

PROPOSED REDEVELOPMENT,
28 BOWEN and 34,36 & 38 HAWKE
STREET, HUSKISSON, NSW

ABORIGINAL DUE DILIGENCE ASSESSMENT

Report to PDC Lawyers and Town Planners

LGA: Shoalhaven City Council

April 2021





EXECUTIVE SUMMARY

Apex Archaeology have been engaged to assist PDC Lawyers and Town Planners in the Aboriginal due diligence assessment of a property located at 28 Bowen and 34,36 & 38 Hawke Street, Huskisson, NSW. PDC Lawyers and Town Planners have been engaged to undertake a Development Application (DA) for the proposed new motel. An Aboriginal Due Diligence Assessment is required to be completed for the project to support the Development Application.

This report has been produced in accordance with the DECCW 2010 *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* (the Due Diligence Code of Practice), in order to assess the Aboriginal archaeological values of the study area.

The study area is located within Huskisson, NSW (Figure 1). The study area is located approximately 138 km south west of Sydney. It is located within the Shoalhaven City Council (SCC) Local Government Area (LGA).

A site visit was conducted on Thursday 1 April 2021. No previously recorded archaeological sites are located within the study area. No newly identified archaeological material was identified during the survey. Ground surface visibility (GSV) was low throughout the study area. GSV was rated at <5% overall.

Ground disturbance was high within the study area. Evidence of vegetation clearance (historic and recent), and construction/landscaping was identified within the area. The area was considered unlikely to contain any evidence of historical Aboriginal habitation of the area due to the levels of disturbance present.

It is recommended that:

- No further Aboriginal archaeological assessment is required prior to the commencement of development works as described in this report.
- The results of this assessment fulfil the requirement for archaeological assessment in accordance with the 2010 *Guide to Investigation, assessing and reporting on Aboriginal cultural heritage in NSW* and the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* (Code of Practice).
- The proposed works must be contained to the area assessed during this archaeological assessment, as shown on Figure 2. If the proposed location is amended, further archaeological assessment may be necessary to determine if the proposed works will impact any Aboriginal objects or archaeological deposits.
- Should unanticipated archaeological material be encountered during site works, all work must cease and an archaeologist contacted to make an assessment of the find. Further archaeological assessment and Aboriginal community consultation may be required prior to the recommencement of works. Any objects confirmed to be Aboriginal in origin must be reported to Heritage NSW.



Apex Archaeology would like to acknowledge the Aboriginal people who are the traditional custodians of the land in which this project is located. Apex Archaeology would also like to pay respect to Elders both past and present.

DOCUMENT CONTROL

The following register documents the development and issue of the document entitled 'Proposed Redevelopment, 28 Bowen and 34, 36 & 38 Hawke Street, Huskisson, NSW – Aboriginal Due Diligence Assessment', prepared by Apex Archaeology in accordance with its quality management system.

Revision	Prepared by	Reviewed by	Comment	Issue Date
1 – Draft	Leigh Bate	Jenni Bate	Issue for client review	7 April 2021
2 – Final	Leigh Bate	Lee Carmichael	Final Report	13 April 2021



GLOSSARY OF TERMS

Aboriginal Object	An object relating to the Aboriginal habitation of NSW (as defined in the NPW Act), which may comprise a deposit, object or material evidence, including Aboriginal human remains.
AHIMS	Aboriginal Heritage Information Management System maintained by Heritage NSW, detailing known and registered Aboriginal archaeological sites within NSW
AHIP	Aboriginal Heritage Impact Permit
BP	Before Present, defined as before 1 January 1950.
Code of Practice	The DECCW September 2010 <i>Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales</i>
Consultation	Aboriginal community consultation in accordance with the DECCW April 2010 <i>Aboriginal cultural heritage consultation requirements for proponents 2010</i> . Consultation is not a required step in a due diligence assessment; however, it is strongly encouraged to consult with the relevant Local Aboriginal Land Council and to determine if there are any Aboriginal owners, registered native title claimants or holders, or any registered Indigenous Land Use Agreements in place for the subject land
DA	Development Application
DCP	Development Control Plan
Disturbed Land	If land has been subject to previous human activity which has changed the land's surface and are clear and observable, then that land is considered to be disturbed
Due Diligence	Taking reasonable and practical steps to determine the potential for an activity to harm Aboriginal objects under the <i>National Parks and Wildlife Act 1974</i> and whether an application for an AHIP is required prior to commencement of any site works, and determining the steps to be taken to avoid harm
Due Diligence Code of Practice	The DECCW Sept 2010 <i>Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales</i>
GIS	Geographical Information Systems
GSV	Ground Surface Visibility
Harm	To destroy, deface or damage an Aboriginal object; to move an object from land on which it is situated, or to cause or permit an object to be harmed
Heritage NSW	Heritage NSW in the Department of Premier and Cabinet, incorporating the former DPIE/OEH and Heritage Branch
LALC	Local Aboriginal Land Council
LGA	Local Government Agency
NPW Act	NSW <i>National Parks and Wildlife Act 1974</i>
NPWS	National Parks and Wildlife Services
OEH	The Office of Environment and Heritage of the NSW Department of Premier and Cabinet – now Heritage NSW
RAPs	Registered Aboriginal Parties
SCC	Shoalhaven City Council



CONTENTS

1.0	Introduction.....	1
1.1	Study Area	1
1.2	Investigators and Contributors	1
1.3	Statutory Context	1
1.3.1	Commonwealth Native Title Act 1993.....	1
1.3.2	NSW National Parks and Wildlife Act 1974	4
1.3.1	Shoalhaven Local Environmental Plan 2014.....	4
1.4	NSW Due Diligence Code of Practice	6
2.0	The Due Diligence Code of Practice Process.....	7
2.1	Step 1: Will the activity disturb the ground surface?	7
2.2	Step 2a: AHIMS and Available Literature Search.....	7
2.2.1	AHIMS Results	7
2.2.2	Literature Review	8
2.2.3	Predictive Model	13
2.3	Limitations.....	14
2.4	Step 2b: Landscape Features	14
2.5	Raw Materials	16
2.5.1	Procurement.....	18
2.5.2	Manufacture.....	18
2.6	Historical Context	19
2.6.1	Ethnohistory	21
2.7	Step 3: Avoid harm	23
2.8	Step 4: Visual Inspection	23
2.8.1	Survey Coverage.....	23
2.8.2	Results	23
2.9	Site Analysis	28
2.9.1	Discussion.....	32
3.0	Conclusions and Recommendations	33
3.1	Conclusions	33
3.2	Recommendations.....	33
4.0	References	34
	Appendix A: Basic Search Results	36



FIGURES

Figure 1: Study Area in its local context.....	2
Figure 2: Survey plan of subject site.....	3
Figure 3: South Coast People, Tribunal No NC2017/003 Native Title Claim boundary.....	5
Figure 4: The Strahler system (Source: Department of Planning and Environment 2016).....	16

PLATES

Plate 1: Looking south east across the existing swimming pool, noting ground disturbance	24
Plate 2: Looking south along the eastern boundary of the site.....	24
Plate 3: View across car park at rear of site	25
Plate 4: Looking west across the rear of the site	25
Plate 5: General view looking north through centre of existing motel site	26
Plate 6: View north along western boundary of site	26
Plate 7: General view looking south along exterior of site	27
Plate 8: View east across front of site, noting subsurface services present	27
Plate 9: General view south across front of existing motel.....	28



1.0 INTRODUCTION

Apex Archaeology have been engaged to assist PDC Lawyers and Town Planners in the Aboriginal due diligence assessment of a property located at 28 Bowen and 34,36 & 38 Hawke Street, Huskisson, NSW. PDC Lawyers and Town Planners have been engaged to undertake a Development Application (DA) for the proposed new motel. An Aboriginal Due Diligence Assessment is required to be completed for the project to support the Development Application.

This report has been produced in accordance with the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* (the Due Diligence Code of Practice), in order to assess the Aboriginal archaeological values of the study area.

1.1 STUDY AREA

The study area is located within Huskisson, NSW (Figure 1). The study area is located approximately 138 km south west of Sydney. It is located within the Shoalhaven City Council (SCC) Local Government Area (LGA).

1.2 INVESTIGATORS AND CONTRIBUTORS

This report has been prepared by Leigh Bate, Director and Archaeologist with Apex Archaeology, and Jenni Bate, Director and Archaeologist with Apex Archaeology. Both have over thirteen years of consulting experience within NSW.

Name	Role	Qualifications
Leigh Bate	Primary Report Author, GIS, Field inspection	B. Archaeology; Grad. Dip. Arch; Dip. GIS
Jenni Bate	Project Manager, Review	B. Archaeology; Grad. Dip. CHM

1.3 STATUTORY CONTEXT

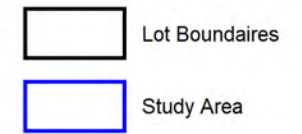
Heritage in Australia, including both Aboriginal and non-Aboriginal heritage, is protected and managed under several different Acts. The following section presents a summary of relevant Acts which provide protection to cultural heritage within NSW.

1.3.1 COMMONWEALTH NATIVE TITLE ACT 1993

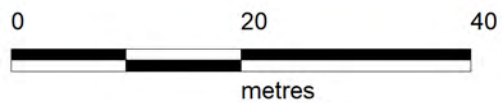
The *Native Title Act 1993*, as amended, provides protection and recognition for native title. Native title recognises the traditional rights of Aboriginal and Torres Strait Islanders to land and waters.

