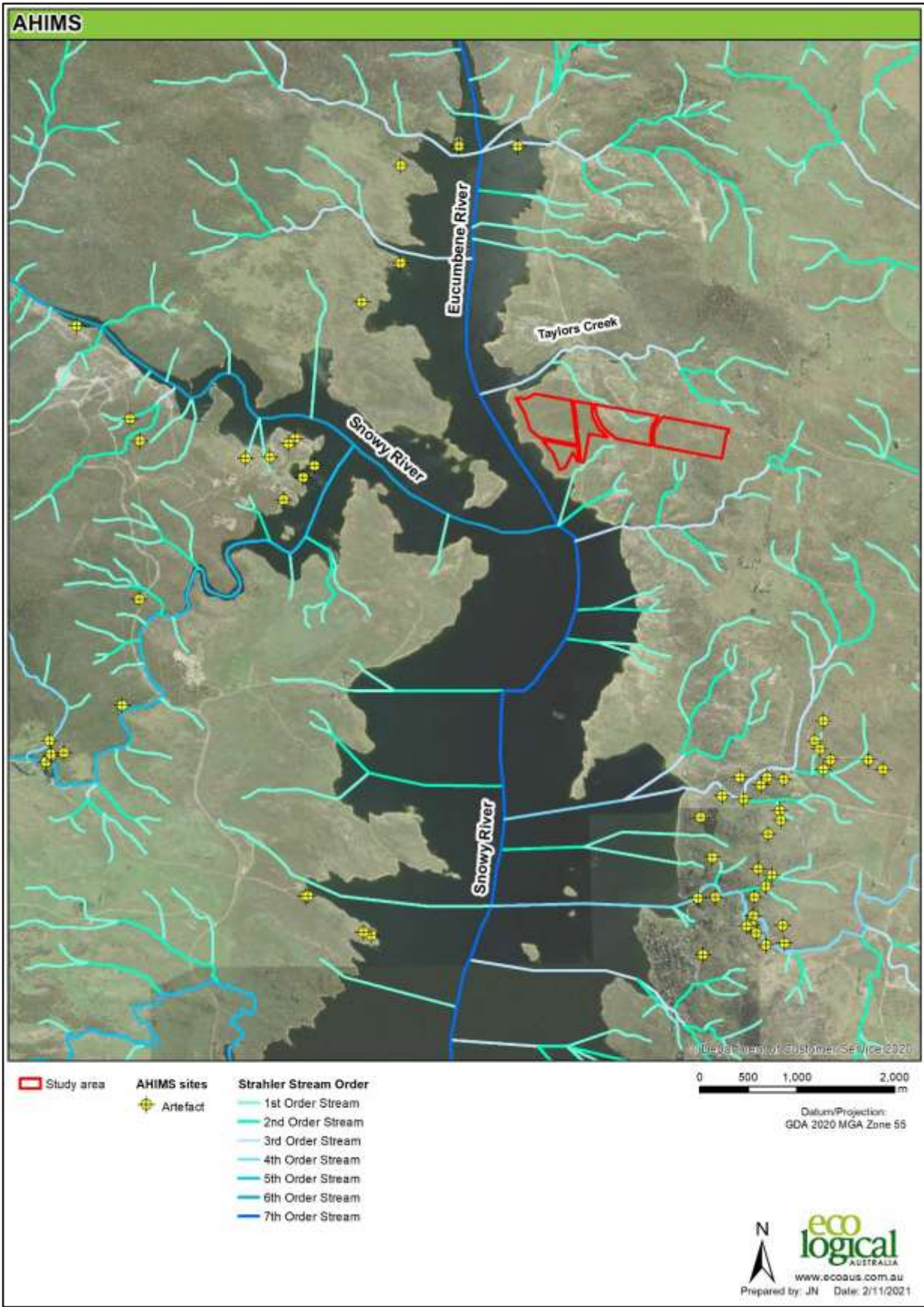


Figure 3: AHIMS registered sites within the vicinity of the study area

3.2.3 Previous archaeological investigation

A number of archaeological surveys and investigations have been undertaken in Jindabyne and the wider Snowy Mountains Region over the last few decades, in relation to the Snowy Hydro Scheme and other developments in the area. The most relevant reports to this investigation will be summarised below:

Chapman, 1982. *Report of an Archaeological Survey of East Jindabyne*. Prepared for Gutteridge Haskins & Davey Pty Ltd.

Valerie Chapman was previously engaged by Gutteridge Haskins & Davey Pty Ltd to conduct an archaeological survey in East Jindabyne. The survey was in association with an excavation of a hearth, known as Snowy River site J/SR1, a 'surface campsite', one of many hearths identified in the area. The site is located on the bank of the Snowy River, approximately 2.5 km from Lake Jindabyne Dam Wall and approximately 10 km to the south-west of the current study area.

The survey found that the hearth was situated on a small area of gently sloping ground with erosion evident above the hearth, potentially related to extensive clearing and grazing and the construction of the road. Vegetation around the hearth was low. The hearth was subsequently excavated, with a 1.5 x 0.6m trench running along the baseline. Spits were excavated in 5cm intervals and the base was reached in some portions at 40 cm. Soil changes along the trench were few, though two types of baked clay appeared, a hard-pitted material exposed on the surface and a softer redder material that had been buried. Charcoal appeared in some portions of the trench from Spit 1, with some large pieces occurring beyond the baked clay in Spit 4. Large pieces of charred wood were also collected. Associated with the baked clay and charcoal in the centre of the trench was an area of darker and more friable soil.

The maximum depth of the baked clay was about 20 cm and its area diminished between 10 and 20 cm depth. It generally lacked a well-defined shape and was constructed from the same subsoil base material, indicating it is unlikely the clay was carried into the site. A collection of artefacts was identified within an area enclosing the hearth, with 123 items collected. Concentrations occurred in downslope erosion gullies next to the hearth, with smaller clusters up to 30 m away. The greatest density of artefacts was found within 10 m of the hearth, both below and above, indicating tool making was undertaken near the fireplace.

The findings of the excavation were that there was no discernible plan to the clay deposit and there was no direct evidence of food sources.

NSW Archaeology, 2014. *Lot 15 on DP236151 East Jindabyne NSW – Aboriginal Cultural Heritage Assessment Report*. Prepared for The Bottomline Group.

