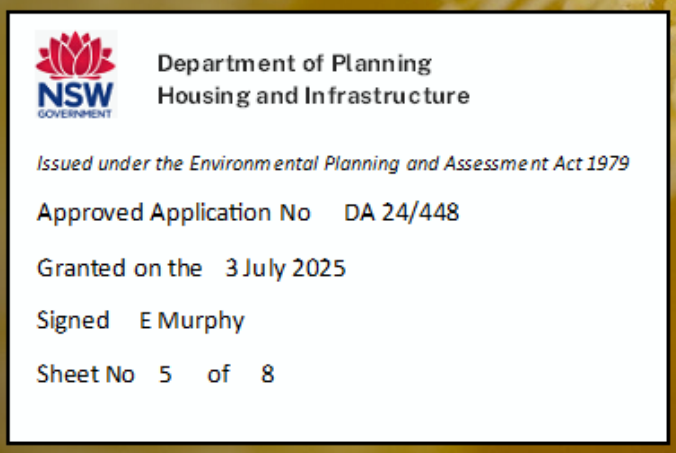
Prepared for Kosciuszko Thredbo Pty Ltd

Aboriginal Heritage Due Diligence Assessment

Sonnblick Lodge Demolition

July 2023

Project Number: 230203



Document verification

Project Title:	Sonnblick Lodge Demolition
Project Number:	230203
Project File Name:	230203 Sonnblick Demolition Aboriginal DD Report Final v1.0

Revision	Date	Prepared by	Reviewed by	Approved by
Draft v1.0	30/06/2023	Petra Balanzategui	Ingrid Cook	Matthew Barber
Final v1.0	3/07/2023	Petra Balanzategui	Matthew Barber	Matthew Barber
	[Enter the date]			
	[Enter the date]			

NGH Pty Ltd is committed to environmentally sustainable practices, including fostering a digital culture and minimising printing. Where printing is unavoidable, NGH prints on 100% recycled paper.

Table of contents

Figures

Plates

Tables

Acronyms and abbreviations

ACHA	Aboriginal Cultural Heritage Assessment
AHIMS	Aboriginal Heritage Information Management System
AHIP	Aboriginal Heritage Impact Permit
BP	Before Present
DA	Development Application
DECCW	(Former) Department of Environment, Climate Change and Water (formerly responsible for heritage, now superseded by Heritage NSW)
DPE	Department of Planning and Environment
Due Diligence Code	*Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW*
EP&A	*Environmental Planning and Assessment Act 1979*
Heritage Act	*Heritage Act 1977* (NSW)
Heritage NSW	Heritage NSW, within the Department of Premier and Cabinet (formerly part of OEH)
IBRA	Interim Biogeographic Regionalisation for Australia
Km	Kilometre/s
LALC	Local Aboriginal Land Council
LEP	Local Environmental Plan
LGA	Local Government Area
M	Metre/s
MGA	Map Grid of Australia
NGH	Ngh Pty Ltd
NPW Act	*National Parks and Wildlife Act 1974* (NSW)
NPW Regulation	National Parks and Wildlife Regulation 2019 (NSW)
NSW	New South Wales
OEH	(Former) Office of Environment and Heritage (NSW) (now Heritage NSW)
PAD	Potential Archaeological Deposit
SEE	Statement of Environmental Effects

Executive summary

NGH Pty Ltd (NGH) was commissioned by Kosciuszko Thredbo Pty Ltd (the Proponent) to undertake an Aboriginal Heritage Due Diligence Assessment in accordance with the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW* (DECCW, 2010) (Due Diligence Code) for the proposed demolition of the Sonnblick Lodge, located within Lot 802 DP1119757 at 10 Bobuck Lane, Thredbo (the Proposal Area).

The proposed works will involve the demolition of the Sonnblick lodge building and associated concrete paths, landings and stairs (the Proposal). The Proposal will be subject to geotechnical investigations which will provide recommendations for site stability post demolition. The Due Diligence assessment is undertaken to evaluate whether Aboriginal objects are present, or likely to be present, within the proposed impact area of the development activity, and if those objects would be harmed by the activity. The Due Diligence assessment will be incorporated into a Statement of Environmental Effects (SEE), to support a Development Application (DA) to be lodged with the Department of Planning and Environment (DPE).

Background and desktop assessment

An extensive AHIMS search of the Aboriginal Heritage Information Management System (AHIMS) database revealed 22 Aboriginal objects and no declared Aboriginal Places recorded within the search area measuring approximately 7km in length and 3km in width, centred on the Proposal Area. The most common site type previously recorded in the local area was artefact (isolated artefact and artefact scatter), and the nearest, site #61-6-0082 is an artefact scatter located 130m north.

Based on the initial desktop assessment, using satellite imagery and topographic data, it was deemed unlikely for Aboriginal objects to occur within the Proposal Area given previous impacts associated with vegetation clearing, and modification of the natural landform for the construction of the lodge and associated infrastructure. As per the Heritage NSW Due Diligence Code of Practice, lands can be considered disturbed "if it has been the subject of a human activity that has changed the land's surface, being changes that remain clear and observable" (DECCW 2010:7). Examples of disturbance that have impacted the Proposal Area provided by the Code include the "clearing of vegetation, and the construction of buildings and associated earthworks" (DECCW 2010:7-8).

Prior to land clearing and modification, the Proposal Area encompassed a forested steep slope, which would have been an unfavourable position for Aboriginal activity or occupation. Previous archaeological research within the region suggested that elevated flats and relatively level and well-drained ground were the focus of Aboriginal activity while moderate slopes were targeted to a lesser degree. Previously recorded AHIMS sites in the local area have been commonly recorded on well-drained spurs and spurlines near waterways. Archaeological excavations in the local area have suggested that steep slopes and alluvial flat landforms were not utilised for activities that left an archaeological record.

The desktop assessment therefore, indicated that there were no unmodified landscapes present within the Proposal Area that had the potential to contain Aboriginal objects. The nature of the works being undertaken at the Proposal Area will involve a high level of ground disturbance and it is unlikely that it would impact on Aboriginal heritage objects.

The desktop assessment therefore concluded that a visual inspection was not warranted as it was unlikely that Aboriginal objects would be impacted by the proposed works.

Impact assessment conclusion

This Due Diligence assessment concludes that due to the levels of disturbance to the Proposal Area and lack of potential for the existence of Aboriginal heritage objects or areas of archaeological potential to be present,

the proposed works, as assessed in this report, will not require any further heritage investigation and works can proceed with caution.

Recommendations

The following recommendations are based on a number of considerations including:

- Background Aboriginal heritage research into the area;
- Assessment of Landscape;
- Land use and disturbance assessment;
- Consideration of the impact of the proposed works; and
- Legislative context for the development proposal.

1. The proposed work can proceed with caution without further archaeological assessment.
2. Any activity proposed outside of the current Proposal Area should also be subject to an Aboriginal heritage assessment.
3. If any items suspected of being Aboriginal in origin are discovered during the work, all work in the immediate vicinity must stop and the NSW Environment Line (1300 361 967) notified. The find will need to be assessed and, if found to be an Aboriginal object, further detailed assessment and an application for an Aboriginal Heritage Impact Permit (AHIP) may be required.
4. In the unlikely event that human remains are identified during development works, all work must cease in the immediate vicinity and the area must be cordoned off. The Proponent must contact the local NSW Police who will make an initial assessment as to whether the remains are part of crime scene or possible Aboriginal remains. If the remains are thought to be Aboriginal, Heritage NSW must be notified by ringing the Enviroline (131 555).

The Proponent is reminded that it is an offence under the *National Parks and Wildlife Act 1974* to disturb, damage or destroy an Aboriginal object without a valid AHIP.

1. Introduction

NGH Pty Ltd (NGH) was commissioned by Kosciuszko Thredbo Pty Ltd (the Proponent) to undertake an Aboriginal Heritage Due Diligence Assessment in accordance with the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW* (DECCW, 2010) (Due Diligence Code) for the proposed demolition of the Sonnblick Lodge, located at 10 Bobuck Lane, Thredbo.

The proposed works will involve the demolition of the Sonnblick lodge building and associated concrete paths, landings and stairs (the Proposal). The Proposal will be subject to geotechnical investigations which will provide recommendations for site stability post demolition. The Due Diligence assessment is undertaken to evaluate whether Aboriginal objects are present, or likely to be present, within the proposed impact area of the development activity, and if those objects would be harmed by the activity. The Due Diligence assessment will be incorporated into a Statement of Environmental Effects (SEE), to support a Development Application (DA) to be lodged with the Department of Planning and Environment (DPE).

1.1 Subject site

The subject site is located within Lot 802 DP1119757, at 10 Bobuck Lane, Thredbo (the Proposal Area) (Figure 1-1, Figure 1-2). It is within the Snowy Monaro Regional Council Local Government Area (LGA) and is situated in the eastern precinct of the Thredbo Village. The lodge has been used for staff accommodation and comprises three apartments with 16 beds in total.

1.2 Project personnel

The Due Diligence assessment was carried out by Senior Heritage Consultant Petra Balanzategui of NGH including background research and the completion of this report. Regional Manager of Heritage Ingrid Cook reviewed the report for quality assurance purposes.

1.3 Aboriginal consultation

The Proposal Area is within the boundaries of the Eden Local Aboriginal Land Council (LALC). The Due Diligence process does not formally require consultation with Aboriginal community groups. No Aboriginal groups were contacted for this Due Diligence level assessment.

