SOUTH BATEMANS BAY LINK ROAD

Aboriginal Cultural Heritage Assessment

Prepared for Transport for New South Wales

Eurobodalla Local Government Area

April 2020

Ref. 1901

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Document Information

Project Name	South Batemans Bay Link Road - Aboriginal Cultural Heritage Assessment
Project Number	1901
Version	Final Draft
Client Name	Transport for New South Wales
Recipient	Erika Garbayo
Issue Date	22 April 2020
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Portions of this document have been redacted for reasons of confidentiality, to protect sensitive cultural information.

Executive Summary

Transport for NSW (TfNSW) is proposing to connect the Princes Highway with the existing South Batemans Bay Link Road at Glenella Road (the proposal). The proposal would include a new roundabout on the Princes Highway south of Batemans Bay and a new two-lane road (one lane in each direction) between the roundabout and Glenella Road. The proposal would generally follow the current alignment of Glenella Road (formally known as The Ridge Road) between Heron Road and the Princes Highway to complete the South Batemans Bay Link Road project. The proposal aims to allow for land use development and increase freight access and productivity in the Batemans Bay central business district (CBD), southern coastal villages and proposed Surf Beach employment lands. It also aims to ease congestion in the Batemans Bay CBD, particularly along Beach Road, by providing a safe and efficient alternative access to the southern coastal villages.

TfNSW, engaged Kelleher Nightingale Consulting Pty Ltd (KNC) to prepare an Aboriginal cultural heritage assessment report (CHAR) for Aboriginal heritage within the study area as part of the environmental assessment for the proposal. The CHAR has been prepared in accordance with Stage 3 of the TfNSW *Procedure for Aboriginal Cultural Heritage Consultation and Investigation* (PACHCI) (Roads and Maritime Services 2011) and the Department of Planning, Infrastructure and Environment (DPIE, formerly Office of Environment and Heritage (OEH)) *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW* (OEH 2011a).

One newly identified Aboriginal archaeological site (South Batemans Bay Link Road AFT 1) and one potential archaeological deposit (South Batemans Bay Link Road PAD 1) were recorded during the archaeological survey of the study area as part of PACHCI Stage 2 investigations. The PACHCI Stage 2 assessment recommended a program of archaeological test excavation at both the newly identified site and PAD area in order to obtain further information in regards to the nature and significance of the Aboriginal cultural heritage resource and how it may be affected by the project.

Archaeological test excavation of South Batemans Bay Link Road AFT 1 and South Batemans Bay Link Road PAD 1 was subsequently undertaken in accordance with the *Code of Practice for the Archaeological Investigation of Aboriginal Objects in New South Wales* (OEH 2010). The archaeological test excavation identified the presence of a low density archaeological deposit at both sites. Due to the presence of artefacts at South Batemans Bay Link Road PAD 1, it was reclassified and renamed South Batemans Bay Link Road AFT 2.

The entirety of the study area would be impacted to some degree by construction and associated works. The two Aboriginal archaeological sites (South Batemans Bay Link Road AFT 1 and South Batemans Bay Link Road AFT 2) would be wholly impacted by the proposal.

Archaeological significance of the identified Aboriginal sites was defined by the information exhibited by each site. The Aboriginal archaeological sites (South Batemans Bay Link Road AFT 1 and South Batemans Bay Link Road AFT 2) displayed limited archaeological information; as a result, both sites exhibited low archaeological significance and do not warrant salvage excavation.

A land based Aboriginal heritage impact permit (AHIP) for the entire study area should be obtained under section 90 of the *National Parks and Wildlife Act 1974*. The AHIP should include Aboriginal objects associated with sites:

South Batemans Bay Link Road AFT 1	AHIMS 58-4-1385	Low Significance	Total Impact
South Batemans Bay Link Road AFT 2	AHIMS 58-4-1386	Low Significance	Total Impact

This CHAR has been prepared to support the application for an AHIP. It has been prepared in accordance with the *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW* (OEH 2011) and related guidelines and requirements. The CHAR complies with the PACHCI (Roads and Maritime 2011). It builds on the results of previous assessments and consultation regarding the proposal

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1 Introduction

1.1 Project background

Transport for NSW (TfNSW) is proposing to connect the Princes Highway with the existing South Batemans Bay Link Road at Glenella Road (the proposal). The proposal would include a new roundabout on the Princes Highway south of Batemans Bay and a new two-lane road (one lane in each direction) between the roundabout and Heron Road. The proposal would generally follow the current alignment of Glenella Road (formally known as The Ridge Road) between Heron Road and the Princes Highway to complete the South Batemans Bay Link Road project.

In June 2014, the NSW Government announced $10 million for the South Batemans Bay Link Road to improve traffic flow and support future growth in the region. In early 2019, Eurobodalla Shire Council completed construction of the South Batemans Bay Link Road between George Bass Drive and Heron Road, east of the Princes Highway. The completed section of the South Batemans Bay Link Road is known as Glenella Road.

In January 2019, the NSW Government announced funding of $30 million for TfNSW to finalise planning and build the connection of the South Batemans Bay Link Road and the Princes Highway. The main objective of the South Batemans Bay Link Road proposal is to provide a safe and efficient connection between the Princes Highway and the South Batemans Bay Link Road.

Other objectives of the proposal are to:

- Facilitate land use development in the Batemans Bay CBD and southern coastal villages to support residential property and employment growth.
- Increase freight productivity for heavy vehicles accessing the southern coastal villages and the proposed Surf Beach employment lands.
- Improve traffic and pedestrian amenity in the Batemans Bay CBD.

Four strategic design options were developed for the South Batemans Bay Link Road connection to the Princes Highway, located near the existing junction around 1.2 kilometres south of Cranbrook Road. Option 1 (Roundabout) was identified as the preferred option following a comparative assessment against road safety standards, traffic efficiency, environmental impacts, property and community needs, constructability and delivery cost and budget.