NSW Archaeology, was previously engaged by The Bottomline Group to prepare an Aboriginal Cultural Heritage Assessment to support the proposed subdivision of Lot 15 DP236151 in East Jindabyne NSW, located approximately 5 km to the south of the current study area.

An initial desktop assessment, including an extensive search of the AHIMS database, identified 65 Aboriginal sites within the vicinity of the study area. One site had previously been recorded within the study area. The site had originally been recorded as three separate artefact occurrences but were listed as one site on AHIMS (AHIMS ID 62-1-0068). A subsequent archaeological investigation re-recorded the site as AHIMS ID 62-1-226. As part of this assessment multiple locations were recorded as part of the

previously recorded AHIMS sites. A review of available background reports indicated artefact scatters were commonly recorded during field surveys in the Jindabyne region, though site density varied across the region.

A field survey was undertaken which divided the study area into four survey units and identified that the entire study area had undergone high levels of ground disturbance related to historic land clearance and grazing, recent recreational usage (bike riding) and subsequent erosion. All trees located within the areas of direct impact were inspected and no evidence of Aboriginal scarring was evident. Survey Unit 1 was on a simple slope and had undergone previous disturbance from clearance and erosion, the entrance to the area from Rushes Bay Avenue had also been highly modified. Survey Unit 2 was located on a spur crest and had undergone high previous disturbance related to clearance and bike riding, there were also large areas of sheetwash erosion. Survey Unit 3 was located on a simple slope with extensive boulders and had undergone moderate levels of prior disturbance related to clearance and erosion. Survey Unit 4 was on a simple slope with boulders and had undergone moderate levels of previous disturbance from clearance and erosion. Ground exposure across the survey units was approximately 21.5% and included bike tracks and animal tracks. A total of 59 Aboriginal stone artefacts were recorded at 9 locales in Survey Unit 2 and were noted to be a component of previously recorded sites (AHIMS ID 62-1-0068 and AHIMS ID 62-1-0226). The crest landform was found to be eroded and the artefacts were in a highly disturbed context, indicating the site has potential to have subsurface artefact scatters, but they would likely be disturbed.

As a result of this investigation, it was suggested that the low artefact density in disturbed areas indicated that the study area would have been used sporadically by Aboriginal people. Due to this, as well as the high levels of disturbance noted across the study area, subsurface test excavation was not recommended as it would likely be disturbed and result in low density artefacts. No further investigation was recommended, though an AHIP should be sought for the direct impacts to the stone artefacts identified in the study area.

NSW Archaeology, 2017. RMS Development of the West Bound Lane Between Barry Way and Alpine Way, Jindabyne NSW – Due Diligence Assessment. Prepared for NSW Roads and Maritime Services.

NSW Archaeology was previously engaged by the NSW Roads and Maritime Services (RMS) to prepare an Aboriginal Heritage Due Diligence Assessment to support the proposed construction of an additional westbound lane on Kosciusko Road between Barry Way and Alpine Way, to the west of Jindabyne NSW and to the south-west of the current study area.

The initial desktop assessment identified that the proposed works would impact the ground surface and as such, had the potential to harm Aboriginal objects, if present. An extensive search of the AHIMS database did not identify any registered Aboriginal sites within the proposed study area, though it was noted that no targeted surveys had previously been undertaken within the study area.

A visual inspection of the study area was undertaken which did not identify any previously unregistered Aboriginal sites within the study area. In some areas, surface visibility was high. The road corridor had previously been heavily impacted by road construction including levelling and associated drainage works, and the alteration of landscape surfaces. A stone wall was identified as being located partially within the proposed impact zone, though this was not assessed as having any heritage significance. The study area had undergone prior disturbance and in all areas in which impacts would occur, there was a

low likelihood for subsurface archaeological deposits to be present. Overall, the archaeological sensitivity of the area was assessed as being low.

As a result of the desktop and visual assessment, no Aboriginal sites were identified within the study area and the impact areas were assessed as being highly disturbed with low to negligible archaeological sensitivity and potential. As such, an AHIP was not warranted and works could proceed with caution.

Eco Logical Australia, 2018. 415-417 Barry Way, Jindabyne NSW – Aboriginal Heritage Due Diligence Assessment. Prepared for L. Wehbe, R.J Wehbe, J.J Wehbe and R. Hkiek.

Eco Logical Australia (ELA) was previously engaged by L. Wehbe, R.J Wehbe, J.J Wehbe and R. Hkiek to prepare an Aboriginal Heritage Due Diligence Assessment to support the proposed residential subdivision and development at 415-417 Barry Way, Jindabyne NSW, located approximately 12km to the south of the current study area.

A desktop assessment, including an extensive search of the AHIMS database, did not identify any Aboriginal sites within the study area. Artefact scatters (77%) and isolated finds (14%) accounted for the majority of Aboriginal sites within the vicinity of the study area. Five sites were recorded as being within 700m of the study area.

A visual inspection of the study area was undertaken which identified two areas of Potential Archaeological Deposit (PAD). The study area had previously been disturbed, in parts, in association with historic land use including clearing, pasture improvement, dwelling and shed construction, fencing and farm roads and tracks. A significant portion of the study area appeared to have been undisturbed or undergone minimal ground disturbance. The two sites that were identified, Cobbon Farm PAD 1 and Cobbon Farm PAD 2 were both located on a gently sloping terrace landform above the banks of Cobbin Creek. The PADs were both registered on the south-eastern border of the study area. The land has been cleared with an exception of small stands of snow gum in the western portion of the study area. Cobbin Creek runs along the south eastern boundary of the study area and drains into the Snowy River below Jindabyne Dam to the north east. The topography of the property is characterised by ridge and valley landforms with gentle to moderately sloping mid and lower slopes, terraces and valley floor elements as well as steep upper slopes, crests and spur landforms.

As a result of this investigation, no further assessment was required unless impacts upon the identified PADs could not be avoided, in which case an AHIP should be sought for the impact to the two PADs and the Aboriginal site Hilltop Road 001.

