Brou Waste Management Facility

Aboriginal Cultural Heritage Assessment Report

Report to Eurobodalla Shire Council

FINAL - February 2023

Lantern Heritage

shining a light on people and place

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Aboriginal Cultural Heritage Assessment Report

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EXECUTIVE SUMMARY

Introduction

Eurobodalla Shire Council (ESC) are preparing to expand the area of Brou Waste Management Facility into an area of previously undeveloped ground. This study area (Figure 1) is located on the Far South Coast of NSW, near Narooma.

Eurobodalla Shire Council are completing a Planning Proposal for a re-zoning of land that would allow the expansion of the waste management facility. As a component of the investigations that will inform the Planning Proposal, an Aboriginal heritage assessment is required to determine whether the proposed activity is likely to result in harm, or impacts, to Aboriginal cultural heritage. Lantern Heritage Pty Ltd were previously commissioned by Eurobodalla Shire Council to conduct an Aboriginal Due Diligence Assessment of the proposed study area (Lantern Heritage 2022a; Figure 1) and determined that the proposed study area contained landforms that were likely to contain Aboriginal artefacts (Figure 2). Lantern Heritage Pty Ltd has, therefore, been commissioned by Eurobodalla Shire Council to complete an Aboriginal Cultural Heritage Assessment Report (ACHAR) for the Brou Waste Management Facility expansion, with the aim of assessing the nature and extent of any sites within the sensitive landforms identified by Lantern Heritage (2022a; Figure 2) and determining whether an Aboriginal Heritage Impact Permit (AHIP) to impact any sites within the study area, is necessary.

Consultation, Survey and Test Excavation

The Heritage NSW *Aboriginal cultural heritage consultation requirements for proponents* (DECCW 2010c) was implemented by Lantern Heritage on behalf of Eurobodalla Shire Council at the commencement of the project. No cultural heritage values have been identified at the study area.

As detailed in Lantern Heritage (2022a), visual inspection of the study area was conducted on 6th June 2022 by Conor McAdams and Jo Dibden of Lantern Heritage Pty Ltd. The study area was assessed as a series of smaller survey units (survey units 1-4: Figure 6), to provide a comprehensive assessment of the variety of landforms that exist across the study area. No archaeological sites or objects were observed, but two survey units (Unit 2 and Unit 3) correspond to landforms which are likely to contain Aboriginal sites or objects. Because historic impacts were spatially varied, these landforms retained some soil depth. Survey coverage and archaeological visibility were impacted by environmental conditions and, as a result, these two landform units require further investigation to assess their archaeological potential. The two other survey units (Unit 1 and Unit 4) were determined to be of low archaeological potential due to: the landform context; the extent of modern disturbance; and the lack of soil depth likely to contain Aboriginal artefacts.

Test excavations were conducted, in accordance with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCW 2010b), on 18th October 2022, targeting the sensitive landforms identified during the due diligence survey (Lantern Heritage, 2022a). The subsurface testing was undertaken by a team comprising archaeologists Conor McAdams and Cassandra Venn from Lantern Heritage, and representatives from the Registered Aboriginal Parties (RAPs), Jason Davison (Traditional Owner) and Deon Morgan from Guntawang Aboriginal Resources Inc. No Aboriginal objects were found in any of the test pits. Nor was any other archaeological evidence of Aboriginal occupation identified within any of the test pits. Upon completion of the five test units across the eastern portion of the study area it was concluded, in partnership with the RAPs present, that no further pits were required across other portions of the study area. The rationale behind this decision was that testing across the predicted area of highest potential had indicated:

- Higher levels of disturbance than anticipated; and
- No evidence of archaeological material within any of the remnant soil horizons.

On this basis, the entire study area was assessed to be of very low archaeological potential. It was agreed in discussion with the RAPs that no further assessments or investigations were required and the proposed development could proceed under due diligence.

Summary and recommendations

On the basis of the community consultation, field survey and program of subsurface testing carried out as part of this study, no Aboriginal artefacts are likely to be harmed by proposed works at Brou Waste Management facility. As a result, the following recommendations are made:

a) No AHIP is required, as proposed works at Brou Waste Management Facility are unlikely to impact Aboriginal artefacts or cultural heritage values;

b) The proposed activity can only go ahead, with caution;

c) If during the course of the proposed activity, in the rest of the study area, any Aboriginal objects are found, stop work and notify OEH;

d) In the event that human skeletal remains, or suspected human skeletal remains, are encountered during any of the proposed works, stop work, secure the site and notify the NSW Police and OEH, and

e) This Aboriginal Cultural Heritage assessment only covers the works outlined in section 1.2 of this report. If additional impacts or alternative alignments are proposed, further assessment will be required.

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1 PROJECT OVERVIEW

1.1 Introduction

Eurobodalla Shire Council are preparing to expand the area of Brou Waste Management Facility into an area of previously undeveloped ground. This study area (Figure 1) is located on the Far South Coast of NSW, near Narooma.

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1.2 Location and scope of activity

The study area is an area of undeveloped ground, directly west of Brou Waste Management Facility (Figure 1). This parcel of land is approximately 3km northwest of Narooma, just off the Prince's Highway, and sits almost equidistant from Brou Lake to the north and Lake Mummuga to the south.

The expansion of Brou waste management facility aims to increase the area available for waste management at that site. While no detailed scope of works has been provided, the proposed works (Figure 1) are likely to include:

- Removal of vegetation
- Levelling of the ground surface
- Digging large pits, penetrating to a depth of several metres
- Use of heavy earth-moving machinery
- Construction of infrastructure including access roads and hard standing

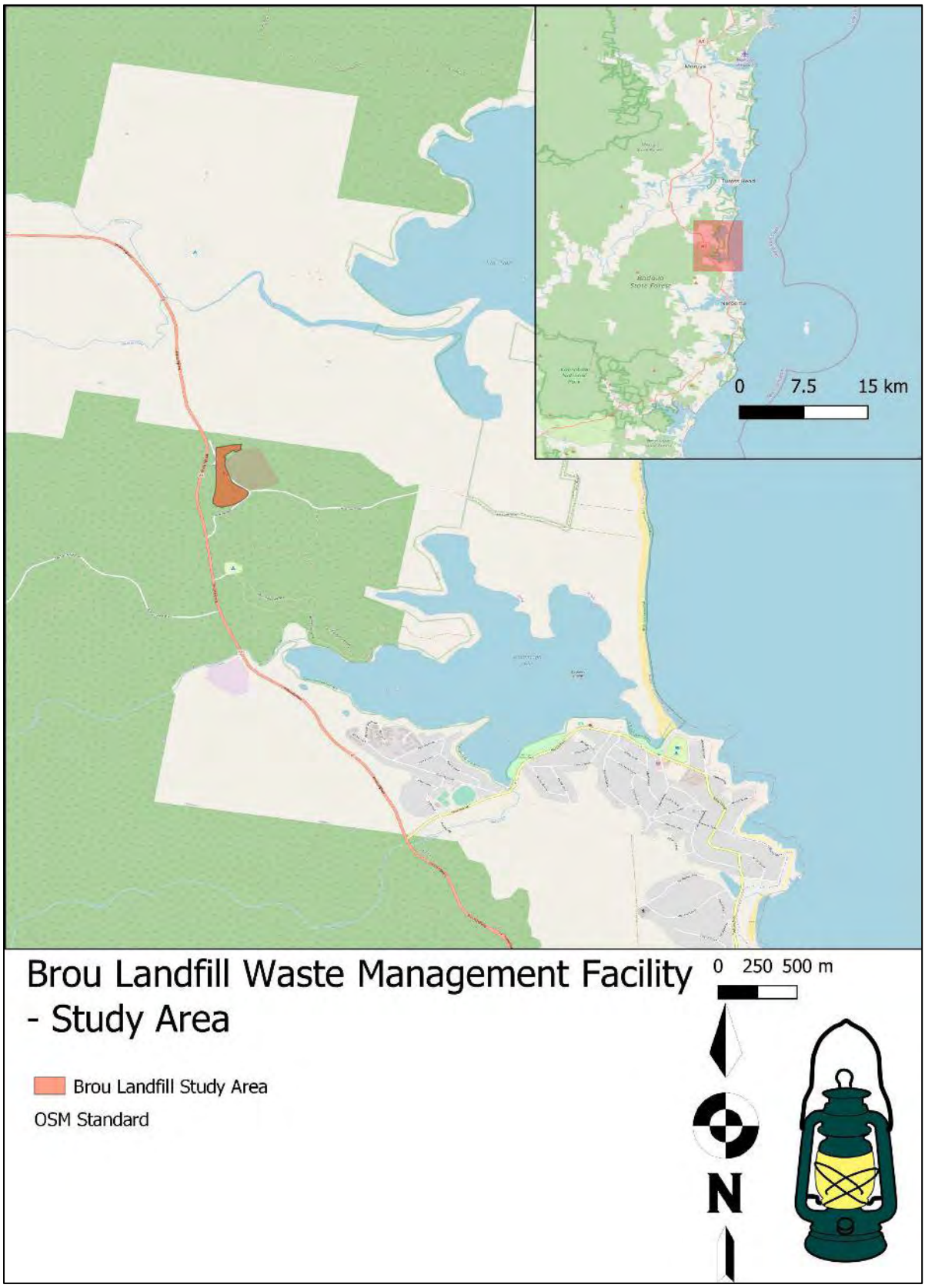

Figure 1: Location of the Brou Waste Management Facility study area (Base map: TopoCurrent 2021).

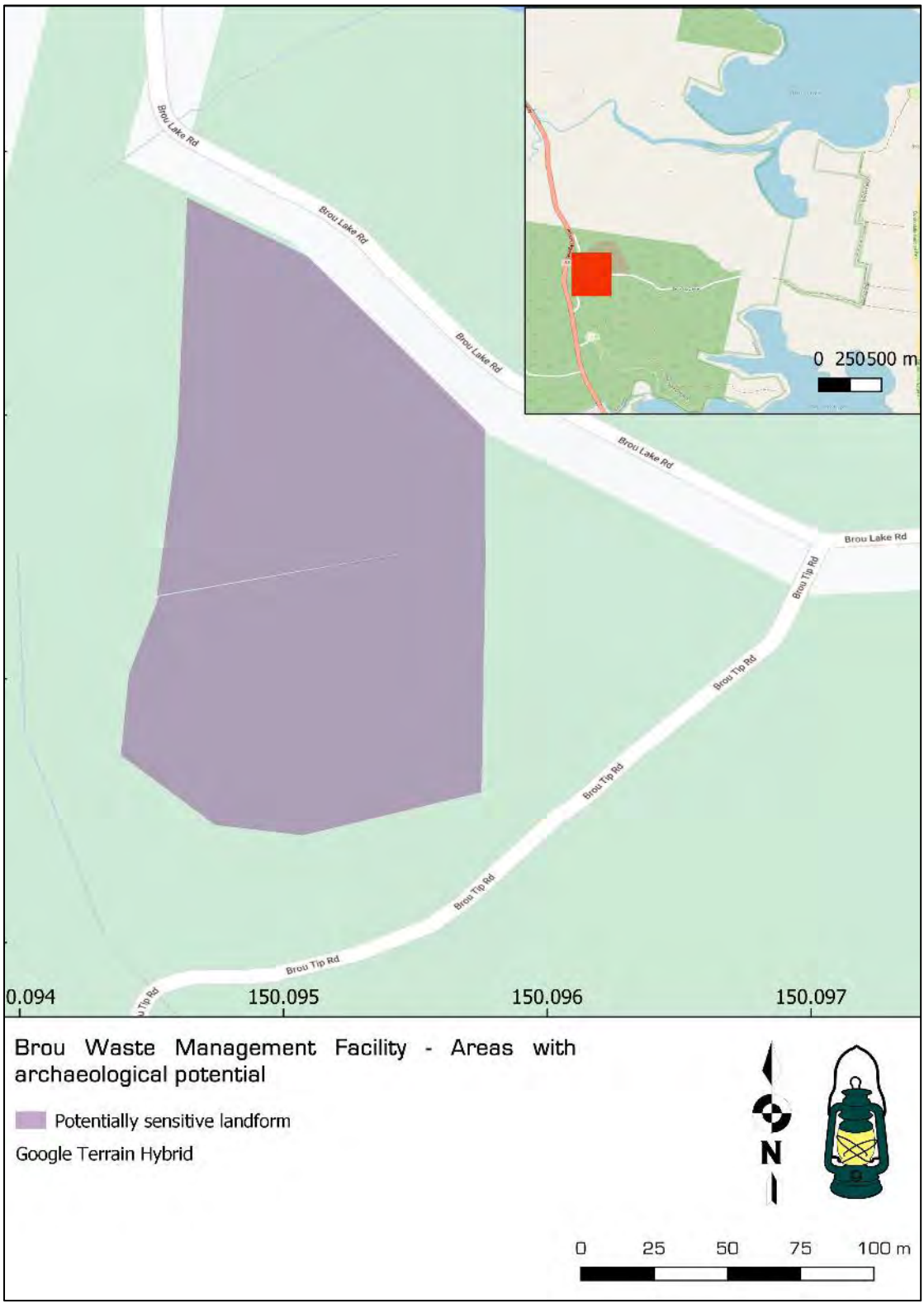

Figure 2: Location of area of archaeological potential within study area, identified during due diligence survey.

1.3 Legislative Framework

1.3.1 National Parks and Wildlife Act 1974

The *National Parks and Wildlife Act* 1974 (as amended), administered jointly by Heritage NSW and Department of Planning and Environment, is the primary legislation for the protection of Aboriginal cultural heritage in New South Wales. Part 6 of the NPW Act provides specific protection for Aboriginal objects and declared Aboriginal places by establishing offences of harm.

Table 1 summarises those offences and their associated penalties. However, if due diligence is exercised, this is a defence against prosecution for the strict liability offence, in the event that an Aboriginal object is later unknowingly harmed without an Aboriginal Heritage Impact Permit (AHIP).

Table 1: Offences and penalties for harming or desecrating Aboriginal objects and declared Aboriginal Places (DECCW 2010b)

Offence	Maximum Penalty: Individual	Maximum Penalty: Corporation
A person must not harm or desecrate an Aboriginal object that the person knows is an Aboriginal object.	2,500 penalty units ($275,000) or imprisonment for 1 year 5,000 penalty units ($550,000) or imprisonment for 2 years or both (in circumstances of aggravation)	10,000 penalty units ($1,100,000)
A person must not harm or desecrate an Aboriginal object (strict liability offence).	500 penalty units ($55,000) 1,000 penalty units ($110,000) (in circumstances of aggravation)	2,000 penalty units ($220,000)
A person must not harm or desecrate an Aboriginal Place (strict liability offence).	5,000 penalty units ($550,000) or imprisonment for 2 years or both	10,000 penalty units ($1,100,000)
Failure to notify Heritage NSW of the location of an Aboriginal object (existing offence and penalty)	100 penalty units ($11,000). For continuing offences a further maximum penalty of 10 penalty units ($1,100) applies for each day the offence continues.	200 penalty units ($22,000). For continuing offences a further maximum penalty of 20 penalty units ($2,200) applies for each day the offence continues
Contravention of any condition of an Aboriginal Heritage Impact Permit	1,000 penalty units ($110,000) or imprisonment for 6 months, or both, and in the case of a continuing offence a further penalty of 100 penalty units ($11,000) for each day the offence continues	2,000 penalty units ($220,000) and in the case of a continuing offence a further penalty of 200 penalty units ($22,000) for each day the offence continues

1.3.2 Environmental Planning and Assessment Act 1979 (NSW)

The NSW *Environmental Planning and Assessment Act* 1979 (EP&A Act) and the Environmental Planning and Assessment Regulation 2000 (EP&A Regulation) provide the overarching structure for planning in NSW. The two most commonly used policies that support the EP&A Act and the EP&A Regulation are State Environmental Planning Policies (SEPPs) and Local Environmental Plans (LEPs).

SEPPs deal with matters of State or regional environmental planning significance. These policies are made by the Governor on the recommendation of the Minister for Planning. SEPPs may be exhibited for public comment in draft form before being published as a legal document to allow the public the opportunity to provide feedback.

LEPs are administered by Local government. An LEP is a planning instrument that councils prepare under the EP&A Act, in consultation with their community and approved by the Minister for Planning (or their delegate). Each local government area has a LEP that guides development and planning decisions as well as providing protection for natural resources. All local councils are required to identify items of local heritage significance in a heritage schedule to their LEP. Items listed on the heritage schedule of an LEP are also listed on the State Heritage Inventory (SHI).