The National Native Title Tribunal (NNTT) was established to mediate native title claims made under this Act. Three registers are maintained by the NNTT, as follows:

- National Native Title Register
- Register of Native Title Claims
- Register of Indigenous Land Use Agreements



PO Box 236
NOWRA
NEW SOUTH WALES 2541



Projection:
MGA Zone 56 (GDA 94)
Nearmap 2021
Image Date: 9/12/2020
FINAL - Version 1

Figure 1: Study Area in its local context



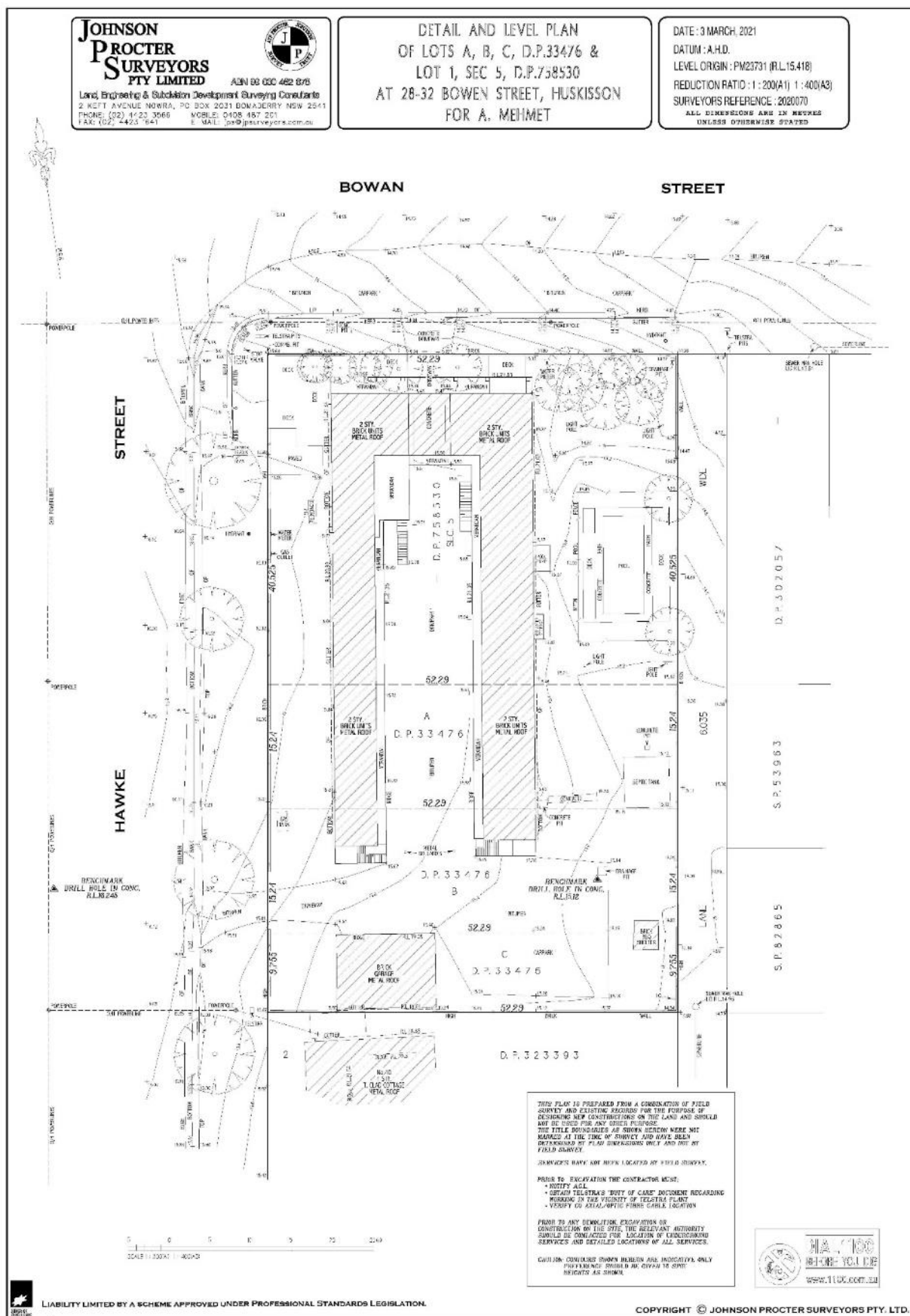


Figure 2: Survey plan of subject site



A search of the above registers identified a Native Title claim by the South Coast People over the study area and surrounds (Figure 3). This claim has been accepted for registration but has not yet been determined. For the purposes of this due diligence assessment consultation with the Aboriginal community is not required.

1.3.2 NSW NATIONAL PARKS AND WILDLIFE ACT 1974

Protection for Aboriginal heritage in NSW is provided primarily under the *National Parks and Wildlife Act 1974* (NPW Act). Although cultural heritage is protected by other Acts, the NPW Act is the relevant Act for undertaking due diligence assessments. Protection for Aboriginal sites, places and objects is overseen by the Heritage NSW.

Changes to the NPW Act with the adoption of the *NPW Amendment (Aboriginal Objects and Places) Regulation 2010* led to the introduction of new offences regarding causing harm to Aboriginal objects or declared Aboriginal places. These new offences include destruction, defacement or movement of an Aboriginal object or place. Other changes to the NPW Act include:

- Increased penalties for offences relating to Aboriginal heritage for individuals and companies who do not comply with the legislation;
- Introduction of the strict liability offences, meaning companies or individuals cannot claim 'no knowledge' if harm is caused to Aboriginal objects or places; and
- Changes to the permitting process for AHIPs – preliminary archaeological excavations can be undertaken without the need for an AHIP, providing the excavations follow the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*.

A strict liability offence was introduced, meaning a person who destroys, defaces or moves an Aboriginal object without an Aboriginal Heritage Impact Permit (AHIP) is guilty of an offence, whether they knew it was an Aboriginal object or not. Exercising due diligence (as described in Section 1.4) provides a defence against the strict liability offence.

1.3.1 SHOALHAVEN LOCAL ENVIRONMENTAL PLAN 2014

Part 5 of the *Shoalhaven Local Environmental Plan 2014* (Shoalhaven LEP 2014) provides specific provisions for the protection of heritage items and relics within the Shoalhaven region LGA.

Clause 5.10(2) (e) identifies that no buildings may be erected on land within a heritage conservation area or which contains an Aboriginal object, without first obtaining development consent. Further, Clause 5.10(2) (c) states that archaeological sites may not be disturbed or excavated without development consent. Exceptions to the requirement for development consent are detailed by Clause 5.10(3) and include low impact activities, or activities for the maintenance of a heritage item. Clause 5.10(8) requires that the effect of any development on an

Aboriginal place of heritage significance must be considered, and the Aboriginal community must be notified of any proposed developments.

There are no Aboriginal heritage items listed in this schedule that fall within the Project Area.

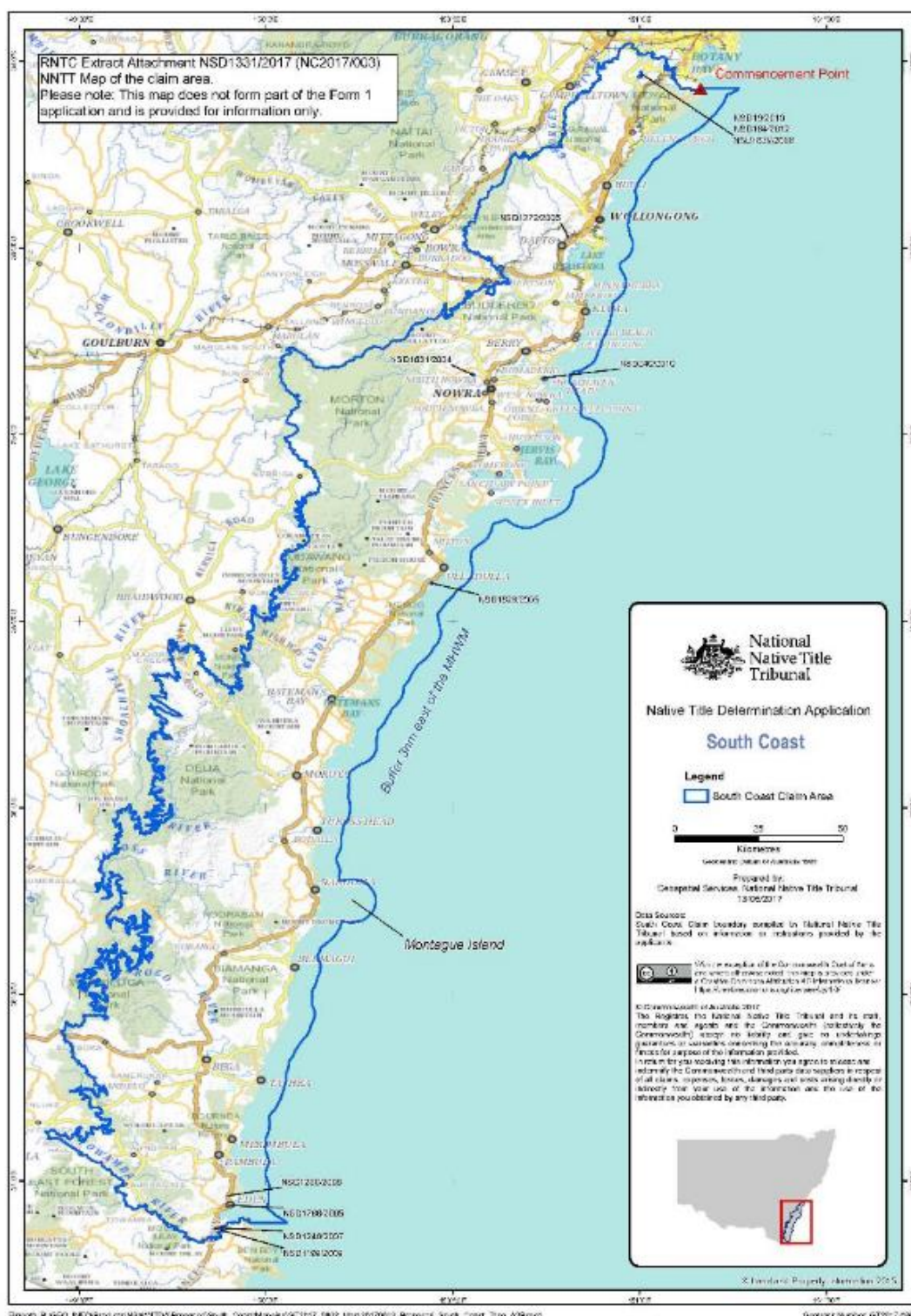


Figure 3: South Coast People, Tribunal No NC2017/003 Native Title Claim boundary



1.4 NSW DUE DILIGENCE CODE OF PRACTICE

The *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* (Code of Practice) was introduced in September 2010. It outlines a method to undertake 'reasonable and practical' steps to determine whether a proposed activity has the potential to harm Aboriginal objects within the subject area, and thereby determine whether an application for an Aboriginal Heritage Impact Permit (AHIP) is required. When due diligence has been correctly exercised, it provides a defence against prosecution under the NPW Act under the strict liability clause if Aboriginal objects are unknowingly harmed without an AHIP.

The Code of Practice provides the 'reasonable and practicable' steps to be followed when determining the potential impact of a proposed activity on Aboriginal objects. Due diligence has been defined by Heritage NSW as "taking reasonable and practical steps to determine whether a person's actions will harm an Aboriginal object and, if so, what measures can be taken to avoid that harm" (DECCW 2010:18).