1.4 Approach and format of this report

This report has been drafted in keeping with the sequence of steps identified in the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW* (Due Diligence Code) (DECCW, 2010). The Due Diligence Code outlines a five-step approach (Table 1-1) to determine if an activity is likely to cause harm to an Aboriginal object, as defined by the NSW *National Parks and Wildlife Act 1974* (NPW Act). The steps follow a logical sequence of questions, and the answer to each question determines the need for the next step in the process in order to:

- Identify whether Aboriginal objects are, or are likely to be, present in the Proposal Area;
- Determine whether or not the proposed activities are likely to harm Aboriginal objects (if present) in the Proposal Area; and
- Determine whether an Aboriginal Heritage Impact Permit (AHIP) application is required.

Table 1-1 Due Diligence steps

	Due Diligence steps
Step 1.	Will the activity disturb the ground surface?
Step 2a.	Search the AHIMS database and use any other sources of information of which you are already aware.
Step 2b.	Are activities proposed in areas where landscape features indicate the presence of Aboriginal objects?
Step 3.	Can you avoid harm to the object or disturbance of the landscape feature?
Step 4.	Undertake a desktop assessment and visual inspection. Is it likely that Aboriginal objects will be impacted by the proposed works?
Step 5.	Further investigations and impact assessment.

If the proposed activities are not 'low impact activities' (a defence for which is provided under the NPW Regulation), the considerations result in a determination of whether or not:

- Further approval under the NPW Act is required, in the form of an AHIP; or
- Due Diligence obligations for the protection of Aboriginal objects are discharged by the process under the Code.

For the purposes of the Due Diligence assessment, disturbed land is defined in the Due Diligence Code. Land is disturbed if it has been the subject of a human activity that has changed the land's surface, with the changes remaining clear and observable.

The defence against prosecution offered by following the Due Diligence Code process does not apply to situations where it is known there is an Aboriginal object present. The defence does not authorise harm to Aboriginal objects.

Each section within this report follows the relevant step outlined in the Due Diligence Code (DECCW, 2010). Reference is also made, where relevant, to the *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW* (OEH, 2011) and the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCW, 2010).

Figure 1-1 General Proposal location

Figure 1-2 The Proposal Area

2. Legislation

In NSW, Aboriginal heritage is principally protected by two legislative acts:

- *National Parks and Wildlife Act 1974* (NSW) (NPW Act) and its subordinate legislation, the National Parks and Wildlife Regulation 2019; and
- *Environmental Planning and Assessment Act 1979* (NSW) (EP&A Act).

2.1 National Parks and Wildlife Act 1974

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. All Aboriginal material receives blanket protection under the NPW Act. 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.

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.

Section 87 sets out defences that are available to a person who is prosecuted for a particular harm offence under section 86. For example, it will be a defence in certain circumstances if the person who is being prosecuted can show that:

- the harm or desecration was authorised through an Aboriginal Heritage Impact Permit (AHIP) and conditions of the AHIP were not contravened;
- the person exercised due diligence to determine whether the act/omission constituted the offence would harm an Aboriginal object and reasonably determined no harm would occur;
- the person complied with requirements or a code of practice, as prescribed in in the *National Parks and Wildlife Regulation* (2019); or
- was a low impact act or omission.

Section 89A of the NPW 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 AHIMS site cards for all sites located during heritage surveys.

2.2 Environmental Planning and Assessment Act 1979

The EP&A Act regulates development in NSW. It sets up a planning structure that requires developers (individuals or companies) to consider impact of the project on the environment and to promote the sustainable manage of built and cultural heritage (which includes Aboriginal cultural heritage). The EP&A Act requires that Aboriginal cultural heritage, and the possible impacts that development may have to Aboriginal heritage be considered, as part of the environmental impact assessment process under the EP&A Act. For

most projects requiring assessment under Part 4 and 5 of the EP&A Act, the NPW Act will apply and an AHIP may be required.

It also provides for the identification, protection, and management of heritage items through inclusion of these items into schedules off planning instruments, such as Local Environmental Plans (LEPs).

3. Ground disturbance

Step 1. Will the activity disturb the ground surface or any culturally modified trees?

The proposed work to be undertaken by Kosciuszko Thredbo will result in a high level of ground disturbance and will involve the demolition of the Sonnblick lodge (Plate 3-1) and associated concrete paths, landings and stairs (Plate 3-2). These works will be subject to geotechnical investigations which will provide recommendations for site stability post demolition. A brief summary of the Proposal is provided below:

- **Geotechnical Investigation/report and demolition plan:** Kosciuszko Thredbo will separately engage a geotechnical engineer to prepare a geotechnical report and recommendation for site stability post demolition. Kosciuszko Thredbo will also separately engage an appropriate engineering consultant to prepare a demolition plan in accordance with *AS 2601-2001 The demolition of structures*.
- **Machinery and equipment:** Machinery and equipment requirements will be subject to the geotechnical report but will likely include a large excavator, large trucks, mobile crane and standard hand tools.
- **Site management:** Demolition equipment and materials may be located on site but must not affect the single lane (one way) traffic of Bobuck Lane. Contractors will also likely be provided a secured compound area at Friday Flat (contractor to provide fencing etc).
- **Waste:** Demolished material will be recycled where possible and if not will be transported to Jindabyne Landfill.

These activities are likely to require a high level of ground disturbance and any Aboriginal sites within the disturbance footprint could therefore be subject to harm. As the Proposal will include ground disturbance, the next step in the due diligence process will be completed.

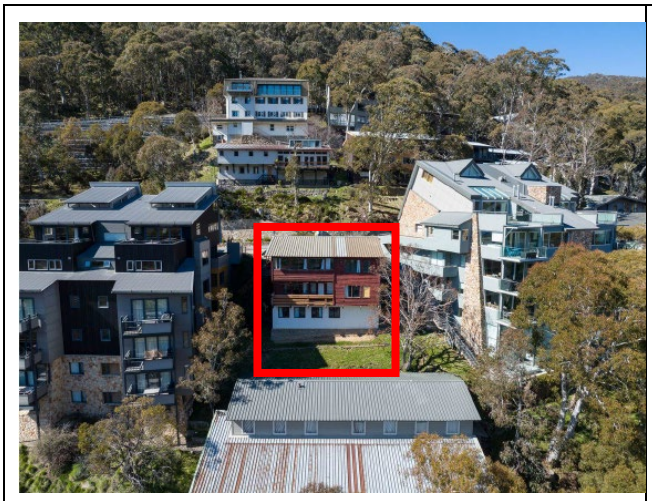


Plate 3-1 The Sonnblick lodge for demolition, with a red outline showing an approximate boundary of the Proposal Area. View to south (Source: Kosciuszko Thredbo).

Plate 3-2 Lodge and associated infrastructure for demolition with a red outline showing an approximate boundary of the Proposal Area. View to north-west. (Source: Kosciuszko Thredbo).

4. Register search and landscape assessment

Step 2a. Search the AHIMS Database and other information sources

A search of relevant heritage registers for Aboriginal sites and places provides an indication of the presence of previously recorded sites. A register search is not conclusive, however, as it requires that an area has been subject to archaeological survey, and information about any sites identified has been submitted for registration. However, as a starting point, the search will indicate whether any sites are known within or adjacent to the investigation area and provide oversight regarding the site types most commonly recorded within the locality. The Aboriginal Heritage Information Management System (AHIMS) provides a database of previously recorded Aboriginal heritage sites. A search provides basic information about any sites previously identified within a search area. The results of the search are valid for 12 months for the purposes of a due diligence level assessment.

On 08 June 2023 a search of the AHIMS database was undertaken over an area measuring approximately 7km in length and 3km in width, centred on the Proposal Area, as follows:

- Client Service ID: 789811
- MGA Zone: 55
- Lat/Long From: -36.5196, 148.2785
- Lat/Long To: -36.4851, 148.3403.
- Aboriginal objects:
    - 22
- Aboriginal Places:
    - nil

There were 22 Aboriginal objects recorded within this search area and no declared Aboriginal Places. Table 4-1 below shows the breakdown of site types and Figure 4-1 and Figure 4-2 show the location of the AHIMS sites in relation to the Proposal Area.

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

Site type	Number	Percentage
Artefact	21	95.45
Artefact; Potential Archaeological Deposit (PAD)	1	4.55
Total	22	100

None of the archaeological sites currently recorded on AHIMS are located within or directly adjacent to the Proposal Area however, five sites occur within 600m. These sites are summarised in in Table 4-2 below.