LEPs are normally supported by a Development Control Plan (DCP), which provides detailed planning and design guidelines. The DCP identifies additional development controls and standards for addressing local development issues. It can normally be applied more flexibly than a LEP.

1.3.3 Project framework

The works proposed at as part of the Brou Waste Management Facility expansion project are being assessed under Part 3 of the EP&A Act 1979. A Planning Proposal has been prepared by Eurobodalla Shire Council, seeking a re-zoning in the area of proposed works from RU3 to SP2. This assessment was undertaken to assist in meeting the requirements of Part 3 of the EP&A Act. It is completed before Heritage NSW undertakes an activity, or grants approval allowing an external party to undertake an activity. Under the Infrastructure SEPP 2017 (Div. 23), development for the purpose of waste or resource management facilities, other than development referred to in subclause (2), may be carried out by any person with consent on land in a prescribed zone.

1.3.4 Aims and Objectives

This *Aboriginal cultural heritage assessment report* (ACHAR) has been prepared to assess whether there are any Aboriginal sites or objects contained on the sensitive landforms identified within the study area by Lantern Heritage (2022a), and to determine whether an Aboriginal Heritage Impact Permit (AHIP) is necessary. The Aboriginal cultural heritage assessment detailed in this report was undertaken in order to document any harm the proposed activities may cause Aboriginal objects and to clearly set out which impacts are avoidable, and which are not. Where harm to Aboriginal objects cannot be avoided, recommendations are provided regarding ways of reducing the extent and severity of harm to significant Aboriginal objects. It includes actions to be taken before, during and after an activity to manage and protect Aboriginal objects where harm cannot be avoided. Additional details regarding the archaeological assessment that was undertaken as part of the investigations for this ACHAR, including stratigraphic logs of excavated test pits, are provided in the excavation report in Appendix 2.

1.3.5 Report restrictions and copyright

None of the information contained in this report has been identified as confidential or restricted.

2 LANDSCAPE CONTEXT

The study area is situated in the coastal hinterland of the South East Corner bioregion, approximately 2.5km from the modern coastline, south of Brou Lake, a back-dune lagoon with an intermittently closed entrance, and north of Lake Mummuga, which is a similar, intermittently open lagoon (NSW DPE, 2022; Figure 1). There are surrounding the study site was classified by Mitchell (2002) as the Bega Coastal Foothills landscape (Figure 4), but a range of other landscape types exist nearby. These include the Bodalla – Nadgee Coastal Sands and the Mount Dromedary Mumbulla Coastal Ranges. Within the study area is a low hill in the southern extent, with a gravel track separating that hill from a wooded ravine in the northern extent of the study area.

2.1 Geology, Geomorphology and soils

The Bega Coastal Foothills landscape is typified by hills that slope toward the coast, formed on Ordovician quartzite, slate, chert, phyllite, with areas on intrusive granite (Figure 3; Mitchell, 2002). Elevation ranges from 0 to 520m, with local relief of 250m. Thin, stony red and red-yellow texture-contrast soils are found on most landforms, but nearby landscapes related to Mount Dromedary – Mumbulla (Figure 4) are formed on Cretaceous monzonite, quartz syenite and diorite that intrudes Ordovician slate and phyllite, These areas may include large rounded tors and domed rock outcrops, with the potential to have provided diverse, valuable raw materials to Aboriginal communities (NSW NPWS, 2003).

Quaternary sediments in this area are associated with coastal, lacustrine and estuarine environments (Mitchell, 2002; NSW NPWS, 2003). The Bodalla-Nadgee Coastal Sands landscape is a complex of beach, dune and lagoon deposits, These low-lying quartz sand formations have moderate carbonate content in frontal dunes, but simple podsols and diffuse iron pans form on the most inland dunes. Organic silty sands are found in lagoons and estuaries. Dendritic drainage channels are found throughout the area, but the nearest perennial stream, Whittaker's Creek, is approximately 1km from the study area (Figure 1).

2.2 Vegetation

Natural vegetation is the area is typified by open forest of tall spotted gum (Corymbia maculata), grey ironbark (Eucalyptus paniculata), red bloodwood (Corymbia gummifera), white stringybark (Eucalyptus globoidea), blackbutt (Eucalyptus pilularis) with blady grass (Imperata cylindrica), bracken (Pteridium esculentum) and burrawang (Macrozamia sp.) in the understorey, shrubs limited. On headlands heaths of bushy needlewood (Hakea sericea), giant honey-myrtle (Melaleuca armillaris), coast rosemary (Westringia friticosa) and dwarfed red bloodwood occur in shallow soils subject to high salt spray input and frequent fire (Mitchell, 2002).

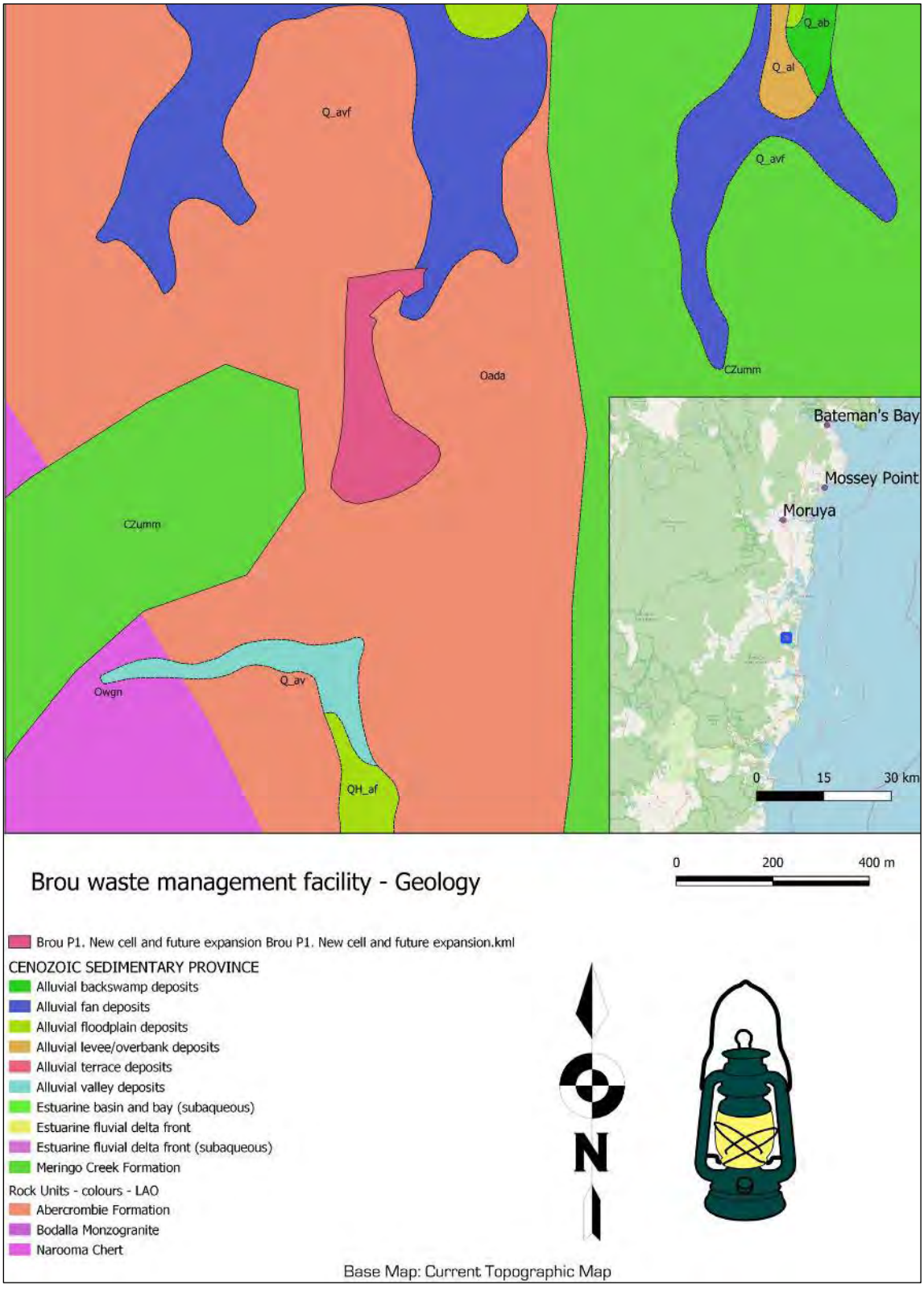

Figure 3: Geological setting of the Brou waste management facility. (Data from Colqhoun et al., 2022)

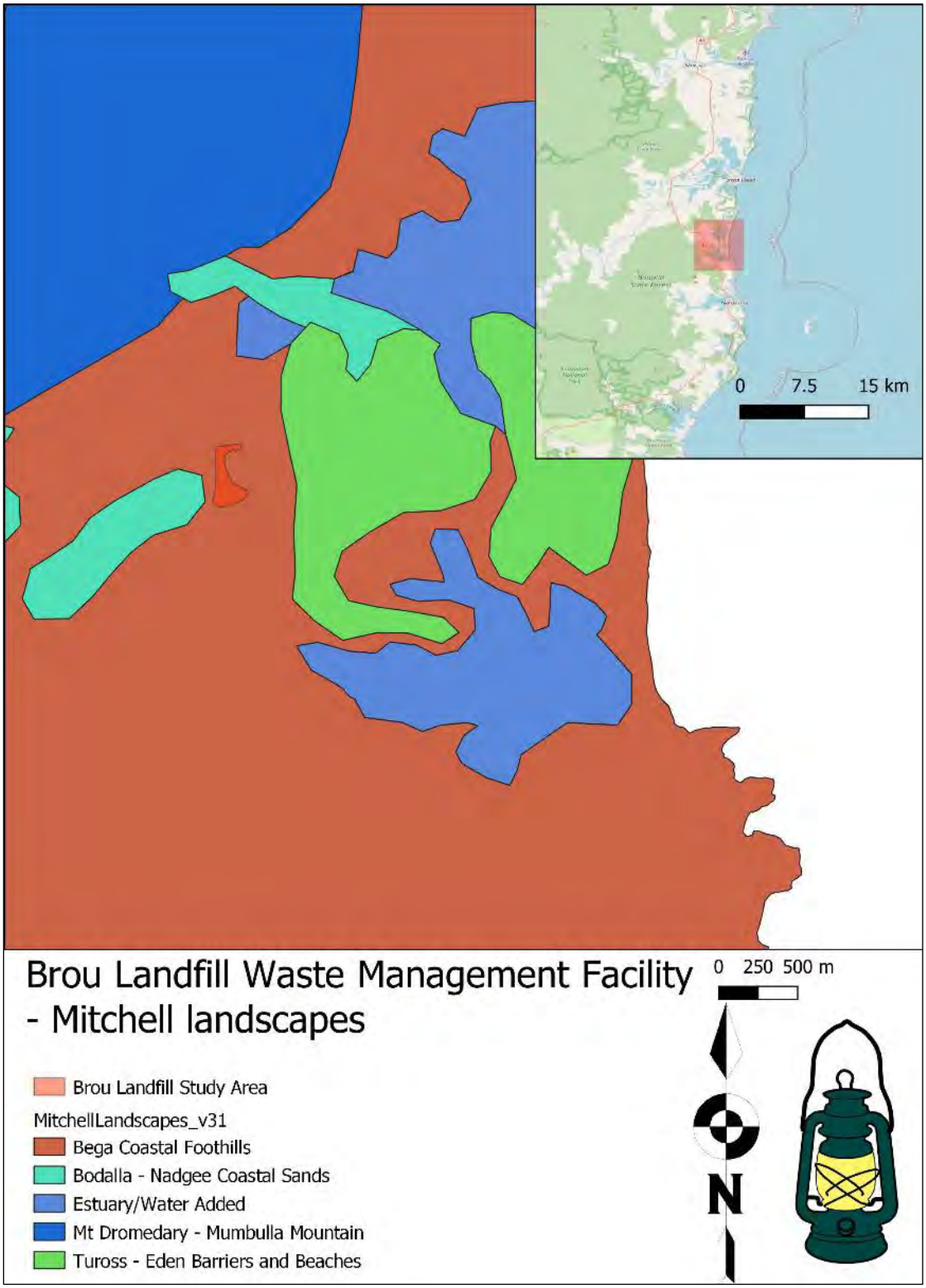

Figure 4: Mitchell landscapes in the vicinity of the Brou waste management facility.

2.3 Aboriginal use of the land

It is likely that this ecotonal landscape supported a range of grasses, shrubs and trees that supplemented the Aboriginal diet. Along with access to marine and estuarine species, animals such as kangaroos, wallabies, possums and various other native species would all have been available. As such, this location would have provided Aboriginal people with access to a diverse range of resources to support habitation. But access to reliable freshwater in the immediate vicinity may have been a factor that limited the study areas attractiveness to groups of individuals for relatively sustained occupation.

2.4 Land-use History

The area that currently makes up the study area has been occupied by Aboriginal peoples for several thousand years prior to European settlement in the area. Aboriginal populations utilised both marine and land resources for a variety of uses including food, medicines, and raw materials. It is also likely fire management techniques were used on local vegetation.

The area has an extensive contact period, beginning in the late 18th century with occasional encounters between sailors and local Aboriginal people (Goulding & Waters 2005). By 1830 there were a number of large pastoral runs in the region, however settlement was patchy in nature due to the rugged mountains and wide river valleys. European pastoral development continued into the mid-1840s in a variety of locations, and Aboriginal communities were known to be involved in the workforce whilst maintaining aspects of traditional lifestyles, including initiation ceremonies. European land use intensified following the 1861 Robertson Land Act resulting in an increase in restrictions on Aboriginal people's capacity to "reside on, travel over and utilize the resources of the country" (Goulding & Waters 2005:48).

While timber getting operations started along the south coast in the 1840s, it wasn't until the 1860s when sawmills boomed. By 1883 there were 13 sawmills operating, to the north, in the Clyde River area alone (Goulding & Waters 2005) and in 1906 the Mitchell Brothers moved their sawmill to Narooma. Around the same time, a shift from beef to dairy cattle began with the development of the butter and cheese industry in the region, particularly in the Bega Valley, to the south (HO & DUAP, 1996). The intensity of European land use for dairying and other small cropping activities involved large scale land clearance and soil erosion. A fish cannery provided a major source of employment in Narooma in the early-mid 20th century.

From 1894 a hand-worked punt crossed Wagonga Inlet, linking Narooma to North Narooma and on to Moruya (HO & DUAP, 1996). In 1929 a petrol-driven punt that had previously operated at Batemans Bay was installed, but it was road links such as the Princes Highway and the Kings Highway that provided improved communications to the far south coast. The Narooma bridge, built between 1929 and 1931, was the first major bridge constructed on the Princes Highway.

3 ETHNOHISTORIC CONTEXT

Aboriginal occupation of Australian extends back well into the Pleistocene. Current theories place the arrival of humans to Sahul between 47,000 years before present (BP) and 65,000 BP (O'Connell and Allen 2004, 2015; Allen and O'Connell 2014; Clarkson et al., 2017, O'Connell et al., 2018). While debate continues regarding the earliest arrival in Australia, there is general agreement that all environmental zones across the continent were colonised by around 35,000 BP (Mulvaney and Kamminga 1999). Since that time there has been substantial climatic variation, which has influenced preferred areas of occupation.

Of direct relevance to the south coast is the fact that sea levels dropped considerably during the Last Glacial Maximum (LGM) (around 21,000 BP), at which time the sea level was on average 130m lower than at present. Sea levels did not reach the current levels again until the mid- Holocene (approximately 6-8,000 BP). Consequently, what is now the coastal strip was actually coastal hinterland during the late Pleistocene and early Holocene. The earliest evidence for occupation of the region dates to the LGM, when this area was part of the coastal hinterland (Lampert 1971; Flood 1980 and Boot 1994, 2002).

Therefore, the archaeological record of human occupation and use of the coastline as we know it today all relates to the mid to late Holocene. So, while potential exists for much older sites (in the order of 20-35,000 BP), such sites, and indeed even early Holocene sites (e.g. 9-12,000BP), must be interpreted within the context of a very different geography.

While there is substantial ethnohistorical information available relating to the far south coast of NSW, information relating to the places where different activities took place is limited. However, it is likely that the occupation would have taken the form of temporary camps used on a seasonal basis, making use of diverse resources in the area. The landscape was undoubtedly well known to generations of people and it is probable that associations extended to spiritual attachments.