1.2 Proponent and consultants

TfNSW is the proponent of the proposal, and an environmental assessment in the form of a Review of Environmental factors (REF) is being prepared in accordance with the requirements of Division 5.1 of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act).

Kelleher Nightingale Consulting Pty Ltd (KNC) was engaged by TfNSW to prepare an Aboriginal Cultural Heritage Assessment Report (CHAR) for the proposal. The CHAR has been prepared in accordance with Stage 3 of the TfNSW *Procedure for Aboriginal Cultural Heritage Consultation and Investigation* (PACHCI) (Roads and Maritime Services 2011) and the Department of Planning, Infrastructure and Environment (DPIE, formerly Office of Environment and Heritage (OEH)) *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW* (OEH 2011a).

1.3 Location and scope of activity

The study area for this assessment comprises the entirety of the proposal area. The proposed South Batemans Bay Link Road would follow the existing alignment of Glenella Road, with a new roundabout to connect the South Batemans Bay Link Road to the Princes Highway. The project works would involve earthworks (including cuttings, embankments and retaining walls), utility adjustments, new road construction and road widening, vegetation clearance, drainage works and storm water management.

At present, it is expected that the Old Sawmill Site, Lattas Point Road and a section of Glenella Road between Heron Road and The Ridge Road would be utilised as ancillary facilities during construction. Access during construction is expected to be primarily from the Princes Highway; however Forestry Corporation tracks and the Heron Road intersection have also been investigated to provide alternative access, in particular between the two potential ancillary facilities.

1.4 Statutory controls and development context

The proposal would be undertaken by TfNSW. The majority of the proposal is subject to assessment under Part 5 of the *Environmental Planning and Assessment Act 1979*. Aboriginal objects would be harmed by the proposal and an application for an Aboriginal Heritage Impact Permit (AHIP) would be made under section 90A of the *National Parks and Wildlife Act 1974*.

The CHAR has been prepared to support the environmental assessment and the AHIP application. It has been prepared in accordance with the DPIE *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW* (OEH 2011) and related guidelines and requirements. The CHAR complies with the TfNSW *Procedure for Aboriginal Cultural Heritage Consultation and Investigation* (PACHCI) (Roads and Maritime 2011).

1.5 National Parks and Wildlife Act 1974

The *National Parks and Wildlife Act 1974* (NPW Act) is the primary statutory control dealing with Aboriginal heritage in New South Wales. Items of Aboriginal heritage (Aboriginal objects) or Aboriginal places (declared under section 84) are protected and regulated under the NPW Act.

Under the Act, an "Aboriginal object" is defined as "any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction and includes Aboriginal remains". As such, Aboriginal objects are confined to physical evidence and are commonly referred to as Aboriginal sites.

Aboriginal objects are protected under section 86 of the Act. It is an offence to harm or desecrate an Aboriginal object, either knowingly [section 86 (1)] or unknowingly [section 86 (2)].

There are offences and penalties relating to harm to, or desecration of, an Aboriginal object or declared Aboriginal place. Harm includes to destroy, deface, damage or move. Penalties are tiered according to offences, which include:

- a person must not harm or desecrate an Aboriginal object that the person knows is an Aboriginal object
- a person must not harm an Aboriginal object (strict liability offence)
- a person must not harm or desecrate an Aboriginal place (strict liability offence)
- failure to notify Office of Environment and Heritage of the location of an Aboriginal object (existing offence and penalty)
- contravention of any condition of an AHIP.

Under section 87 (1) it is a defence against prosecution if "(a) the harm or desecration concerned was authorised by an Aboriginal heritage impact permit and (b) the conditions to which that Aboriginal heritage impact permit was subject were not contravened".

Section 87 (2) of the Act provides a defence if "the defendant exercised due diligence to determine whether the act or omission constituting the alleged offence would harm an Aboriginal object and reasonably determined that no Aboriginal object would be harmed".

Section 89A of the Act relates to the notification of sites of Aboriginal objects, under which it is an offence if the location of an Aboriginal object is not notified to the Director-General in the prescribed manner within a reasonable time.

Under section 90 (1) of the Act "the Director-General may issue an Aboriginal heritage impact permit". The regulation of Aboriginal heritage impact permits is provided in Part 6 Division 2 of the Act, including regulations relating to consultation (section 90N).

An AHIP is required for an activity which would harm an Aboriginal object.