These steps include:

- Identification of whether Aboriginal objects are, or are likely to be, present within the subject area, through completing a search of the Aboriginal Heritage Information Management System (AHIMS);
- Determine whether the proposed activity is likely to cause harm to any Aboriginal objects; and
- Determine the requirement for an AHIP.

Should the conclusion of a due diligence assessment be that an AHIP is required, further assessment must be undertaken, with reference to the following guidelines:

- DECCW, April 2010, *Aboriginal cultural heritage consultation requirements for proponents 2010. Part 6 National Parks and Wildlife Act 1974*;
- DECCW, Sept 2010, *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*;
- OEH, April 2011, *Guide to Investigation, assessing and reporting on Aboriginal cultural heritage in NSW*; and
- OEH, May 2011, *Applying for an Aboriginal Heritage Impact Permit: Guide for Applicants*.

The Code of Practice also outlines activities considered a low impact activity for which there is a defence in the NPWS Regulation under Clause 58. It is noted that the land proposed for works meets the definition of disturbed land, with 'disturbed land' defined as "...disturbed if it has been the subject of human activity that has changed the land's surface, being changes that remain clear and observable".

However, it was considered appropriate to undertake a due diligence assessment to confirm whether there was any potential for archaeological material to be present within the site.



2.0 THE DUE DILIGENCE CODE OF PRACTICE PROCESS

The Due Diligence Code of Practice provides a specific framework to guide the assessment of Aboriginal cultural heritage. The following section presents the results of this process.

2.1 STEP 1: WILL THE ACTIVITY DISTURB THE GROUND SURFACE?

The proposed works will disturb the ground surface. It is proposed to demolish the existing motel and to construct a new motel with associated access. Services will include connection to town water and sewerage services, electricity, driveway formation, and associated landscaping.

Excavation relating to the motel development will include, demolition of the existing infrastructure and levelling of the ground surface. Connection to electricity, water and sewerage will require trenching. Earthworks would also include clearing, grubbing, stripping and stockpiling topsoil, excavation of soil and backfilling. On completion of the development the area would be landscaped. All proposed works would have an impact to some extent on the ground surface.

2.2 STEP 2A: AHIMS AND AVAILABLE LITERATURE SEARCH

Heritage NSW is required to maintain a register of Aboriginal sites recorded during archaeological assessments and other activities within NSW. This is known as the Aboriginal Heritage Information Management System (AHIMS). This register provides information about site types, their geographical location, and their current status. It is the requirement for the recorder of a newly identified site to register this site with Heritage NSW to be placed onto the AHIMS register. It is a requirement of the Code of Practice to undertake a search of this register as part of undertaking a due diligence assessment.

Heritage NSW also maintains a register of archaeological reports relating to archaeological investigations throughout NSW. These reports are a valuable source of information regarding investigations previously completed and their findings, and can inform the assessment process regarding the potential for Aboriginal cultural material and archaeological potential within a study area.

2.2.1 AHIMS RESULTS

A search of the study area using the Lot and DP was conducted. No Aboriginal sites were identified within the study area. A copy of the basic search is attached in Appendix A.



2.2.2 LITERATURE REVIEW

A review of previous archaeological work within the surrounding region of the study area was undertaken. A number of reports were identified from background research and the AHIMS database and are detailed below.

NAVIN 1991

Navin undertook an archaeological assessment in advance of the proposed construction of a road linking Woollamia with Callala Beach. Several alignments were considered, and all required a crossing of Currumbene Creek approximately 3km north of the creek mouth. An initial feasibility study identified a need for further investigation of the proposed alignments.

The report contains detailed historical background for the region, including past landuse history, Aboriginal spiritual mythology, and information about prominent Aboriginal people in the area, including their burial locations on the banks of Currumbene Creek.

As part of the assessment of the proposed routes, each route was surveyed by pedestrian survey, and a number of shovel probes were excavated along the route in areas considered to have potential for subsurface archaeological material to be present.

Artefacts were identified at depths of between 8-31cm and were considered to demonstrate occupation of at least 1000 years old, based on the assemblage characteristics. A range of other sites were also identified during the survey, including artefact concentrations, midden sites, scarred trees and an historical Aboriginal campsite, as well as historical artefacts and a potential burial site on the basal slopes adjacent to the creek flats.

The assessment concluded that the area on the northern bank of Currumbene Creek known as Bilong is highly sensitive to the Aboriginal community and did not wish for this area to be disturbed in any way. The archaeological evidence identified was considered to be of high significance and it was considered that disturbance of this area through the construction of a new road and bridge would be unacceptable.

PATON 1993

Paton was engaged to undertake an archaeological investigation in advance of proposed erosion controls on Currumbene Creek to prevent further erosion which threatened to undermine the village of Myola. Stone artefacts were identified by NPWS officers on the banks of the creek and as a result the archaeological investigation was commissioned.

The site on the banks of the creek comprised a total of seven artefacts, made of chert and silcrete. A further two artefacts were located approximately 40m further from the creek. The site was assessed as having low scientific significance. It was



recommended that the erosion control measures be implemented, in accordance with a Consent to Destroy to permit impact to the artefact scatter.

DONLON 1996

Following the discovery of a human skull on the northern bank of Currumbene Creek, Dr Denise Donlon was engaged to prepare a report on the skull, specifically for the local Aboriginal community. A young boy discovered the skull and following its identification as human in origin and likely Aboriginal, NPWS took custody of the skull and informed the Jerrinja LALC.

The skull was considered likely to belong to an adult Aboriginal male, based on the shape of the glabella (between the eye sockets) and the shape of the eye sockets, and likely to be between 18-40 years old when he died. The original burial location of the skull was not clear, and there was a possibility that the skull may have washed in from further up the creek. The skull was considered to be hundreds rather than thousands of years old.

The report concluded that there is a possibility of further burials occurring along the banks of Currumbene Creek, with sand dunes inside bays, estuaries and harbours considered a common location of inhumations.

NOHC 2000

Navin Officer undertook an assessment for the proposed crossing of Moona Moona Creek by a reclaimed water pipeline. Two registered sites were located within the proposed pipeline easement, with one comprising a small scatter of estuarine shell and a small number of stone artefacts, and the other comprising a low-density artefact scatter of two stone artefacts within a 4x4 track north of Moona Moona Creek. Both sites were considered to be of low significance.

It was proposed to underbore the creek to avoid undetected midden material which may have been present immediately adjacent to the creek bank. This also avoided the known sites within the proposed easement.

WELLINGTON 2002

Rodney Wellington, Aboriginal Sites Officer SAHU/Nowra, undertook an archaeological assessment in advance of proposed works to enhance a bushfire protection area adjacent to residences on Callala Street, Huskisson. Bushfires impacted the Jervis Bay National Park over the 2002 New Year period, and several houses were damaged or destroyed. An existing firebreak was proposed to be increased to reduce the continuity of canopy in this area. As the site was on a wetland margin, the potential for Aboriginal sites to be present was considered to be high.



No archaeological sites were identified, and the absence of any sites was considered to reflect the area's unsuitability for Aboriginal occupation in the past due to the waterlogged nature of the soils, and the accessibility of nearby areas more conducive for habitation.

JO McDONALD CHM 2002

Jo McDonald CHM undertook an archaeological survey for Aboriginal sites at the then Jervis Bay Hotel in advance of a proposed development to the north of the existing hotel. The site was considered to have been highly disturbed by vegetation clearing, landfill and landscaping. Additionally, buildings associated with the hotel and since demolished were located within the proposed development area. A septic tank with associated drainage trenches were located throughout the area. It was noted by the then landowner that no shell or bone were encountered during the excavation for these trenches.

An area of exposure associated with a drainage pipeline, stormwater drain and power pole on the north eastern corner of the development area was noted. Some shell was noted within this area but it was considered to be highly disturbed. No other surface expressions of archaeological material were noted during the inspection.

Given the level of disturbance present across the area, it was recommended that no further investigation (including through subsurface investigation) was required prior to the commencement of the proposed development.

SCARP ARCHAEOLOGY 2009

Scarp Archaeology were engaged to prepare a cultural heritage assessment in advance of a proposed development at the Huskisson Hotel, comprising a mixed tourist and permanent residential development. The report was prepared to meet the Director General's Environmental Assessment Requirements (DGRs) for the project. The assessment was undertaken in accordance with the 2005 *Interim Community Consultation Requirements for Applicants* and the 2005 *Draft Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation* (the Draft Guidelines).

The assessment considered the conclusions drawn by Dr McDonald in 2002 as being reliable and appropriate for the site, given the assessed level of historical disturbance across the site. A number of comments were received regarding the use of the headland by Aboriginal people in the past.

It was concluded that, in accordance with the Draft Guidelines, the site was considered unlikely to possess Aboriginal cultural objects due to the level of disturbance present. As such, there were no Aboriginal archaeological constraints to the project proceeding. It was noted that the Aboriginal community retained significant connections to the area and in general there are high cultural heritage values for the Jervis Bay/Currambene Creek region. The overall height of the



proposed development was opposed by the Aboriginal community and the community further requested continued participation in any works undertaken on the site.

FEARY 2012

During the approved renovation works to the Huskisson Hotel, a small amount of fragmented shell was identified within an area under excavation and levelling for a new carpark, located to the north west of the existing hotel buildings. Dr Sue Feary was engaged to undertake an assessment of the area. Works were immediately halted within the vicinity of the find.

Examination of the exposed shell material identified a number of molluscan species from both rocky shore platforms and estuaries, which was considered to indicate the shell was not a natural shell bed which would contain species from a single ecosystem (ie rock platforms or estuary) only. The shells were considered to be hundreds rather than thousands of years old due to a small amount of colour remaining within some fragments. Historical rubbish including glass was identified.

Inspection of the sections exposed during excavation for the car park batters was undertaken. All of the profiles inspected revealed a lower layer of orange clay, overlaid by a very black, greasy layer in some profiles. Generally fragmented shell was associated with this black layer and it was considered likely that the shell had decayed. Two of the profiles showed a layer of orange, unconsolidated sand which was considered likely to relate to the original Holocene sand dune on the headland, although it was noted that footings and drains were also located in this general area, which may have required sand as part of their construction.

A very thin midden layer was considered to exist just below the A horizon in soil profiles on the western face and western end of the northern face of the car park. However, this was considered to be so sparse and fragmentary that shell species could not be determined. No midden material or stone artefacts were observed in exposures to the north of the existing garden bar were identified.

It was “concluded that an Aboriginal shell midden had once existed over at least part of the headland, and is now visible in only a small area, to the north/northwest of the buildings” (Feary 2012). The midden was considered to have low scientific significance based on its lack of integrity and the sparse nature of the midden.