Patterns of human settlement often reflect the physical geography of the landscapes where they occur, and the valleys of the Moruya, Tuross, Bega and Towamba Rivers were divided by steep, forested hills (NPWS NSW, 2003). These natural drainage basins extend westwards to the watershed of the Great Dividing Range and formed territorial limits of the Aboriginal groups that inhabited them, to some extent. Flood (1982) presents the drainage basins of the Towamba and Bega rivers as the precise territories of the Taua and Djirringanj groups, respectively. Narooma, and the study area, are located almost at the boundary of the Bega River Valley and the Tuross River Valley to the north, which was part of the territory of the Walbanga.

3.1 Review of historic and ethnohistorical accounts

Ethnohistorical information relating to the south coast of NSW dates back to at least 1770, when James Cook recorded his observations of Aboriginal people at Murramarang Point (Blade 1893 in Boot 2002: 56). Accounts of Aboriginal people are available from the records of other early explorers, census records and dedicated ethnohistorical studies from throughout the nineteenth century and into the early twentieth century. Information is also available from sources such as newspapers, historical maps (e.g. parish maps) and government gazettes. However, such records tend to provide information specific to individuals and/or Aboriginal reserves, rather than observations of traditional ways of life. Valuable syntheses of ethnohistorical sources relating to the south coast of NSW are available in the honours and doctoral theses of Attenbrow (1976), Boot (2002), Sullivan (1982) and Wesson (2002). More recently, recording of oral histories of the Aboriginal communities up and down the coast has started. Examples include studies relating to traditional pathways (Blay 2005), histories of Aboriginal reserves (Donaldson and Feary 2012) and the Bega Valley Shire compilation of oral histories (Donaldson 2010).

Howitt (1904: 81-82) identified the South Coast region between the Shoalhaven River in the north and Cape Howe in the south to be that of the Yuin tribes. The Yuin were described by Howitt as comprising two large sub-tribes: the Guyangal-Yuin in the south and the Kurial-Yuin in the north. The

modern-day district of the Bega Valley corresponds to the area occupied by the Guyungal-Yuin, and more specifically, the clan of the Tadera-manji (Howitt 1904: 82). Howitt also distinguished between the Katungal, those who lived along the coast, and the Paiendra, those who live inland. Wesson (2002: 69) references accounts by Robinson in the 1840s to suggest that the Bega River coincided with the boundary between two Yuin language groups: the Thau-aira, which extended down to Mallacoota in the south, and the Jeringan, which extended up towards the Wadbilliga Plateau. Robinson (in Wesson 2002: 178) also refers to the Bega River as a boundary between tribal/clan groups with the Wadder Waddo occupying the coast north of the Bega River.

Estimates of pre-contact Aboriginal populations along the far south coast have been reviewed by Attenbrow (1976), Sullivan (1982), Boot (2002) and Wesson (2002). Debate continues over the probable number of Aboriginal people living along the NSW south coast prior to European invasion. Uncertainties surround the extent to which the numbers recorded by early explorers, settlers and census accounts may have been affected by the spread of disease that preceded them (Boot 2002: 60-65). Attenbrow (1976:49 in Boot 2002) estimated that the pre-contact population of the far south coast was at least 0.06 individuals per square kilometre (i.e. 6 people per 100 km2). While Radcliffe-Brown (1930 in Wesson 2002: 33-34) estimated a population in the order of 0.21-0.28 per square kilometre (i.e. 21-28 people per 100km2), and Boot (2002: 64-65) suggests that the average population across the south coast may have been as high as 1.6 per square kilometre (i.e. 160 people per 100km2).

The range of plants and animals utilised as food resources by Aboriginal people along the NSW south coast includes: fish (e.g. bream, trumpeter, salmon, sea mullet, estuarine mullet, eel, whiting, snapper, leather jacket and ling); other marine animals (e.g. whale, shark, seal, mussel, oyster, mud oyster, other shellfish, octopus, and prawns); marsupials such as possum, kangaroo, wombat, and koala; birds such as gull, swan, emu, and cockatoo; various plants (e.g. fruit/berries, macrozamia seeds, cabbage tree heart, honeysuckle bark, kurrajong leaves, figs and vegetables); as well as eggs, honey, goanna, dingo, and various grubs and worms (Boot 2002: 78-82).

Boot (2002: 77) lists a range of plants with ethnohistorical references for use by Aboriginal people for the manufacture of organic implements. The plants listed comprise:

"...grass tree (Xanthorrhoea sp.); resin and flower spikes; cabbage tree palm (Livistona australis) leaves; messmate (Eucalyptus obliqua) bark; stringybark (Eucalyptus muellerana) bark and wood; sallee (Eucalyptus stellulata) wood; sedge (Carex sp.) flower stems; native cherry (Exocarpus cupressiformis) wood; blackwood (Acaica melanoxylon) bark; kurrajong (Brachychiton pupulneus) bark; and grey box (Eucalyptus bosistoana) bark."

In terms of fauna, Boot (2002: 77-78) lists the following animals/animal parts as being utilised in the manufacture of items of material culture: the teeth, paws, skins and sinew of kangaroo (*Macropus sp.*); the skins of brushtail (*Trichosurus sp.*) and ringtail (*Pseudocheirus peregrinus*) possums; claws of eagle-hawks (*Accipiter sp.*); swan (*Cygnus olor*) feathers; abalone (*Haliotis giganta*) and mussel shell (*Mytilus edulis planulatus*); koalas (*Phascolarctos cinereus*); rabbit rats (*Conilurus albipes*), kangaroo rats or potoroos (*Potorous sp.*); wallabies (various species); and quolls (*Dasyurus maculatus*).

Sullivan (1982: 244-45) references accounts by Brierly and Robinson from the mid-1800s that emphasise the importance of marine foods in the diet of the Aboriginal people on the far south coast of NSW. She also documents accounts of weirs and canoes in catching fish, and the use of kangaroo apple, native cherry, macrozamia, cabbage tree, wombat, eel and wild dog as food resources (Sullivan 1982: 245-246). Descriptions are also provided of the bark huts or gunyas that were used in the area as dwellings. Boot's (2002: 66) ethnohistorical research indicates that campsites were typically occupied by between two and 56 people, while over 100 people would gather for ceremonial purposes such as the Bunan initiation ceremony.

Howitt (1904: 518-519) describes protocols surrounding a gathering of Aboriginal people near Bega for initiation ceremonies. His description indicates that the gathering took place somewhere to the east of the Bega River "not far from the coast" (presumably at Mumbulla Mountain, which is

a well-documented location for male initiation ceremonies), and that people came from as far away as the Queanbeyan, Shoalhaven and Two Fold Bay districts. The last initiation at Mumbulla recorded by non-indigenous Australians was in 1918 (Boot 2002: 85). Wesson (2002: 189) describes the Ford property, on the headland north of the Bega River, as an important location for Aboriginal gatherings with people travelling up to 400km to attend ceremonies there.

Yuin practices relating to death and treatment of the dead are described by Howitt (1904: 462-463). He explains how the deceased was wrapped in "an opossum rug" with articles of clothing and ornamentation placed under the head. The body was then wrapped in bark and tied up before being placed at the foot of a large tree. It is unclear from Howitt's account whether the body was actually buried at the foot of the tree. However, Boot (2002: 84) notes that trees played an important role within Yuin cosmology as communication paths with the sky world, the underworld and the spirits of the dead. Accounts of traditional Aboriginal burial practices from further north on the coast, around the Illawarra, indicate that graves were commonly located in sands on the banks of creeks and lagoons, and that graves were typically three to four feet deep (DEC 2005: 33).

3.2 Post-contact history

The first recorded interactions between non-indigenous people and Aboriginal people on the far south coast of NSW relates to the survivors of the Sydney Cove shipwreck. In 1797, 17 men, including five British and 12 Bengalis made their way from Bass Strait up the coast towards Sydney, after their ship was wrecked. It was the assistance they received from Aboriginal inhabitants along the coast that enabled their survival. Following the reports and observations of the survivors from the Sydney Cove, European exploration around Twofold Bay was initiated and sealing and whaling enterprises commenced in the area during the early nineteenth century (SCT 2012).

By the 1830s, squatters had started to move into the region. Early accounts of the sealers', whalers' and squatters' interactions with the local Aboriginal people indicate tension and conflict. There are reports of Aboriginal massacres involving both shootings and poisoning (SCT 2012). Aboriginal people were also employed on the European farms, undertaking tasks ranging from shepherding and harvesting crops through to stripping bark from wattle trees (SCT 2012).

While there is no doubt that the arrival of Europeans caused significant disruptions to Aboriginal life and the practice of traditional ways of life, there is also evidence to suggest that traditional cultural practices continued throughout much of the nineteenth century (Chittick and Fox 1997). However, the establishment in 1883 of the Aborigines Protection Board (APB) heralded the commencement of policies that aimed to concentrate Aboriginal people on set areas of land (Aboriginal Reserves), which served to further limit their movements and the practice of traditional ways of life.

4 ARCHAEOLOGICAL CONTEXT

4.1 AHIMS site search

An extensive site search was conducted via AHIMS on 10th May 2022 by Conor McAdams, from: -36.1789, 150.0394 – (Latitiude, Longitude) to: -36.1096, 150.163.

Forty eight (48) Aboriginal sites or objects were listed as being present within the search area. Table 2 provides a list of the sites, including site types and features present in the search area. The locations of the sites are shown in Figure 5, but none of the sites listed on AHIMS are within the proposed study area. Table 3 provides an overview of the previously recorded sites according to site types and features. One Ceremony and Dreaming Site is located approximately two kilometres north of the study area, at Two Sisters Rocks (AHIMS#62-7-0021), while the rest of the sites are a mix of artefact scatters and midden.

Figure 5 shows that recorded sites tend to be located at the coast, and in built up areas around main roads. While there are few previously recorded sites close to the study area, it is important to note that the absence of any sites listed on AHIMS being present in the study area does not mean that Aboriginal objects, or areas of archaeological potential, are not present. Sites are generally only added to the AHIMS database during surveys for research or cultural heritage assessment purposes.

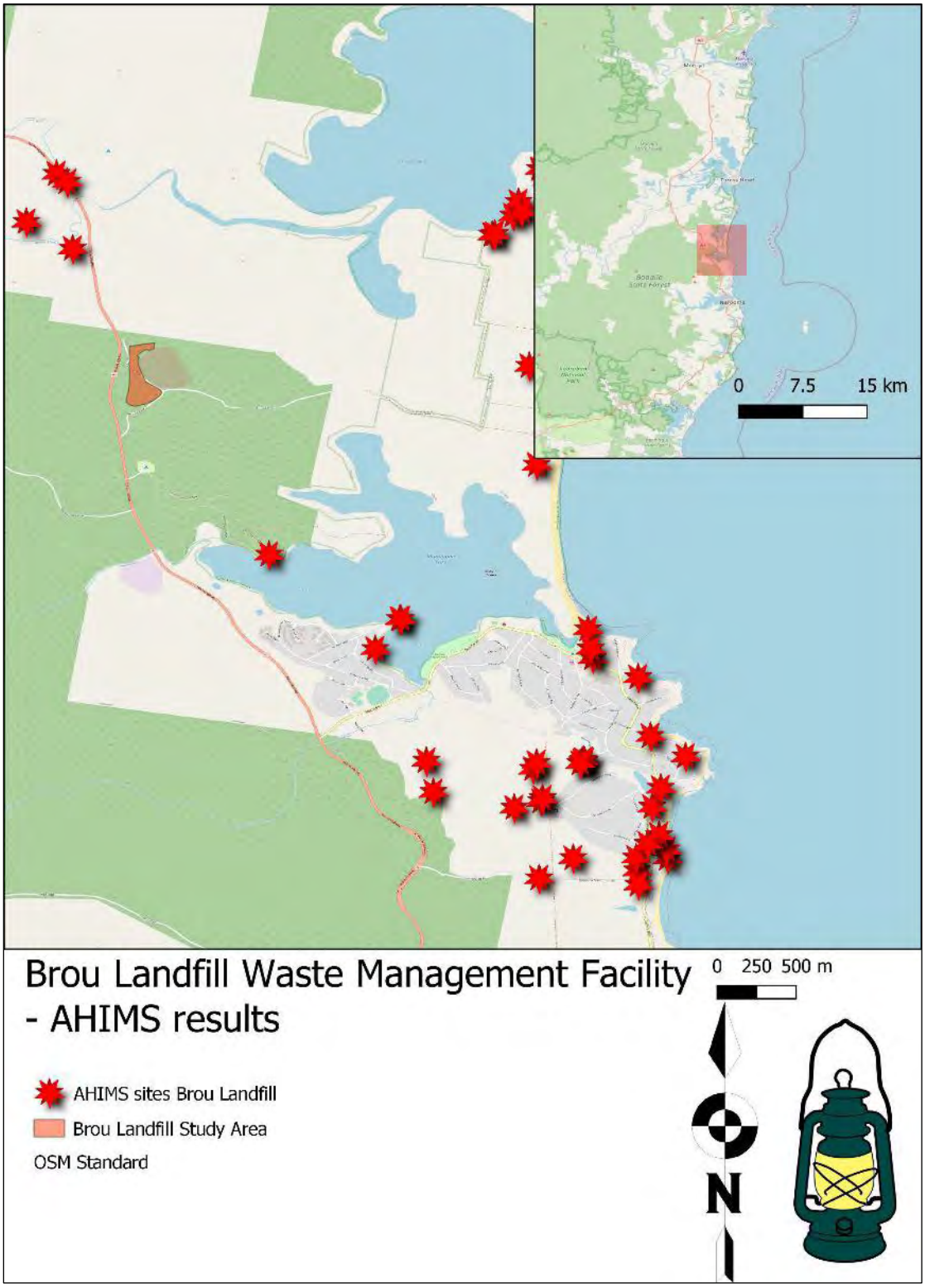

Figure 5: AHIMS sites in the vicinity of the study area

Table 2: Summary of AHIMS search results near Brou waste management facility

AHIMS #	Site Name	Site Type/Feature
62-7-0021	Two Sisters Rocks	Open site
62-3-0120	Site 2 Narooma	Open site
62-7-0235	Barkala 2; Dalmeny Drive;	Open site
62-7-0421	Dalmeny Bikepath SU6	Open site
62-7-0418	Dalmeny Bike Path Survey Unit 1	Open site
62-7-0383	Mummuga Lk 1	Open site
62-7-0280	Lot 54 Dalmeny IF1	Open site
62-7-0302	Brou Lake Survey Unit 1 - Locale 1	Open site
62-7-0301	Brou Lake Survey Unit 1 - Locale 2	Open site
62-7-0479	Eucalyptus Drive 03 - Isolated Find	Open site
62-7-0382	Dalmeny P5	Open site
62-7-0420	Dalmeny Bikepath SU5	Open site
62-7-0300	Brou Lake Survey Unit 1 - Locale 3	Open site
62-7-0296	Brou Lake Survey Unit 3 - Locale 2	Open site
62-7-0071	Lake Mummuga 28/37;	Open site
62-3-0121	Site 3 Narooma	Open site
62-7-0236	Barkala 1; Dalmeny Drive;	Open site
62-7-0239	Barkala 3; Dalmeny;	Open site
62-7-0481	Eucalyptus Drive 01- Isolated Find	Open site
62-7-0067	Lake Brou 24/21;	Open site
62-7-0381	Dalmeny P4	Open site
62-7-0422	Barkala 1 and barkala 2:	Open site
62-7-0073	Dalmeny 28/52a;	Open site
62-7-0480	Eucalyptus Drive 02 - Artefact Scatter	Open site
62-7-0498	Duesburys Road Stone Adze 1	Open site
62-7-0426	Dalmeny Survey Unit 1/Locale 1	Open site
62-7-0240	Dalmeny Drive Isolated Find 2; Dalmeny Drive;	Open site
62-7-0419	Dalmeny Bikepath Survey Unit 2	Open site
62-7-0384	Mummuga Lke 2	Open site
62-7-0279	The Old Highway Dalmeny	Open site
62-7-0389	Mummuga Head Midden	Open site
62-7-0065	Lake Brou 24/111b;	Open site
62-7-0298	Brou Lake Survey Unit 1 - Locale 5	Open site
62-7-0378	Dalmeny P1	Open site
62-7-0297	Brou Lake Survey Unit 3 - Locale 1	Open site
62-7-0072	Lake Mummuga 28/48;	Open site
62-7-0425	Dalmeny Survey Unit3/Locale 1	Open site

AHIMS #	Site Name	Site Type/Feature
62-7-0177	Two Sisters Rock	Open site
62-7-0070	Lake Mummuga 28/42;	Open site
62-7-0281	Lot 54 Dalmeny IF2	Open site
62-7-0478	Eucalyptus Drive 04 - Isolated Find	Open site
62-7-0068	Lake Brou;Lake Mummuga 28/174a;	Open site
62-7-0069	Lake Mummuga 28/174b;	Open site
62-7-0379	Dalmeny P2	Open site
62-7-0449	3010/1	Open site
62-7-0299	Brou Lake Survey Unit 1- Locale 4	Open site
62-7-0463	Dalmeny Campground	Open site
62-7-0380	Dalmeny P3	Open site

Table 3: AHIMS Site types in the vicinity of Brou waste management facility

Site type	Count
Aboriginal Ceremony and Dreaming	1
Artefact/artefact scatter	31
Shell	2
Artefact and shell	14
Grand total	48

4.2 Other Heritage Register Searches

The Australian Heritage Database (AHD) contains information about natural, historic and Aboriginal places of World and National heritage significance. The NSW State Heritage Inventory (SHI) is a database that contains sites listed on the NSW State Heritage Register, on Schedule 5 of Local Environmental Plans (LEP) and registered Aboriginal Places. Searches of the SHI and AHD were completed on 1st November 2022. No Aboriginal places or places with Aboriginal cultural values are listed on any of the above heritage registers within or adjacent to the proposed study area.