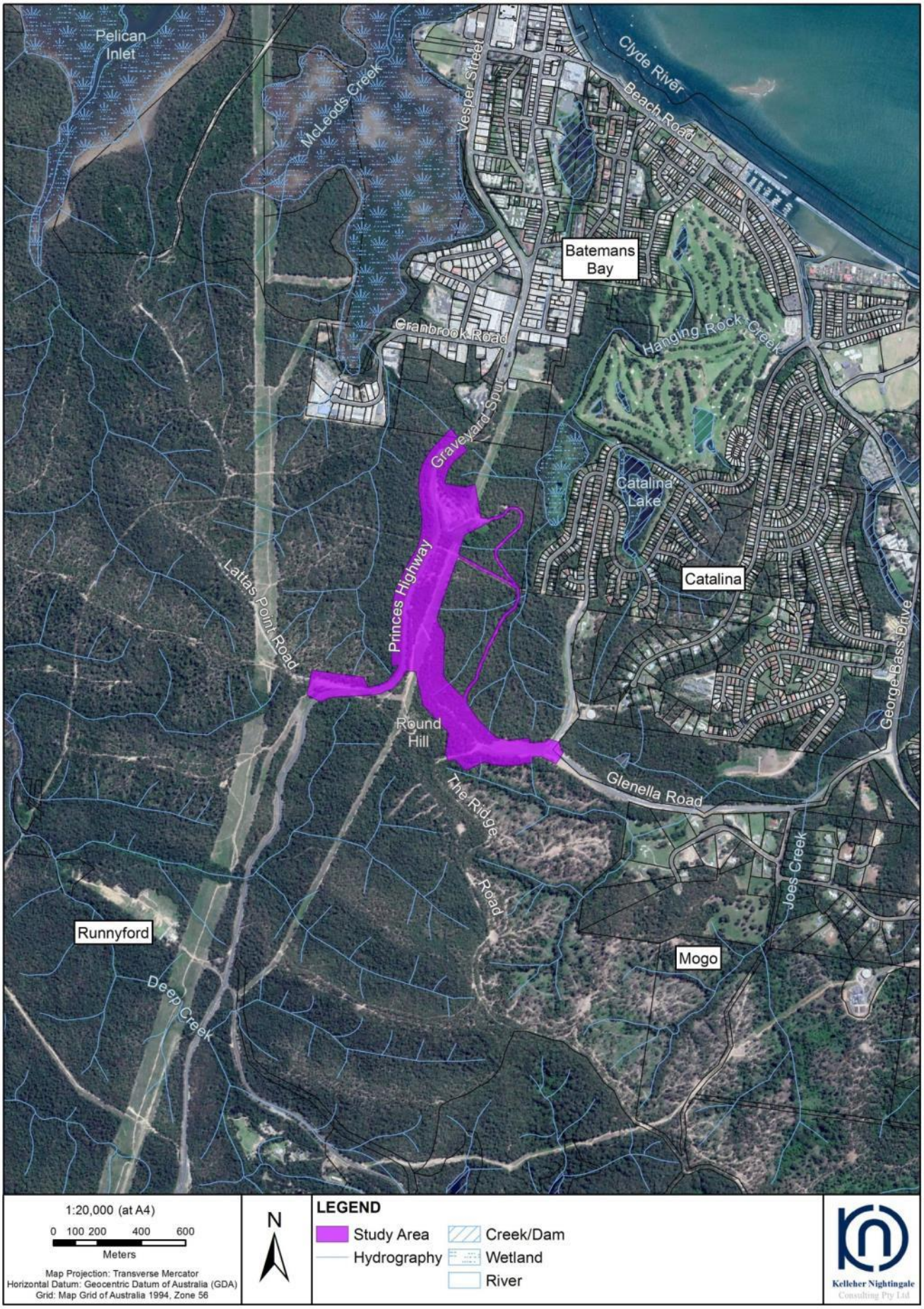


Figure 1. Location of the study area

Figure 2. Study area

1.6 Objectives of the CHAR

The proposed infrastructure works would impact on some Aboriginal objects (sites). Approval obtained under the *National Parks and Wildlife Act 1974* would be required for these Aboriginal objects prior to any impact or harm. The proponent would apply for an AHIP under section 90A of the Act.

Clause 61 of the *National Parks and Wildlife Regulation 2019* requires that an application for an AHIP is accompanied by a CHAR. The CHAR is to provide information on:

- the significance of the Aboriginal objects or Aboriginal place that are the subject of the application
- the actual or likely harm to those Aboriginal objects or Aboriginal places from the proposed activity that is the subject of the application
- any practical measures that may be taken to protect and conserve those Aboriginal objects or Aboriginal places
- any practical measures that may be taken to avoid or mitigate any actual or likely harm to those Aboriginal objects or Aboriginal places.

The *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW* (OEH 2011) provides further guidance on the preparation of a CHAR. This report has been prepared in accordance with the requirements of the Regulation and the OEH guide.

This CHAR has been prepared to accompany an application for an AHIP made by TfNSW for Aboriginal objects within the study area, including those associated with South Batemans Bay Link Road AFT 1(58-4-1385) and South Batemans Bay Link Road AFT 2 (58-4-1386).

2 Landscape Context

2.1 Landform, hydrology, geology and soils

The study area is located within the South East Corner bioregion of NSW. This region is located in the south eastern corner of NSW and encompasses the eastern fall from the Great Dividing Range across the Great Escarpment to the coast. The study area is within the Bateman sub-region, which comprises the steep hills below the escarpment orientated north-south and controlled by rock structure (National Parks and Wildlife Service (NPWS) 2003). The rolling lines of hills become lower towards the coast, with a slight upturn along the coastal margin. Coastal barrier systems tend to be small and estuarine fills are also limited. Underlying geologies of the wider region are part of the Lachlan Fold Belt, comprising folded Ordovician slates, cherts, and quartzite. Less deformed Devonian sandstones and mudstones overlie the Ordovician rocks and approximately half the South East Corner bioregion is intruded by granites. Smaller localised areas of Tertiary basalt and quartz gravels and sand occur along the coast. Quaternary sediments have not greatly contributed to shaping of the bioregion's landscape except for the beaches and dunes of small coastal barrier systems (NPWS 2003:230).

Landforms present across the study area generally comprise the steep upper slopes and crests of Graveyard Spur and its associated ridge spurs (Figures 3 & 4). Graveyard Spur is a north to south trending ridgeline which extends north across the study area from a high point at the Round Hill Lookout to the south of the study area. The ridgeline forms a watershed between McLeods Creek and Hanging Rock Creek. On the western slopes, several drainage tributaries drain north to McLeods Creek and adjacent marshlands and swamp. The eastern slopes of the ridge are dissected by open depressions associated with the upper catchment of Hanging Rock Creek which flows north into the Clyde River.

The geology of the study area comprises Ordovician sedimentary rocks of the Adaminaby Group (Figure 3). The Adaminaby Group comprises coarse to fine-grained sandstones and siltstones of turbiditic origin and mudstone, shale, carbonaceous shale, greywacke; chert, quartzite, phyllite and slate. Turbiditic sequences comprise green to grey–green laminated slates and siltstones interbedded with sandstones of variable thickness (Percival et al 2011:13-15). This geology contains lithic materials suitable for use in stone tool-making. Naturally occurring quartz is known to be present across the ridges and upper slopes within the study area. Quartz fragments fractured by machinery and other landuse related activities have previously been identified within the study area.