3.3 Landscape assessment

The study area is located within the Monaro subregion of the South-Eastern Highlands Bioregion of NSW and Victoria. Soil landscape data is not available for the Jindabyne region, which encompasses the study area. A summary of the landforms, geology, soils, and vegetation typical within this subregion are presented in Table 3 below:

Table 3: Monaro subregion summary (source: NSW Department of Planning, Industry and Environment)

Monaro	
Geology	Block faulted ranges and closed lake basins in Silurian and Devonian acid fine grained sedimentary and metamorphic rocks with some granites. Extensive areas of thin Tertiary basalt flows over lake and river sediments.
Characteristic Landforms	Sloping plateau rising from 600 to 1300 m north to south. Structural ridges of more resistant rock. Stepped plains on basalt with intervening low areas of granite or sedimentary rocks. Numerous shallow lakes and swamps, a few permanent many are closed basins and periodically dry. Area is in rain shadow with rainfall 450-700mm.
Typical Soils	Harsh yellow texture contrast soils in general. Shallow red brown to black stony loams on basalt.
Vegetation	Snow gum, ribbon gum, candle-bark gum, broad-leaved peppermint, and mountain gum open woodlands with Kangaroo grass understorey. White gum, mottled gum on hills. Brown barrel and black ash forests in east with west facing patches of dwarf casuarina heathland. Extensive grasslands of snow grass, spear grass and wallaby grass on the driest plains with clumps of snow gum amongst rocky outcrops.

3.3.1 Hydrology

Lake Jindabyne is located approximately 90 m to the west of the study area, and contains water from the Snowy River as well as its tributaries, the Thredbo River and Eucumbene River. The snowy River is a 7th order stream (Figure 3). Ephemeral drainage lines and creeks run to the north and south of the study area and although a first order stream is shown in the mapping on the northern boundary of the study area the site survey demonstrated that it is a steeply sloping hillside which has been dammed in several places along its length.

Jindabyne Dam is a major ungated rockfill embankment dam across the Snowy River. The dam's main purpose is for the generation of hydro-power and is one of the sixteen major dams that comprise the Snowy Mountains Scheme. The dam was completed in 1967, flooding the valley and the original town of Jindabyne with a lake that is up to 40 m deep. It is likely that the majority of Aboriginal sites have been drowned by the flooding of the valley.

3.3.2 Land Use

Historic aerials of the study area from 1964 and 1988 indicate the study area itself has undergone minimal changes over time. The 1964 aerial shows the surrounding area before the construction of Lake Jindabyne, with the Snowy River evident and a road running through the west of the study area (Figure 4). The road to Jindabyne was drowned by the formation of Lake Jindabyne in the late 1960s early 1970s.

In the 1998 aerial (Figure 5), Lake Jindabyne has formed to the west and a road has been constructed to the east through the study area (Figure 5). Due to the steepness of the topography the road was constructed in a hair pin form to accommodate the slope. The road accesses the village of Kalkite to the north of the study area.

The study area is currently used for cattle and sheep grazing and comprises mostly of cleared and fenced paddocks, a residence, a fenced garden and several corrugated iron sheds.