4.3 Material Evidence of Aboriginal Land Use

4.3.1 Localised reports: Archaeological work in and around Brou Waste Management Facility

A number of previous investigations have been undertaken within the local region. The findings assembled from previous archaeological work provides a context and baseline for interpreting the archaeological material identified within the subject area.

The far south coast of NSW has been the subject of investigation for various academic research projects and cultural heritage management studies. The following summary highlights some of the relevant research findings within the surrounding area.

Dibden (2015) prepared an ACHAR for Eurobodalla Shire Council in advance of installation and renewal of sewer and water at the Dalmeny Campground, NSW. An Aboriginal site (stone artefacts) was known to be present, and the ACHAR was required to support an AHIP application. In addition, despite a lack of permanent, higher-order streams nearby, Dibden believed the access to coastal resources meant that the study area had the potential to support intensive, complex occupation. An AHIMS search found 70 Aboriginal sites listed in the surrounding area, but none within the study area itself. Therefore, a new site was recorded for the stone artefacts that were known to be within the study area. Because of the levels of disturbance associated with the landform, and the low significance of the recorded site, no mitigation strategies beyond AHIP application were proposed.

Dibden (2005) detailed seven recorded artefact scatters on the southeast shore of Lake Brou, found during a survey conducted for the NSW National Parks and Wildlife Service during upgrades to the campsite there. Despite landform analysis that suggested the area, similar to our current study area, may be intensively occupied, artefact density was found to be low and explained in terms of the absence of a source of reliable fresh water.

Dibden (2014) prepared an ACHAR for Eurobodalla Shire Council in advance of a c. 250m long water pipe installation at Dalmeny, NSW. Two previously recorded Aboriginal sites were located in the subject area during an AHIMS search. This area is a hind dune context, and the access to varied resources (including rocks and minerals) that it would have provided made it a prime camp site location. Although an AHIP (#1082566) had been issued to ESC previously for a proposed Shared Pathway development, but Council have been advised by the NSW OEH that a new AHIP is required. This study located the sites and determined that they were of insufficient value and significance to place any constraints on development other than necessitating an AHIP.

Dibden (2007a) surveyed of two separate areas at Dalmeny, broken down into 6 survey units, carried out in advance of the Dalmeny to Narooma bikepath. Sparse scatters of stone artefacts and fragmented shell were found to be present within areas of five of the six survey units, concentrated on headlands, simple slopes and dune landforms.

Subsequent to Dibden (2007), Dibden (2008) details subsurface excavation at three areas of PAD within the North Narooma bike path study area. Three Transects (24 Test Pits) were excavated and 141 stone artefacts were retrieved, with artefacts recovered from all three Test Transects and the majority of Test Pits. The average artefact density across the test excavation area was 23.5 artefacts per square metre, but artefact density in individual test transects ranged from as low as 14.5 artefacts per square metre to as high as 36 artefacts per square metre. As such, average artefact density was assessed to range from low to low/moderate and the archaeology of the study area was assessed to be of low/moderate archaeological significance.

Dibden (2007b) provides details of a midden a found at the site of proposed beach access stairs at Mummuga Head. The midden is situated in a sandy dune deposit immediately adjacent to the south side of the Mummuga Lake, where shell and a stone artefact were recorded in an erosion exposure caused by pedestrian traffic. The erosion blow-out measures 7m long by 3 – 4m wide and the exposed midden is in a black sandy deposit which appears to be situated 500 mm below clean yellow sand, with a unit depth of approximately 300mm. The shell was highly fragmented, but a range of species were identified. Observed shell species include nerite (Melanerita melanotragus), turban (Ninella torquata), cockle and Warrener (Subninella undulata). The stone artefact was a white quartz flaked piece measuring 28 x 18 x 12mm.

Paton (1986) presents a survey of an area proposed for the construction of a water pipeline between Moruya and Narooma, which was constructed as part of the Lower South Coast water supply augmentation scheme. The route followed existing road and power line easements and was characterized by high levels of disturbance. The author believed that any sites that had been present would have been entirely destroyed by historic impacts along the majority of the route. But three artefact scatters were located several hundred metres away and they recommended employment of an indigenous officer to monitor the works as they progressed in potentially sensitive areas, in case further sites/artefacts were revealed.

4.3.2 Regional reports: Archaeological work on the far south coast of NSW

Sullivan (1976, 1978) researched Aboriginal site types and locations along the coast between Bermagui and Durras. Sullivan's research concluded that shell middens are the most common coastal site type. It was noted that middens are frequently located within the foredune behind sandy beaches, adjacent to a rock platform, often on the northern side of a headland. It was also noted that sites were most commonly associated with headlands that afforded relatively easy access to the rock platform, as opposed to those that were more precipitous.

Additional surveys at Pambula and Wagonga Inlet in 1980 were conducted by Sullivan (1981) in order to assess the changes that had occurred at the large mounded middens described in the area by the Geological Surveyor William Anderson some ninety years earlier. Sullivan concluded that European impacts had resulted in the destruction of over 90% of the middens at Wagonga Inlet, while the middens at Pambula had been subject to much lower levels of disturbance and more than 95% were still extant. It was also noted that similar large midden mounds at Wallaga Lake had also mostly been destroyed (Sullivan 1981: 85).

Hughes and Sullivan (1978) undertook a preliminary study for the Five Forests, a study area of over 300 square kilometres, dominated by steep forested hills, that encompassed parts of the coastal strip and up to 20kms of the adjoining hinterland between Wallaga Lake and Bega River. Eight shell middens were recorded in the estuarine and coastal zones. Five small scatters of predominantly quartz artefacts were recorded within the forested hills: four on spurs and ridges and one on the banks of a creek.

Hughes and Attenbrow (1981) investigated an area of approximately 250ha at Potato Point, between Tuross Inlet and Narooma. The study area comprised beach and foredunes associated with lagoons, the Lake Brunderee wetland complex, sand flats behind Potato Beach, and the adjacent forested bedrock slopes and ridges. Eight sites (five open sites and three shell middens) were identified in the foredune and lagoon complex. Three open sites were identified in the course of survey sampling across the forested ridges around Lake Brunderee.

Hughes and May (1982) surveyed an area of 1.55ha, on the southern side of the Bega River, for the Tathra River Estate. They recorded five isolated artefacts and 17 other sites during the survey, comprising 16 stone artefact scatters and one shell midden. The results of that survey were interpreted as evidence that ecotonal areas such as the estuaries were the focus of camp sites within the coastal hinterland. Most of the sites were located on flat or gently sloping spurs. Rhyolite was the predominant stone material, porphyry, quartz and silcrete were also recorded.

Additional investigations at Tathra River Estate were undertaken by Barber and Williams (1993, 1994) and NSW Archaeology (2005, 2009). In 1993 Barber and Williams reviewed the 1982 study by Hughes and May. They revisited the locations of the 17 previously recorded sites (of which 13 were successfully relocated) and identified four additional sites, comprising three artefact scatters and one midden, all of which were described as "small in size" (Barber and Williams 1993: 6). A test excavation program was subsequently undertaken in order to more fully assess the nature and extent of the archaeology at Tathra River Estate.

The test excavations undertaken by Barber and Williams (1994) comprised 404 shovel test probes (50x25cm) across ten of the previously identified sites and eight subsidiary areas. The investigations aimed to not only test the spur lines on which artefacts had been recorded at the surface, but also a series of flats and subsidiary spurs between the main spurs. A total of 898 artefacts were recovered during the investigations. Artefact numbers from individual pits varied considerably. Areas such as the intermediary flats tended not to yield artefacts, or only to yield low numbers. Whereas the flatter sections of the spur crests, particularly the terminal spur crests, closest to the river and wetlands, tended to yield higher numbers of artefacts.

In 2005 NSW Archaeology (Dibden 2005b) undertook a comprehensive review of the archaeology across the Tathra River Estate. The review entailed comprehensive landscape survey of the entire study area and a full re-evaluation of the archaeological resource. The result of that investigation was that a further 30 occurrences of stone artefacts were identified, four in association with previous recordings and the remainder within landforms that had not previously been identified as containing archaeology. The previously recorded shell middens were also brought into question in terms of their status as archaeological sites.

NSW Archaeology conducted a further program of test excavation in 2008 (Dibden 2009). Those investigations saw 811 50x50cm test pits excavated across 74 transects. Artefacts were recovered from 488 test pits. Artefacts were present across all transects. However, it was found that artefact density was variable, and while most of the test areas appeared to contain low to very low densities of stone artefacts, the lower gradient sections of spurs, that afforded good access to the river and wetlands, tended to be characterised by higher densities of artefacts.

4.4 Predictive Model

The archaeology of the Eurobodalla region and the far south coast of NSW, more broadly, is dominated by flaked stone, artefact scatters and shell middens, but also includes sites such as burials, ceremonial grounds, stone arrangements, quarries, rock shelters, ground stone (e.g. axes and grinding grooves), natural/mythological sites, modified trees and areas of PAD. While some of these site types, such as artefact scatters or ceremonial sites, can occur in any given location, the likelihood of finding midden, burials or PAD is determined by a range of factors including soil type and the extent of prior disturbance. This predictive model is summarised in Table 4

Stone artefacts are the most ubiquitous component of the archaeological record of Aboriginal occupation. Artefacts can be found on any landform. However, previous research along the south coast suggests that sites are more common along the coastal strip and around estuary margins, or at distances in excess of 12km from the coast (Hughes 1995). Stone artefacts and shell middens are a common site type around and along the coastline in New South Wales. Stone artefacts recorded in such locations are commonly identified in association with middens. The prevalence of surface ground exposure, together with erosional features that expose subsoils, will often dictate the likelihood of identifying the presence of stone artefacts during survey.

Both the site mapping from the AHIMS searches and the above review of previous investigations in the local area suggest that middens most commonly occur along the coastal shoreline and in association with estuary foreshores (e.g. spurlines leading down to estuaries, lakes and lagoons). Differentiation between Aboriginal middens, natural shell deposits and modern shell deposits can be problematic, especially where surface exposures have been subject to traffic and associated high levels of shell fragmentation. Aboriginal middens are typically characterised by weathered shell specimens within a given economic/edible size range and tend to be dominated by species such as

Cabestana, Anadara, Pyrazus ebeninus, and Ostrea. The presence of stone artefacts and evidence of camp fires (e.g. charcoal lenses) can assist in determining the cultural nature of such shell deposits.

Areas of PAD are often identified in association with stone artefacts and/or midden, or on relatively undisturbed landforms with a high likelihood of containing stone artefacts, midden or other cultural deposits. PAD will normally tend to be identified on landforms that are geomorphologically stable, or subject to aggrading rather than eroding processes. Although, in situations where potential subsurface deposits are relatively deep (e.g. sands), PAD may still occur despite disturbance and erosional affects to the upper deposits.

The location of sites such as grinding grooves, quarries and rock shelters are all highly dependent upon the presence of suitable rock outcrops. They can occur anywhere that such outcrops are found. European quarrying and mining practices can often overlap with such areas, which means that Aboriginal sites may be obscured, damaged or effectively destroyed, thus hampering their identification during survey.

Sites such as modified trees will generally only be found in areas where older growth trees are present. Examples of such remnant vegetation are becoming increasingly rare, particularly given the extent of logging and associated forestry operations along the far south coast.

Burials are a site type that are more difficult to predict in terms of landform due to the fact that geographical and chronological variations in cultural practices for internment and treatment of the dead can result in a diverse range of burial types and locations. Broadly speaking, along the NSW coast as a whole, burials are often found in association with shell middens. There are also ethnohistorical references to burials being associated with large trees. However, burials tend to be most commonly identified during ground disturbance activities (e.g. excavation), or as the result of erosional processes. It is rare for such sites to be identified during survey.

Similarly, sites such as ceremonial grounds, stone arrangements and mythological sites may occur anywhere in the landscape. Ethnohistorical records and oral histories often play an important role in identifying the potential locations of such sites. Farming practices such as ploughing may obscure or destroy such sites.

Information relating to Aboriginal occupation during the last 200 years indicates that contact and post-contact sites often coincide with locations that were traditionally used prior to European invasion. Continued Aboriginal use of such locations is more common in areas unsuitable for agricultural purposes. However, the employment of Aboriginal people on European farms means that potential also exists for such sites to occur in association with lands used for cultivation and pastoral activities.

Table 4: Summary predictive model for the area surrounding Brou waste management facility

Site Features	Predicted Potential	Sensitivity Within Activity Area
Stone artefacts	Moderate to high	Any landform. Increased sensitivity on low gradient landforms, particularly where prior disturbance is limited.
Midden	Low to Moderate	Any landform. Increased sensitivity on low gradient landforms near the coast or estuary margins, particularly where prior disturbance is limited.
Potential archaeological deposit(PAD)	Low to moderate	Increased sensitivity on low gradient landforms where prior disturbance isminor.
Ceremonial/Dreaming	Low to Moderate	Any landform.
Burial	Low to Moderate	Any landform. Increased sensitivity where deeper soil profiles and/or midden deposits occur.
Stone arrangements	Low to Very Low	Unlikely to occur, but presence cannot be completely discounted.
Culturally modified tree	Low to Moderate	Anywhere where mature trees remain.

4.4.1 Predictive Statement

Given the nature of the local topography and geology, it is predicted that:

- there is a moderate to high potential for stone artefact scatters on low-gradient landforms;
- there is a low to moderate to high potential for midden to occur on low-gradient landforms;
- there is a low to moderate potential for stratified or intact subsurface archaeological deposits;
- There is a low to moderate potential for ceremonial or dreaming sites;
- there is a low to moderate potential for burials to be present within the proposed study area;
- There is a low to moderate potential for culturally modified trees and;
- the presence of stone arrangements and places of intangible cultural value cannot be discounted.

Predications regarding location of different site types within the study area are:

- **Isolated artefacts** are found across the entire landscape. These finds can occur in any location as Aboriginal people traversed the country for thousands of years. Isolated finds may end up in a recorded location as a result of humans, erosion or depositional forces. These sites are likely to occur in the study area.

- **Stone artefact scatters** represent a camping location and are identified by a concentration of stone flakes. They are a common site type as they are more likely to survive in the archaeological record than other types of sites. Artefact scatters will occur across the landscape, usually in association with a resource such as permanent water. Low-gradient landforms close to major water sources were a preferred location for camping. As the study area is in a coastal location, near two large bodies of water, artefact scatters are likely to occur on areas of low gradient.

- **Potential Archaeological Deposit (PAD)** are buried archaeological materials, or soils and sediment thought to contain buried archaeological materials, can occur in locations where past activity created sediment deposition, or where soil and sediment aggradation has been an active geomorphological process. Paradoxically, PADs are most likely to be observed where erosive processes are active, e.g. where sediment exposures reveal the stratigraphy of the subsurface environment.

- **Scarred/culturally modified trees** display evidence of human modification and manipulation. They require the presence of mature trees and are likely to be found in any area that supports old-growth vegetation.