Soils within the region are strongly influenced by underlying geology and topography but generally form texture contrast profiles. Thin topsoils occur above red clay subsoils on metamorphic rocks, with deeper coarser-grained sediments on granites and red-brown structured loams on basalt (Morgan 2001; NPWS 2003). The Tertiary sands and dunes of the coast comprise deep siliceous sands with some podsol development. Brown friable earths and red-brown structured loams are most common in the Bateman sub-region, along with acid brown earths and red duplex soils on the coastal ranges. On ridge crests and slopes covering the majority of the study area, profile samples taken along ridgelines indicated that a typical profile comprises Yellow Dermosols and Yellow Podzolic soils derived from the underlying shale lithology. A Horizon soils typically consist of slightly acidic, dark fine sandy clay loams and B Horizon soils consist of brown light sandy clays and brown medium clays. Soils are well drained, with a moderate erosion hazard (OEH 2019).

Remnant native vegetation in the local area consists of several vegetation communities. Batemans Bay Foothills Dry Forest occurs on sandy loams across ridges and slopes throughout the coastal hinterland and is defined by Eucalypt woodland with an open understorey of Sclerophyll shrubs, grasses and forbs (NSW Department of Environment, Climate Change and Water 2009). Slopes at lower elevation consist of a mix of Wet Sclerophyll Forest such as Batemans Bay Cycad Forest and Clyde-Tuross Hinterland Forest. Batemans Bay Cycad Forest is characterised by Eucalypt forest with open shrub and grass cover across the slopes, and Clyde-Tuross Hinterland Forest, present within proximity to creeks and drainage lines, consists of Tall Eucalypt Forest with vine-laden small trees and shrubs over a dense ground cover of ferns, graminoids and small forbs.

Landuse practices have had a variable impact on the landscape around the study area. European settlement expanded in the mid to late 1800s in the Batemans Bay area as a result of sawmilling and farming industries. The local area has been subject to vegetation clearance associated primarily with ongoing forestry practices and the installation of overheard transmission lines. An old timber mill site is located within the northern part of study area. Further land clearing and grading activities associated with 4WD access tracks and road construction across the ridgelines has also contributed to ground surface disturbance and increased erosion in these areas. The existing road corridor of the Princes Highway has been extensively disturbed by earthworks, levelling, drainage works and cuttings. These activities are likely to have contributed to disturbance of soils and any subsurface deposits.