Table 4-2 Sites within 600m of the Proposal Area

Site number	Site name	Site type	Distance to project (m)	Site status on AHIMS
61-6-0082	Merritts Park Nature Trail;Site 1;	Artefact	130m north	Valid
61-6-0121	Merrits Creek 1	Artefact	315m north	Valid

61-6-0103	EDI 1	Artefact	420m north	Valid
61-6-0083	Merritts Park, Site 1;	Artefact	355m north	Valid
61-3-0065	Friday Flat IF-1;?;	Artefact	585m east	Valid

The five AHIMS sites located within 600m of the Proposal Area are described below:

- AHIMS site #61-6-0082 is an artefact scatter recorded by Nicole Fuller in 1988, during an assessment for an extension to a golf course. The site comprises one broken hammerstone made from a river pebble, one silcrete geometric microlith, four silcrete flaked pieces, one silcrete flake, and one tiny chert flake. These artefacts were identified 30m along the Merritts Park Nature Trail, on a gentle hillslope, back from Thredbo River. The site had been disturbed by the clearing of land and the site was exposed by bulldozer tracks.
- AHIMS site #61-6-0121 is a low density artefact scatter recorded by Alistair Grinbergs in 1997 during a site inspection for the proposed development of additional ski slope facilities. The site is located on a level to gently sloping saddle on a spur adjacent to Merritts Creek. No further information about the site is provided on the site card.
- AHIMS site #61-6-0103 is an artefact scatter recorded by C.D Dearling in 1997 during an archaeological survey of the proposed extension of the 'Easy Does It' ski run. The site consisted of four quartz flakes and one quartz core fragment, located on a spur above Merritts Creek. The site's location had been impacted by wombat digging.
- AHIMS site #61-6-0083 is an artefact scatter recorded by Nicole Fuller in 1988, during an assessment for an extension to a golf course. The site comprises one silcrete flake, one volcanic flake, one silcrete blade, one silcrete fragment, and eight possible quartz chips and flakes. The site was recorded on a patch of exposed ground measuring 10m by 10m, between a small gravel parking bay and a barbecue. The site is also located on a slight slope, approximately 30m from a creek. Vegetation surrounding the site consists of grasses with the occasional small bush. The site had been impacted by the use of the barbecue area.
- AHIMS site #61-3-0065 is an isolated artefact recorded by P. Saunders (Archaeological Heritage Surveys) in 1998 during an archaeological survey for a proposed carpark extension at the Thredbo Alpine Village. The site was identified on a former gravel pit, immediately west of the northern bank of Thredbo River. The site contained one quartz flake measuring 18mm (length), 12mm (width) and 1mm (thickness). The site's location had been highly disturbed by works associated with gravel extraction in the 1950s-1960s.

The sites described below are those located in the wider area:

- AHIMS site #61-6-0139 is an artefact scatter recorded by Past Traces in 2022, during an Aboriginal heritage due diligence assessment for the Thredbo golf course development. The site comprises nine quartz flakes and two quartz cores, found within three surface exposures.
- AHIMS site #61-6-0104 is an artefact scatter recorded by Navin Officer in 1996 during an archaeological survey for an underground electricity cable easement. The site consisted of seven artefacts (one grey silcrete flaked piece, one grey silcrete flake, two quartz flaked pieces, one quartz core fragment and two quartz flakes) in three exposures. The site was recorded on an upper slope along a small spurline and spurline shoulder adjacent to the Thredbo River flats to the northwest and Friday Flat Creek to the southeast. The site's condition was described as good, with minor impacts being from rabbit and wombat activity.
- AHIMS site #61-6-0081 is a low density artefact scatter recorded by Nicole Fuller in 1988, during an assessment for an extension to a golf course. The site comprises one retouched silcrete scraper and

one quartz flaked piece, located on a narrow track running parallel to the Thredbo River. The site was surrounded by woodland with dense undergrowth.

- AHIMS site #61-3-0062 and AHIMS site #61-3-0063 were recorded by Navin Officer in 1992 during an archaeological survey for roads works on Alpine Way:
    - AHIMS site #61-3-0062 is an artefact scatter identified in two exposures, with the first exposure containing 84 artefacts in an area measuring 40m by 2.5m-3m and the second exposure containing 14 artefacts in an area measuring 7m by 1m. The artefacts included quartz cores, blades, flaked pieces, flakes and chips and one silcrete flake. The site was recorded as being partially disturbed due to its location in a works depot.
    - AHIMS site #61-3-0063 is an artefact scatter that was identified on a well-drained spur adjacent to a transmission line service track. The site contained 16 artefacts of silcrete blades and quartz flaked pieces, flakes and chips. At the time of the recording, the site was described as being partially disturbed.
- AHIMS site #61-6-0099 and AHIMS site #61-6-0100 were recorded by Navin Officer in 1994 during an archaeological survey for the Crackenback Ridge at Thredbo Village:
    - AHIMS site #61-6-0099 comprises 16 artefacts, five of which are silcrete and the remainder are quartz. Forty three percent were flakes, 31% were flakes with secondary flaking, 12% were cores, and 12% were flaked pieces. The artefacts were located on a broad and low spurline adjacent to Ramshead Creek. It was considered likely that the site extended beyond the known extent, particularly upslope and adjacent to Ramshead Creek.
    - AHIMS site #61-6-0100 comprises four quartz artefacts (two quartz cores, one quartz flake and one quartz broken flake) located in an area measuring 75m by 15m. The artefacts were located on a low gradient slope adjacent to a small drainage line, sloping to Ramshead Creek. A Consent to Destroy (now AHIP) was issued for the site on 10 November 1994, “for consent to destroy those relics in the course of construction of accommodation buildings and associated infrastructure”.
- AHIMS site #61-3-0137 and AHIMS site #61-3-0138 were recorded by Grinbergs Heritage Solutions in 2008, during a preliminary ACHA for the proposed Thredbo to Bullocks Flat multi use track:
    - AHIMS site #61-3-0137 was described as a sparse scatter of four quartz artefacts (two flakes and two chips) located on a level to very gently sloping bench/termination above the eastern banks of the Thredbo River. The artefacts were identified over an area of approximately 40m by 40m. The artefacts were found in a disturbed context; however, it was concluded that there may be additional artefacts in the immediate area.
    - AHIMS site #61-3-0138 was described as a single quartz flake identified on a gentle slope above the Thredbo River. The artefact was found in an exposure made by extensive wombat diggings over an area of approximately 5m by 5m.

Figure 4-1 AHIMS sites surrounding the Proposal Area

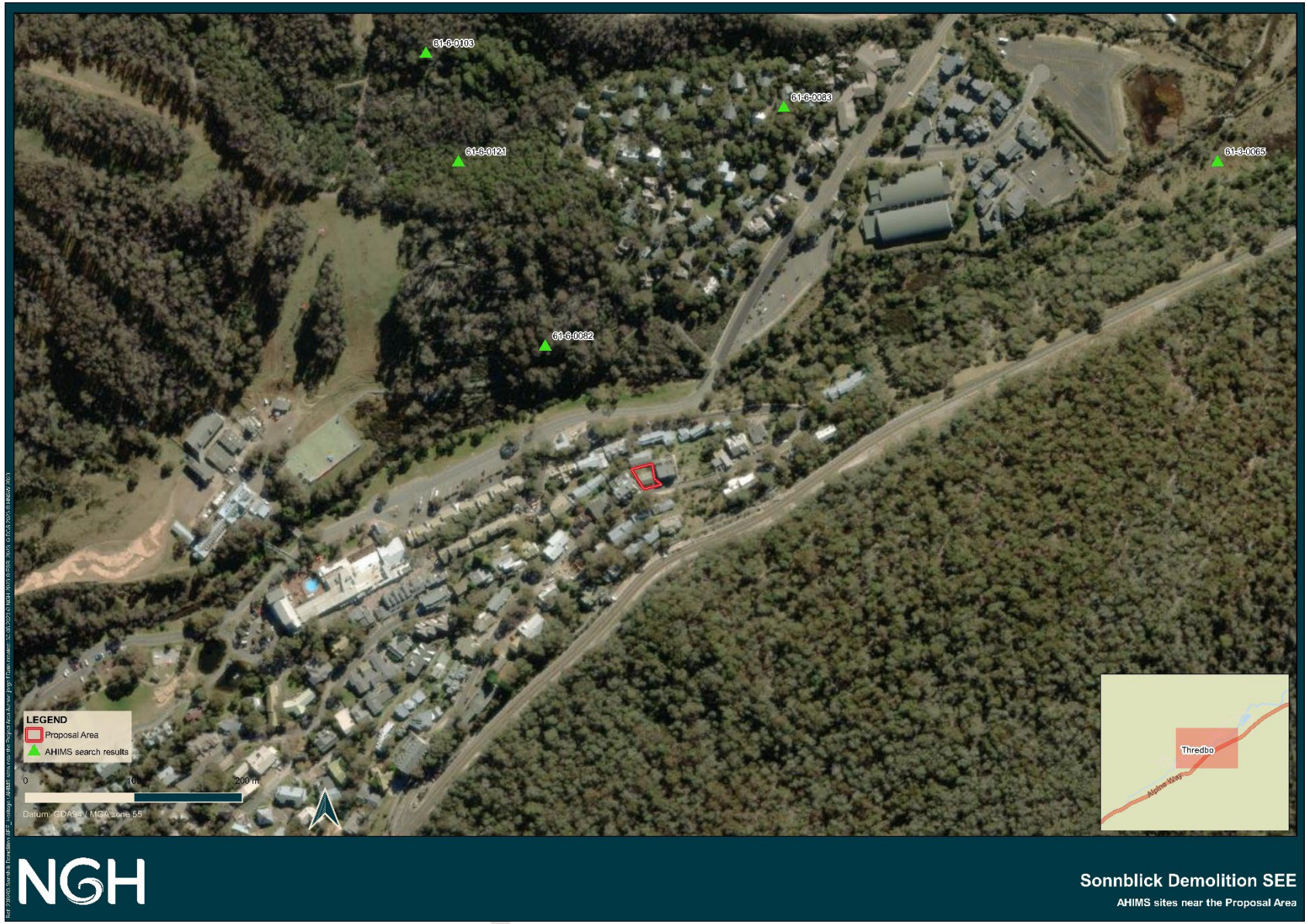


Figure 4-2 AHIMS sites near Proposal Area

4.1 Archaeological context

4.1.1 Regional context

Aboriginal people have occupied what we now know as the Australian continent for at least 40,000 years and perhaps 60,000 years and beyond (Bowler et al. 2003; Mulvaney and Kamminga 1999; Hiscock 2007). All major environmental zones in Australia are known to have been occupied for the last 35,000 years (Mulvaney and Kamminga 1999:114). The earliest archaeological dates for occupation in the Australian Alps bioregion dates back to 21,000 years ago from a rock shelter at Birrigai, near Canberra. However, there is physical evidence of Aboriginal use across the region in the form of surface artefacts, scarred trees, stone quarries, ceremonial grounds, stone arrangements, rock art, and rock shelters with cultural deposits (Flood 1980; Grinbergs 1992; Freslov et al. 2004).