- **Hearths/ovens** indicate locations where a fire was lit for one-off (hearth) or multiple uses (oven) and are identified by presence of charcoal or burnt clay (used as heat retainers). Hearths are recorded either in isolation or in association with other Aboriginal cultural features such as camp sites. Ovens are generally larger than hearths and often include other materials such as bone. No hearths or ovens have been recorded near the study area.

- **Ceremonial places** are found in isolated locations throughout the landscape. The preferred location of these places will vary from region to region. One such site, AHIMS#62-7-0021 was amongst the AHIMS sites in the vicinity of the study area and the presence of these sites cannot be wholly discounted. They may take the form of tangible or intangible sites.

- **Burials** are generally found in elevated, soft sandy, alluvial deposits or in proximity to rivers and major creeks. It is important to note that burials are typically only detected through disturbance and they may occur anywhere. Three burials have been recorded within the Batemans Bay region.

- **Shell middens** show evidence of shell discard after people have collected, eaten and discarded shellfish. Middens may also contain other cultural material including stone artefacts, other faunal remains or charcoal from cooking. Middens are frequently recorded in the vicinity of the study area.

4.5 Field survey and test excavation investigation results

This section includes a summary of the results of the initial due diligence survey (Lantern Heritage, 2022) that identified the sensitive landform within the study area (Figure 2; Figure 6). Subsequent investigation through test excavation in accordance with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCW 2010b).is then summarised in Section 4.5.2. Further details of test excavation can be found in the excavation report (Appendix 2).

4.5.1 Due Diligence Survey (Lantern Heritage 2022)

As detailed in Lantern Heritage (2022), visual inspection of the study area was conducted on 6th June 2022 by Conor McAdams and Jo Dibden of Lantern Heritage Pty Ltd. The visual inspection involved a pedestrian survey which focussed on 4 distinct survey units within the study area (Figure 6). It should be noted that dense vegetation across much of the study area impacted survey coverage. While existing access track exposures and areas of exposed or eroded ground provided the best archaeological visibility, this was also hampered by the large quantities of background quartz found throughout the study area.

Overview

The study area was assessed as a series of smaller survey units (survey units 1-4: Figure 6), to provide a comprehensive assessment of the variety of landforms that exist across the study area.

No archaeological sites or objects were observed, but two survey units (Unit 2 and Unit 3) correspond to landforms which are likely to contain Aboriginal sites or objects. Because historic impacts were spatially varied, these landforms retained some soil depth. Survey coverage and archaeological visibility were impacted by environmental conditions and, as a result, these two landform units require further investigation to assess their archaeological potential. The two other survey units (Unit 1 and Unit 4) were assessed to be of low archaeological potential, due to the landform context, the extent of modern disturbance and the lack of soil depth likely to contain Aboriginal artefacts.

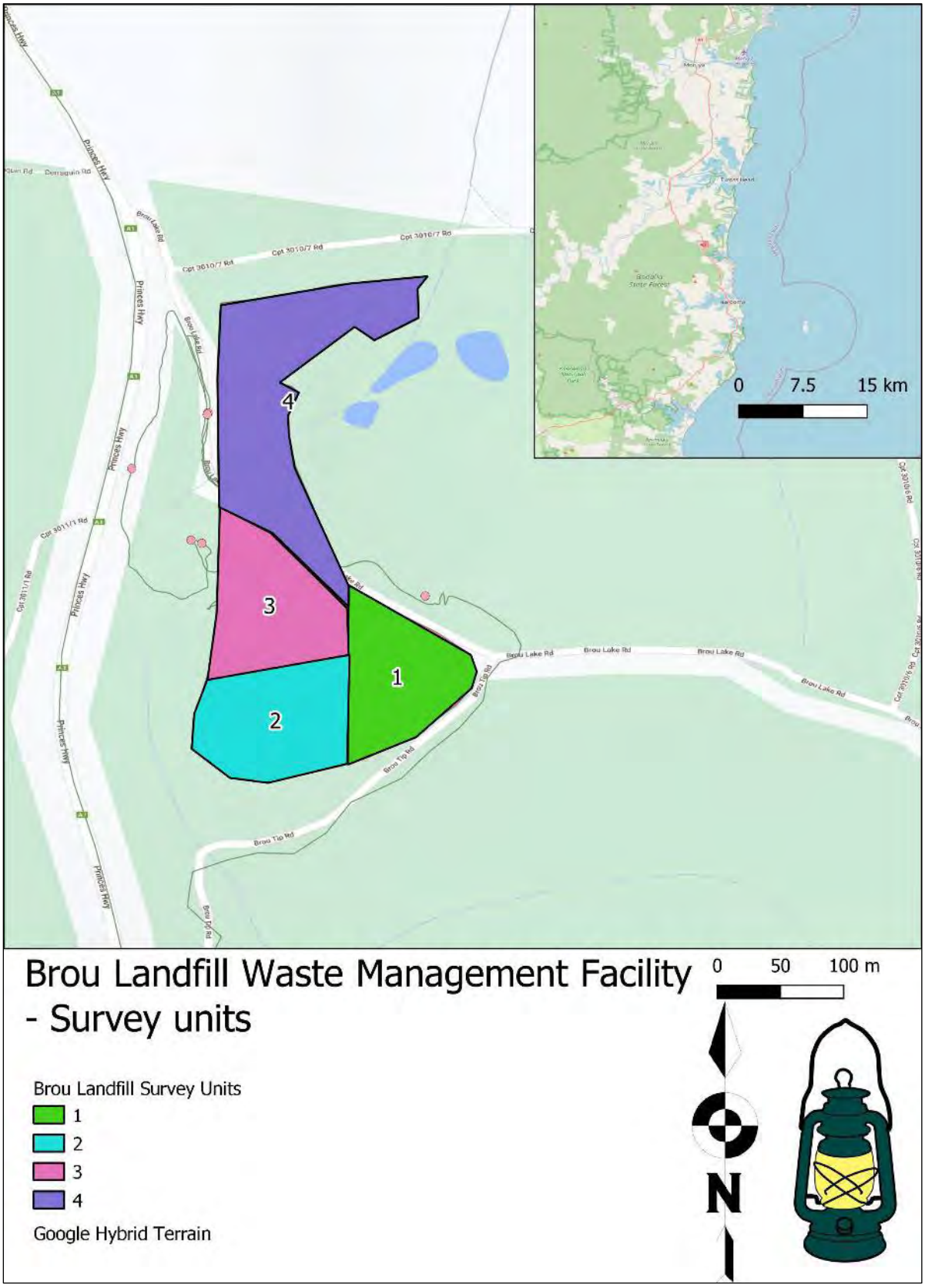

Figure 6: Overview of areas surveyed during visual assessment

Survey unit 1

Survey unit 1 is located in the southeastern extent of the study area (Figure 6), in an area of open, disturbed forest to the east of the current waste management facility (Plate 1). Survey coverage was negatively impacted by dense vegetation (Plate 2), but extensive disturbance and sediment transport was evident, with vehicle tracks, including earthwork 'speed bumps' (Plate 3), resulting in large areas of exposed quartz gravels, which restricted archaeological visibility in areas of higher survey coverage. Trees and vegetation in the area were young and there was little evidence of intact soil profiles. Archaeological potential is very low in this highly disturbed area (Plate 4).

Survey unit 2

Survey unit 2 is an area of disturbed woodland to the west of survey unit 1. It covers the gentle, southern slope of a low hill. Despite extensive historic impacts, evident from paths, borrow pits and uneven ground related to mechanical processes (Plate 5), areas with apparently intact soil are present, along with large tree stumps that indicate considerable depth of soil in some areas (Plate 6), including in some clearings. Dense vegetation limited survey coverage, particularly on the southern slope of the hill (Plate 7). Where paths and tracks provided exposures, archaeological visibility was limited by the ubiquitous background quartz (Plate 8). While no artefacts were observed, this area retains some archaeological potential and requires further investigation.

Survey unit 3

Survey unit 3 is located to the north of the survey unit 2 (Figure 6), on top of the low hill. Vegetation is open forest (Plate 9, Plate 10), but leaf litter provided little survey coverage across much of the area. The exposure created by the vehicle track that crosses the middle of the study area indicates that soil depth of several centimetres persists within this survey unit (Plate 11), but archaeological visibility was virtually zero because of the ubiquitous background quartz (Plate 12). On the north-facing slope there are several old-growth trees and stumps of similar trees. But while soil depth persists in some areas, erosion due to modern impacts is extremely spatially varied. Because of the north-facing, raised geomorphological setting of this unit, and the lack of survey coverage/ archaeological visibility, it is impossible to rule out archaeological potential without further investigation.

Survey unit 4

Survey unit 4 is located in the northern extent of study area (Figure 6) and is dominated by a densely wooded ravine (Plate 13). The steepness of the slope and dense vegetation made ingress difficult and limited survey coverage, but the steepness of the slope is also a factor limiting archaeological potential. Extensive modern impacts further limit the archaeological potential of this area, visible as tracks (Plate 14), areas of deposited sediment (Plate 15, Plate 16) and rubbish that has been, presumably, dumped illegally.

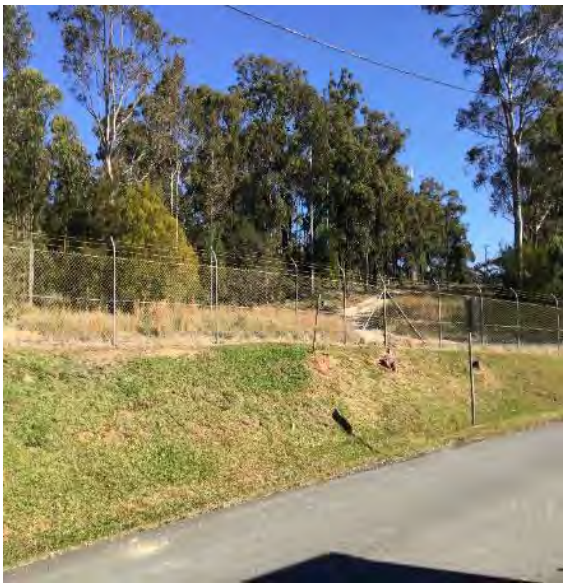

Plate 1: Study area from current waste management site (looking west)

Plate 2: Disturbed woodland (Survey unit 1)

Plate 3: Exposed quartz gravel, indicating disturbance and limiting archaeological visibility (Survey unit 1)

Plate 4: Open forest, disturbed by logging (Survey unit 1)

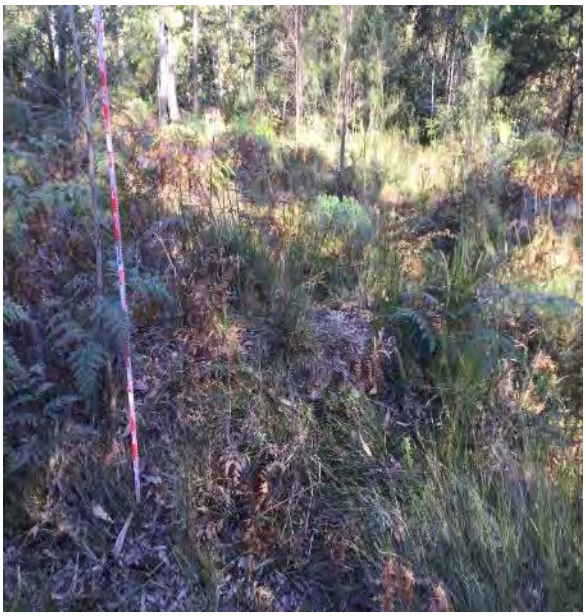

Plate 5: borrow pit (Survey unit 2)

Plate 6: Older stumps indicating some soil depth (Survey unit 2)

Plate 7: Dense vegetation on slope (Survey unit 2)

Plate 8: Fragmentary quartz gravels limiting archaeological visibility (Survey unit 2)

Plate 9: clearing on top of hill (Survey unit 3)

Plate 10: limited survey coverage top of hill (Survey unit 3)

Plate 11: Track exposure indicating soil depth top of hill (Survey unit 3, northern extent)

Plate 12: Archaeological visibility limited by gravels on track (Survey unit 3, northern extent)

Plate 13: Steep gully with dense vegetation (Survey unit 4)

Plate 14: Vehicle tracks, dumping and disturbance (Survey unit 4)

Plate 15: Very disturbed, heavily vegetated area (Survey unit 4)

Plate 16: view across front (Survey unit 4)

Summary
Survey coverage was low throughout the study area, due to the extent of vegetation cover. Vehicle tracks, animal burrows, tracks and eroding slopes provided exposures, but archaeological visibility was virtually nil, due to the ubiquitous quartz gravels that were found throughout the study area. The archaeological potential of the study area was assessed as four separate landform units (Figure 6), all of which showed evidence of historic and modern disturbance related to logging, including vegetations removal, tracks formation and sediment deposition.

Survey units 1 and 4 are assessed as having low archaeological potential. Survey unit 1 is highly disturbed, with little evidence of *in-situ* soils or sediments likely to contain Aboriginal sites or artefacts. Survey unit 4 is centred on a heavily vegetated, steep gully landform that was unlikely to be a focus of occupation. In addition, historic impacts to this area are visibly extensive, which further limits its archaeological potential.

Survey units 2 and 3 are assessed as having moderate-high archaeological potential. Although no Aboriginal sites or artefacts were found, survey coverage and archaeological visibility were virtually nil due to environmental factors. These survey units correspond to a low hill in a resource-rich area, which may have formed an attractive landscape feature for Aboriginal communities in the past. While historic impacts are clearly visible in these areas, persistence of old-growth vegetation, along with visible soil depth in exposed profiles, indicate that some areas retain the potential to preserve Aboriginal sites. As a result, it was deemed necessary to conduct test excavations, in accordance with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCW 2010b), to assess the nature and extent of any archaeological deposits within the study area.

4.5.2 Test excavation

Test excavations were conducted on 18-10-22, targeting the sensitive landforms identified during the due diligence survey (Lantern Heritage, 2022; Plate 17). The subsurface testing was undertaken by a team comprising archaeologists Conor McAdams and Cassandra Venn, from Lantern Heritage, and representatives from the RAPs, Jason Davison (Traditional Owner) and Deon Morgan from Guntawang Aboriginal Resources Inc. The initial approach to testing was sampling five test pits from 50cm x 50cm. The general location of the five test pits was determined in consultation with the RAPs prior to going into the field (Lantern Heritage 2022b; Figure 7). As discussed in that methodology, the exact location and number of individual test pits was then determined during fieldwork in consultation with the RAP representatives participating in the test excavations, targeting the areas most likely to contain Aboriginal artefacts and avoiding areas of obvious disturbance (Figure 8).

The testing program aimed to identify whether this portion of the landscape retained archaeological evidence of Aboriginal use and to check for the presence of Aboriginal objects within this area. The position of the 5 testing locations is provided below in Figure 8.

The overall objectives of the testing program were to:

- Determine if Aboriginal objects were present within subsurface deposits across the study area; and
- Characterise the subsurface stratigraphy in terms of phases and processes of deposit formation.

Test Pits

- The test pits were excavated by hand (e.g. trowels, spades and other hand tools) with each test pit comprising one or more 50 x 50cm test units.
- The first test pit was excavated in arbitrary 5cm spits; the subsequent test pits were then excavated in 10cm spits to a culturally sterile layer. All decisions to terminate test excavation were made in consultation with RAPs.
- The intervals between pits ranged from 10m to 40m.
- As outlined above, the test pits locations aimed to target areas of least disturbance within the crest of the low hill and its southern slope, the areas of highest archaeological potential identified during the initial due diligence survey.
- Following completion of each test unit, the results were reviewed in terms of horizontal and vertical distributions of artefacts and additional test units were excavated to further explore concentrations of artefacts and/or confirm absence of artefacts.
- Photographic and/or scale drawn records were kept for all test pits.
- Test pit locations, surface levels and final levels for all test pits were surveyed with a handheld GPS.
- All excavated material was collected in buckets by pit and spit and sieved through a 5mm mesh. Decisions regarding termination and/or expansion of a test pit were made in partnership with the Aboriginal community once all spoil was sieved.
- The maximum surface area of all test excavation units was no greater than 0.5% of the area being investigated.
- Test excavation units were backfilled with the spoil from excavation and sieving as soon as practicable.
- Test excavations ceased once enough information had been recovered to adequately characterise the nature of the deposit.

Plate 17: View of low hill landform from inside Brou waste management facility, looking west.