No further assessment was recommended and the car park was recommended to be completed. The final recommendation was “while acknowledging that the headland has been very substantially disturbed, it is possible that sections of intact midden still exist. Any future ground disturbance of a substantial nature associated with the Husky pub [sic] should be inspected by an archaeologist if any evidence of shell or other Aboriginal objects are uncovered” (Feary 2012).



FEARY 2014

Dr Sue Feary was engaged by Shoalhaven City Council to undertake an Aboriginal Cultural Heritage Assessment report in advance of the proposed construction of a 500m shared path along Orion Beach, between Huskisson and Vincentia. A known Aboriginal site was located immediately adjacent to the eastern end of the route. This site comprised a low-density deposit of seven stone artefacts and dispersed midden material identified at five discrete locations along the proposed pathway.

These locations included along the cliff top and a small promontory. The sites were considered to be of low cultural significance and the proposed works would likely assist to protect the sites and any additional archaeological material that may have been obscured by ground cover at the time of the survey, through covering and stabilising the ground surface.

FEARY 2016

Shoalhaven City Council engaged Dr Sue Fear to undertake a due diligence assessment of a proposed shared path across Moona Moona Creek at Huskisson. The new bridge was proposed to be constructed adjacent to the existing vehicle bridge. She notes that an AHIP was issued in 2000 for one of the sites (#58-2-0349) identified by NOHC in 2000 for the reclaimed water pipeline.

The study area was considered to be highly disturbed by various works over the years, including the construction of the vehicle bridge and a shared path on either side of the creek. A small area of archaeological potential was identified on the southern side of the bridge, but leaf litter obscured the ground surface. It was recommended to avoid this area during the proposed works, or if avoidance was not possible, it was recommended to undertake further investigation of the area. It was also recommended to avoid the location of site #58-2-0349 despite the site having had an AHIP issued, or applying for a new AHIP to permit further harm to occur.

FEARY 2018

Dr Sue Feary undertook an Aboriginal due diligence assessment in advance of the propose sale and redevelopment of the Anglican Church grounds at Huskisson. The church grounds are suggested to contain the grave of an Aboriginal man known as Jimmy Golding/Billy Budd II. The study area was considered to be highly disturbed due to the long history of use for church activities, and no surface expressions of artefacts were noted within the church grounds.

It was concluded that there were no Aboriginal archaeological constraints to the redevelopment of the site, although it was recommended that the area identified during a ground penetrating radar survey as potentially containing numerous graves should be avoided by any works. It was further noted that the grave of Jimmy Golding, if present within the study area, would fall under the auspices of the *NSW Heritage Act 1977* rather than the *National Parks and Wildlife Act 1974*.



2.2.3 PREDICTIVE MODEL

Based on the results of previous archaeological investigations within the wider region, a number of predictions regarding Aboriginal use of the area can be made. These predictions focus on the nature, extent and integrity of the remaining evidence.

The landscape characteristics of the area influence the prediction of the nature of potential sites within the landscape itself. Disturbance is the predominant factor determining whether or not artefacts are likely to be identified within a landscape.

Surface sites are likely to have been impacted by agricultural processes and domestic land use within the area over the historic period. Natural actions such as bioturbation are likely to have impacted at least the upper levels of archaeological deposits, as are cultural activities such as excavation, construction, demolition, ploughing, clearing and planting. Whilst these actions may impact the integrity of stratigraphy within the deposit, this does not necessarily mean associated archaeological objects will also be disturbed.

In general, Aboriginal use of an area is based on a number of factors, such as:

- Proximity to permanent fresh water sources – generally permanent or areas of repeat habitation are located within approximately 200m of permanent water;
- Proximity to ephemeral water sources – generally sites near ephemeral water sources were utilised for one-off occupation;
- Ease of travel – ridgelines were often utilised for travel during subsistence activities; and
- The local relief – flatter, more level areas were more likely to be utilised for long term or repeat habitation sites than areas of greater relief, especially if the slopes are at a distance from water.

SUMMARY

Previous assessment within the Huskisson region has shown archaeological evidence is likely to comprise midden material, which may be associated with artefacts. Scarred trees and burials have also been recorded within the wider area.

In terms of the study area, sites are considered more likely to comprise sub-surface stone artefact concentrations or isolated finds, as well as midden material which may or may not be associated with artefact deposits.

It is acknowledged that the study area is highly disturbed across the entirety of the site due to historical development and there is limited potential for any archaeological sites to be present within impacted areas. Any surface sites are likely to have been disturbed, removed, or potentially buried due to works on site over the



years. Any potential is likely to be subsurface but only in areas which have not been previously impacted, which are very limited within the study area.

2.3 LIMITATIONS

The above review of previous archaeological work is subject to a number of limitations. It should be noted that AHIMS results are a record only of the sites that have been previously registered with AHIMS and are not a definitive list of all Aboriginal sites within an area, as there is potential for sites to exist within areas that have not previously been subject to archaeological assessment. Aboriginal people may choose not to disclose cultural knowledge of an area for a variety of reasons, and therefore the area may hold cultural significance, but this significance is not disclosed to the archaeologist. This, in turn, makes it difficult to establish the level of cultural significance within an area.

2.4 STEP 2B: LANDSCAPE FEATURES

An assessment of landscape features is required to determine whether Aboriginal objects are likely to be present within the proposed activity area. Certain landscape features are more likely to have been utilised by Aboriginal people in the past and therefore are more likely to have retained archaeological evidence of this use. Focal areas of activity for Aboriginal people include rock shelters, sand dunes, water courses, waterholes and wetlands, as well as ridge lines for travel routes.

The presence of specific raw materials for artefact manufacture, as well as soil fertility levels to support vegetation resources, are also factors to be considered in the assessment of the environmental context of a study area. Geomorphological factors, such as erosion and accretion of soils, affect the preservation of potential archaeological deposits and therefore need to be considered when making an assessment of the potential for archaeological material to be present within a study area. This assessment is predominantly a desktop exercise.

The study area is located along the South Coast of NSW within the Jarvis Bay region. This part of the South Coast is characterized topographically as generally flat with diverse landscape features such as forests, heathlands, rock platforms, dunes, wetlands, streams and estuaries and a unique shallow coastal lake.

The study area has been disturbed by previous land use practices, including historic land clearance, building, stormwater infrastructure and subsequent landscaping activities including associated infrastructure.



TOPOGRAPHY, SOILS AND GEOLOGY

The general topography of the study area can be characterised as an embankment bordering a creek on one side and the open waters of Jervis Bay on the other. The Currumbene Creek is directly to the north of the area.

Typically, the soil description would be derived from an understanding of the overall deposition sequence for an area or the soil landscape series for NSW. However, in this instance the level of historical disturbance to this site has removed any trace of the existing soils which would have occurred in the study area. According to several geotech reports (Westlake Plunnett & Associates June 2019 & ACT Geotechnical Engineers December 2019), the site is comprised of uncontrolled fill to a depth of ~60-70cm below which is a silty sand and finally a silty clay at ~90cm.

The underlying geology of the study area is the Permian age Shoalhaven Group Wandrawandian Siltstone. This consists of siltstone, silty sandstone, and pebbly in part (Ulladulla Geological Series Sheet S1 56-13).

FLORA AND FAUNA

Remnant vegetation to the area west of Huskisson within Woollamia Nature Reserve and behind Greenfield Beach, is an open forest dominated by blackbutt (*Eucalyptus pilularis*). This would have dominated the Huskisson area prior to European colonisation. This forest grows on sandy to clayey soils of the Wandrawandian Siltstone and includes red bloodwood (*Corymbia gummifera*), white stringybark (*E. globoidea*), grey gum (*E. punctata*), grey ironbark (*E. paniculata*), turpentine (*Syncarpia glomulifera*) and rough-barked apple (*Angophora floribunda*). A smaller tree layer includes black sheoak (*Allocasuarina littoralis*) and, in gullies, rainforest trees. The understorey can be dense and includes a variety of shrubs.

These species would have supported a range of fauna species. Both flora and faunal resources would have been exploited by the Aboriginal people in the area.

HYDROLOGY

The nearest permanent fresh water source is an unnamed tributary of Moona Moona Creek, located approximately 600m west of the study area. The upper reaches of Moona Moona Creek would likely have provided fresh water, at a distance of approximately 1.2km to the south west of the study area. Watercourse classification ranges from first order through to fourth order (and above) with first order being the lowest, ie a minor creek or ephemeral watercourse, and fourth or above being a large watercourse such as a river. Moona Moona Creek is classified as a third order watercourse.

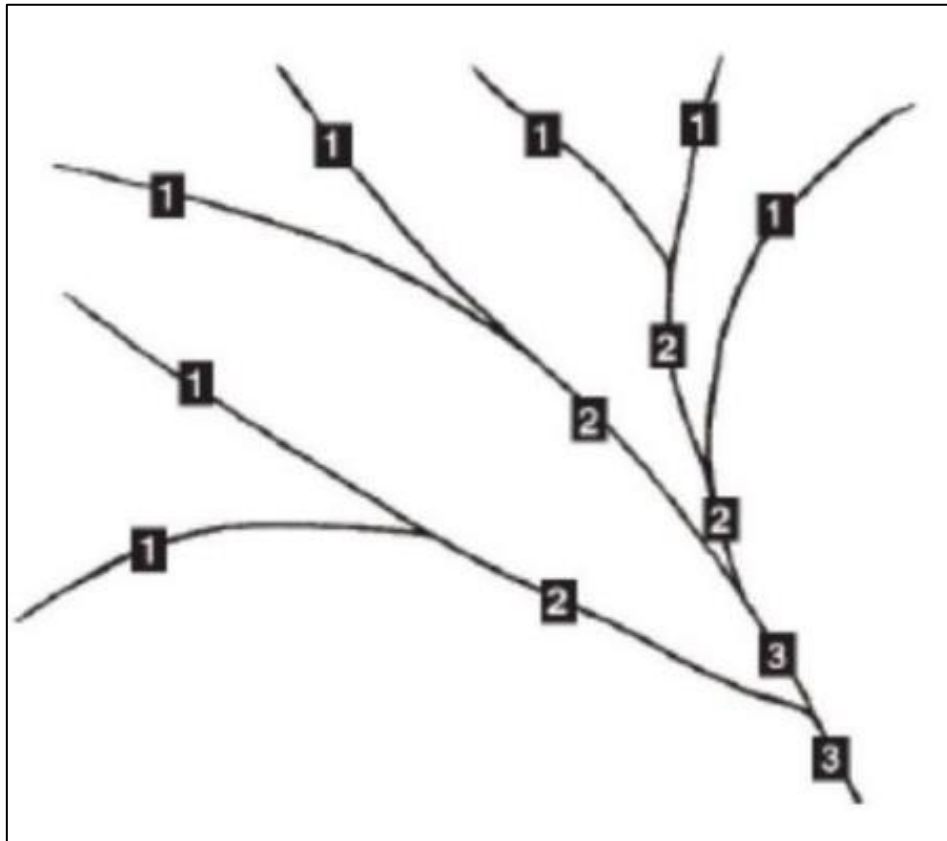


Figure 4: The Strahler system (Source: Department of Planning and Environment 2016).