In the south-eastern Australian highlands, there has been limited evidence of Pleistocene occupation with most sites dating to approximately 4,000 before present (BP), which is well within the Holocene (Flood et al. 1987). Only three Pleistocene sites have been recorded and excavated in the region. The oldest of these sites, Birrigai rock shelter near Canberra, has been dated to 21,000 BP and was thought to have been above the tree line during this period (Flood et al. 1987). Another regional site is New Guinea II on the Snowy River, which was recorded by Ossa et al. (1995) with a similar basal date of approximately 21,000 BP. The third site, Cloggs Cave, located in the lead up to the Victorian highlands was dated to approximately 18,000 BP (Flood 1973). The archaeological evidence from these sites – mostly faunal remains and lithics – suggests limited non-intensive use of the sites during the Pleistocene before a more intensive Holocene occupation. This model of occupation contrasts strongly with previously recorded sites in Southwest Tasmania, which is climatically and temporally similar, where it appears that Pleistocene highland occupation was intensive, and evidence of subsistence specialisation is recorded (Ossa et al. 1995; Cosgrove 1999).

While there are not enough sites currently identified in this region to clearly inform upon patterns of Pleistocene highland usage it is suggested by Ossa et al. (1995) that the drivers of highland occupation in south-eastern Australia were very different between the Pleistocene and Holocene. Holocene occupation of these areas has been strongly associated with ethnographic evidence of Bogong moth hunting as part of feasts and ceremonies (Flood 1973:1980). It is important to note however, that bogong moths could not have been a highland resource prior to the present climatic conditions of the Holocene. Consequently, present models of site identification proposed by Flood (1980) are only appropriate for Holocene Aboriginal cultural sites.

Through her work, Flood (1973, 1980) proposed that five archaeological site types typify the Southern Uplands:

- Large lowland base camps – open artefact scatters containing over 1,500 artefacts that may extend over several kilometres;
- Medium sized lowland camps;
- Valley camps at altitudes between 745m– 1,160m;
- High summer camps at elevations of 1,160m – 1,525m; and
- Camp sites above 1,525m (the snow line).

This model revolved around both seasonal resource availability (e.g. Bogong moths) and seasonal movement through the landscape, with lowland areas occupied during the winter months and the alpine areas occupied during summer (Flood 1980). Flood recognised that three main resource zones were exploited by Aboriginal communities. These resource areas were:

1. The riverine plains on the tablelands, where the great variety of riverine foods would have been easily exploited.

2. The mountain slopes and wet sclerophyll forests where mammals and vegetable foods were obtained.
3. Sub-alpine and alpine areas with the Bogong moths and daisy yams (Flood 1980:159).

Flood (1980) also suggested that camp sites would be located:

- Within access to water (all sites within one kilometre of a water source and most sites within 100m);
- Not directly along water courses, with Flood (1980) suggesting that poor drainage, risk of flash flooding and mosquitoes would have deterred long term camps immediately adjacent to rivers and creeks;
- With an aspect that allows people to sight game and/or the approach of strangers;
- In close proximity to shelter or materials from which to construct shelters; and
- In close proximity to food and other resources.

Flood concluded that "no traces of Aboriginal presence have yet been found in the dense bush of the Thredbo Valley, which would have been a much more difficult route to the moth peaks than the open Perisher Valley" (Flood 1980:192-3). However, archaeological investigations undertaken since, have challenged Flood's theory, providing an archaeological record of Aboriginal occupation and movement through the valley. Feary and Niemoeller (2015:30) have suggested that large numbers of sites along the Thredbo River, "may be associated with seasonal activities such as ceremonial gatherings prior to movement to the mountains, or they may have nothing at all to do with moth feasts, being more a reflection of a riverine based economy, relying on the resources of the river rather than on the resource poor treeless plains". Navin Officer (1987:4) noted that "at the time of Flood's investigations, no archaeological sites had been found in the Thredbo River Valley" and that "archaeological investigations undertaken in the region since the 1970s has led to the discovery of a number of campsites in and around the Thredbo River Valley".

Kamminga (1993) determined that the Thredbo River Valley is a "continuous archaeological site, comprising many activity areas" and that the "flaking of quartz pebbles at locations along the valley floor and lower slopes over millennia has produced a high background count of flaking debitage" (Kamminga cited in Feary and Niemoeller 2015:39). Feary and Niemoeller (2015:39) propose that Kamminga's findings may contribute to a "refining of the model, by suggesting that rather than an even distribution of archaeological material along the valley, traditional use was concentrated at the lower end of the valley around Bullocks Flat and the Little Thredbo River, where people gathered and/or lived". Further indicating Little Thredbo River as an area of Aboriginal occupation, R.F Payten (1949) described three Aboriginal burials as "mounds of earth covered in stones, about 3 feet high", "on the Thredbo River, a few miles above the confluence of the Little Thredbo and Thredbo Rivers" (Payten cited in Young 2005:79). Paton (1984) undertook archaeological investigations at Bullocks Flat and determined that "the comparatively large number of isolated finds and scatters of stone artefacts now known from the Thredbo Valley would seem to indicate a relatively intensive occupation of areas below 1,200m" (Paton 1984:8).

Consistent with geology of the Main Range Montane soil landscape, quartz has been recorded as the predominant material for artefact manufacture in the region. Kamminga (1992) undertook archaeological test excavation at the now Lake Crackenback Resort, which recovered a total of 661 artefacts with quartz flakes representing the majority of the assemblage (95%). Radiocarbon dating of charcoal samples obtained from stratified deposits indicated an Aboriginal occupation date of 4,000 years BP, thus "providing the first dated cultural sequence within the NSW section of the Australian Alps" (Kamminga 1992, Feary and Niemoeller 2015:38).

Paton and Macfarlane (1988a, 1988b) conducted preliminary salvage excavations for the proposed resort complex at the Little Thredbo Homestead near the Thredbo Skitube terminal, located approximately 14.8 km north-west of the current Proposal Area. During this assessment, Paton and Macfarlane classified the landforms between one of four categories: alluvial flats (low lying, generally shaded, and poorly drained), moderate slopes (3° - 5° slopes, generally well drained), steep slopes (greater than 6° slope, well drained),

and elevated flats (less than 3° slope and at least 20m above alluvial flats on well drained shoulders, crests, or knolls); all landforms were noted to contain varying aspects. The results of this salvage work – which included excavation of test pits and controlled bulldozer scrapes – were that a total of 246 subsurface stone artefacts were recorded:

- Within the alluvial flats, 16 test pits were excavated but only two artefacts were recorded.
- Within the moderate slopes, 10 test pits were excavated with 62 artefacts recorded (from only two pits).
- Within the steep slopes, nine test pits were excavated but no artefacts were recorded.
- Within the elevated flats, 15 test pits were excavated with 181 artefacts recorded. Only a single bulldozer scrape contained an artefact.

A total of 224 of the recorded artefacts were quartz, the majority of which were 'small chips' (flaked pieces) at 54.4%, while flakes represented 37%. The remainder of the quartz assemblage comprised of multiplatform and bipolar cores. The remaining 22 artefacts were identified as grey silcrete (n=21, 8.5%) and a volcanic pebble (n=1, 0.4%). Silcrete geometric microliths and broken backed blades were identified while the single volcanic pebble was recorded as a ground-edged axe with pitting on one of its surfaces indicating its potential use as a hammerstone. Paton and Macfarlane argued that the quartz assemblage recorded during the salvage was consistent with the results of other excavations on the Far South Coast (Hiscock 1982 as cited in Paton and Macfarlane 1988) and the Southern Tablelands (Flood 1980). They also noted that Flood (1980:217 as cited in Paton and Macfarlane 1988:5) argued that geometric microliths were more common within assemblages in the region while backed blades were rare. Paton and Macfarlane argued that the presence of these typologies suggested that the site could be dated between 2,000 and 5,000 years BP, however this was solely based on the stone artefacts present as no dateable material was recovered. More generally, the results of the assessment by Paton and Macfarlane conform to the predictive models developed by Flood (1980) for montane valley camps. Elevated flats were clearly the focus of previous human activity in this area while moderate slopes were targeted to a lesser degree (especially when elevated 20m above alluvial flats and with an easterly or north-easterly aspect). The results of these excavations also suggest that steep slopes and alluvial flat landforms were not utilised for activities that left an archaeological record. Despite largely conforming to previous predictive models, Paton and Macfarlane argue that the size of the recorded assemblage suggests that the Aboriginal occupation of the Thredbo valley was more intensive that had been previously understood.