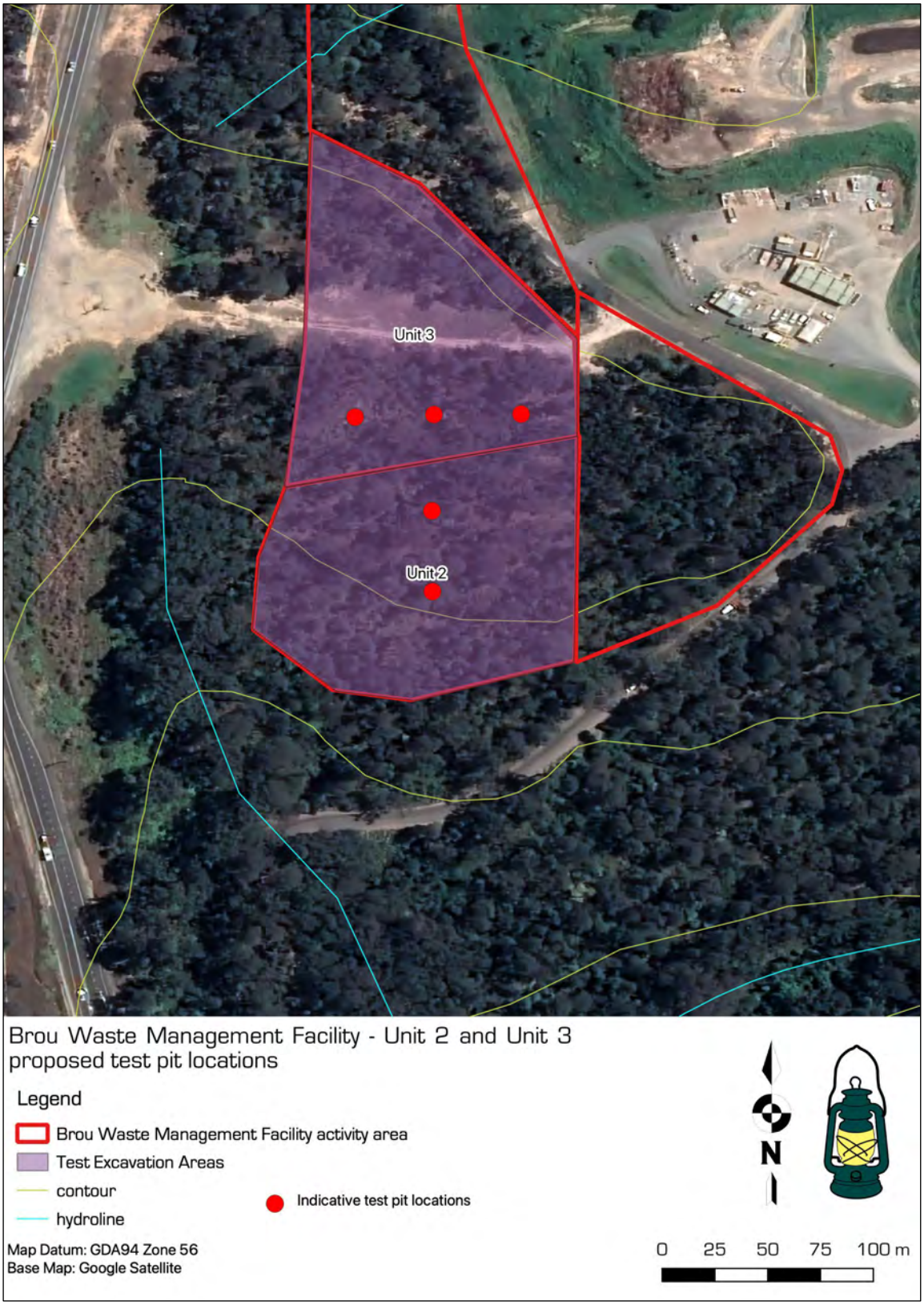

Figure 7: Location of proposed test pits across areas of identified PAD at Unit 2 and Unit 3, Brou Waste Management Facility site.

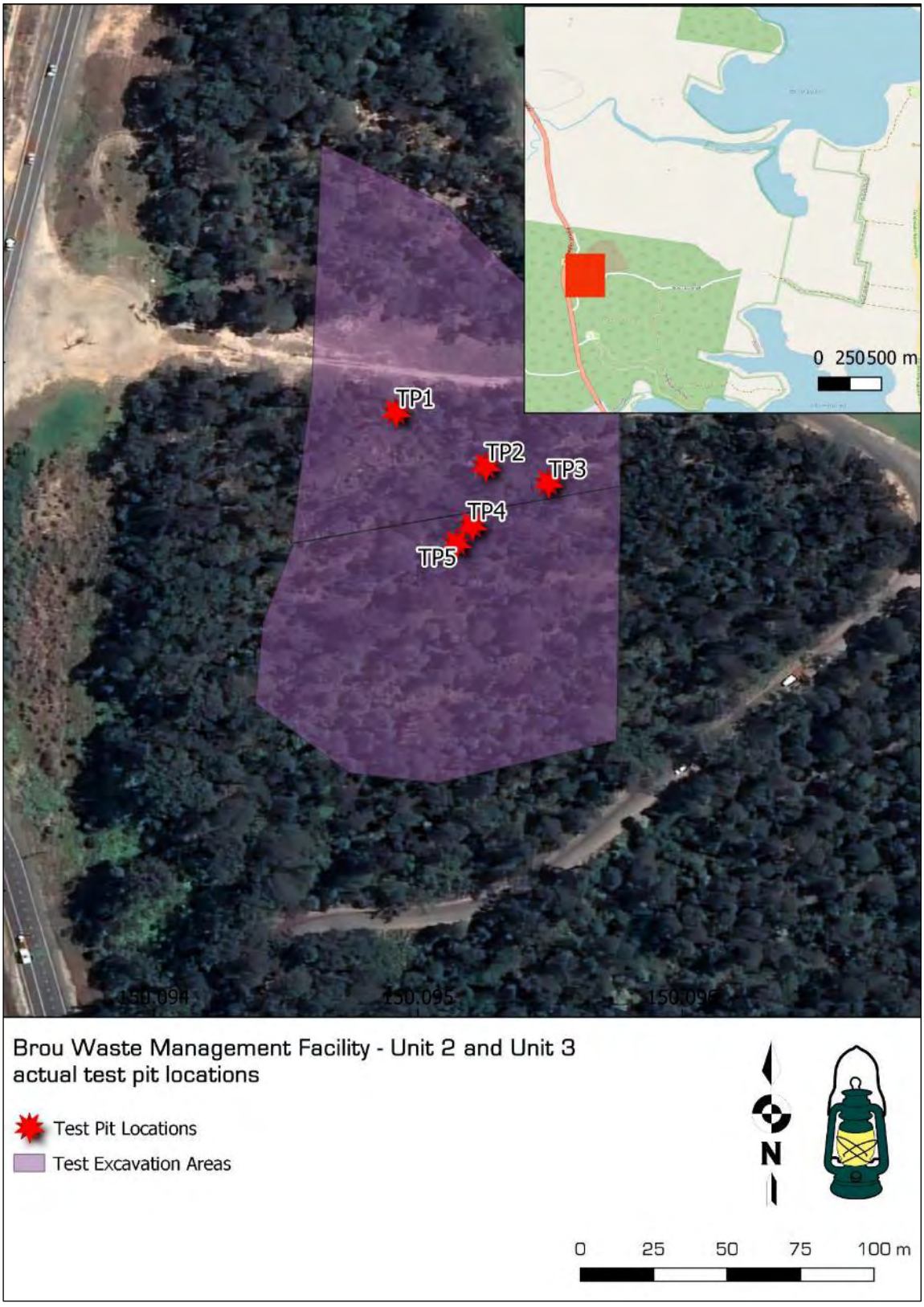

Figure 8: Actual test pit locations within Unit 2 and Unit 3

Test excavation was conducted along the crest and southern slope of the low hill landform, where there was judged to be the highest potential for Aboriginal objects and relatively intact soil profiles.

The test pits were initially arranged with three test units (TP1 -TP3) located along an east-west running transect on the crest of the low hill, and two further test units (TP4 and TP5) extending southwards down the gentle slope (Figure 8). These locations were chosen as areas of least disturbance that corresponded to landscape features most likely to contain Aboriginal objects. The five test units correspond to a total area of 1.25m^2.

Test pits were shallow, depths varied from 15cm at TP 1 and TP 2 and to 30cm at TP 3. A total volume of 1.25m^3 of deposit was excavated and sieved.

No Aboriginal objects were found in any of the test pits. Nor was any other archaeological evidence of Aboriginal occupation identified within any of the test pits. One rock fragment with somewhat ambiguous features was excavated from TP 3, but in consultation with RAPs this was determined to be non-artefactual. Upon completion of the five test units across the eastern portion of the study area it was concluded, in partnership with the RAPs present for the fieldwork, that no further pits were required across other portions of the study area. The rationale behind this decision was that testing across the predicted area of highest potential had indicated:

- Higher levels of disturbance than anticipated; and
- No evidence of archaeological material within any of the remnant soil horizons.

On this basis, the entire study area was assessed to be of very low archaeological potential. It was agreed in discussion with the RAPs that no further assessments or investigations were required and the proposed development could proceed under due diligence.

Stratigraphy

All test pits revealed extensively truncated and disturbed soil profiles and photographic records and strat logs are provided in Appendix 2. In all but Test Pit 3, leaf litter and weakly structured organic-rich topsoil/humus was deposited directly above weathered bedrock and saprolite to a depth of 15-20cm. These profiles indicate severe erosion and removal of soil, resulting in very low archaeological potential. In Test Pit 3, the leaf litter and humus contained a higher proportion of sand and gravel and were overlying a chaotically arranged deposit of poorly sorted aggregates of soil, quartz gravel, anthropogenic waste and clay rip-up clasts that originated from a subsoil horizon. Below this unit was a truncated b-horizon consisting of massive, orange-brown to grey-brown clays. These are indicative of high-energy soil disturbance, leaving only parts of the archaeologically sterile, subsoil horizons intact. This has resulted in an almost total loss of archaeological potential.

Conclusions

The test pits excavated across the study area were all terminated at a layer indicative of the termination of deposits with potential to contain Aboriginal objects. No Aboriginal objects or any form were recovered from any of the pits. Furthermore, the stratigraphy across the study area indicated much higher levels of disturbance than had been anticipated.

The test excavation program targeted, the areas with the highest predicted potential to contain Aboriginal objects. It also targeted the areas with the lowest levels of visible prior disturbance. As such, the absence of Aboriginal objects within these areas of highest archaeological potential is interpreted as an indication that the entire study area is of very low archaeological potential for Aboriginal objects.

This interpretation of the results was discussed in the field with the representatives from the RAPs. It was concluded that the proposed activity was unlikely to impact Aboriginal objects and that no further investigations or mitigation measures were warranted.

5 CONSULTATION PROCESS

5.1 Overview

The Heritage NSW *Aboriginal cultural heritage consultation requirements for proponents* (DECCW 2010c) were implemented by Lantern Heritage on behalf of Eurobodalla Shire Council at the commencement of the project. Summaries of the various stages in the consultation process are provided below, together with inputs received to date by registered Aboriginal parties (RAPs). Examples of correspondence and notifications sent out to Aboriginal groups and individuals are provided in Appendix 1 together with a summary log of all consultation.

5.2 Stage 1

The first stage of the consultation process involved the identification of potential stakeholders and invitations to register an interest in the program. This initially involved letters (refer to Appendix 1 for an example of the letter) sent out to the following organisations on 7th December 2021:

- Aboriginal Cultural Heritage Regulation Team, Heritage NSW – Queanbeyan;
- Native Title Services Corp (NTS Corp);
- National Native Title Services (NNTS);
- Office of the Registrar Aboriginal Land Rights Act 1983 (Office of the Registrar ALRA)
- Bodalla Local Aboriginal Land Council (BLALC); and
- Eurobodalla Shire Council.

A newspaper advertisement (refer to Appendix 1 for a copy of the advertisement) was also placed in the Narooma News on 16th December 2022. The closing date for initial registrations of interest was the 8th July 2022.

Following receipt of advice from the Office of the Registrar ALRA, Bega Valley Shire Council and Heritage NSW, additional letters were sent out to the following groups, organisations and individuals on 21st July 2022:

- Barraby Cultural Services/ Lee Field
- Yurrandaali/Bo Field
- Ngunnawal Elders Corporation/Arnold Williams
- NSW Aboriginal Land Council
- Cobowra Local Aboriginal Land Council
- Mogo Local Aboriginal Land Council
- Bodalla Local Aboriginal Land Council
- Wagonga Local Aboriginal Land Council (WLALC)
- Djirringanj Elders/ John Dixon
- Batemans Bay Local Aboriginal Land Council
- Batemans Bay Aboriginal Corporation
- Jerrinja Consultants Pty Ltd/Graham Connolly
- Merrimans Local Aboriginal Land Council/ Di McVeity
- Gunjeewong Cultural Heritage Aboriginal Corporation/Shayne Dickson
- Iris White
- Thomas Brown
- Corroboree Aboriginal Corporation/ Marilyn Carroll-Johnson
- Murri Bidgee Mullangari Aboriginal Corporation/ Darleen Johnson
- Guunamaa Dreaming/Richard Campbell
- Nundagurri Aboriginal Corporation/ Newton Carriage
- Walbunja/ Hika Te Kowhai
- Goobah Development Pty Ltd./ Basil Smith
- Gunyuu/ Kylie Ann Bell
- Wullung/ Lee-Roy Boota
- Badu/ Karia Lea Bond
- Yerramurra/ Robert Parsons
- Jerringong/ Jodie Stewart
- Merrigarn Indigenous Corporation/ Shaun Carroll
- Wingikara/ Hayley Bell
- Bilinga/ Simalene Carriage
- Munyunga/ Kaya Dawn Bell
- Pemulwuy/ Pemulwuy Johnson
- Karrial/ Karrial Johnson
- Didge Ngunawal Clan/ Lillie Carroll
- Ginninderra Aboriginal Corporation/ Krystle Carroll
- Muragadi Heritage Indigenous Corporation/ Jesse Johnson
- THAUAIRA/ Shane Carriage
- WALGALU/ Ronald Stewart
- Chapman Clan/ Les Simons
- Gadhu Dreaming/ Gordon Campbell
- South East Coast Gadu Elders (Yuin Nation)/ Maureen Davis
- Noel Webster
- Noel Butler
- Thoorga Nura/ John Carriage
- James Davis
- South Coast NSW Aboriginal Elders/ Owen Carriage
- Gilay Consultants/ Carol Slater
- Guntawang Aboriginal Resources Incorporated/ Wendy Morgan
- Jason Davison
- Yurwang Gundana Consultancy Cultural Heritage Services/ Dean Bell and Merekai Bell
- Clive Freeman
- Vivienne Mason
- South Coast People/ Sandy Chalmers
- Joint Management Co-Ordinator Gulaga National park/ Amanda Close

Registrations of interest were received from the following nine groups and individuals (RAPs):

- NTS Corp/ Isobel Brinin, Sandy Chalmers
- Didge Ngunawal/ Lily Carroll;
- Gungeewong/ Shayne Dickson;
- Jason Davison;
- Yurwang Gundana/ Merekai Bell;
- Guntawang/ Wendy Morgan;
- Wagonga LALC/ Cheryl Moreton;
- Clive Freeman;
- Gadu Elders/ William Davis;
- Batemans Bay LALC/ Roslyn Carriage.

Two other groups/individuals registered but wished for their details to remain private. All Registered Aboriginal Parties were given until July 2022 to provide feedback and comment on the proposed draft methodology.

5.3 Stages 2 and 3

Each of the RAPs were then contacted again by letter with more detailed information relating to the proposed works, the proposed process of impact assessment, including anticipated timelines, and details of known Aboriginal sites in and around the subject area. These letters were sent out on 17th August 2022 (refer to Appendix 1 for example letter and to Lantern Heritage (2022b) for the attached methodology). The letters also invited the RAPs to provide feedback, in writing, in person or over the phone, regarding:

- their cultural concerns, perspectives and assessment requirements;
- contributions to the research methodology and culturally appropriate information gathering;
- the cultural significance of Aboriginal objects and/or places in the proposed study area; and
- inputs into the development of any cultural heritage management options.