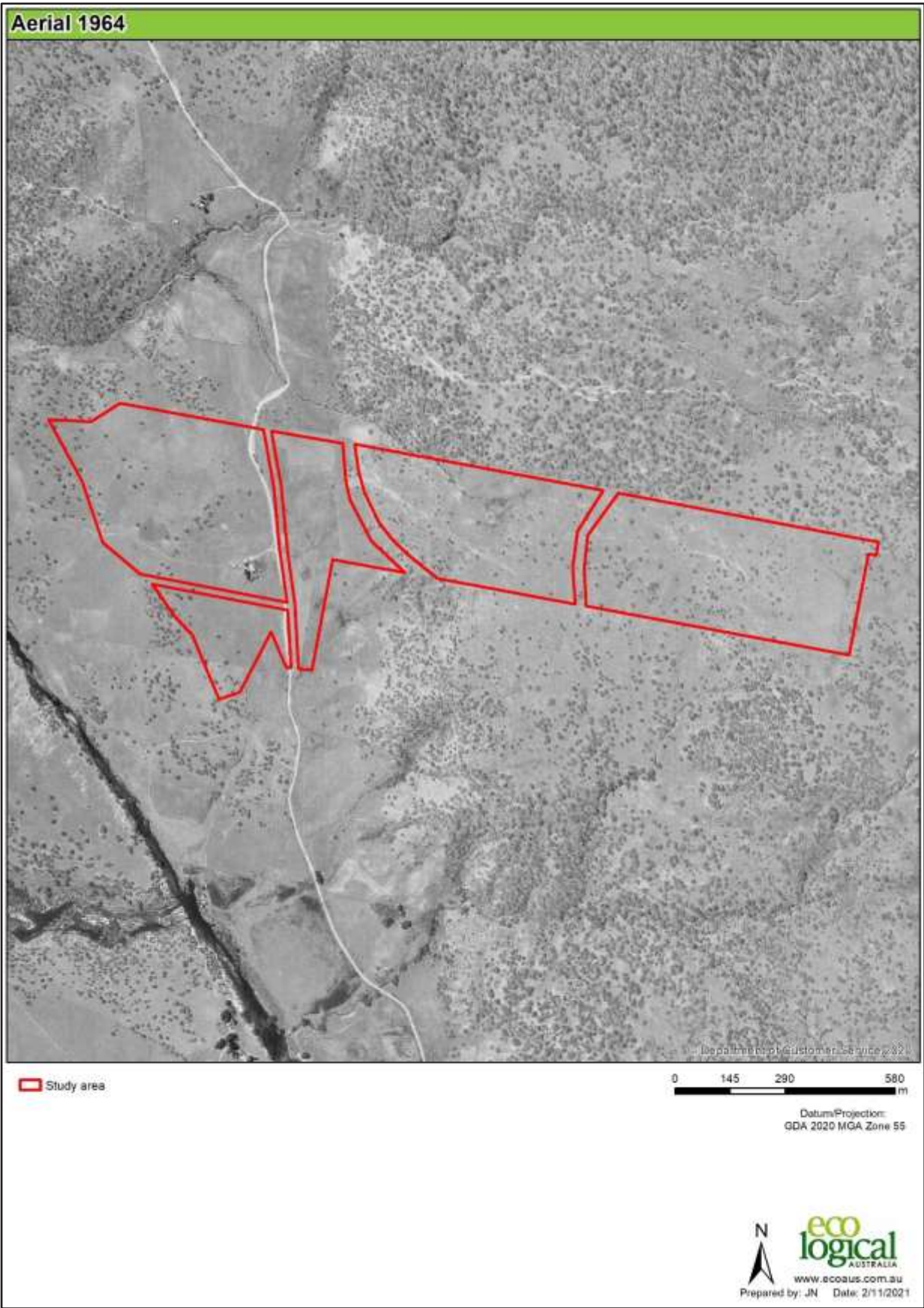


Figure 4: 1964 Historic Aerial of Study Area

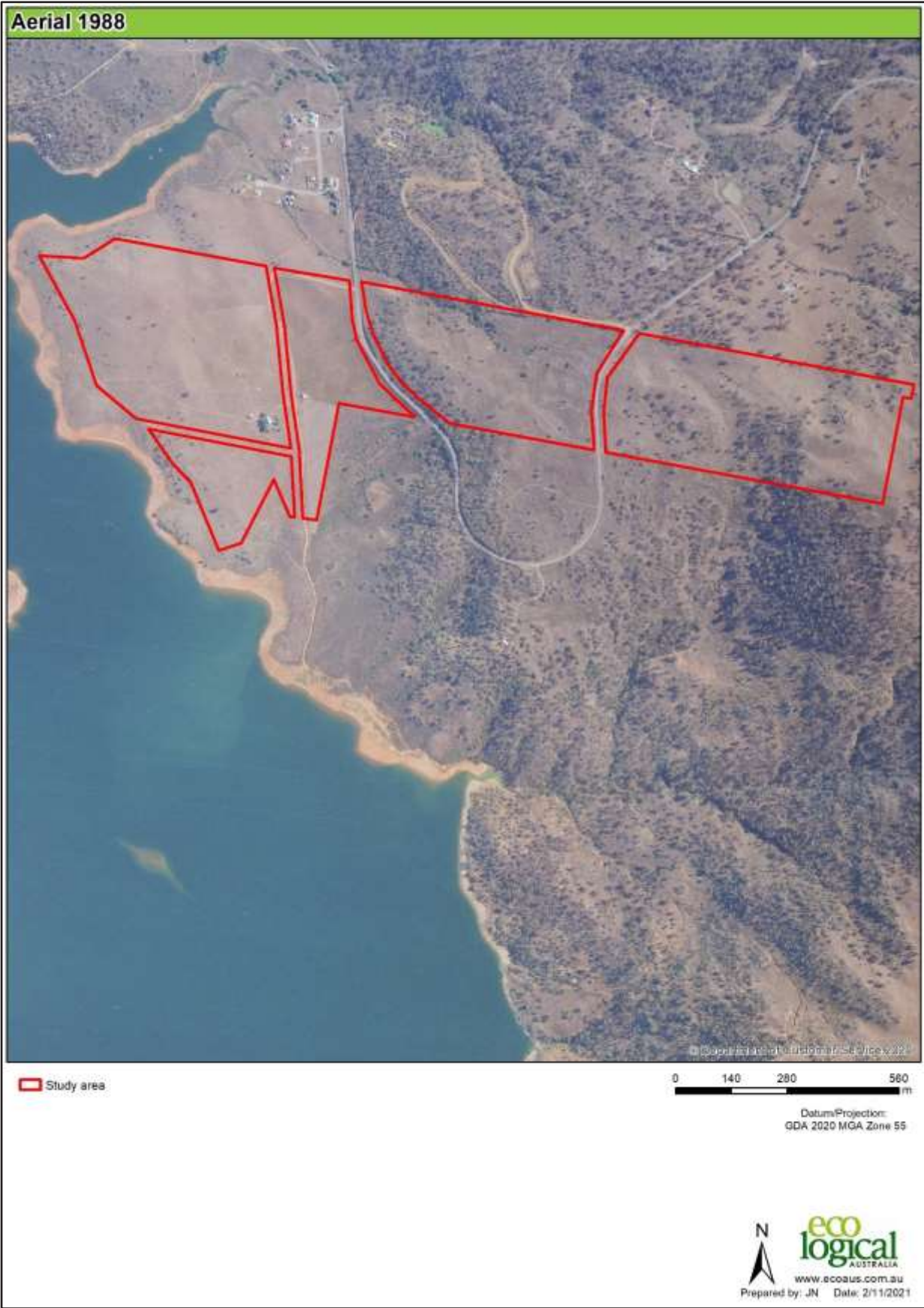


Figure 5: 1988 Historic Aerial of Study Area

An archaeologically sensitive landscape is an area that has the potential for archaeological material to be present within it. According to the *Due Diligence Code of Practice* (DECCW 2010a), archaeologically sensitive landscapes can include areas:

- Within 200m of waters; or
- Located within a sand dune system; or
- Located on a ridge top, ridge line, headland; or
- Located within 200m below or above a cliff face; or
- Within 20m of or in a cave, rock shelter, or a cave mouth and is on land that is not disturbed land.

The Due Diligence Code of Practice (DECCW 2010a:18) defines disturbed land as areas that have any land that:

“Has been the subject of a human activity that has changed the land’s surface, being changes that remain clear and observable. Examples include ploughing, construction of rural infrastructure (such as dams and fences), construction of roads, trails and tracks (including fire trails and tracks and walking tracks), clearing vegetation, construction of buildings and the erection of other structures, construction or installation of utilities and other similar services (such as above or below ground electrical infrastructure, water or sewerage pipelines, stormwater drainage and other similar infrastructure) and construction of earthworks.”

3.4 Predictive model

Aboriginal people have occupied NSW for at least 40,000 years, although dates of the earliest occupation by Aboriginal people in the South Eastern highlands region are subject to continued revision as more research is undertaken. Our knowledge of past Aboriginal communities in the region is often hindered by limitations of ethnographic records, the ethnocentric bias of early settlers and the impacts of European colonisation.