4.1.2 Local context

Anutech (1987) was commissioned by Monaro Electricity Commission to undertake an archaeological survey of a 33kV transmission line, measuring approximately 13km in length from Bullocks Flat to Thredbo Village, approximately 980m east of the current Proposal Area. The proposed transmission line covered flat to gently sloping ground, in proximity to the Thredbo River and was therefore considered to be suited to Aboriginal occupation and have high archaeological sensitivity. Anutech and Eden LALC undertook an archaeological survey of the proposed transmission line and identified 11 artefact scatters and two isolated artefacts, all exposed in areas of ground disturbance from land clearing, animal burrowing and erosion. The artefact scatters had low densities and it was determined that they likely formed a general background scatter of artefacts along the Thredbo River. In line with regional trends, the artefacts were mostly manufactured from quartz. Anutch concluded that due to disturbance, "all artefacts had been displaced from their original discard position and the integrity of the sites and their ability to answer questions of occupation and spatial organisation had been further reduced" (Anutech 1987:18). Seven of the 11 sites were to be threatened by the proposed development. For five of these sites, it was recommended that the developer apply for a Consent to Destroy (now AHIP). The remaining two sites were considered to be archaeologically sensitive due to containing a large number of artefacts and having a "greater potential to answer questions about Aboriginal occupation" (Anutech 1987:18). As such, it was recommended that the proposed development

avoid these sites and that temporary fencing be erected to restrict the movement of heavy vehicles through this area.

Navin Officer Heritage Consultants (Navin Officer) (1992) was commissioned by NSW National Parks and Wildlife Services to undertake an archaeological survey of part of the Alpine Way in the Kosciusko National Park, including the Friday Flats Work Depot, which is approximately 900m east of the current Proposal Area. Based on background research of the local area, it was determined that the site types most likely to be found in the study area were artefact scatters, scarred trees and isolated artefacts. The study area had been previously disturbed by road construction, modifications and maintenance and as such the potential for Aboriginal sites was considered to be moderate to low. Archaeological survey was undertaken by Navin Officer and the Eden LALC, which identified one possible scarred tree, eight artefact scatters, five isolated artefacts and eight possible historic sites/features. The majority of these sites were located outside of the study area and would therefore not be impacted by the proposed works. One artefact scatter (AHIMS site #61-3-0062, previously described in Section 4) was recorded at the Friday Flat Works Depot, closest to the current Proposal Area. A total of 98 artefacts were identified, and Navin Officer determined the potential for further sub-surface artefacts to remain in undisturbed portions of the site. It was therefore considered to have moderate to high archaeological potential in a local context. It was recommended that a Consent to Destroy (now AHIP) be applied to for part of the site that had already been disturbed, and which were located in areas to be impacted by the proposed works. It was also recommended that the final design for the depot incorporate a permanent barrier to protect undisturbed portions of the site.

Navin Officer (1997) was commissioned by Kosciusko Thredbo to prepare an Aboriginal heritage study for the extension and improvement of the 'Easy Does It' ski run at Thredbo, approximately 450m north-east of the current Proposal Area. An analysis of land-use history found that a large amount of fill had been introduced to form a slope for the ski trail. This fill had a large amount of introduced stone including fragments of quartz and granite pebbles. Based on other archaeological studies conducted in the Thredbo Valley, Navin Officer determined the site types most likely to be encountered in the study area were artefact scatters and isolated finds made of quartz material and located on level or low gradient, well drained ground. Archaeological survey undertaken by Navin Officer identified one low density artefact scatter, located on top of a spur, with a steep slope falling to Merritts Creek. The site consisted of five artefacts including one quartz core fragment and four quartz flakes. Navin Officer determined that the site represented a single occupation event or reflected the transitory movement of Aboriginal people through the landscape. It was concluded that "due to its size, contents, and location which is fairly typical for those found in the region, the artefact scatter site was considered to have low scientific or archaeological significance in a local context". It was recommended that the proponent apply for a Consent to Destroy (now AHIP), and that a copy of the report be forwarded to the Eden LALC.

HLA-Envirosciences (HLA) (2005) was commissioned by the Roads and Traffic Authority to undertake archaeological test excavation at Friday Flats Work Depot, approximately 900m east of the current Proposal Area. Navin Officer (1992) had previously identified an artefact scatter at the Depot during a survey of part of the Alpine Way. Archaeological test excavation recovered a total of 99 stone artefacts, with the most common tool type being flaked pieces (68%), and the most common material type being quartz (47%). The distribution of artefacts recovered from each test pit reflected a ow density assemblage. Majority of the assemblage (67%) was recovered from fill or mixed fill material, and it was concluded that the area had been heavily impacted by the construction of the work depot. HLA described the overall assemblage as "a series of overlapping knapping events, separated in time but which through post-depositional processes, have become incorporated within similar stratigraphic units" (HLA 2005:34). According to HLA, the excavations revealed that "natural and human environmental change had destroyed or modified *in situ* archaeological deposits within the study area" and as such, the assemblage was considered to be of low to nil archaeological significance because of their "condition, low density and lack of any stratigraphic integrity". HLA recommended that a Consent to Destroy (now AHIP) be sought prior to the commencement of proposed works.

Alistair Grinbergs Heritage Solutions (2008) was commissioned by the Department of Environment and Climate Change to prepare an ACHA for the proposed Thredbo to Bullocks Flat 16km multi-use track, located approximately 1.6km east of the current Proposal Area, at its nearest point. It was determined that the study area would have provided a range of montane and riparian resources beneficial to Aboriginal people. Based on previous research carried out in the Thredbo Valley, the most common sites to be expected in the study area were artefact scatters and isolated artefacts, and they were likely to be close to permanent water sources, on ridges or spur crests, spur terminations and basal slopes or on level to gently sloping landform elements. Archaeological survey identified a total of 23 Aboriginal sites, including 11 artefact scatters, nine isolated artefacts, one grinding groove and two PADs. The artefact sites were dominated by quartz flakes, and small quantity of chert and silcrete flakes were identified. The PAD sites were recorded in associated with two artefact sites located banks of the Thredbo River. The grinding groove was described as a uniform shallow depression on a large flat outcrop of granite with a pebble bed on the banks of the Thredbo River. This site was considered to be a rare example of this site type, especially being on a granite based rock. Based on the results of the survey, it was recommended that additional archaeological investigation in the form of text excavation be undertaken at all 23 sites.

On Site Cultural Heritage Management (On Site CHM) (2011) were commissioned by NSW National Parks and Wildlife Services to undertake archaeological excavation of bridge footings along the Thredbo to Bullocks Flat shared use track, approximately 1.6km east of the current Proposal Area, at its nearest point. The three bridge locations were located along a 1.1km stretch of the Thredbo River. Previous archaeological investigations of the shared use track undertaken by Alistair Grinbergs Heritage Solutions (2008) had identified 23 Aboriginal sites, and as such the bridge footing locations were determined to have high archaeological potential. A total of three test pits were excavated and five auger holes were hand drilled at the locations of the bridge footings. No Aboriginal objects were identified and due to the close proximity of the river, it was determined that periodic flooding may have washed artefacts away or Aboriginal people may not have used these locations as they were flood prone. Based on the results of the excavations, it was recommended that the proposed works could proceed with due caution.

Ironbark Heritage and Environment (IHE) (2013) was commissioned by Dabyne Planning on behalf of Kosciuszko Thredbo to prepare an Aboriginal Heritage Due Diligence Assessment for Stage 1 of the Thredbo Mountain Bike Trails, located approximately 95m north of the current Proposal Area, at its nearest point. An extensive AHIMS search of an area approximately 4km by 5km centred on the study area identified 23 Aboriginal sites, with four sites within 100m of the mountain bike trails. The most common site type in the local area and the most likely to be found in the study area were artefact scatters and isolated artefacts. An analysis of landscape features of the study area determined the potential for Aboriginal sites to remain, particularly in areas of relatively level and well-drained ground. Site inspection of the mountain bike trails did not identify any Aboriginal stone artefacts, however a number of areas that had the potential to contain artefacts were noted, based on their ideal terrain and limited ground disturbance. It was recommended that the project avoid certain landforms and where it could not, a layer of geo-fabric be installed. It was also recommended that Trail 1 and Trail 3 be placed along areas that had already been disturbed.

NGH (2022) was commissioned by Le Hunte Properties to prepare an Aboriginal Heritage Due Diligence Assessment for the proposed construction of tourist accommodation at 5 Diggings Terrace, Thredbo, approximately 580m south-west of the current Proposal Area. Desktop assessment of the study area found that due to the proximity of a major waterway and the presence of a spur, there was potential for isolated artefacts to be present. Visual inspection did not identify any Aboriginal objects or areas of PAD within the study area. Shallow soils and steep landforms were encountered, both of which had been shown by previous archaeological investigations in the local area to contain little potential for archaeological deposits. It was determined to be highly unlikely that Aboriginal objects or archaeological deposits would be impacted by the proposed works, and it was recommended that the proposed works could proceed with due caution.

4.2 Landscape assessment

Step 2b. Are there landscape features present likely to contain Aboriginal objects?