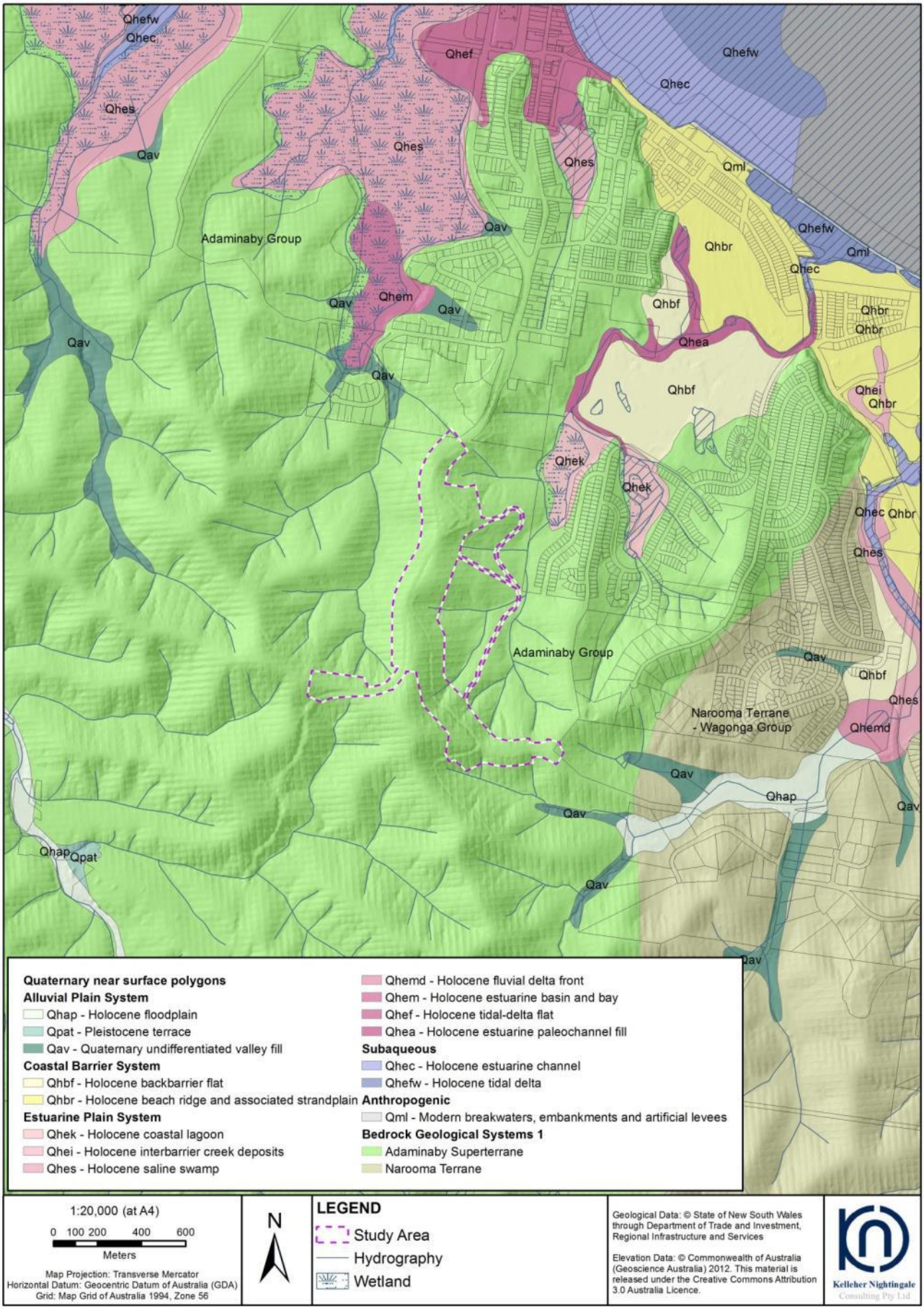


Figure 3. Geology of the study area

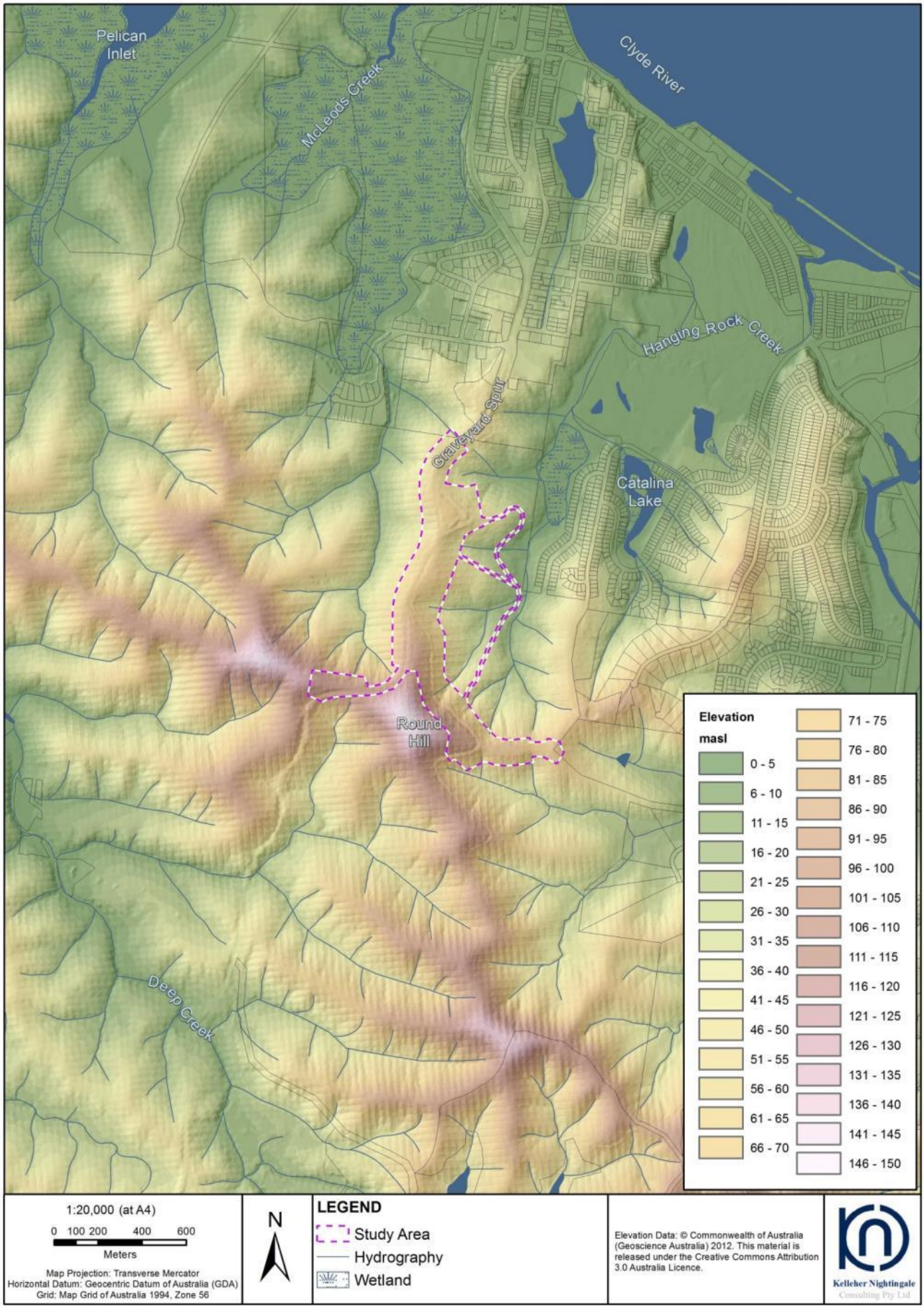


Figure 4. Topography of the study area

2.2 Ethnohistoric and historic context

The study area is located within a region that was important to and intensively used by Aboriginal people in the past while members of the contemporary Aboriginal community continue to experience connection with the local area through cultural and family associations (cf. Goulding Heritage 2005, SDDE&CS 2006 and SDDE&CS 2007).

The Batemans Bay area sits within a resource rich region encompassing marine and freshwater environments and freshwater and estuary wetlands. These areas provided a rich aquatic and avian resource for Aboriginal people including a wide variety of shellfish, fish, eels, and crabs. The river shallows, wetlands and floodplains also provided a rich source of plant resources for food and medicinal purposes. Aboriginal people also utilised a wide range of land-based resources, including animals such as wallabies and possums, plant foods, and honey as food sources.

As would be expected in such a resource rich area the early European records give an impression of a well-populated region. Prior to the intrusion of Europeans, Aboriginal people in the region lived in small residence groups of around fifteen to twenty people, associated into larger groups of perhaps seventy to a hundred people. Aboriginal people of the region were closely connected through ceremonial cycles, trade networks and kinship to communities north to Sydney, south to Victoria and west up onto the tablelands and alps. Patterns of movement along the coast and between the coast and the Monaro hinterlands existed long before European arrival in the area and were associated with resource sharing (e.g. whale meat, fish flushes, bogong moths), for ceremonial purposes, including initiation and warfare, and for trade and marriage exchange (Attenbrow 1976, SDDE&CS 2006 &2007, Blackwell & Happ 1984, Kabaila 2005, Poiner 1976). Aboriginal people and communities within the Batemans Bay area continue to operate today, as they did in the past, as part of a broad network of community and kinship extending south and north along the coast and inland to the tablelands.