The Snowy Mountains Region was traditionally occupied by the Ngarigo, Djilamatung and Walgal tribes who utilised the land and its abundance of natural resources. The Jindabyne area is generally thought to occur within the boundaries of the Ngarigo tribe, which consisted of several language groups who moved around in extended family groups and gathered for ceremonial occasions (Tindale, 1974). The Ngarigo tribe maintained social ties with other Aboriginal groups in the region through trade and corroborees (Flood, 1980). The Ngarigo tribe occupied lower valleys during the winter and travelled to the higher alpine regions during the summer months for the annual Bogong Moth hunt where tribes throughout the region gathered and performed inter-tribal ceremonies (Flood, 1980). The Bogong Moths were not only utilised as an economic food source but also served as a way to maintain social ties between the various tribes in the area (Chapman, 1977).

Aboriginal sites that have been recorded around the shores of Lake Jindabyne are associated with flat areas adjacent to second and third order streams. It is likely that many sites that were associated with the Snowy and Eucumbene Rivers and their tributaries have been drowned by the flooding of the valley. The study area does not contain any streams or flat areas close to permanent water.

European settlers began to arrive in the Snowy Mountains during the early 1800s, in search of pastoral properties. Relations between early European settlers and local Aboriginal populations are thought to have been amicable but nonetheless changed the ways in which local Aboriginal populations occupied their traditional lands and interacted with each other (Tindale, 1974). Large numbers of people began settling the area in the 1870 after gold was found in the region.

Based on the material evidence and range of archaeological sites across the region, it is clear that Aboriginal people have been utilising the land and resources within the South Eastern Highlands Region for thousands of years, although probably sporadically. The predictive model outlined in Table 4 below has been developed for the study area based on the AHIMS search results, landscape assessment and regional and local Aboriginal archaeological context outlined above.

Table 4: Predictive model

Site Type	Description	Likelihood to occur
Open camp sites/stone artefact scatters/isolated finds	Open camp sites represent past Aboriginal subsistence and stone knapping activities and include archaeological remains such as stone artefacts and hearths. This site type usually appears as surface scatters of stone artefacts in areas where vegetation is limited and ground surface visibility increases. Isolated finds may represent a single item discard event or be the result of limited stone knapping activity. The presence of such isolated artefacts may indicate the presence of a more extensive, in situ buried archaeological deposit, or a larger deposit obscured by low ground visibility.	Low – there are no registered AHIMS sites within the study area, though the study area appears to be relatively indicating this could occur.
Potential Archaeological Deposit	Potential Archaeological Deposits (or PADs) are areas where there is no surface expression of stone artefacts, but due to a landscape feature there is a strong likelihood that the area will contain buried deposits of stone artefacts.	Low - there are no registered AHIMS sites within the study area, though the study area appears to be relatively undisturbed indicating this could occur.
Scarred or carved trees	Tree bark was utilised by Aboriginal people for various purposes, including the construction of shelters (huts), canoes, paddles, shields, baskets and bowls, fishing lines, cloaks, torches and bedding, as well as being beaten into fibre for string bags or ornaments (sources cited in Attenbrow 2002: 113). Trees may also have been scarred in order to gain access to food resources (e.g. cutting toe-holds so as to climb the tree and catch possums or birds), or to mark locations such as tribal territories. Such scars, when they occur, are typically described as scarred trees.	Low – no scarred trees have been recorded on the AHIMS database in the vicinity of the study area, and the study area has been mostly cleared of vegetation indicating this is unlikely to occur.
Axe grinding grooves	Grinding grooves are the physical evidence of tool making or food processing activities undertaken by Aboriginal people. The manual rubbing of stones against other stones creates grooves in the rock; these are usually found on flat areas of abrasive rock such as sandstone.	Low – no grinding grooves are recorded on the AHIMS database within the vicinity of the study area and the landform is not conducive to this site type.
Bora/ceremonial	Aboriginal ceremonial sites are locations that have spiritual or ceremonial values to Aboriginal people. Aboriginal ceremonial sites may comprise natural landforms and, in some cases, will also have archaeological material. Bora grounds are a ceremonial site type, usually consisting of a	Low - there is no evidence suggesting this site type

Site Type	Description	Likelihood to occur
	cleared area around one or more raised earth circles, and often comprised of two circles of different sizes, connected by a pathway, and accompanied by ground drawings or mouldings of people, animals or deities, and geometrically carved designs on the surrounding trees.	occurs within the study area.
Burial	Mortuary practices often took place in proximity to camp sites, as most people tended to die in or close to camp and it is difficult to move a body over a long distance. Soft, sandy soils on or close to rivers and creeks allowed for easier removal of earth for burial. Similarly, rock shelters or middens also provided accessible burial places. Burial sites may be marked by stone cairns, modified trees, or a natural landmark. They may also be identified through historic records or oral histories.	Low - there is no evidence suggesting this site type occurs within the study area.
Contact/historical sites	Artefacts located at such sites may involve the use of introduced materials such as glass or ceramics by Aboriginal people or be sites of Aboriginal occupation in the historical period.	Low – there is no evidence suggesting this site type occurs within the study area.

3.5 Visual inspection

A visual inspection of the study area was undertaken by Karyn McLeod, Principal Archaeologist on the 4th and 5th of November 2021. Visual inspection aimed to identify Aboriginal objects if present and assess the archaeological potential of the study area.

The study area is mapped and fenced as five separate sections and therefore each section was surveyed separately on foot. The two westernmost land portions bounded by Kalkite Road are extremely steep with outcropping granite, shallow soils, native and pasture grasses and stunted native trees (Figures 7 and 9). The landform is undulating, rises steeply to the east and crosses two ridgelines with some evidence of gully erosion. An area on the northern boundary has been mapped as a first order stream but is actually a steep drainage line that has been heavily modified to form two dams (Figure 15).

Ground disturbance in these two land parcels include transmission lines, telecommunication easements, animal and vehicle tracks, water tanks and troughs (Figures 12 and 14). No stock was present and the land is probably not suited to cattle due to the very steep grades. Ground cover was extensive and the few exposures noted contained coarse orange sandy soils. Quartz is reasonably common in this landscape, however no artefacts were identified and no trees were large enough for scarring.

The section of the property between Kalkite Road and the house drops very steeply from the road. Kalkite Road is formed by cut and fill with steep embankments on both sides (Figure 6). Hilldowns Road is unsealed and heavily eroded in sections (Figure 16). This road originally linked a number of properties to the east of the Snowy River however it was truncated by the formation of Lake Jindabyne. (Figure 18).