2.5 RAW MATERIALS

A wide range of raw materials were selected by Aboriginal people for flaking to create stone implements. Material types ranged from high quality to poor quality for flaking purposes, depending on the geology of the area and readily available material types. The following is a description of a range of raw material types known to have been utilised by Aboriginal people for the creation of stone artefacts.

QUARTZ

Pure quartz is formed of silicon dioxide, and has a glossy texture and is translucent. Introduction of traces of minerals can lead to colouration of the quartz, such as pink, grey or yellow. The crystalline nature of quartz allows for minute vacuoles to fill with gas or liquid, giving the material a milky appearance.

Often quartz exhibits internal flaws which can affect the flaking quality of the material, meaning that in general it is a low-quality flaking material (Kuskie & Kamminga 2000: 186). However, quartz is an abundant and widely available material type and therefore is one of the most common raw materials used for artefact manufacture in Australia. Flaking of quartz can produce small, very sharp flakes which can be used for activities such as cutting plant materials, butchering and skinning.



QUARTZITE

Formed from sandstone, quartzite is a metamorphic stone high in silica that has been heated or had silica infiltrate the voids found between the sand grains. Quartzite ranges in colour from grey to yellow and brown.

SILCRETE

Silcrete is a siliceous material formed by the cementing of quartz clasts with a matrix. These clasts may be very fine grained to quite large. It ranges in colour from grey to white, brown, red or yellow. Silcrete flakes with sharp edges and is quite durable, making silcrete suitable for use in heavy duty woodworking activities and also for spear barbs (Kuskie & Kamminga 2000:184).

TUFF/INDURATED MUDSTONE

There is some disagreement relating to the identification of lithic materials as tuff or indurated mudstone. The material is a finely textured, very hard yellow/orange/reddish-brown or grey rock. Kuskie and Kamminga (2000: 6, 180) describe that identification of lithic materials followed the classification developed by Hughes (1984), with indurated mudstone described as a common stone material in the area. However, Kuskie and Kamminga's analysis, which included x-ray diffraction, identified that lithics identified as 'indurated mudstone' was actually rhyolitic tuff, with significant differences in mineral composition and fracture mechanics between the stone types. They define mudstone as rocks formed from more than 50% clay and silt with very fine grain sizes and then hardened.

The lithification of these mudstones results in shale (Kuskie & Kamminga 2000: 181) and thus 'indurated mudstone', in the opinion of Kuskie and Kamminga, do not produce stones with the properties required for lithic manufacture.

In 2011, Hughes, Hiscock and Watchman undertook an assessment of the different types of stones to determine whether tuff or indurated mudstone is the most appropriate terminology for describing this lithic material. The authors undertook thin section studies of a number of rocks and determined that the term 'indurated mudstone' is appropriate, with an acknowledgment that some of this material may have been volcanic in origin. They also acknowledge that precise interpretation of the differences between material types is difficult without detailed petrological examination, and suggest that artefacts produced on this material are labelled as 'IMT' or 'indurated mudstone/tuff'.

VOLCANIC

Both volcanic and acid volcanic stones are a commonly used raw material type within the South Coast. Without detailed petrological analysis it can be difficult to identify the specific raw material, and for the purposes of archaeological assessment these fine grained materials are referred to as volcanic. Material such as obsidian is however separated and visually quite different to other volcanic material, which is often grey in colour and heavy for its size.



2.5.1 PROCUREMENT

Assemblage characteristics are related to and dependent on the distance of the knapping site from raw materials for artefact manufacture, and different material types were better suited for certain tasks than other material types. Considerations such as social or territorial limitations or restrictions on access to raw material sources, movement of groups across the landscape and knowledge of source locations can influence the procurement behaviour of Aboriginal people. Raw materials may also have been used for trade or special exchange between different tribes.

2.5.2 MANUFACTURE

A range of methodologies were used in the manufacture of stone artefacts and tools, through the reduction of a stone source. Stone may have been sourced from river gravels, rock outcrops, or opportunistic cobble selection. Hiscock (1988:36-40) suggests artefact manufacture comprises six stages, as follows:

1. The initial reduction of a selected stone material may have occurred at the initial source location, or once the stone had been transported to the site.
2. The initial reduction phase produced large flakes which were relatively thick and contained high percentages of cortex. Generally the blows were struck by direct percussion and would often take advantage of prominent natural ridges in the source material.
3. Some of these initial flakes would be selected for further reduction. Generally only larger flakes with a weight greater than 13-15 grams would be selected for further flaking activities.
4. Beginning of 'tranchet reduction', whereby the ventral surface of a larger flake was struck to remove smaller flakes from the dorsal surface, with this retouch applied to the lateral margins to create potential platforms, and to the distal and proximal ends to create ridges and remove any unwanted mass. These steps were alternated during further reduction of the flake.
5. Flakes were selected for further working in the form of backing.
6. Suitable flakes such as microblades were retouched along a thick margin opposite the chord to create a backed blade.

Hiscock (1986) proposed that working of stone materials followed a production line style of working, with initial reduction of cores to produce large flakes, followed by heat treatment of suitable flakes before the commencement of tranchet reduction. These steps did not necessarily have to occur at the same physical location, but instead may have been undertaken as the opportunity presented.

It is considered likely that Aboriginal people in the South Coast region generally utilised local materials wherever possible (Kuskie 2002; Dibden 2006).



2.6 HISTORICAL CONTEXT

INDIGENOUS OCCUPATION

When Aboriginal occupation of Australia is likely to have first commenced, around 60,000 years ago (Mulvaney and Kamminga 1999; Bowdler *et al* 2003; Attenbrow 2010), sea levels were around 30-35m lower than present levels, and this further decreased to up to 130m lower than present sea levels (Attenbrow 2010). Sea levels stabilised around 7-6,500 years ago, and as a result many older coastal sites would have been inundated with increasing sea levels. It is possible that areas that are now considered “coastal” would once have limited resources available to Aboriginal people, and as such would have been less likely to have been occupied or used for repeated habitation sites.

Archaeological work at the Madjedbebe site in Arnhem Land in the Northern Territory revealed evidence confidently dated to the period before 45-46 ka and possibly up to 50-55 ka (Clarkson *et al* 2015). In NSW, there is strong evidence available to support Aboriginal occupation of the Cumberland Plain region in the Pleistocene period (approximately 40 ka) and possibly earlier. Work in Cranebrook Terrace was dated to 41,700 years BCE by Stockton and Holland (1974), and a site in Parramatta within deep sandy deposits was dated to 25-30 ka (JMcDCHM 2005). Kohen’s 1984 assessment of Shaws Creek in the Blue Mountain foothills yielded ages of 13 ka, while Loggers Shelter at Mangrove Creek was dated to 11 ka by Attenbrow (1987). Deeply stratified occupation deposits at Pitt Town were dated to 39ka (Apex Archaeology 2018). These ages are obtained from both radiocarbon and optically stimulated luminescence (OSL) dating.

Some experts have cast doubt onto the assessment of the items from Cranebrook Terrace as artefactual (Mulvaney & Kamminga 1999; McDonald 2008), although they do not doubt the results of the radiocarbon dates – it is the association of the artefacts with the dated deposits that is problematic, and Mulvaney and Kamminga (1999) consider that there are better examples of sites with more robust identification of age available. There has certainly been a great deal of research undertaken within the Sydney region in the intervening years.

Aboriginal people have occupied the NSW South Coast for at least 20,000 years (Boot 2002). Occupation sites dating to the Pleistocene period have been dated to c.20,000 Before Present (BP) at Burrill Lake (Lampert 1971) and c.17,000 BP at Bass Point (Bowdler 1970; 1976), with investigations suggesting a very low site occupation intensity during the Pleistocene era, with intensification of occupation commencing approximately 7,000 BP. The evidence at Burrill Lake came from a rockshelter, while Bass Point comprised an open context site on the gentle slopes of a ridgeline. Generally, the Pleistocene occupation of the South Coast is considered to have been sporadic and of low intensity, due to the low population levels postulated during this time (McDonald 2005).



Changing sea levels resulted in the ecological systems of the hinterland areas changing too, resulting in differing resources becoming available. This led to an increase in evidence of habitation of areas from around 6,500 BP, although it is unclear whether this relates to the survivability of more recent sites, or an increase in population. Hughes and Lampert (1982) suggested that a population increase is the only plausible explanation for the exponential increase in Holocene sites from 6,000 BP.

During the Holocene period around 6.5ka, sea levels increased and stabilised, which led to those groups on the coastal fringes turning inland (McDonald 2008). Prior to this, the coast would have been further offshore than current coastlines, meaning any sites within this region would have been inundated as sea levels rose. Recent works off the coast of Western Australia have identified relatively intact inundated Aboriginal archaeological sites, dated to 7,000-8,500 years BP at inundation (Benjamin *et al* 2020), which confirms that archaeological sites can be detected below sea level and should be considered in any works which may impact these drowned landscapes.

Around 5,000 years BP a change in archaeological assemblages can be seen, with an emphasis on the use of locally available stone for artefact production. Around 4,000 years ago people began to decrease their residential mobility and inhabit certain biogeographic zone on a permanent basis (McDonald 2008).

POST CONTACT OCCUPATION

Following the establishment of the first European settlement at Sydney Cove, the need for additional agricultural land was identified, as Sydney Cove was considered unsuitable for farming. By November 1788, food supplies were running low for the settlement, and an expedition led by Governor Philip set off up the Parramatta River in search of arable land. An area known as Rose Hill (now Parramatta) was settled by a small group of 11 soldiers and 10 convicts. The grain crops at Sydney Cove failed, and the settlement at Rose Hill was ordered to be used for agriculture. These crops were luckily successful, and a further settlement comprising a convict farm was established at Toongabbie.

Exploration of the wider region continued, and in 1791, expeditions travelled the Hawkesbury and Nepean areas, identifying them as likely spots for agriculture. The Shoalhaven region had been sighted by Captain Cook in April of 1770, when he observed a protected bay which was later named Port Jervis, and he recorded evidence of smoke along the shoreline just before dark, which may have been related to Aboriginal campfires near the area now known as Bass Point.