Oral history and the archaeological record give us some insight into the many thousands of years of history of Aboriginal people's occupation of the Batemans Bay region. Documentary records only exist for the relatively recent past, with the first written record of Aboriginal people at the Bay being from 1770, when Captain James Cook sailed up the south coast on board the *Endeavour*, and recorded seeing five Aboriginal men standing on the shore just to the north of Batemans Bay (Ellis 1997). In 1797, a party of survivors of the shipwreck of the *Sydney Cove* in the Bass Strait travelled overland up the coast to Sydney, passing through the Batemans Bay area. Travelling from Wallaga Lake through the Batemans Bay area towards Jervis Bay the shipwreck survivors were treated kindly by the local Aboriginal people who provided them with food and water and guided them across rivers and through country. Despite this assistance, by the time they reached the Moruya River many of the party were too weak to continue the walk to Sydney and nine of them were left behind while eight continued the walk to the north. The nine left behind were all Bengali seamen, it is not known what happened to them but given the kindness that the local Aboriginal people had shown to the group, it is possible that at least some of them survived and remained with the local Aboriginal community (McKenna 2016:30-33).

The next meeting between the Aboriginal people of the Batemans Bay area and Europeans that was documented was in 1808 when a small vessel, the Fly, pulled into the Bay to escape a storm. Five of the sailors went on shore where they were met by a party of Aboriginal people and for reasons not recorded, there was conflict between the two groups. Three of the five Europeans were killed; it is not recorded if any of the Aboriginal men were injured (Ellis 1997:14, Gibbney 1980:14-15). In 1821 another ship, this one carrying cedar cutters heading for the Illawarra, took shelter from a storm at Batemans Bay. The people of Batemans Bay again met the intruders with violence, killing one man and injuring another and forcing the ship to head back to sea (Ellis 1997:14-15). The people of Batemans Bay had by this time acquired a reputation for fierceness among the Europeans. The reason for the change in attitude by the Batemans Bay people towards the intruding Europeans is not known; it may have been the result of the differing attitudes of the various Europeans or may have reflected a growing awareness and concern for the potential impact of the European presence.

In October of 1826 John Harper, a member of the Wesleyan Missionary Society, travelled by boat down the south coast in search of a suitable location to establish a 'Mission to the Aborigines'. On the 14th of that month the boat put in at Batemans Bay and remained there for two weeks. Harper (1826; Mitchell Library CY1529) recorded,

> *The number of blacks present is 87 men, 36 women, 23 children; making in all 146. besides others who are not far distant, as may be seen by the smoke ascending in various places. The land is pretty tolerable in some parts and thickly covered with timber, tho' in some parts it is very mountainous.*

Harper commented that,

> *Ships are not in the habit of putting in here ; the consequence is the blacks are uncontaminated… They seemed to be highly amused at every trifling thing which I did. No man of pure motives need be afraid of travelling with the blacks, even in the most obscure place. Alltho' this assertion is not credited in the Colony by some people, yet I know from experience more than thousands who would object to it. For my part I never was afraid of meeting blacks who had never seen a white man before : neither will I ever be. Let the whites reform their conduct and they need never be afraid.*

> *The women made me several presents which consisted of kangaroo teeth, shells, and red ocre* (sic)*, The kangaroo teeth are fastened to a string, made from the hair of the Opossom, with gum which answers the purpose of wat* (sic) *or glue… They are the cleanest blacks that I have yet seen in the Colony : they have no cutaneous sores upon them… They are very kind to their women and children ; the blankets which I gave to the men they gave to their wives and children… My interpreter tells me they are on good terms with the rest of the surrounding tribes… Their principal manner of living is in catching fish, and marine animals (seals) and in procuring the fruits that grow wild in the woods on which they chiefly subsist. They generally repose at about half a mile from the sea coast. They have temporary huts, ornamented with a tuft of grass fastened to a stick, and projecting from the front part of the top.*

The application by the Wesleyan Missionary Society for a land grant at Batemans Bay was later refused. Governor Darling (Historic Records of Australia, Vol:XIII:128) stated in 1827 that "I have… lately declined authorizing the Wesleyan Missionary Society to select land, which they had applied for along the Coast of Bateman's Bay, considering it would have been prejudicial to the interests of the Settlers."

European pastoralists began to move into the Batemans Bay area in the late 1820s. In 1828, a surveyor noted a deserted hut and stockyards near Batemans Bay (Johnson 1980:24-25), however, European pastoral activity in the region was scattered and very limited in nature. Throughout the 1830s European settlement in the area steadily increased. Much of the movement of people and stock into the area came down from the tablelands via Braidwood and Araluen while others came by sea (Gibbney 1980:21-28). Throughout the nineteenth and well into the twentieth century the sea was the focus of south coast settlement with settlers relying on it for the majority of their transport needs.

In 1830 two settlers from the Murramarang and Moruya areas respectively wrote to the government regarding the actions of Aboriginal people against the intruding Europeans asserting that cattle had been killed and threats made against certain European settlers. They requested the presence of soldiers or permission to shoot the leaders of the resistance (W.T. Morris (1830) in James 2001:5-6).

As a result of these requests the government authorities sent a patrol headed by Lieutenant Lachlan Macalister to the area. Lieutenant Macalister spoke to both European and Aboriginal people in the area and concluded that the coastal peoples were not involved in the conflict, rather that it was people from the mountain regions who were taking issue with not receiving blankets as the coastal peoples did. As a result of his report, blankets were subsequently supplied to the mountain groups as well as the coastal groups and the conflict ceased (James 2001:7, Gibbney 1980:21-28).