The three western sections of the property between Lake Jindabyne and Kalkite Road are almost completely cleared of trees and include steep and moderate slopes covered in pasture grasses and accommodating cattle. Rocky outcrops are present although less frequent than the very steep eastern portions. Soil exposures demonstrated similar coarse orange sandy soils and no artefacts were identified.



Figure 6: Kalkite Road formed by cut and fill in the steep topography of the study area



Figure 7: Disturbance in the north eastern part of the study area



Figure 8: Central and southern part of the study area sloping steeply to Lake Jindabyne



Figure 9: Eastern part of the study area showing sparse trees and rocky outcroppings



Figure 10: Hilldowns Road and iron shed



Figure 11: Rolling grassed paddocks surrounding existing residence and outbuildings



Figure 12: Vehicle tracks and exposed soils on the steep eastern slopes of the study area



Figure 13: View west down steep drainage line on the northern boundary of the study area



Figure 14: Power lines, water troughs and water tanks are common across the steep parts of the eastern study area



Figure 15: Central part of the study area on the northern boundary showing modification as a result of damming



Figure 16: Hilldowns Road erosion



Figure 17: View east of the existing buildings and steep topography in the study area

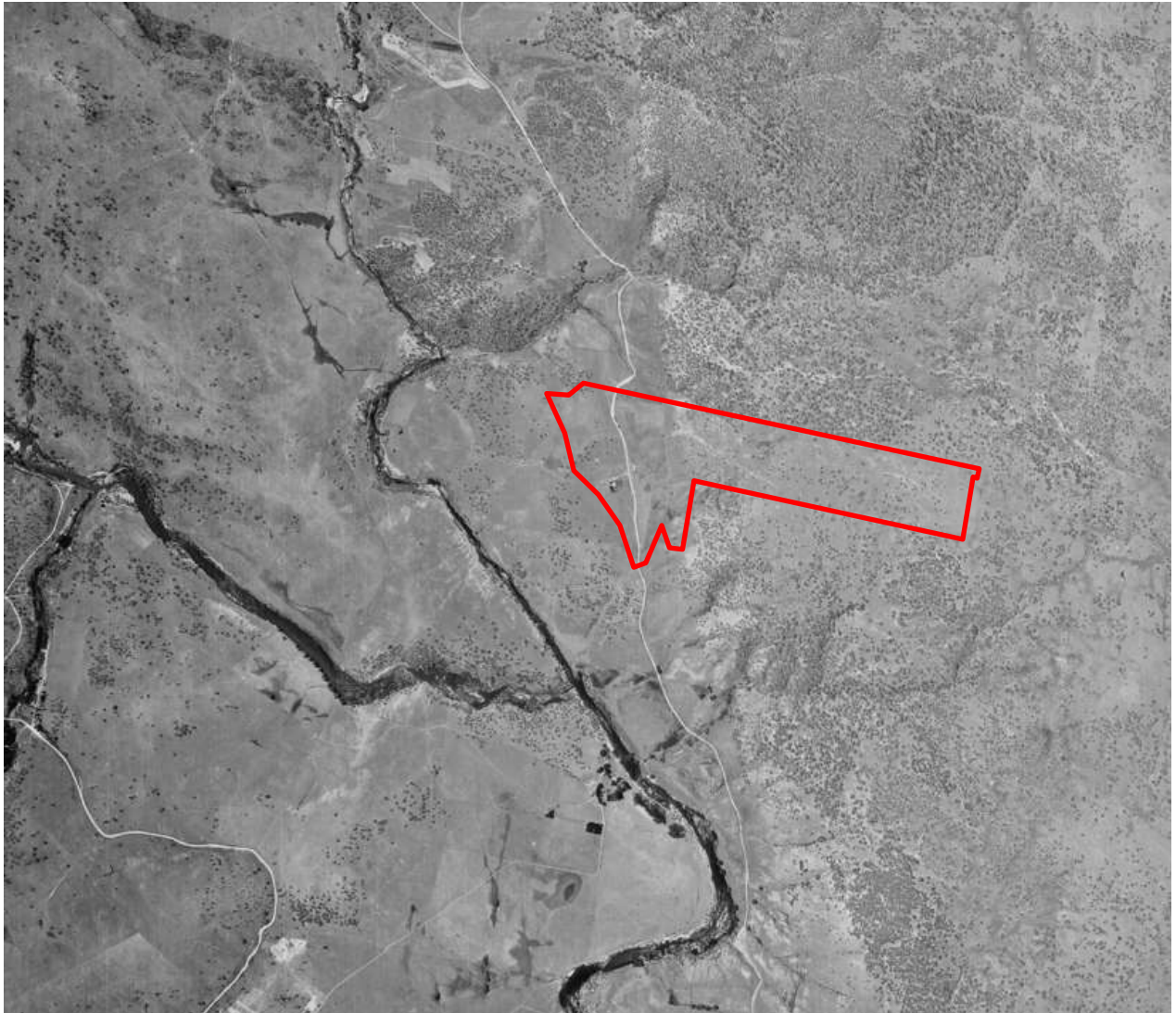


Figure 18 The study area in the 1950s prior to the creation of lake Jindabyne showing location of waterways, Hilldowns Road and existing buildings

The existing development of the study area comprises a main house with four associated sheds and outbuildings, a garden surrounding the house, a shed and irrigation near the dam, a number of water tanks on the upper slopes and fenced paddocks. The main house and some of the sheds are present in the 1950s aerial.

3.6 Impact avoidance assessment

The information gained from the database search, landscape assessment and site survey indicates that there is little archaeological potential and that impacts to archaeological objects, if present, could be avoided due to the low density of the proposed zoning and development.

4. Statutory requirements

Aboriginal objects and places in New South Wales are afforded protection under the *National Parks and Wildlife Act 1974* (NPW Act) irrespective of whether they are registered on AHIMS. Strict penalties apply for engaging in activities that inflict harm to an Aboriginal cultural heritage site or object without consent for activities under the NPW Act. Under Part 6 of the NPW Act, consent or authorisation for harmful activities may be given under an Aboriginal Heritage Impact Permit (AHIP). Should harm be inflicted upon an Aboriginal site or object, there are five defences:

- The harm was authorised under an AHIP;
- The proponent exercised due diligence prior to causing the harm and is able to demonstrate this;
- The harm was caused during activities that complied with a code of practice as described in Part 5 of the *National Parks and Wildlife Regulation 2019* (New South Wales). For example, undertaking archaeological test excavations in accordance with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW 2010c);
- The harm was caused as part of a low-impact activity or omission under the regulation, and the proponent was not aware of the presence of Aboriginal cultural material; or
- The harm caused during activities that are exempted under Section 87A of the NPW Act. For example, emergency fire-fighting or bushfire hazard reduction work, as defined by the *Rural Fires Act 1997* (NSW).