Lieutenant James Grant recorded an account of an early meeting of Europeans and local Aboriginal people as being amicable (Grant 1801), with the Aboriginal people they encountered described as 'more robust than Sydney Blacks'.



James Meehan reached the Shoalhaven River in 1805 as part of his exploration of the region, and noted the extensive stands of red cedar along the lower reaches of the river (Antill 1982). The first official shipment of cedar left the Shoalhaven in 1811, and by the following year seven ships were transporting cedar out of the Shoalhaven.

An overland route between Jervis Bay and Appin was first traversed by settlers in 1812, but this wasn't mapped until 1818 when James Meehan set out. The construction of The Wool Road between Nerriga and Vincentia in 1841 assisted further in opening up the region and allowed pastoral produce to be transported out of the Southern Highlands and the Monaro region to the coast for transportation to Sydney (Peter Freeman Pty Ltd 2003). Access to the area was still predominately via ship until the Bomaderry railway line was completed in 1893.

Huskisson was established in response to the coastal shipping industry at Jarvis Bay in the 1840s. The strategic location on the Currumbene estuary allowed the town to flourish, through the establishment of ship-building facilities. As the population grew, additional facilities were constructed to meet the needs of the township, including a school which opened in 1871 on a half-time basis and moved to a full-time basis in 1881, and the first hotel in Huskisson was opened by the Dent family in 1893 (Peter Freeman Pty Ltd 2003).

2.6.1 ETHNOHISTORY

Ethnohistorical evidence is based on the reports of colonisers and do not tend to include the Aboriginal perspective, leading to a Eurocentric view of Aboriginality. Additionally, historical records can be contradictory and incomplete regarding the exact tribal boundaries and locations of ceremonial or domiciliary activities of Aboriginal people pre-contact within the South Coast region. Boot (2002:58) notes:

The problem associated with ethnohistoric documents include their tendency to record unusual, rather than everyday events, and their focus on religious behaviour to the exclusion of woman and children (Attenbrow 1976:34; Sullivan 1983:12.4).

As a result, there are several versions of the Aboriginal history prior to colonisation, mostly due to differing records made in the historical period. Howitt (1904) defined the Yuin tribal area as extending from Cape Howe in the south to the Shoalhaven River in the north. Linguistically, the communities living between Batemans Bay and Lake Conjola were identified as speaking Thurumba Muthang, which appeared to be a mixture of languages spoken to the north and south (Wesson 2000).

In contrast, other historical records made by early colonists indicate the study area is located within lands traditionally occupied by the Wandandian people (Tindale 1974). It is noted that the Wandandian people were considered to have occupied an area extending from the Shoalhaven River south to Ulladulla (Tindale 1974).



However, some members of the Aboriginal community dispute these associations and claim the area falls within the lands of the Jerrinja tribe, which extends from Crooked River in the north to the Clyde River in the south. The Jerrinja tribe have been referred to as the “Saltwater people of the Shoalhaven” (Penfold 2017).

As such, it is difficult to make definitive claims regarding the history of the people who once inhabited the area.

Regardless of the specific identity of the original inhabitants of the area, Aboriginal society in general was understood to be constructed of a hierarchy of social levels and groups, with fluid boundaries (Peterson 1976). The smallest group comprising a family of a man and his wife/wives, children and some grandparents, referred to as a ‘clan’ (Attenbrow 2010). The next level consists of bands, which were small groups of several families who worked together for hunting and gathering purposes (Attenbrow 2010). The third level comprised regional networks with a number of bands, and these bands generally shared a common language dialect and/or had a belief in a common ancestor. Networks would come together for specific ceremonial purposes. The highest level is described as a tribe, which is usually described as a linguistic unit with flexible territorial boundaries (Peterson 1976); although Attenbrow (2010) argues that “these groups were not tribes in the current anthropological sense of the word”.

The traditional lifestyles of Aboriginal groups depended largely on the environment in which they lived. Whilst hinterland groups relied on freshwater and terrestrial animals and plants, coastal groups utilised marine and estuarine resources. Pebbly Beach falls within the coastal region, with access to both marine and inland resources. Animals such as kangaroos, wallabies, possums, gliders, bandicoots, wombats, quolls, fruit bats, echidnas, native rats and mice, emus, ducks, tortoises, snakes and goannas (Attenbrow, 2010), played a major role in the subsistence of coastal groups, while other resources included shellfish such as oysters, crustacea such as crayfish and crabs, and marine animals including dolphins, dugongs, fish, shark, eel, seals and whales (Boot 1994). Fishing was conducted from canoes with spears, or collected along the shore (Tench in Attenbrow 2010). Beached whales were eaten, as observed by the British settlers in the late 18th century.

The different environments of the Huskisson area contain a diverse range of plant and animal species. On creek banks and surrounds, a wide variety of game would have been found. The vegetation communities along the creeks and gullies, primarily woodlands, would have provided shelter for numerous animal and plant species that could be eaten or used for other purposes such as providing shelter and medicines.

The Aboriginal people of the area would have utilised a range of hunting and gathering equipment, including fishing and hunting spears made of wood and barbed with shell, flaked stone blades, shark teeth, or sharpened bone; boomerangs and spear-throwers; fishing hooks made from bird talons, bone, wood and shell;



ground stone axes; anvils and pounders; stone tools including blades and scrapers; shields, clubs and digging sticks made from wood; baskets made from bark; and wooden canoes (Attenbrow 2010).

Shelter is a basic need for any humans and historical records report either rockshelters or huts constructed from bark, branches and leaves were utilised for shelter. Coastal groups tended to build larger huts than the hinterland groups, and within the Huskisson region, huts known as gunyas were likely the dominant choice of shelter due to the limited nature of rockshelters (Attenbrow 2010; Penfold 2017). There is some discussion regarding whether Aboriginal people moved regularly from place to place, or whether they lived at one campsite for a longer period of time and ranged out for resources, returning to their home base as necessary, with Penfold providing oral histories stating the Jerrinja peoples tended to have multiple home bases for different seasons, and relied on gunyahs for shelter (Penfold 2017).

2.7 STEP 3: AVOID HARM

Given the limited previous studies undertaken within the wider area, it was considered necessary to undertake a visual inspection of the study area to identify any surface objects or landforms with potential archaeological deposits (PAD). This inspection would allow conclusions to be made regarding the probability of archaeological objects occurring within the proposed development areas. This would assist in determining if there was any archaeological potential within the study areas which could potentially be harmed by the proposed works, and in turn, assist in determining if harm to the archaeological resource could be avoided.

The proposed development would impact a portion of the study area through the construction activities, including installation of required services and landscaping on completion of works.

2.8 STEP 4: VISUAL INSPECTION

A visual pedestrian inspection of the study area was undertaken on 1 April 2021 by Jenni Bate, Archaeologist with Apex Archaeology.

2.8.1 SURVEY COVERAGE

Given the small size of the study area, the proposed impact area was inspected by pedestrian survey to identify any surface artefacts or any areas with potential for intact subsurface deposits to be present.

2.8.2 RESULTS

A thorough inspection of the area was undertaken. No newly identified archaeological material or sites were identified during the survey.

Ground surface visibility (GSV) was low throughout the study area. GSV was rated at <5% overall. No raw material sources were identified within the study area. The majority of the study area assessed has been modified and disturbed through past land use activities. No subsurface potential was identified within the study area.



Plate 1: Looking south east across the existing swimming pool, noting ground disturbance



Plate 2: Looking south along the eastern boundary of the site



Plate 3: View across car park at rear of site



Plate 4: Looking west across the rear of the site



Plate 5: General view looking north through centre of existing motel site



Plate 6: View north along western boundary of site



Plate 7: General view looking south along exterior of site



Plate 8: View east across front of site, noting subsurface services present



Plate 9: General view south across front of existing motel

2.9 SITE ANALYSIS

Following the site inspection, the following analysis of the site was undertaken to assess the likelihood of various types of Aboriginal archaeological evidence being present within the study area.

STONE ARTEFACTS

Stone artefacts can be identified on the ground surface or within subsurface deposits. Generally, artefact concentrations are representative of debris from knapping activities, which includes flakes, flake fragments, cores, and pieces likely to have been knapped but with no or inconclusive diagnostic features, referred to as flaked pieces. Modified artefacts can also be identified, including backed artefacts, scrapers, or edge ground axes, although these are generally a smaller proportion of the artefact assemblage. During excavation, very small debris (~3-5mm) can be identified within sieved material, and is referred to as debitage. This is indicative of in situ knapping activities.

As the detection of stone artefacts relies on surface visibility, factors such as vegetation cover can prevent their identification. Conversely, areas of exposure can assist in their identification. Within the study area, artefacts were not identified on the ground surface, and the level of disturbance across the site suggests any artefacts which may once have been present are likely to have been disturbed or removed from site.



Additionally, the site is at some distance from permanent potable water and as such, this would reduce its attractiveness for long term habitation, which would reduce the likelihood of artefact manufacture occurring within the study area.

QUARRY AND PROCUREMENT

Exposures of stone which can be exploited for the production of lithics are referred to as quarries or procurement sites. Quarries generally have evidence of extraction visible, while procurement sites can be inferred through the presence of artefactual material made from raw material sources present within the area.

No exposed stone was noted within the study area and thus this site type is not considered to occur within the study area.

MIDDENS

Middens are concentrations of shell, and may also contain stone artefacts, bone and sometimes human burials. These sites are generally recorded along coastal areas. Middens are formed through the exploitation of locally available species by humans for resources, and accumulation of the shell material within a specific location. Middens can range in size from small, discrete deposits, to deposits covering a large area.

Generally, middens reflect the species available in the local area. In estuarine regions, estuarine species will dominate the composition of the midden, while around headlands, rock platform species tend to dominate. The site is set back approximately 150m from the ocean and the rock platforms present along the shoreline, and this distance, coupled with the lack of proximity to potable water, suggests that other sites would have been more attractive for the accumulation of midden material. No evidence of midden material was noted during the site inspection and it is considered unlikely to be present within the study area.

BURIALS

Aboriginal people across Australia utilised a range of burial forms, which depended on the customs of the individual tribes. Common burial practices included inhumation, cremation, desiccation and exposure. Burials are known to occur within sandy contexts in the wider region. These are generally found within coastal Holocene sand bodies, and generally are not identified during field survey as there is usually minimal surface expression of this type of site.