There are very few references to conflict between Europeans and the Aboriginal people of the area after this time; in 1845 the settler Francis Flanagan stated that, "… Some few cattle have been speared, and petty robberies are occasionally committed by them… They frequently fight amongst themselves, upon which occasions, the whites, though often spectators, never interfere… Few are killed in those encounters" (Report from the Select Committee on the Condition of the Aborigines 1845:38).

The whaling and sealing vessels travelling the coast during the early 1800s may have transmitted new diseases to the Aboriginal population of the South Coast. The smallpox epidemic that devastated the Sydney coastal peoples in 1789 may well have had an impact further down the coast. However, Harper on his visit to Batemans Bay in 1826, before the first European settlement in the area, recorded that the people he saw there had, *"*… no cutaneous sores upon them." However, even if the local people had managed to avoid the impact of the earlier smallpox epidemics, the epidemic of 1829-31 (which affected areas throughout the colony) is almost certain to have had some impact.

In 1834, the government distributed blankets to station run holders to distribute to Aboriginal people in their local areas. Blankets were given to four stations in the Batemans Bay area, thirty blankets each to Mr Thomson, Mr Hunt, Mr Flanagan and twenty to Mr Morris (State Records of NSW 4/6666B.3). In 1839, a total of 117 people were recorded for the Batemans Bay area, 50 men, 29 women, 24 boys and 14 girls (State Records of NSW 4/6666B.3).

The Aborigines Protection Board emerged in the 1880s and soon developed into an agency of government control over the lives of Aboriginal people in New South Wales, dramatically increasing the regulations and limitations governing Aboriginal people's lives (Chesterman & Galligan 1997, Goodall 1996, Read 1996, *Minutes of Colonial Secretary re Protection of the Aborigines* 1883). Reporting on the Moruya region in 1882, the Board stated that there was a population of 67 Aboriginal people (*Report of the Protector of the Aborigines to 31 December 1882)* and that the Government had provided them with,

> *Four boats in this portion of district in fair order, and properly cared for. Impossible to say what they earn…. The half-castes in this district are remarkably well off, and can earn the same wages as Europeans. The half-castes generally use the boats.*

At Nelligen the Board recorded a population of 16 and referred to them being,

> *… employed in getting timber and wattle bark. Abraham and Donald, with their families, live principally by fishing and bark-stripping, with occasional odd jobs from settlers.*

The Aborigines Protection Board established the Wallaga Lake Reserve on the South Coast in 1890-91. It was a managed station and was the reserve on which the Board attempted to 'concentrate' the population of the region. Wallaga Lake Station provided the only Aboriginal school for the South Coast from the 1890s to the 1960s (Byrne 1984, Young 2000, McKenna 2002). This is reflected in the population figures recorded by the Board for 1899; with a total of 16 Aboriginal people at Batemans Bay, 21 at Moruya, 9 at Nelligen, and 116 at Wallaga Lake (*Report of the Protector of the Aborigines to 31 December 1899)*. Despite the attempts of the Board to move people onto the Wallaga Lake Reserve people continued to live in Batemans Bay and surrounding areas. There were a number of reserves created in the area but the majority of Aboriginal people chose to live in camps around the edges of the township, many of them being traditional camping places.

In particular, the Hanging Rock and Joes Creek area located to the east of the study area, on the southern side of Batemans Bay township, were important residence, recreation and resource places well into the second half of the twentieth century (SSDE&CS 2007, Waters Consultancy 2017).

Aboriginal people worked at a wide range of jobs in the Batemans Bay area including fishing, sawmills, and seasonal farm work. In addition, in the second half of the twentieth century Aboriginal people were employed in dress shops, restaurants, cafes and pubs in Batemans Bay (Donaldson 2008:101). Traditional resource gathering activities, particularly those that centred around the Bhundoo (Clyde) River and the ocean, continued to be a major part of the economic, social and cultural life of the Aboriginal people of the Batemans Bay region throughout the twentieth century. The Eurobodalla Shire Aboriginal Heritage Study, which combined historical research, cultural mapping and oral history, stated that the Batemans Bay area, "… continues to be utilized today as a primary resource collection place, particular (sic) for flathead, black bream, blackfish, stingray, green eel, shark, oysters, cockles, leather jackets, mud and mangrove crabs" (Donaldson 2008:100).

3 Archaeological Context

The local area and wider Batemans Bay region has been subject to several previous archaeological investigations conducted for infrastructure and development projects. The results of investigations relevant to understanding the Aboriginal archaeological record of the current study area are presented below.

South Batemans Bay Bypass Project
Previous archaeological assessment was undertaken for the South Batemans Bay Bypass in 1995. The assessment included archaeological survey of a proposed arterial road between the Princes Highway and the Batehaven Bypass (George Bass Drive) and included the proposed development of a portion of the Old Malua Bay Road (also known as The Ridge Road and now Glenella Road) within the current study area. Background research identified the potential for archaeological sites to occur on all landforms represented in coastal and immediate hinterland area; however sites with relatively higher archaeological potential were more likely to be located on low gradient areas on ridge crests and elevated ground adjacent to the valley floor (Navin Officer Archaeological Resource Management 1995: 20).

Archaeological field survey was undertaken for the assessment area. Survey traversed the ridge crest, upper/mid slopes, basal slopes and creek flats present across the study area. Ground surface visibility was generally low for the majority of the assessment area, though visibility increased significantly along the main road, track exposures and burnt off areas. The entirety of the assessment area displayed considerable evidence of surface disturbance resulting from forestry related landuse practices. This was particularly evident along the Graveyard Spur ridge within the current study area. A total of eight Aboriginal archaeological sites were identified during the course of the field survey. Sites identified included four artefact scatters, South Batemans Bay Bypass 1 (SBB1) – South Batemans Bay Bypass 4 (SBB4) and four isolated finds, Isolated Find 1 – Isolated Find 4. Two of the isolated finds and one artefact scatter site identified as a result of this assessment were located within the current study area: South Batemans Bay IF 1; IF1 (58-4-0792), South Batemans Bay IF 2; SBB IF2 (58-4-0793) and South Batemans Bay Bypass 1; SBB 1 (58-4-0797).