To assess the requirement of an AHIP, Heritage NSW necessitates that an Aboriginal Cultural Heritage Assessment (ACHA) is prepared in accordance with the *Guide to Investigating, Assessing, and Reporting on Aboriginal Cultural Heritage in New South Wales* (OEH 2011) and the *Code of Practice for the Protection of Aboriginal Objects in New South Wales* (DECCW 2010a). Consultation with Aboriginal people is a requirement of the heritage assessment process and recognises that;

- Aboriginal people should have the right to maintain culture, language, knowledge and identity
- Aboriginal people should have the right to directly participate in matters that may affect their heritage
- Aboriginal people are the primary determinants of the cultural significance of their heritage.

These two guides establish a set of guidelines to aid land users in being aware of how their activities could damage Aboriginal cultural heritage sites and advise Archaeologists of the requirements that must be followed during the investigation of Aboriginal cultural heritage sites. If an AHIP is required, Heritage NSW necessitates that it is further supported by a copy of the approval for the development or infrastructure issued under Part 4 or Part 5 of the *Environmental Planning and Assessment Act 1979* in the form of a Development Application or a Review of Environmental Factors.

5. Conclusions and Recommendations

CONCLUSION

The purpose of the Aboriginal heritage due diligence assessment is to identify if there are registered Aboriginal sites and/or sensitive landforms which may indicate the presence of Aboriginal sites and may therefore require further assessment and approval under Part 6 of the *National Parks and Wildlife Act 1974*. The steps and results of the due diligence assessment are included below.

Step 1: Determine if the activity will disturb the ground surface or modified trees.

The proposed works will not disturb the ground surface.

Step 2a: Search the AHIMS and other relevant databases.

ELA has undertaken an extensive search of the Aboriginal heritage Information Management System (AHIMS) database maintained by Heritage NSW. Fifty-nine Aboriginal sites are listed on AHIMS for the study area and 6km surrounding the study area within the following coordinates:

1. Eastings: 641408-653408
2. Northings: 5970749-5982749

The AHIMS data has been mapped (Figure 3) showing no sites in the study area.

Two heritage items are listed on the Snowy River LEP as being within the vicinity of the study area and will not be impacted by the proposed works. These items are:

- 'Wee Wah', item number I39 and located at 375 Eucumbene Road, within 2km of the study area
- 'Lake Jindabyne Conservation Area, item number C4 and located, at its closest point, approximately 90m to the west of the study area

The item is also listed on the non-statutory:

- Register of the National Estate, Place ID 1054

Step 2b: Review other sources of information.

A review of available background reports indicates that there is a low likelihood for Aboriginal objects to occur within disturbed contexts. These reports included:

- Chapman, 1982. *Report of an Archaeological Survey of East Jindabyne*. Prepared for Gutteridge Haskins & Davey Pty Ltd.
- NSW Archaeology, 2014. *Lot 15 on DP236151 East Jindabyne NSW – Aboriginal Cultural Heritage Assessment Report*. Prepared for The Bottomline Group.
- NSW Archaeology, 2017. *RMS Development of the West Bound Lane Between Barry Way and Alpine Way, Jindabyne NSW – Due Diligence Assessment*. Prepared for NSW Roads and Maritime Services.

- Eco Logical Australia, 2018. *415-417 Barry Way, Jindabyne NSW – Aboriginal Heritage Due Diligence Assessment*. Prepared for L. Wehbe, R.J Wehbe, J.J Wehbe and R. Hkiek.

NSW Archaeology were previously engaged to undertake an ACHA to support a proposed subdivision in East Jindabyne, located approximately 5km to the south of the current study area. An extensive search of the AHIMS database identified that one site had previously been recorded in the study area, an artefact scatter (AHIMS ID 62-1-0068). A field survey was undertaken which identified that the entire study area had undergone high levels of ground disturbance related to historic land clearance. A low density of artefacts was observed within the study area, in a disturbed context, indicating that the study area had potential for subsurface artefact scatters, but they would likely be disturbed. As a result of the high levels of disturbance noted across the study area, a test excavation was not recommended and no further investigation was warranted, though an AHIP should be sought for direct impacts to the artefacts identified within the study area.

Step 2c: Determine if the activity is in area where landscape features indicate the presence of Aboriginal objects.

Landscape features are generally very steep with shallow soils and rocky outcrops. This type of terrain was not occupied by Aboriginal people apart from moving through country. Aboriginal people preferred to occupy raised flat terraces adjacent to permanent water sources. The study area does not contain these landforms. The formation of the lake is likely to have drowned the majority of Aboriginal sites.

Step 3: Can you avoid harm to the object or disturbance of the landscape feature?

No sites are expected to be harmed by the proposal.

Step 4: Desktop assessment and visual inspection.

A site inspection undertaken by ELA Principal Archaeologist on the 4th and 5th of November 2021. No sensitive landforms, areas of archaeological potential or Aboriginal objects were identified.

Step 5: Further investigation and impact assessment.

Due to the above assessment, Aboriginal objects are unlikely to be present in the study area and the proposed works will not impact sites and objects. As such, no further assessment and mitigation measures will be required to ensure no harm will occur.

RECOMMENDATIONS

Based on the findings of this due diligence and the requirement of the NPW Act the following is recommended.

Recommendation 1 - General measures

Aboriginal objects are protected under the NPW Act regardless if they are registered on AHIMS or not. If suspected Aboriginal objects, such as stone artefacts are located during future works, works must cease in the affected area and an archaeologist called in to assess the finds. If the finds are found to be Aboriginal objects, Heritage NSW must be notified under section 89A of the NPW Act. Appropriate

management and avoidance or approval under a section 90 AHIP should then be sought if Aboriginal objects are to be moved or harmed.