The Due Diligence Code outlines a range of general landscape features that are more likely to contain Aboriginal objects. These include land that is:

- Within 200m of water;
- Located within a sand dune system;
- Located on a ridge top, ridge line or headland;
- Located within 200m below or above a cliff face; or
- Within 20m of a cave, rock shelter or cave mouth.

It is also necessary to consider whether any sensitive landscape features present have been disturbed or modified which would reduce the potential for Aboriginal objects to occur.

4.2.1 Soils

The formation and nature of soils within the Proposal Area can provide insight into the types of sites which may be present, in addition to the likelihood for intact archaeological deposits to be present.

The Proposal Area is located within the Australian Alps Bioregion which is the smallest bioregion in NSW and is NSW's only true alpine environment. The soils of this region reflect the extreme climatic gradient across the ranges (NPWS 2003: 218). The lowlands consist of texture contrast soils, grading to uniform, organic soils and peats at the highest elevations.

The Proposal Area is located within the Main Range Montane (Mam) soil landscape of the Australian Alps Bioregion which is characterised by gritty clay loams on granites and pedal red to yellow clay subsoils on eta-sediments. Soils are intermediate in character between low elevation texture contrast profiles and higher elevation organic uniform profiles (Mitchell 2002:8).

As shown in Figure 4-3, the soil type of the Proposal Area is alluvial rudosols, which is associated with high exposed ridges and elevated stony slopes (EMM Consulting 2017:21). Soils are often shallow, with bedrock being located near the surface (EMM Consulting 2017:22). Shallow soils such as alluvial rudosols have implications for the potential and survivability of Aboriginal objects and are unlikely to contain deep and/or stratified archaeological deposits. In addition, it is likely that soil has been moved and possibly introduced for stability of the lodge and construction of the driveway and retaining walls.

Figure 4-3 Soil landscape of the Proposal Area and near vicinity

4.2.2 Geology

The landscape context of the Proposal Area is based on Mitchell soil landscapes and Interim Biogeographic Regionalisation for Australia (IBRA) data, and 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 Australia Alps Bioregion comprises granites that have formed faulted, stepped ranges at the point where the South Eastern Highlands in NSW turn west into Victoria. The upper surface of granite locks contain low relief. Geology of the Main Range Montane soil landscape comprises Silurian-Devonian gneissic granite, granite and granodiorite and Ordovician slate, chert, quartzite and phyllite (Mitchell 2002:8). These raw materials, particularly quartz and chert were utilised by Aboriginal people for the manufacture of stone tools and evidence of this has been recorded in the local area (see Section 4.1.2).

4.2.3 Topography and hydrology

The general elevation of the Main Range Montane soil landscape is 100m to 1,500m and Thredbo Village is located at 1,365m (Mitchell 2002:8). The Proposal Area is located on a steep slope, that has been modified for the construction of the lodge, driveway and associated infrastructure (see Plate 4-2).

Thredbo River is located 85m north and is a perennial river within the Snowy River catchment. The Thredbo River is impacted by seasonal climate changes, with high flows during the spring snow melt and snow and ice during the winter season (Envirokey 2015:31). Friday Flat Creek is located 870m south-east and Bullock Yard Creek is located 3.077km east. The Thredbo River and its tributaries would have provided freshwater and food resources for Aboriginal people. Past Aboriginal activity along the Thredbo River is evidenced by the previously recorded AHIMS sites, see Figure 4-1.

4.2.4 Flora and fauna resources

The information provided herein is intended as a generalised summary of the endemic flora and fauna present within the Proposal Area and local area and is not to be used as a substitute for detailed ecological studies and assessments. However, it may be inferred that prior to human disturbance the local area would have been heavily vegetated and would have supported a wide variety of resources to any people living there.

Plant foods were important in the Aboriginal diet, and tubers of the daisy yam (*Microseris scapigera*) would have been a “more reliable staple food with Bogong moth harvesting restricted to special and infrequent ceremonial occasions” (Bowdler 1981). Flood noted that “the root of the native orchid and lilies, and the starchy rhizomes of various waterplants, grew in the mountains and are likely to have been eaten in large quantities” (Flood 1980). The Thredbo River would have provided fish, crayfish and waterbirds and game such as kangaroos, wallabies and possums would have also been locally available (Flood 1980).

The Proposal Area has been cleared of vegetation and contains grass (Plate 4-1). The Proposal Area is void of trees and therefore does not have potential for modified trees (scarred or carved) to exist. The NGH (2023:3) *Sonnblick Demolition BOS Evaluation* has identified the vegetation within the Proposal Area as exotic grasses (see Plate 4-1 and Plate 4-2).

Prior to clearing, the Proposal Area is like to have contained vegetation typical of the Main Range Montane soil landscape which includes tall forests in moist, high rainfall environments with alpine ash (*Eucalyptus delegatensis*), mountain gum (*Eucalyptus dalrympleana*), narrow-leaved peppermint (*Eucalyptus radiata*), manna gum (*Eucalyptus viminalis*), brown barrel (*Eucalyptus fastigata*), snow gum (*Eucalyptus pauciflora*),

mountain hickory wattle (*Acacia obliquinervia*) and silver wattle (*Acacia dealbata ssp. alpina*). Moist gullies support soft tree fern (*Dicksonia antarctica*), with blackwood (*Acacia melanoxylon*), southern sassafras (*Atherosperma moschatum*) and hazel pomaderris (*Pomaderris aspera*). Sphagnum bogs (*Sphagnum cristatum*) with candle heath (*Richea continentis*) and swamp heath (*Epacris paludosa*) occur at the head of most creeks (Mitchell 2002:8).

Plate 4-1 Exotic grasses in the Proposal Area.

Plate 4-2 Photograph of exotic grasses at rear of property, and topography considerably cut into for retaining wall.

4.2.5 Historic land use

The traditional lifestyle of the Ngarigo people was disrupted from the late 1820s when graziers brought stock into the Thredbo Valley, attracted by the benefits of the grasslands and permanent water supply (Thredbonet Marketing 2015). Grazing leases occurred in the area from the 1820s until the mid-1900s, when they ceased due to increasing environmental concerns. Scientist Richard Helms first raised the alarm in 1893, about the "environmental impacts of regular burning and grazing and consequent soil erosion in the Alpine area" (Pickering and Worboys 2002:8). However, it was during the 1930s that the "first real stirrings of opposition to this land-use gained momentum as erosion had become severe in many areas" (Pickering and Worboys 2002:8). It was the establishment of the Kosciuszko State Park by Act of Parliament on 19 April 1944, which resulted in the removal of grazing from the Alpine area (Pickering and Worboys 2002:9).

In 1949, the Snowy Mountains Hydro Electricity Scheme commenced, bringing an influx of workers to the region. One of these workers, Tony Sponar, set up a downhill skiing course at an area known as George Chisholm course, located near the current Thredbo village. The Kosciuszko Chairlift and Thredbo Hotel Syndicate was formed in 1955 and included Sponar, Charles Anton, Eric Nicholls and Geoffrey Hughes and it aimed to establish Thredbo as a major ski resort. In 1957, the syndicate was incorporated as Kosciuszko Thredbo Limited, and the company was granted a lease by the NSW Minister for Lands which gave it various rights to developing Thredbo (Thredbonet Marketing 2015). An article in the Canberra Times from Wednesday 30 January 1957 details:

> *The Premier, Mr Cahill announced today that Cabinet had given approval to the Department of Lands to enter into an agreement with a private syndicate authorising it to occupy 75 acres in the Thredbo Valley in Kosciuszko State Park. Mr Cahill said the Kosciuszko Chairlift and Thredbo Hotel Syndicate had agreed to carry out the following improvements if granted the lease:*
>
> - *Construction of a chairlift*
> - *Construction of an hotel to accommodate not fewer than 40 guests*
> - *Construction of an access road from the Alpine Highway to the hotel site*

- *Construction of a petrol station*

New Hotel And Ski-lift Possible For Kosciusko

SYDNEY, Tuesday. — An 80-guest hotel with an ultra-modern ski-lift may be built in the Kosciusko area.

The Premier, Mr. Cahill, announced to-day that Cabinet had given approval to the Department of Lands to enter into an agreement with a private syndicate authorising it to occupy 75 acres in the Thredbo Valley in Kosciusko State Park.

Mr. Cahill said the Kosciusko Chairlift Thredbo Hotel Syndicate had agreed to carry out the following improvements if granted a lease:

- Construction of a chairlift at the 4,550ft. altitude to the 6,000ft. mark on Crackenback Peak, with a capacity of 150 passengers an hour.
- Construction of an hotel to accommodate not fewer than 40 guests, with the necessary appointments and accommodation for 40 more guests in the hotel or in Norwegian huts to be purchased from the Snowy Mountains Hydro-Electric Authority.
- Construction of an access road from the Alpine Highway to the hotel site.
- Construction of a petrol service station on the hotel site.

Mr. Cahill said that if the syndicate completed these improvements within five years it would be granted a 99-year lease.

The syndicate would be charged only a rental of £1 a year during the five-year option period of the lease.

Later rentals would be based on the annual receipts of the hotel, with a maximum rental of 1¼ per cent. of gross annual receipts.

Figure 4-4 (Canberra Times, Wednesday 30 January 1957, Page 3).