To date, there are no records of burials being identified within the specific study area during past works associated with the motel, but this does not preclude burials from occurring. However, the study area is situated at a distance from the ocean, and the soil present within the study area comprises a clayey loam. This soil type is unlikely to have been utilised for inhumations as it was difficult to excavate and other sandy deposits were present within the wider area, which would have been more



likely to be utilised for burials. Based on the available information, burials are not expected to occur within the study area.

ROCK SHELTERS

Rock shelters are formed by rock overhangs which would have provided shelter to Aboriginal people in the past. Often, evidence of this occupation can be found in the form of art and/or artefacts. Shell, midden material, grinding grooves, pictographs (rock engravings), artworks including stencils and paintings, and potential archaeological deposits (PAD) are common features of rock shelter sites.

There are no known rock overhangs within the study area likely to contain rock shelters, and no rock shelters were identified during the site inspection. Thus, this site type is not considered to occur within the study area.

GRINDING GROOVES

Grinding grooves are formed on sandstone exposures through the creation and maintenance of ground edge tools, such as axes and spears. Usually, stone was ground to form a sharp edge, although bone and shell were also ground to create sharp points.

Generally, fine grained sandstone was favoured for these maintenance activities, and the presence of a water source nearby or overflowing the sandstone was also favoured. Grinding grooves range from individual examples through to hundreds of grooves within an area, sometimes arranged in a specific pattern. Horizontal sandstone was generally preferred, although there are examples of vertical grooves.

There are no known sandstone outcrops within the study area and thus this site type is not considered to occur within the study area.

SCARRED AND CARVED TREES

Scarred and carved trees are created during the removal of bark from a tree for a range of reasons, both domestic and ceremonial. This type of site can be identified within areas containing trees of the correct species and appropriate age. Deliberately scarred trees can be difficult to differentiate from naturally occurring damage to trees, and specific criteria must be considered when assessing a scar for a cultural origin.

Given the level of historical clearance across the area in the past, this site type is not considered to occur within the study area.

CEREMONIAL AND MYTHOLOGICAL SITES

Specific places were used for ritual and ceremonial purposes, including initiation and burial practices. Secret rituals were also undertaken at specific places by specific individuals, such as at water holes and by clever men.



The landscape itself was also considered to hold significance to Aboriginal people, and the understanding of this is referred to as a sacred geography. This includes natural features which were associated with spirits or creation beings. The meaning attributed to the landscape provided Aboriginal people with legitimacy regarding their role as guardians of the places which had been created by the spiritual ancestors (Boot 2002).

Navin (1991) records several mythologies for the Jervis Bay area, specifically for the Currumbene Creek region, located to the north of the study area. One such mythology relates to the Bipbip women, who “looked normal except for their pointed toes. The women use to come down from the mountains and lure Aboriginal men from their families onto Beecroft Peninsula. Unfortunately, the activities of the Bipbip women and their associated sites are largely forgotten, although a Bipbip women’s site has been recorded at Orient Point” (Cane 1987 in Navin 1991). Bid Bid Creek is located to the north of Currumbene Creek and drains the hinterland behind Callala Bay, and it is considered possible that the name of the creek is related to the original ‘dreaming path’ of the Bipbip women. Another mythology relates to the creation of the wind by Tootawa or Tutawa (or Dudawa), who spat blood in anger (Mackenzie 1874 in Navin 1991). The name “Too-too-ah” was recorded as the Aboriginal name for Currumbene Creek by Charles Throsby when he explored the Jervis Bay region (Navin 1991).

Many areas along the South Coast of NSW are considered to be sacred to the original inhabitants. There are no known recorded sacred areas within the specific study area, although this does not preclude these values from existing within this location, and it is acknowledged that there are oral histories of Aboriginal occupation within the Huskisson area.

CONTACT SITES

Contact sites contain evidence of Aboriginal occupation concurrent with initial colonisers in an area. This could include evidence such as flaked artefacts formed on glass, or burials containing non-Aboriginal grave goods. Often Aboriginal camps would form around newly built towns, allowing for employment (or exploitation) of the Aboriginal people by the colonists, and also for trade to exist between the two communities. Contact sites can also occur around Aboriginal mission sites, where Aboriginal children were taken from their families to raise in the European manner. Families often camped around the mission boundaries to try to catch a glimpse of their children.

There is no known evidence of initial contact between Aboriginal people and colonists within the study area, although it may have been possible. The probability of evidence of contact sites occurring within the study area is considered low.



2.9.1 DISCUSSION

In accordance with the Due Diligence Code of Practice, land is considered disturbed if human activities within the area have left clear and observable changes on the landscape.

The site has been subject to landscape modification activities over the last 100-150 years. Evidence of vegetation clearance (historic and recent), and construction/landscaping activities are evident across the site.

The level of disturbance (historic and recent) within the study area precludes the potential for sub-surface deposits being present within the area. The distance to fresh water suggests the area would have been unlikely to be utilised for any long term habitation or occupation by Aboriginal people in the past.

Although burials are known to occur within the Huskisson region, all recorded burials have been identified within sandy contexts. The study area is located on a shallow clayey loam soil which was unlikely to have been utilised for burials.



3.0 CONCLUSIONS AND RECOMMENDATIONS

3.1 CONCLUSIONS

- No previously recorded sites are located within the study area itself.
- No archaeological material was identified on the ground surface of the study area.
- The study area is moderately to highly disturbed from past and current land use practices.
- No areas of potential archaeological deposit (PAD) were identified within the study area.
- This assessment was based on identification of landform elements, previous archaeological work undertaken within the wider region, and a visual inspection of the study area.

3.2 RECOMMENDATIONS

- No further Aboriginal archaeological assessment is required prior to the commencement of development works as described in this report.
- The results of this assessment fulfil the requirement for archaeological assessment in accordance with the 2010 *Guide to Investigation, assessing and reporting on Aboriginal cultural heritage in NSW* and the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* (Code of Practice).
- The proposed works must be contained to the area assessed during this archaeological assessment, as shown on Figure 2. If the proposed location is amended, further archaeological assessment may be necessary to determine if the proposed works will impact any Aboriginal objects or archaeological deposits.
- Should unanticipated archaeological material be encountered during site works, all work must cease and an archaeologist contacted to make an assessment of the find. Further archaeological assessment and Aboriginal community consultation may be required prior to the recommencement of works. Any objects confirmed to be Aboriginal in origin must be reported to Heritage NSW.



4.0 REFERENCES

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APPENDIX A: BASIC SEARCH RESULTS

Apex Archaeology

Date: 22 March 2021

PO Box 291

Macarthur Square New South Wales 2560

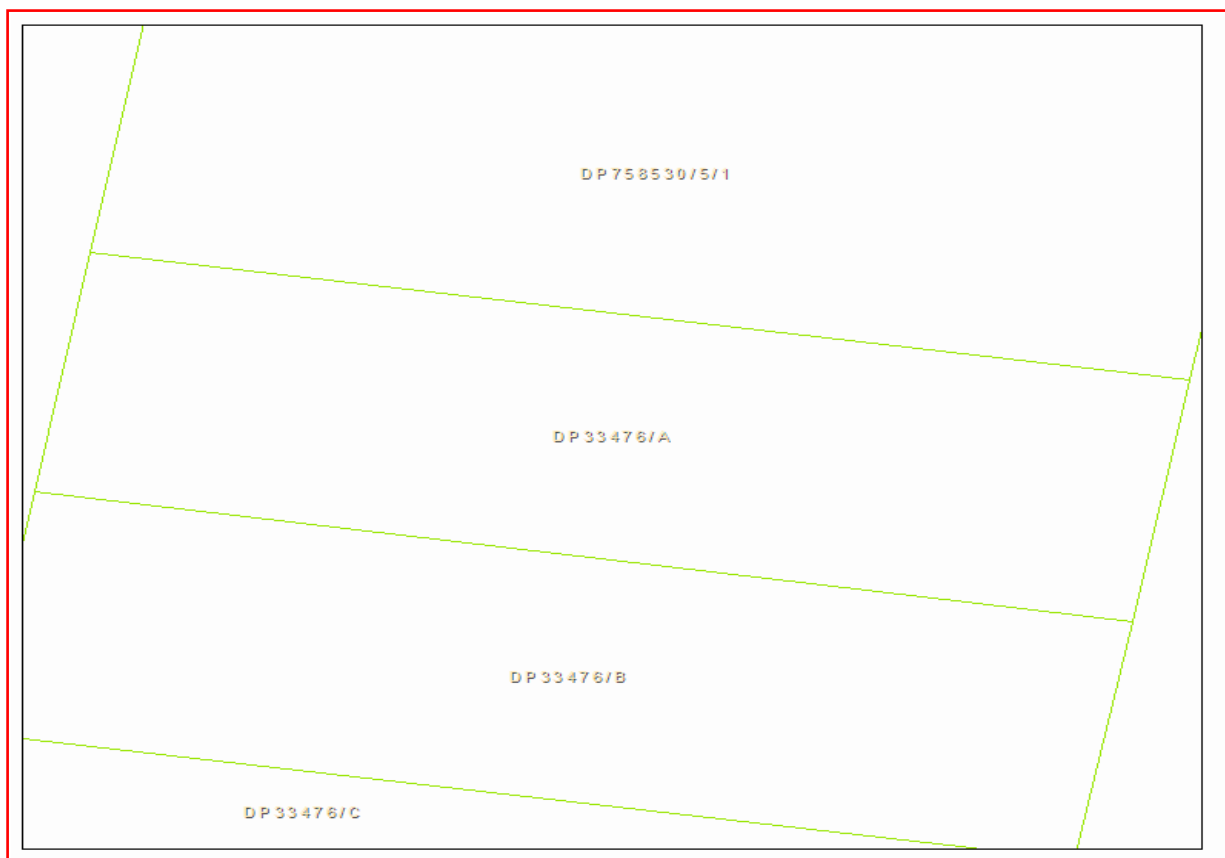
Attention: Leigh Bate

Email: leigh@apexarchaeology.com.au

Dear Sir or Madam:

AHIMS Web Service search for the following area at Lot : A, DP:DP33476 with a Buffer of 0 meters, conducted by Leigh Bate on 22 March 2021.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of the Office of the Environment and Heritage AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

0	Aboriginal sites are recorded in or near the above location.
0	Aboriginal places have been declared in or near the above location. *

If your search shows Aboriginal sites or places what should you do?