In the extremely unlikely event that human remains are found, works should immediately cease, and the NSW Police should be contacted. If the remains are suspected to be Aboriginal, Heritage NSW may also be contacted at this time to assist in determining appropriate management.

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : 20099
Client Service ID : 635217

SiteID	Site Name	Datum	Zone	Easting	Northing	Geotag	Site Status **	Site Features	Site Types	Reports
62-3-0183	IF-2	AGD	55	649338	5973210	Open site	Valid	Archaeol -		93585
	Contact	Recorders	Public Inquiry					Permits	1628	
62-3-0182	IF-2	AGD	55	649338	5973200	Open site	Valid	Archaeol -		93585
	Contact	Recorders	Public Inquiry					Permits	1628	
62-3-0183	IF-3	AGD	55	649338	5973100	Open site	Valid	Archaeol -		93585
	Contact	Recorders	Public Inquiry					Permits	1628	
62-3-0184	Way's Hill - 4	AGD	55	649338	5973100	Open site	Valid	Archaeol -		93585
	Contact	Recorders	Public Inquiry					Permits	1628	
62-3-0185	Way's Hill - 5	AGD	55	649338	5973100	Open site	Valid	Archaeol - 10		93585
	Contact	Recorders	Public Inquiry					Permits	1628	
62-3-0133	CE2	AGD	55	652255	5974400	Open site	Valid	Archaeol - 18		93585
	Contact	Recorders	Mr. Matthew Barker					Permits	1619	
62-3-0143	CE1	AGD	55	642727	5974375	Open site	Valid	Archaeol - 70		93585
	Contact	Recorders	Mr. Matthew Barker					Permits	1619	
62-3-0196	CE4	AGD	55	641675	5973555	Open site	Valid	Archaeol - 5		93585
	Contact	Recorders	Mr. Matthew Barker					Permits	1625	
62-3-0224	CE2	AGD	55	640534	5973195	Open site	Valid	Archaeol - 4		93585
	Contact	Recorders	Mr. Trish Saunders					Permits		
62-3-0226	CE1	AGD	55	640238	5973650	Open site	Valid	Archaeol - 100		93585, 103617
	Contact	Recorders	Mr. Trish Saunders					Permits	3794	
62-3-0253	Restriction applied. Please contact ahims@ecological.com.au for more info.						Open site	Valid		93585
	Contact	Recorders	Miss Vanessa Mason					Permits		
62-3-0245	Wendepool SW	AGD	55	649410	5976700	Open site	Valid	Archaeol - 8		93585
	Contact	Recorders	Miss Vanessa Mason					Permits		
62-3-0257	Wendepool SW	AGD	55	650661	5976200	Open site	Valid	Archaeol - 2		93585
	Contact	Recorders	Miss Vanessa Mason					Permits		
62-3-0310	Wendepool SW	AGD	55	649410	5976700	Open site	Valid	Archaeol - 1		93585
	Contact	Recorders	Mr. Mike Williams					Permits		
62-3-0314	Hatchery Bay 1	GDA	55	644136	5971800	Open site	Valid	Archaeol -		103647
	Contact	Recorders	Onsite Cultural Heritage Management - Narooma, Mr Gerard Mennel					Permits	4050	
62-3-0315	Hatchery Bay 2	GDA	55	644136	5971800	Open site	Valid	Archaeol -		103647
	Contact	Recorders	Onsite Cultural Heritage Management - Narooma, Mr Gerard Mennel					Permits	4050	
62-3-0328	Galea Hatchery 1	GDA	55	641175	5973255	Open site	Valid	Archaeol -		103647
	Contact	Recorders	Onsite Cultural Heritage Management - Narooma, Mr Gerard Mennel					Permits	4176	
62-3-0329	Pillaroo 10	GDA	55	642254	5973640	Open site	Valid	Archaeol -		103647
	Contact	Recorders	Onsite Cultural Heritage Management - Narooma, Mr Gerard Mennel					Permits		

Report generated by AHIMS Web Service on 03/11/2021 for Kate Storan for the following area at Datum: GDA, Zone: 55, Eastings: 641000.0 - 651000.0, Northings: 5970749.0 - 5972749.0 within a Buffer of 8 meters. Number of Aboriginal sites and Aboriginal objects found is 59

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : 20099
Client Service ID : 635217

SiteID	Site Name	Datum	Zone	Easting	Northing	Geotag	Site Status **	Site Features	Site Types	Reports
62-3-0340	Galea Bridge 2	GDA	55	641529	5973327	Open site	Valid	Archaeol -		103647
	Contact	Recorders	Onsite Cultural Heritage Management - Narooma, Mr Gerard Mennel					Permits	4176	
62-3-0341	Galea Bridge 1	GDA	55	641528	5973315	Open site	Valid	Archaeol -		103647
	Contact	Recorders	Onsite Cultural Heritage Management - Narooma, Mr Gerard Mennel					Permits	4176	
62-3-0337	Hatchery Bay 3	GDA	55	644134	5971512	Open site	Valid	Archaeol -		103647
	Contact	Recorders	Onsite Cultural Heritage Management - Narooma, Mr Gerard Mennel					Permits		
62-3-0374	On (Hatchery) (T1)	GDA	55	641645	5971662	Open site	Valid	Archaeol -		
	Contact	Recorders	Mr. Matthew Barker (NSW Heritage) - Sydney					Permits		
62-3-0378	L777 5	GDA	55	641648	5973350	Open site	Valid	Archaeol -		
	Contact	Recorders	Onsite Cultural Heritage Management - Narooma, Mr Gerard Mennel					Permits		

** Site Status

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

Destroyed - The site has been completely replaced or removed usually as a consequence of natural activity but sometimes also after natural events. There is nothing left of the site on the ground but a record is held in the system.

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

Not a site - The site has been originally entered and accepted into AHIMS as a valid site but after further investigation it was decided it is NOT an Aboriginal site. Input of this type of site does not require permit as it is not a Heritage NSW site.

Report generated by AHIMS Web Service on 03/11/2021 for Kate Storan for the following area at Datum: GDA, Zone: 55, Eastings: 641000.0 - 651000.0, Northings: 5970749.0 - 5972749.0 within a Buffer of 8 meters. Number of Aboriginal sites and Aboriginal objects found is 59

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