Historical aerial imagery from 1964 (Figure 4-5) shows that by this year the Proposal Area had been mostly cleared of vegetation. Thredbo village at this time remained largely undeveloped, compared to the image from 1992 (Figure 4-6). The image from 1992 (Figure 4-6) shows that the lodge had been constructed by this year and all vegetation had been cleared. Development surrounding the Proposal Area has increased significantly and all roads had been formalised.

Summary

Prior to modification, the Proposal Area would have comprised a steep landform with Eucalyptus species typical of the Main Range Montane soil landscape. The Thredbo River located 85m north would have provided freshwater and food resources for Aboriginal people. Raw materials available in the local area, such as quartz and chert would have been utilised by Aboriginal people for the manufacture of stone tools. The Proposal Area is void of trees and therefore does not have potential for modified trees (scarred or carved) to exist. The only vegetation remaining is that of exotic grasses. The natural topography of the Proposal Area has been cut into and modified (Plate 4-2) for the construction of the lodge, driveway and associated infrastructure, and this is likely to have resulted in the movement of soil and introduction of imported soil. Historical aerial imagery has revealed that the Proposal Area was cleared of vegetation as early as the 1960s and that the lodge was built before 1992. The Proposal Area has experienced a high level of disturbance, therefore significantly limiting the potential for Aboriginal objects to remain.

Figure 4-5 Historic aerial imagery from 1964

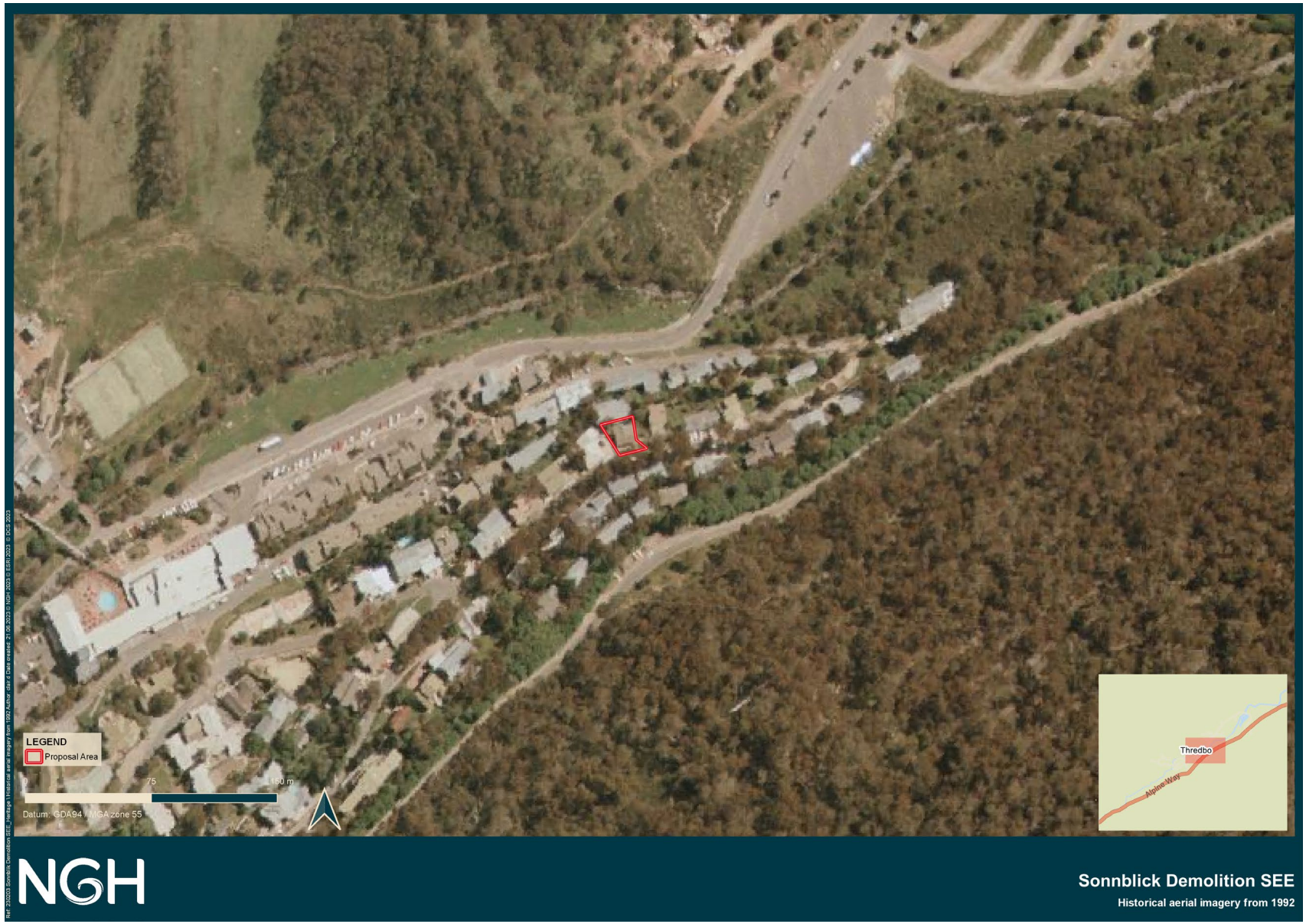


Figure 4-6 Historic aerial imagery from 1992

4.3 Aboriginal site prediction

Based upon the initial desktop assessment, using satellite imagery and topographic data, it appears that there is low potential for Aboriginal objects to occur within the Proposal Area given previous impacts associated with vegetation clearing, and modification of the natural landform for the construction of the lodge, driveway and associated infrastructure. As per the Heritage NSW Due Diligence Code of Practice, lands can be considered disturbed "if it has been the subject of a human activity that has changed the land's surface, being changes that remain clear and observable" (DECCW 2010:7). Examples of disturbance that have impacted the Proposal Area provided by the Code include the "clearing of vegetation, and the construction of buildings and associated earthworks" (DECCW 2010:7-8).

Prior to land clearing and modification, the Proposal Area encompassed a forested steep slope, which would have been an unfavourable position for Aboriginal activity or occupation. Previous archaeological research within the region suggests that elevated flats and relatively level and well-drained ground were the focus of Aboriginal activity while moderate slopes were targeted to a lesser degree. Previously recorded AHIMS sites in the local area have been commonly recorded on well-drained spurs and spurlines near waterways. Excavations in the local area have suggested that steep slopes and alluvial flat landforms were not utilised for activities that left an archaeological record.

The Proposal Area is void of trees, and therefore does not have potential for modified trees (scarred or carved) to exist. Site types such as burials, stone quarries, grinding grooves, and stone arrangements are present in the region but are unlikely to occur due to their rarity and the unsuitable landforms present within the Proposal Area. The most common site types in the local area are artefact scatters and isolated artefacts. The Proposal Area has negligible potential to contain these types of sites due to past disturbance from vegetation clearing, and modification of the natural landform for the construction of the lodge, driveway and associated infrastructure. It is unlikely for substantial sub-surface deposits to exist within the Proposal Area due to the presence of shallow soils and high clay content typical of alluvia rudosols. In addition, it is likely that soil has been moved and possibly introduced for stability of the lodge and construction of the driveway and retaining walls.

The desktop assessment, therefore, indicates that there are no landscapes present within the Proposal Area that have the potential to contain Aboriginal objects. The nature of the works being undertaken at this site will involve a high level of ground disturbance and it is unlikely that it would impact on Aboriginal heritage objects.

5. Impact avoidance

Step 3. Can any AHIMS listed objects, or landscape features be avoided?

No AHIMS sites have been previously recorded within the Proposal Area and the nearest, site #61-6-0082 is an artefact scatter located 130m north. The Proposal Area is unlikely to contain Aboriginal sites due to past disturbance associated with vegetation clearing and modification of the landform for the construction of the lodge and associated infrastructure. Due to this high level of disturbance, there no unmodified landscapes present within the Proposal Area that have the potential to contain Aboriginal objects. The nature of the works being undertaken within the Proposal Area will involve a high level of ground disturbance and it is unlikely that it would impact on Aboriginal heritage objects.

6. Desktop assessment and visual inspection

Step 4. Does the desktop assessment confirm that there are likely to be Aboriginal objects present or below the ground surface?

The assessment process is primarily a desktop exercise, using available information such as the AHIMS search results and relevant archaeological reports to develop or refine a model of Aboriginal site prediction based on the type of activity proposed and the level of disturbance of the area. A visual inspection is also required where landscape features are present that may contain Aboriginal objects that cannot be avoided by the activity.

The desktop assessment has indicated that there are no unmodified landscapes present within the Proposal Area that have the potential to contain Aboriginal objects. The nature of the works being undertaken at the Proposal Area will involve a high level of ground disturbance and it is unlikely that it would impact on Aboriginal heritage objects.

The desktop assessment has therefore concluded that a visual inspection is not warranted as it is unlikely that Aboriginal objects will be impacted by the proposed works.

7. Further assessment

Step 5. Is further investigation or impact assessment required?

The construction of the lodge and associated infrastructure has characterised the Proposal Area as having a high level of disturbance.

The Due Diligence Code states that if, after the research and desktop assessment is completed, it is evident that harm will occur to Aboriginal objects or heritage places then further and more detailed assessment is required. However, if the research and desktop assessment conclude that the proposed activity is unlikely to harm Aboriginal objects then the activity can proceed with caution. The desktop assessment and research has concluded that the proposed activity is unlikely to harm Aboriginal objects and further archaeological assessment is not required.