The formal closing date for feedback was 16th September 2022. However, it was made clear in the letters that information and other inputs would be welcome at any stage throughout the project. Furthermore, options were made available for providing restrictions on any information provided, so as to ensure that culturally sensitive information is not circulated inappropriately. Options were also provided for delivering and handling information that might relate to specific women's/men's business through appropriate gendered channels.

The field survey and test excavation undertaken during June and October 2022 respectively, also provided an opportunity to gather information regarding cultural significance. Fieldwork was conducted in collaboration with the Guntawang Aboriginal Resources Inc. and Jason Davison (Traditional Owner). The BLALC was represented by Chris Hoskins and Ron Thomas, while John Dixon, Eric Carpenter, Ron Thomas and Tanya represented the interests of Djirringanj Elders Federation. Topics discussed during fieldwork included traditional use/function of areas within the broader landscape, and the nature of the subsurface distribution of stone artefacts in the region.

More generally, the feedback regarding the nature of the development and the extent of potential impacts on Aboriginal objects, was satisfaction that:

- Direct impacts will not result in a loss of cultural heritage significance, and
- The broader indirect impacts will not result in a loss of cultural heritage significance.

5.4 Stage 4

Draft copies of this ACHAR and the appended excavation report (Appendix 2) were sent out to RAPs for review on 22nd November 2022. Wendy Morgan of Guntawang Aboriginal Resources inc. sent an email confirming that they were happy with the results and conclusions presented on 29th November 2022.

No other RAP provided comment to this Stage.

6 SUMMARY AND ANALYSIS OF BACKGROUND INFORMATION

The cultural heritage values in the study area can be assessed through analysis of the information provided in the preceding chapters. This section considers what the landscape, historic/ethnohistoric sources, archaeological research and Aboriginal community consultation tells us about how the landscape may have been used in the past.

Located near the coast, a short distance from Brou Lake and Mummuga Lake, the study area comprises a low hill, with a steep ravine to the north. The ecotonal environment in this varied landscape supports a diverse range of native flora and fauna. Within the study area are sheltered, low gradient landforms with somewhat elevated open locations that provide opportunities for monitoring the surrounding area.

The far south coast of NSW has been relatively little-studied, but it is likely that that diverse environmental resources surrounding the study area were attractive to Aboriginal communities. Registered archaeological sites in the area tend to cluster around more developed areas, such as Narooma, immediately to the south, or around Batemans Bay, further to the north. Interestingly, another investigation nearby the study area, at the modern campsite at Brou Lake (Dibden, 2005), expected a high density of artefacts based on the environmental resources of the region. The very low density of artefacts that was found there was explained by a lack of proximity to the reliable sources of water that can easily be found elsewhere in the landscape. This may also be a factor explaining the lack of artefacts at the location in this study. The extent of prior impacts, however, is a major factor affecting the distribution of archaeological materials and the extent of historic disturbance in this area is likely to have destroyed any cultural heritage values that may have been present.

7 CULTURAL HERITAGE VALUES AND STATEMENT OF SIGNIFICANCE

This section details a full assessment of all cultural heritage values at Brou Lake. It has been compiled in accordance with the processes outlined in the *Burra Charter* (ICOMOS 2013a). Each of the sub-sections below provides an overview of how different cultural heritage values are defined in the *Burra Charter*, followed by discussion of how these values apply to the study area assessed during field survey.

7.1 Social or Cultural Values

Within the Burra Charter Practice Note on *Understanding and Assessing Cultural Significance* (ICOMOS 2013b: 4) Social Value is defined as follows:

> ***Social value*** *refers to the associations that a place has for a particular community or cultural group and the social or cultural meanings that it holds for them.*

Within the context of assessing Aboriginal cultural heritage, spiritual values are often closely tied to social values. Within the Burra Charter Practice Note on *Understanding and Assessing Cultural Significance* (ICOMOS 2013b: 4) Spiritual Value is defined as follows:

> ***Spiritual value*** *refers to the intangible values and meanings embodied in or evoked by a place which give it importance in the spiritual identity, or the traditional knowledge, art and practices of a cultural group. Spiritual value may also be reflected in the intensity of aesthetic and emotional responses or community associations, and be expressed through cultural practices and related places.*
>
> *The qualities of the place may inspire a strong and/or spontaneous emotional or metaphysical response in people, expanding their understanding of their place, purpose and obligations in the world, particularly in relation to the spiritual realm.*
>
> *The term spiritual value was recognised as a separate value in the Burra Charter, 1999. It is still included in the definition of social value in the Commonwealth and most state jurisdictions. Spiritual values may be interdependent on the social values and physical properties of a place.*

There are no known social or cultural values associated with the study area.

7.2 Historic Values

Within the Burra Charter Practice Note on *Understanding and Assessing Cultural Significance* (ICOMOS 2013b: 3) Historic Value is defined as follows:

> ***Historic value*** *is intended to encompass all aspects of history—for example, the history of aesthetics, art and architecture, science, spirituality and society. It therefore often underlies other values. A place may have historic value because it has influenced, or has been influenced by, an historic event, phase, movement or activity, person or group of people. It may be the site of an important event. For any place the significance will be greater where the evidence of the association or event survives at the place, or where the setting is substantially intact, than where it has been changed or evidence does not survive. However, some events or associations may be so important that the place retains significance regardless of such change or absence of evidence.*

There are no known historical values associated with the study area.

7.3 Scientific/Archaeological Values

Within the Burra Charter Practice Note on *Understanding and Assessing Cultural Significance* (ICOMOS 2013b: 3-4) Scientific Value is defined as follows:

> ***Scientific value*** *refers to the information content of a place and its ability to reveal more about an aspect of the past through examination or investigation of the place, including the use of archaeological techniques. The relative scientific value of a place is likely to depend on the importance of the information or data involved, on its rarity, quality or representativeness, and its potential to contribute further important information about the place itself or a type or class of place or to address important research questions. To establish potential, it may be necessary to carry out some form of testing or sampling. For example, in the case of an archaeological site, this could be established by a test excavation.*

There are no known scientific or archaeological values within the study area.

7.4 Aesthetic Values

Within the Burra Charter Practice Note on *Understanding and Assessing Cultural Significance* (ICOMOS 2013b: 3) Aesthetic Value is defined as follows:

> ***Aesthetic value*** *refers to the sensory and perceptual experience of a place—that is, how we respond to visual and non-visual aspects such as sounds, smells and other factors having a strong impact on human thoughts, feelings and attitudes. Aesthetic qualities may include the concept of beauty and formal aesthetic ideals. Expressions of aesthetics are culturally influenced.*

There are no known aesthetic values associated with the study area.

7.5 Statement of Significance

No sites were recorded within the study area and there are no impacts proposed to any values of significance.

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8 THE PROPOSED ACTIVITY

Eurobodalla Shire Council's expansion of Brou waste management facility aims to increase the area available for waste management at that site.

8.1 Works proposed at Brou Waste Management Facility

The expansion of Brou waste management facility aims to increase the area available for waste management at that site. While no detailed scope of works has been provided, the proposed works are likely to include:

1. Removal of vegetation
2. Levelling of the ground surface
3. Digging large pits, penetrating to a depth of several metres
4. Use of heavy earth-moving machinery
5. Construction of infrastructure including access roads and hard standing

8.2 Potential Harm to Aboriginal Objects

The levels of prior disturbance and historic impacts within the study area are such that Aboriginal artefacts are unlikely to be found within the soils and sediments. There is, therefore, no potential to harm Aboriginal artefacts.

8.3 Assessment of Harm

Proposed works are unlikely to harm Aboriginal sites or artefacts at the Brou Waste Management Facility study area.

8.3.1 Impacts on cultural heritage values

No heritage values have been identified within the study area, therefore proposed works will not impact cultural heritage values.

9 AVOIDING AND/OR MITIGATING HARM

In Australia, the principal document that provides guidance for the conservation and management of places of cultural significance is the *Burra Charter* (ICOMOS 2013a). The *Burra Charter* is based on the knowledge and experience of Australia ICOMOS members; it "advocates a cautious approach to change: do as much as necessary to care for the place and to make it useable, but otherwise change it as little as possible so that its cultural significance is retained" (ICOMOS 2013a: 1).

Obviously, it isn't necessarily practicable to conserve all places of cultural heritage significance. This means that decisions need to be taken with regard to the heritage values of a given place, or item, the impacts that are proposed and the overall effects from such impacts on the cultural heritage within the study area, across the local region, as well as at state and national levels.

No harm is proposed to Aboriginal objects or places of cultural significance as a result of this project, so there is no need for any mitigation strategies.

10 SUMMARY AND RECOMMENDATIONS

On the basis of the community consultation, field survey and program of subsurface testing carried out as part of this study, no Aboriginal artefacts are likely to be harmed by proposed works at Brou Waste Management facility. As a result, the following recommendations are made:

a) No AHIP is required, as proposed works at Brou Waste Management Facility are unlikely to impact Aboriginal artefacts or cultural heritage values;

b) The proposed activity can only go ahead, with caution;

c) If during the course of the proposed activity, in the rest of the study area, any Aboriginal objects are found, stop work and notify OEH;

d) In the event that human skeletal remains, or suspected human skeletal remains, are encountered during any of the proposed works, stop work, secure the site and notify the NSW Police and OEH; and

e) This Aboriginal Cultural Heritage assessment only covers the works outlined in section 1.2 of this report. If additional impacts or alternative alignments are proposed, further assessment will be required.

11 GLOSSARY

Aboriginal site	A place where Aboriginal activity has occurred and/or a place associated with Aboriginal tradition. Aboriginal sites include locations where archaeological evidence is present and/or places of intangible heritage value, where Aboriginal tradition or oral history indicate the place has meaning or significance to the Aboriginal community.
archaeological sensitivity	A location or landform where archaeological sites or deposits are likely to occur. Such locations may include areas of identified PAD or may correspond to areas for which insufficient information is available regarding the nature and integrity of deposits to identify clear areas of archaeological potential.
archaeological site	A place where physical evidence of human activity is present on the surface (e.g. artefacts, modified trees, middens, earthworks or other structural features) and/or within subsurface deposits.
archaeological deposit	A subsurface deposit containing artefacts or other evidence/features (e.g. fire places, middens or post holes) of human activity.
archaeological visibility	Usually expressed as a percentage, this refers to the extent to which the archaeological deposits, or PAD, are visible during survey.
artefact	An object made, modified or transported (manuport) by humans.
geomorphology	The study of the nature and origin of landforms – i.e. the ways in which the landscape was formed through processes of weathering and erosion.
historical site	A place where human activity has occurred and is associated with non-Aboriginal occupation. Such places may be archaeological sites with physical evidence of activity and/or locations associated with historical events. Historical sites that contain evidence of contemporaneous Aboriginal and non-Aboriginal activity are commonly referred to as post contact sites.
midden	An area of refuse. Middens contain items created (e.g. stone artefacts, bottles or ceramics), or used (e.g. shell and bone from meals) by humans. Middens can occur on both Aboriginal and historical sites.
potential archaeological deposit	PAD: An area or landform predicted to contain archaeological deposits.
scarred tree	A scarred tree, also referred to as a culturally modified tree, is a tree that shows evidence of human activity. This is usually evidenced in the form of a scar where bark has been removed (either an absence of bark of an area of regrowth bark). It may also include modifications to the heartwood (e.g. carving or axe marks). Bark removal and tree carving was practiced by both Aboriginal and non-Aboriginal people. Usually the nature of the scar, the extent of regrowth and the broader context of the tree will provide clues to the origin of the scar (e.g. a surveyor's blaze versus bark removal for a shield or coolamon).
stone artefact	A stone/rock, or piece thereof, that has been modified by humans. It generally refers to portable chipped/flaked, ground or pecked items (Clarkson and O'Connor 2013: 153).

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APPENDIX 1 – ABORIGINAL CONSULTATION

Example Stage 1 Letter

Lantern Heritage Pty Ltd
PO Box 7039
Tathra
NSW 2550

ACN: 620 582 658
ABN: 30 620 582 658

Mobile: 0436 479 888
Email: consultation@lanternheritage.com.au
Web: www.lanterheritage.com.au

Tuesday 19 July 2022

Organisation
(address) Street
PO Box xx
Town, NSW 2xxx
Ph: xxx
E: xxx

mailto:adminofficer@oralra.nsw.gov.au
Dear Sir/Madam

To seek Aboriginal knowledge holders to assist Eurobodalla Shire Council to prepare an Aboriginal Cultural Heritage Assessment Report for proposed works at the Brou Waste Management Facility site.

Eurobodalla Shire Council (ESC) is planning construction works to expand operations and conduct remediation works at the bushfire affected Brou Waste Management Facility site, 10 kms North of Narooma, NSW. An Aboriginal Heritage Due Diligence Assessment has determined that prior to commencement of construction works on the site an Aboriginal Cultural Heritage Assessment Report (ACHAR) and Aboriginal Heritage Impact Permit (AHIP) is required. As such, ESC and its consultants are implementing the *Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW 2010)*. The purpose of community consultation is to assist Heritage NSW in the identification, assessment and management of Aboriginal objects or places.

As such ESC are seeking the names of Aboriginal people who may hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places within the study area for the Brou Waste Management Facility site project.

Aboriginal people identified by your agency will be notified of the project and invited to participate in the assessment process as described in OEH's requirements.
To register your interest to be consulted about this project, please contact consultation@lanternheritage.com.au before **5th August 2022**

The contact details for information regarding this project are:

Michael Holton
Public Works Advisory /
Department of Regional NSW
South Coast Team
E: michael.holten@pwa.nsw.gov.au

Yours Sincerely,
Glenn Merrick

Lantern Heritage
shining a light on people and place

Example Stage 2-3 consultation letter

From: Consultation
To: [redacted]
Subject: Brou Landfill Stage 2/3 consultation
Date: Wednesday, 17 August 2022 11:27:00 AM
Attachments: Brou_ Landfill_CoP Methodology_17082022.pdf
image001.png

Dear [redacted]

Thank you for your registration of interest in the Aboriginal consultation process regarding the Brou Landfill remediation and expansion works at Brou, NSW. Please find attached stage 2/3 consultation letter for the Project.
Note: **The official closing date for comment on the methodology will be the 16th of September 2022**. However, contributions are welcome at any stage throughout the process, and any information received after that date will still be included and incorporated into the final report.
Details for response are included in the attached letter.

Kind regards
Glenn

Glenn Merrick
Assistant Business Manager

Mob: 0436 479 888

Lantern Heritage Pty Ltd
PO Box 7039, Tathra NSW 2550
3/15 Bega St, TATHRA NSW 2550
E: glenn_m@lanternheritage.com.au
W:www.lanternheritage.com.au

Available Monday to Thursday

Public notice from Narooma News

Proposed Works at Brou Landfill Site

Eurobodalla Shire Council (ESC) is planning construction works to expand operations and conduct remediation works at the bushfire affected Brou Landfill site, 10 kms North of Narooma, NSW. An Aboriginal Heritage Due Diligence Assessment has determined that prior to commencement of construction works on the site an Aboriginal Cultural Heritage Assessment Report (ACHAR) and Aboriginal Heritage Impact Permit (AHIP) is required. As such, ESC and its consultants are implementing the **Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW 2010)**. The purpose of community consultation is to assist Heritage NSW in the identification, assessment and management of Aboriginal objects or places.

Registrations of interest are invited from Aboriginal people or organisations who may hold cultural knowledge relevant to determining the significance of Aboriginal objects or places at the abovementioned site in Brou, near Narooma NSW.