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
- You can get further information about Aboriginal places by looking at the gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the [NSW Government Gazette \(http://www.nsw.gov.au/gazette\)](http://www.nsw.gov.au/gazette) website. Gazettal notices published prior to 2001 can be obtained from Office of Environment and Heritage's Aboriginal Heritage Information Unit upon request

Important information about your AHIMS search

- The information derived from the AHIMS search is only to be used for the purpose for which it was requested. It is not be made available to the public.
- AHIMS records information about Aboriginal sites that have been provided to Office of Environment and Heritage and Aboriginal places that have been declared by the Minister;
- Information recorded on AHIMS may vary in its accuracy and may not be up to date .Location details are recorded as grid references and it is important to note that there may be errors or omissions in these recordings,
- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in those areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.

Apex Archaeology

Date: 22 March 2021

PO Box 291

Macarthur Square New South Wales 2560

Attention: Leigh Bate

Email: leigh@apexarchaeology.com.au

Dear Sir or Madam:

AHIMS Web Service search for the following area at Lot : B, DP:DP33476 with a Buffer of 0 meters, conducted by Leigh Bate on 22 March 2021.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of the Office of the Environment and Heritage AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

0	Aboriginal sites are recorded in or near the above location.
0	Aboriginal places have been declared in or near the above location. *

If your search shows Aboriginal sites or places what should you do?

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- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
- You can get further information about Aboriginal places by looking at the gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the [NSW Government Gazette \(http://www.nsw.gov.au/gazette\)](http://www.nsw.gov.au/gazette) website. Gazettal notices published prior to 2001 can be obtained from Office of Environment and Heritage's Aboriginal Heritage Information Unit upon request

Important information about your AHIMS search

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- This search can form part of your due diligence and remains valid for 12 months.

Apex Archaeology

Date: 22 March 2021

PO Box 291

Macarthur Square New South Wales 2560

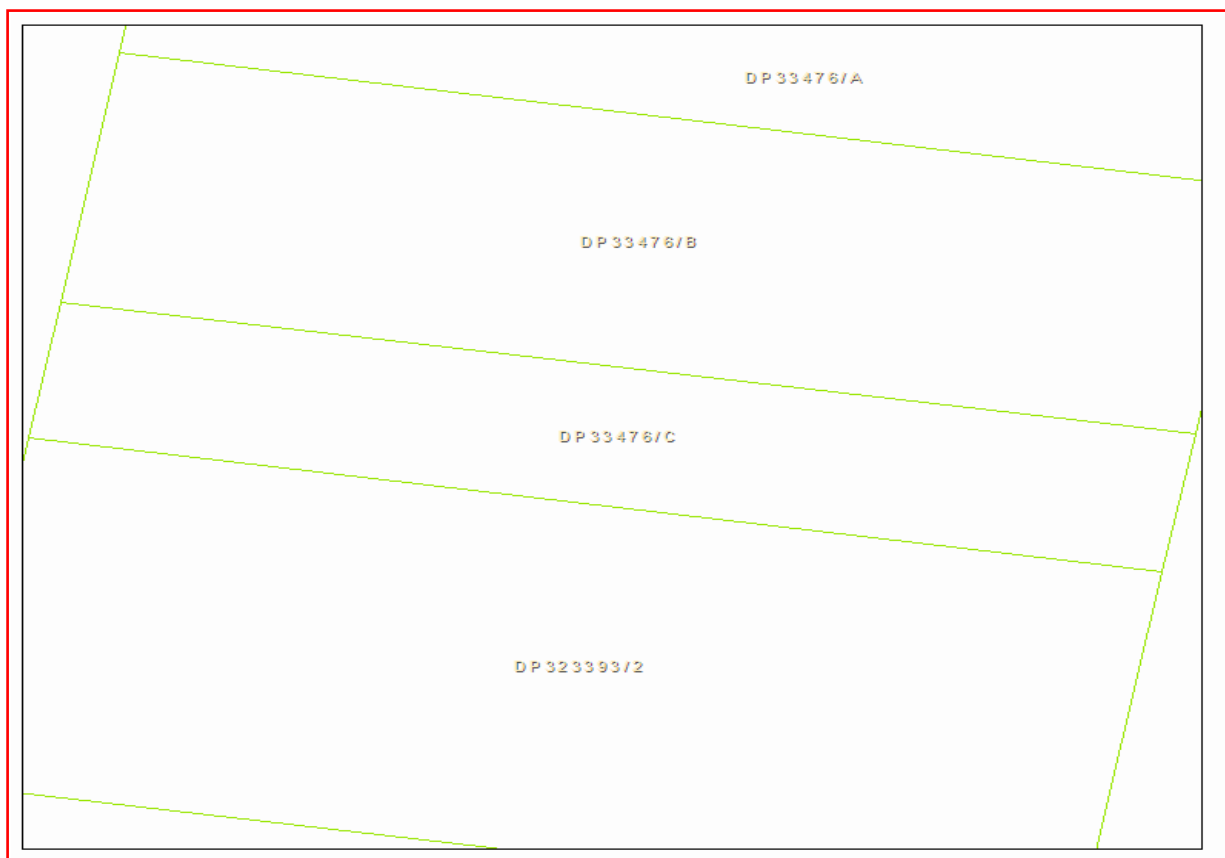
Attention: Leigh Bate

Email: leigh@apexarchaeology.com.au

Dear Sir or Madam:

AHIMS Web Service search for the following area at Lot : C, DP:DP33476 with a Buffer of 0 meters, conducted by Leigh Bate on 22 March 2021.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of the Office of the Environment and Heritage AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

0	Aboriginal sites are recorded in or near the above location.
0	Aboriginal places have been declared in or near the above location. *

If your search shows Aboriginal sites or places what should you do?

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
- You can get further information about Aboriginal places by looking at the gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the [NSW Government Gazette \(http://www.nsw.gov.au/gazette\)](http://www.nsw.gov.au/gazette) website. Gazettal notices published prior to 2001 can be obtained from Office of Environment and Heritage's Aboriginal Heritage Information Unit upon request

Important information about your AHIMS search

- The information derived from the AHIMS search is only to be used for the purpose for which it was requested. It is not be made available to the public.
- AHIMS records information about Aboriginal sites that have been provided to Office of Environment and Heritage and Aboriginal places that have been declared by the Minister;
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- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in those areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.

Apex Archaeology

Date: 22 March 2021

PO Box 291

Macarthur Square New South Wales 2560

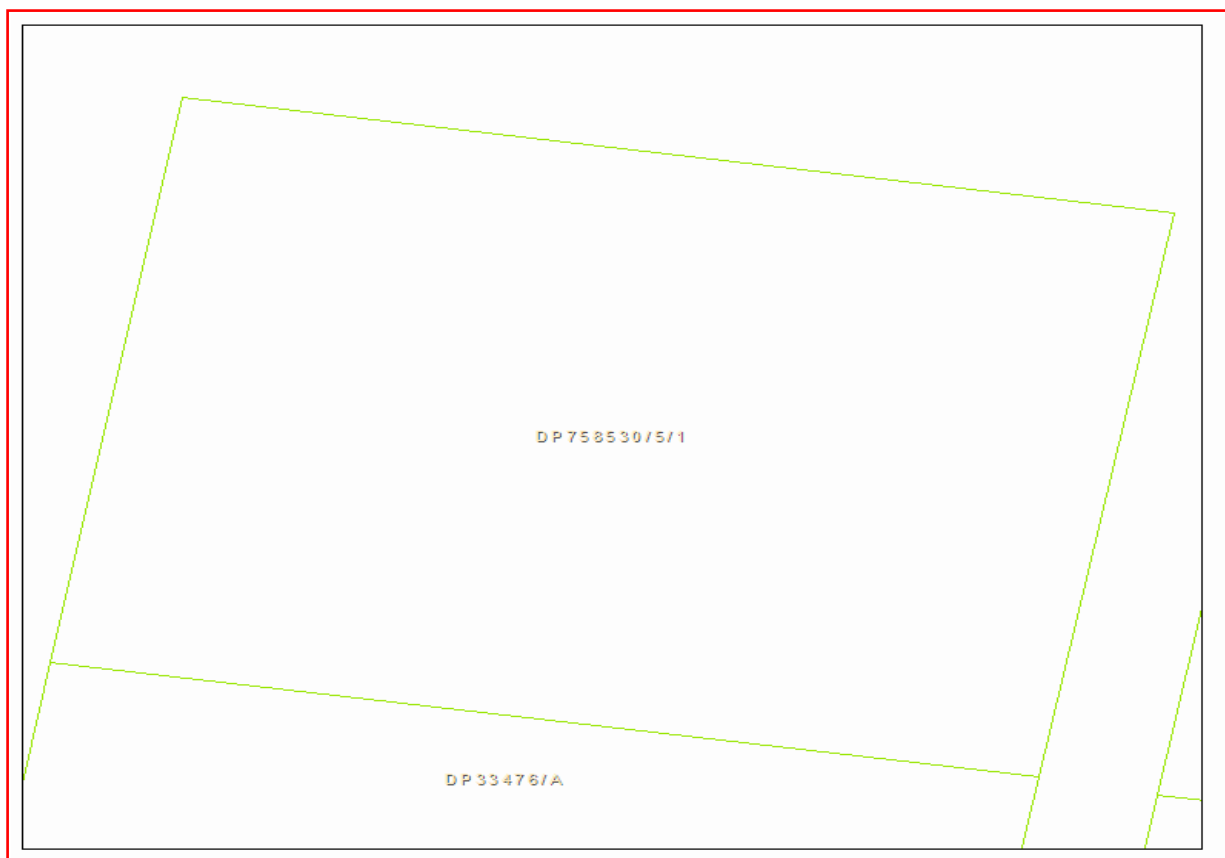
Attention: Leigh Bate

Email: leigh@apexarchaeology.com.au

Dear Sir or Madam:

AHIMS Web Service search for the following area at Lot : 1, DP:DP758530, Section : 5 with a Buffer of 0 meters, conducted by Leigh Bate on 22 March 2021.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of the Office of the Environment and Heritage AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

0	Aboriginal sites are recorded in or near the above location.
0	Aboriginal places have been declared in or near the above location. *

If your search shows Aboriginal sites or places what should you do?

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- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
- You can get further information about Aboriginal places by looking at the gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the [NSW Government Gazette \(http://www.nsw.gov.au/gazette\)](http://www.nsw.gov.au/gazette) website. Gazettal notices published prior to 2001 can be obtained from Office of Environment and Heritage's Aboriginal Heritage Information Unit upon request

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- AHIMS records information about Aboriginal sites that have been provided to Office of Environment and Heritage and Aboriginal places that have been declared by the Minister;
- Information recorded on AHIMS may vary in its accuracy and may not be up to date. Location details are recorded as grid references and it is important to note that there may be errors or omissions in these recordings,
- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in those areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.