8. Recommendations

The following recommendations are based on a number of considerations including:

- Background Aboriginal heritage research into the area;
- Assessment of Landscape;
- Land use and disturbance assessment;
- Consideration of the impact of the proposed works; and
- Legislative context for the development proposal.

1. The proposed work can proceed with caution without further archaeological assessment.
2. Any activity proposed outside of the current Proposal Area should also be subject to an Aboriginal heritage assessment.
3. If any items suspected of being Aboriginal in origin are discovered during the work, all work in the immediate vicinity must stop and the NSW Environment Line (1300 361 967) notified. The find will need to be assessed and, if found to be an Aboriginal object, further detailed assessment and an application for an Aboriginal Heritage Impact Permit (AHIP) may be required.
4. In the unlikely event that human remains are identified during development works, all work must cease in the immediate vicinity and the area must be cordoned off. The Proponent must contact the local NSW Police who will make an initial assessment as to whether the remains are part of crime scene or possible Aboriginal remains. If the remains are thought to be Aboriginal, Heritage NSW must be notified by ringing the Enviroline (131 555).

The Proponent is reminded that it is an offence under the *National Parks and Wildlife Act 1974* to disturb, damage or destroy an Aboriginal object without a valid AHIP.

9. References

Alistair Grinbergs Heritage Solutions (2008). *Preliminary Aboriginal Cultural Heritage Assessment: Proposed Thredbo to Bullocks Flat Multi-Use Track.* Report prepared for Department of Environment and Climate Change.

Anutech (1987) *An Archaeological Survey of a 33kV Transmission Line (No 2) from Bullocks Flat to Thredbo.* Report prepared for Monaro Electricity Commission.

DECCW. (2010). *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW*. Retrieved from https://www.environment.nsw.gov.au/research-and-publications/publications-search/code-of-practice-for-archaeological-investigation-of-aboriginal-objects-in-nsw

DECCW. (2010). *Due Diligence Guidelines for the Protection of Aboriginal Objects in NSW*. DECCW. Retrieved from https://www.environment.nsw.gov.au/research-and-publications/publications-search/due-diligence-code-of-practice-for-the-protection-of-aboriginal-objects-in-new-south-wales

EMM Consulting (2017). *Soils and land assessment: Exploratory Works for Snowy 2.0.* Report prepared for Snowy Hydro Limited.

Feary S. and Niemoeller G. (2015). *Lower Thredbo Valley shared path: Bullocks Flat to Curiosity Rocks, Snowy Mountains, NSW. Aboriginal cultural heritage assessment.* Report prepared for NPWS and SRSC.

Flood, J. (1973). *The Moth-Hunters: Investigations Towards a Prehistory of the South-Eastern Highlands of Australia.* Australian Institute of Aboriginal Studies, Canberra.

Flood, J (1974). 'Pleistocene Man at Cloggs Cave: his Tool Kit and Environment', *Mankind*, vol. 9, no. 3, pp. 175–188.

Flood, J (1980). *The moth hunters: Aboriginal prehistory of the Australian Alps*. Australian Institute of Aboriginal Studies, Canberra.

Flood, J, David, B, Magee, J & English, B (1987). 'Birrigai: a Pleistocene site in the south-eastern highlands', *Archaeology in Oceania*, vol. 22, no. 1, pp. 9–26.

Freslov, J, Clark, I & Marsh, C (2004). Post *Wildfire Aboriginal Heritage Survey*, Unpublished Report to Parks Victoria and the Department of Sustainability and the Environment.

Grinbergs, A (1992). *The Myth Hunters. Investigations Towards a Revised Prehistory of the South Eastern Highlands of Australia.* Unpublished B.A. (Hons) Thesis. Department of Archaeology and Anthropology, Australian National University, Canberra.

Hiscock, P (1982). 'A Technological Analysis of Quartz Assemblages from the South Coast of NSW', in S Bowdler (ed), *Coastal Archaeology in Eastern Australia*, Department of Prehistory, Research School of Pacific Studies, Australian National University.

Hiscock, P (2007). *Archaeology of Ancient Australia,* Routledge.

HLA Enviro-sciences (2005). *Preliminary Research Permits #2071 and #2072: Excavations and Findings at Friday Flat Snow Clearing Depot, Thredbo, NSW.* Report prepared for Roads and Traffic Authority.

Ironbark Heritage and Environment (2013). *A Cultural Heritage Due Dilligence Assessment for Thredbo Bike Trails Stage 1, Kosciuszko National Park, NSW.* Report prepared for Dabyne Planning.

Kamminga, J. (1992). *Aboriginal settlement and prehistory of the Snowy Mountains*. In: B. Scougall, ed. Cultural Heritage of the Australian Alps. Canberra: Austrelaian Alps Liaison Committee, pp. 101-124

Mitchell P. (2002). *Descriptions for NSW (Mitchell) Landscapes*. Department of Environmental and Climate Change NSW. Retrieved from https://www.environment.nsw.gov.au/resources/conservation/landscapesdescriptions.pdf

Mulvaney, DJ & Kamminga, J (1999). *Prehistory of Australia*, Allen & Unwin.

Navin Officer (1992). *Archaeological Survey: Alpine Way, Kosciusko National Park, NSW.* Report prepared for NSW National Parks and Wildlife Services.

Navin Officer (1997). *Cultural Heritage Survey: Proposed 'Easy Does It' Ski Run Improvement Works, Thredbo, NSW.* Report prepared for Kosciusko Thredbo.

NGH (2022). *Aboriginal Heritage Due Diligence Assessment: Thredbo Lot 768 DA.* Report prepared for Le Hunte Properties.

NGH (2023). *Preliminary BOS Evaluation: Sonnblick Demolition BOS Evaluation*. Report prepared for Kosciuszko Thredbo.

NPWS (2003). *Bioregions of New South Wales: Australian Alps.* Retrieved from https://www.environment.nsw.gov.au/research-and-publications/publications-search/australian-alps-bioregion

NSW Government. (2019). *National Parks and Wildlife Regulation 2019*. Retrieved from https://legislation.nsw.gov.au/view/html/inforce/current/sl-2019-0408

OEH. (2010, September). *NPWS Act 1974 Fact Sheet 1.*

OEH. (2010, September). *NPWS Act 1974 Fact Sheet 2.*

OEH. (2011). *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in New South Wales*. Retrieved from https://www.environment.nsw.gov.au/research-and-publications/publications-search/guide-to-investigating-assessing-and-reporting-on-aboriginal-cultural-heritage-in-nsw

On Site CHM (2011) *Subsurface testing of bridge footings Threbo to Bullocks Flat shared use track, Kosciuszko National Park.* Report prepared for NSW National Parks and Wildlife Services.

Ossa, P, Marshall, B and Webb, C (1995). 'New Guinea II Cave: A Pleistocene site on the Snowy River, Victoria', *Archaeology in Oceania*, vol. 30, no. 1, pp. 22–35.

Paton, R and MacFarland, I (1988a). *An Archaeological Investigation of the Lake Crackenback Village near Thredbo, NSW*. Report prepared for Faraba Pty Ltd.

Paton, R and MacFarland, I (1988b). *Results of Preliminary Salvage Excavation at Thredbo Valley*. Report prepared for Faraba Pty Ltd.

Pickering, C and G, Worboys (2002). *Managing the Kosciuszko Alpine Area: Conservation milestone and future challenges.* National Library of Australia Cataloguing-in-Publication Data.

Thredbonet Marketing (2015). *The History of Thredbo.* Retrieved from: https://www.discoverthredbo.com/history-thredbo/

Young, M. (2005). *The Aboriginal people of the Monaro.* 2nd ed. Sydney: NSW Department of Environment and Conservation.

NGH Pty Ltd

NSW • ACT • QLD • VIC

ABN 31 124 444 622 ACN 124 444 622

E: ngh@nghconsulting.com.au

GOLD COAST

2B 34 Tallebudgera Creek Road
Burleigh Heads QLD 4220
(PO Box 424 West Burleigh QLD 4219)

T. (07) 3129 7633

SYDNEY REGION

Unit 17, 21 Mary Street
Surry Hills NSW 2010

T. (02) 8202 8333

BEGA

Suite 11, 89-91 Auckland Street
(PO Box 470)
Bega NSW 2550

T. (02) 6492 8333

MELBOURNE

Level 14, 10-16 Queen Street
Melbourne VIC 3000

T: (03) 7031 9123

TOWNSVILLE

Level 4, 67-75 Denham Street
Townsville QLD 4810

T. (07) 4410 9000

BRISBANE

T3, Level 7, 348 Edward Street
Brisbane QLD 4000

T. (07) 3129 7633

NEWCASTLE - HUNTER & NORTH COAST

Level 1, 31-33 Beaumont Street
Hamilton NSW 2303

T. (02) 4929 2301

WAGGA WAGGA - RIVERINA & WESTERN NSW

35 Kincaid Street (PO Box 5464)
Wagga Wagga NSW 2650

T. (02) 6971 9696

CANBERRA

Unit 8, 27 Yallourn Street
(PO Box 62)
Fyshwick ACT 2609

T. (02) 6280 5053

SUNSHINE COAST

Suite 101, Level 2/30 Main Drive
Birtinya QLD 4575

(07) 4410 9000

WODONGA

Unit 2, 83 Hume Street
(PO Box 506)
Wodonga VIC 3690

T. (02) 6067 2533