The closing date for registrations of interest is 8th July 2022. Registrations can be made in writing or over the telephone through Lantern Heritage:

PO Box 7039

Tathra, NSW 2550

consultation@lanternheritage.com.au

0436479888

Further information regarding the proposed works can be obtained from: Michael Holton

Public Works Advisory

Department of Regional NSW

South Coast Team,

michael.holten@pwa.nsw.gov.au

Consultation Log - Brou Waste Management Facility				
Date	**Organisation**	**Contact Name/s**	**Consultation type / Comment**	**Method**
14/06/2022	Lantern Heritage PTY LTD	Glenn Merrick (Assistant Business Manager), NTSCorp, Heritage Branch OEH Queanbeyan, Office of the Registrar Aboriginal Land Rights Act 1983 (NSW), Eurobodalla Shire Council and LALC, National Native Title Tribunal New South Wales - Sydney Office, Geopatial search	A letter was sent to the main Agencies to nominate knowledge holders for the Brou Waste Management Facility	Emails sent, Bodalla LALC sent by registered post.
14/6/2022	NNTT	geospatial search	nominate South Coast People	email received
15/6/2022	ORSALRA	Brendan Smith	suggest we contact the Joint Management Coordinator for Gulaga National Park: Amanda Close (Ph: 0436 448 273; email: amanda.close@environment.nsw.gov.au), and Wagonga and Bodalla LALCs	email received
15/6/2022	Heritage NSW		supply list of interested parties	email received
16/6/2022	ESC		recommend we contact Wagonga LALC wlalc@bigpond.net.au ;and Vivienne Mason vivella1947@gmail.com	email received

17/6/2022	ntscorp		nominate South Coast People via Isobel Brininands Sandy Chalmers at information@ntscorp.com.au	
21/7/2022	Lantern Heriatge Pty Ltd	Glenn Merrick (Assistant Business Manager),	Stage 1b mailout to 53 recipiants. See mail merge spreadsheet	email and registered post
21/7/2022	Didge Ngunawal	lilly Carroll	Registration of interest	email received
21/7/2022	Gungeewong	Shayne Dickson	Registration of interest	email received
21/7/2022		Jason Davison	Registration of interest	email received
21/7/2022	Guntawang	Wendy Morgan	Registration of interest	email received
21/7/2022	Yurwang Gundana	Merekai Bell	Registration of interest	email received
21/7/2022	Wagonga LALC	Cheryl Moreton	Registration of interest	email received
21/7/2022	Gadu Elders	Maureen Davis	referred letter to William Davis	email received
21/7/2022				
21/7/2022				
22/7/2022		Clive Freeman	Registration of interest	email received
25/7/2022	Gadu Elders	William Davis	Registration of interest	email received
25/07/2022	Gadu Elders	William Davis	sent email clarifying this is the consultation process not an invitation for field work	email sent
4/08/2022	Batemans Bay LALC	Roslyn Carriage	Registration of interest	email received
17/08/2022	Lantern Heritage PTY LTD	Glenn Merrick	Stage 2/3 consultation email sent	Emails sent,
8/09/2022	Yurwang Gundana	Merekai Bell	acceptance of methodology and expression of interest in fieldwork	Email received
15/09/2022	Yurwang Gundana	Merekai Bell	seeking update on fieldwork	Email received
15/09/2022	Yurwang Gundana	Merekai Bell	sent update on fieldwork	Email sent
27/08/2022	Gunjeewong	Shayne Dickson	happy with methodology	email received
29/11/2022	Guntawang	Wendy Morgan	Typo and advising satisfaction with results	email received
29/11/2022	Lantern Heritage PTY LTD	Conor McAdams	Acknowledging receipt of email and addressing issues	Email sent

Copies of written submissions:
Responses received following review of proposed test excavation methodology:

From: yurwang gundana
To: Consultation
Subject: Re: Brou Landfill Stage 2/3 consultation
Date: Wednesday, 7 September 2022 4:45:04 PM
Attachments: image001.png

Yuma, I hope this finds you well

Yurwang Gundana agrees with the methodology and wishes to be a part of the fieldwork/survey

Thanks
Merekai Bell
Yurwang Gundana Cultural Heritage Services

Get Outlook for Android

From: Consultation <consultation@lanternheritage.com.au>
Sent: Wednesday, August 17, 2022 11:29:52 AM
To: yurwang gundana <Yurwang.Gundana.C.H.S@outlook.com>
Subject: Brou Landfill Stage 2/3 consultation

From: yurwang gundana
To: Consultation
Subject: Re: Brou Landfill Stage 2/3 consultation
Date: Thursday, 15 September 2022 11:04:39 AM
Attachments: image001.png

Yuma Glenn, I hope you are doing well

Is there an update on this project and the fieldwork

Thanks
Merekai Bell
Yurwang Gundana Cultural Heritage Services

Get Outlook for Android

Response received following review of draft ACHAR and AR

Hi Conor,

I would like to suggest that you change the organisation name for Deon Morgan he works for Guntawang Aboriginal Resources Inc.

Guntawang agrees with the findings of this report there was no artefacts found in the excavation that took place in this location.

Warm regards

W.Morgan
CEO GARI
Wenlissa01@hotmail.com
0414 964 657

APPENDIX 2 – EXCAVATION REPORT

All subsurface testing was undertaken in accordance with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCW 2010a).

The purpose of sub-surface testing is to collect information about the nature and extent of archaeological deposits that may include Aboriginal cultural material whilst minimising impacts/disturbance to those deposits.

The subsurface testing was undertaken by a team comprising archaeologists and representatives from the RAPs. The initial approach to testing was sampling from 50cm x 50cm test pits. The general location of the test pits was determined in consultation with the RAPs prior to going into the field. The exact location and number of individual test pits was then determined during fieldwork in consultation with the RAP representatives participating in the test excavations.

Test excavation was focused on the areas of highest archaeological potential and least disturbance within the overall study area (Plate 18), focusing on the crest of the low hill (Plate 19) and the lowest gradient areas of the south-facing slope (Plate 20). The testing program aimed to identify whether this portion of the landscape retained archaeological evidence of Aboriginal use and to check for the presence of Aboriginal objects within this area. The position of the 5 testing locations is provided below in Figure 9.

The overall objectives of the testing program were to:

- Determine if Aboriginal objects were present within subsurface deposits across the study area; and
- Characterise the subsurface stratigraphy in terms of phases and processes of deposit formation.

Test Pits

- The test pits were excavated by hand (e.g. trowels, spades and other hand tools) with each test pit comprising one or more 50 x 50cm test units.
- The first test pit was excavated in arbitrary 5cm spits; the subsequent test pits were then excavated in 10cm spits to a culturally sterile layer.
- The intervals between pits ranged from 10m to 40m.
- As outlined above, the test pit's locations aimed to target areas of least disturbance within the crest of the low hill and its southern slope, the areas of highest archaeological potential identified during the initial due diligence survey.
- Following completion of each test unit, the results were reviewed in terms of horizontal and vertical distributions of artefacts and additional test units were excavated to further explore concentrations of artefacts and/or confirm absence of artefacts.
- Photographic and/or scale drawn records were kept for all test pits.
- Test pit locations, surface levels and final levels for all test pits were surveyed with a handheld GPS.

Plate 18: View of low hill landform from inside Brou waste management facility, looking west.

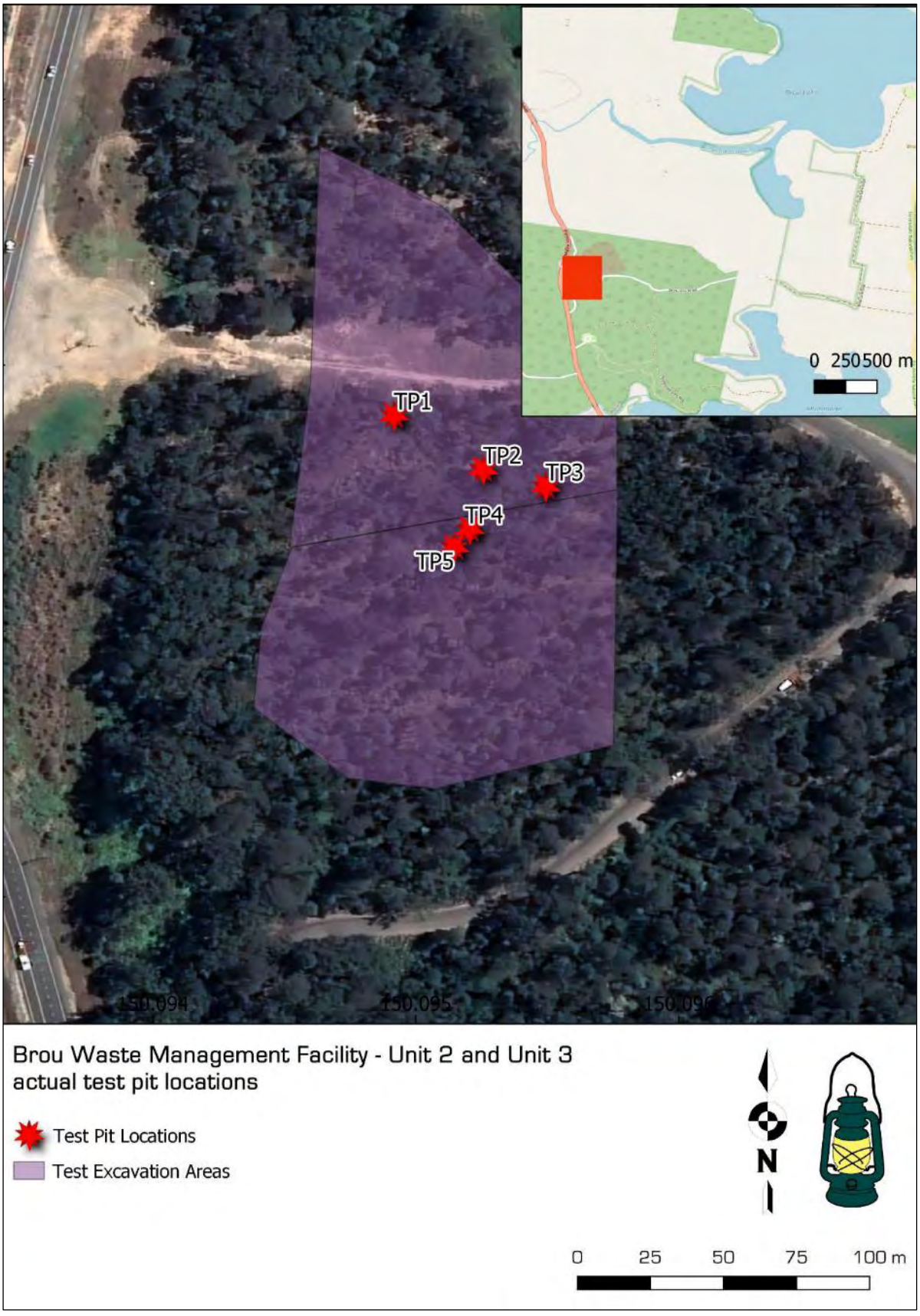

Figure 9: Layout of test unit locations

Plate 19: Crest of low hill landform, looking east.

Plate 20: Southern slope of low hill landform, looking south

- All excavated material was collected in buckets by pit and spit and sieved through a 5mm mesh. Decisions regarding termination and/or expansion of a test pit were made in partnership with the Aboriginal community once all spoil was sieved.
- The maximum surface area of all test excavation units was no greater than 0.5% of the area being investigated.
- Test excavation units were backfilled with the spoil from excavation and sieving as soon as practicable.
- Test excavations ceased once enough information had been recovered to adequately characterise the nature of the deposit.

Overview of Testing

Test excavation under the Code of Practice was conducted along the crest and southern slope of the low hill landform, where there was judged to be the highest potential for Aboriginal objects and relatively intact soil profiles.

The test pits were initially arranged with three test units (TP1 -TP3) located along an east-west running transect on the crest of the low hill, and two further test units (TP4 and TP5) extending southwards down the gentle slope. These locations were chosen as areas of least disturbance that corresponded to landscape features most likely to contain Aboriginal objects. The test pits were initially arranged with three test units (TP1 -TP3) located along an east-west running transect on the crest of the low hill, and two further test units (TP4 and TP5) extending southwards down the gentle slope (Figure 9). These locations were chosen as areas of least disturbance that corresponded to landscape features most likely to contain Aboriginal objects. The five test units correspond to a total area of 1.25m^2.

Test pits were shallow, depths varied from 15cm at TP 1 and TP 2 and to 30cm at TP 3. A total volume of 1.25m^3 of deposit was excavated and sieved.

No Aboriginal objects were found in any of the test pits. Nor was any other archaeological evidence of Aboriginal occupation identified within any of the test pits. Upon completion of the five test units across the eastern portion of the study area it was concluded, in partnership with the RAPs present for the fieldwork, that no further pits were required across other portions of the study area. The rationale behind this decision was that testing across the predicted area of highest potential had indicated:

- Higher levels of disturbance than anticipated; and
- No evidence of archaeological material within any of the remnant soil horizons.

On this basis, the entire study area was assessed to be of very low archaeological potential. It was agreed in discussion with the RAPs that no further assessments or investigations were required, and the proposed development could proceed under due diligence.

Stratigraphy

All test pits revealed extensively truncated and disturbed soil profiles. In all but Test Pit 3, Leaf litter and weakly structured organic-rich topsoil/humus was deposited directly above weathered bedrock and saprolite to a depth of 15-20cm. These profiles indicate severe erosion and removal of soil, resulting in very low archaeological potential. In Test Pit 3, the leaf litter and humus contained a higher proportion of sand and gravel and were overlying a chaotically arranged deposit of poorly sorted aggregates of soil, quartz gravel, anthropogenic waste and clay rip-up clasts that originated from a subsoil horizon. Below this unit was a truncated b-horizon consisting of massive, orange-brown to grey-brown clays. These are indicative of high-energy soil disturbance, leaving only parts of the archaeologically sterile, subsoil horizons intact. This has resulted in an almost total loss of archaeological potential.

Conclusions

The test pits excavated across the study area were all terminated at a layer indicative of the termination of deposits with potential to contain Aboriginal objects. No Aboriginal objects or any form were recovered from any of the pits. Furthermore, the stratigraphy across the study area indicated much higher levels of disturbance than had been anticipated.

The test excavation program targeted, the areas with the highest predicted potential to contain Aboriginal objects, it also targeted the areas with the lowest levels of visible prior disturbance. As such, the absence of Aboriginal objects within these areas of highest archaeological potential is interpreted as an indication that the entire study area is of very low archaeological potential for Aboriginal objects.

This interpretation of the results was discussed in the field with the representatives from the RAPs. It was concluded that the proposed activity was unlikely to impact Aboriginal objects and that no further investigations or mitigation measures were warranted.

Pit Logs

Brou WMF Test Pit 1	Easting: 750029	Northing: 6152750
Spit #/Depth	Description	Artefact #
1 – 5cm	**Leaf litter and humus**: loose, crumby dark brown-black humus, leaf litter with poorly sorted sand and occasional quartzose gravel. Many small roots (<1cm).	0
2 – 10cm	**Leaf litter and humus**: loose, crumby dark brown-black humus, leaf litter with increasing proportions of poorly sorted sand and quartzose gravel. Many small roots (<1cm).	0
3 – 15cm	**Saprolite:** weathered, undulating upper surface of bedrock.	0

BROU WMF TP1 at end of excavation, facing south.

Brou WMF Test Pit 2	Easting: 750049	Northing: 6152779
Spit #/Depth	Description	Artefact #
1 – 10cm	**Leaf litter and humus**: loose, crumby dark brown-black humus, leaf litter with poorly sorted sand and occasional quartzose gravel. Many small roots (<1cm).	0
2 – 15cm	**Saprolite:** weathered, undulating upper surface of bedrock.	0

BROU WMF TP2 end of excavation, looking south.

Brou WMF Test Pit 3	Easting: 750065	Northing: 6152794
Spit #/Depth	**Description**	**Artefact #**
1 – 10cm	**Leaf litter and humus**: loose, crumby dark brown-black humus, leaf litter with 10-20% poorly sorted sand and quartzose gravel. Many small roots (<1cm).	0
2 – 20cm	**Grey interface layer:** mixture of humic material, orange clay rip-up clasts (10-20cm) and anthropogenic material (plastic etc.)	0
3 – 30cm	**Truncated b-horizon:** firm, orange-buff mottled clay silt layer. Forming succinct upper interface.	0

BROU WMF TP3 End of excavation, facing south.

Brou WMF Test Pit 4	Easting: 750089	Northing: 6152824
Spit #/Depth	Description	Artefact #
1 – 10cm	**Leaf litter and humus**: loose, crumby dark brown-black humus, leaf litter with 10-20% poorly sorted sand and quartzose gravel. Many small roots (<1cm).	0
2 – 20cm	**Saprolite:** grey sand and gravel at weathered, undulating upper surface of bedrock. Deepest section in SW corner likely relates to disturbance.	0

BROU WMF TP4 End of excavation, facing south.

Brou WMF Test Pit 5	Easting: 750089	Northing: 6152824
Spit #/Depth	Description	Artefact #
1 – 10cm	**Leaf litter and humus**: loose, crumby dark brown-black humus, leaf litter with poorly sorted sand and occasional quartzose gravel. Many small roots (<1 cm).	0
2 – 15cm	**Saprolite:** weathered, undulating upper surface of bedrock.	0

Brou WMF TP5 End of excavation, facing south.