All four isolated finds were recorded on ridge and spurline crest landforms with low gradients. It was determined that these sites could reflect either more transitory or ephemeral use of the ridgelines, or that these locations had been disturbed by modern land use activities. Isolated finds consisted of singular instances of milky quartz artefacts; including one retouched flake/scraper, one core containing two platforms, one broken flake and one grey volcanic porphyry broken pebble chopper/anvil stone. Artefacts recorded at the surface artefact scatter site locations consisted primarily of broken flakes, flakes, and cores. However instances of backed blades and retouched flakes were also identified. Raw materials present were primarily quartz, with instances of silcrete and volcanics also recorded. The artefact scatter sites (with the exception of South Batemans Bay SBB1) were identified primarily on the basal slopes adjacent to low lying spur lines above the valley floor and the Joes Creek watercourse. These sites were interpreted as reflecting more locally focused, low level exploitation and occupation sites based on their location on the elevated slopes (Navin Officer Archaeological Resource Management 1995: 21). More intensive occupation sites would likely have been located within closer proximity to littoral and estuarine environments associated with the valley floor. Site SBB1 was identified as an artefact scatter consisting of five artefacts identified on a low knoll and adjacent to a ridge crest saddle [redacted]. The site was interpreted as likely reflecting an 'interim campsite' related to periodic use of the [redacted] as an access route (Navin Officer Archaeological Management Resource 1995:20).

All sites identified as a result of the South Batemans Bay Bypass Project were determined to be of low or negligible archaeological significance. It was recommended that an s.90 Consent to Destroy be sought from the Director General of the NSW National Parks and Wildlife Service (NPWS) for all of the sites. An additional recommendation included that the Consent to Destroy should include a provision for the collection of artefacts from the sites identified, that would be considered appropriate for use as an educational resource (Navin Officer Archaeological Resource Management 1995: 26).

An s.90 Consent to Destroy and Permit to Salvage was subsequently granted in two stages, for the South Batemans Bay and Link Road. Sites South Batemans Bay Bypass 1; SBB1, South Batemans Bay IF 1; SBB IF1; and South Batemans Bay IF 2; SBB IF2; were located within the current study area. These sites were subject to salvage in the form of artefact collection. The artefact collection was undertaken by Navin Officer in November 2005. The sites have been destroyed in accordance with the terms and conditions of the Consent to Destroy and Permit to Salvage (Consent #2323) granted on 21 October 2005. Sites South Batemans Bay IF 1;SBB IF1; and South Batemans Bay IF 2; SBB IF2 are no longer extant.

Proposed 66KV Transmission Lines from Batemans Bay to Mossy Point and from Moruya to Narooma
Early archaeological assessment of a 66kv transmission line from Batemans Bay to Mossy Point and from Moruya to Narooma was undertaken by R. Kari Barz in 1979. A pedestrian survey of the proposed transmission route and the proposed substation sites at Batemans Bay, Mossy Point and Narooma was undertaken. The majority of the route was surveyed with the exception of deep gullies and dense vegetation. The proposed transmission line route covered both forested and non-forested areas as well as some areas containing rocky outcrops and rock faces.

Any exposures resulting from natural wind and water erosion or lumbering, construction and quarry activities were carefully examined for surface artefact scatters. These areas within or adjacent to the alignment were inspected. A range of additional sites were identified across the overall proposed corridor between Moruya and Narooma as a result of the assessment, including artefact scatters, archaeological deposit, scarred trees, shell midden and isolated artefacts. None of these sites were located within the vicinity of the current study area.

Within the Batemans Bay to Mossy Point portion of the surveyed area, the majority of the proposed route was found to have been subject to logging operations which had caused considerable soil disturbance; particularly within the proposed transmission line easement. It was noted that soils within a significant portion of the proposed easement had been overturned or scraped (Barz 1979: 11). The assessment noted that logging undertaken by heavy machinery in the area at the time of survey had resulted in the distribution of intrusive quartz across the landscape and had led to difficulty in distinguishing quartz artefacts (resulting from purposeful flaking) from quartz materials fractured and distributed by the machinery. Whilst quartz pieces which could be considered as flakes and cores were identified, no retouched pieces, formal cores or tool types were recorded. It was therefore considered that surface scatters of quartz be considered as machinery damaged in this context (Barz 1979: 14).

Three small artefact scatters containing a few small flakes and amorphous cores were identified, along with three isolated artefacts within the Batemans Bay to Mossy Point portion of the assessment area. Two of these sites (AHIMS 58-4-0129 & 58-4-0130) were recorded within the vicinity of the current study area, . One of the isolated finds consisted of a quartz pebble chopper; it was determined that the artefact had most likely rolled downhill as a result of the recent construction of water tanks further uphill. All artefacts identified within the Batemans Bay to Mossy Point section, were recorded in disturbed contexts and were determined to have likely originated elsewhere. It was determined that no Aboriginal archaeological sites were identified within the proposed transmission line easement or impacted by construction works or associated activities. If any sites were to exist that had not been identified as a result of the survey, it was determined that these would have been heavily disturbed by logging activities.

Proposed Subdivision between Vista Avenue and Glenella Road, Batemans Bay

An Aboriginal archaeological survey of a proposed residential subdivision between Vista Avenue and Glenella Road was undertaken to the east of the current study area by ANUTECH Pty Ltd in 1988. Detailed field survey was undertaken across the assessment area, with areas of high archaeological sensitivity targeted. The assessment area comprised hilly to steeply hilly landforms, deeply incised by ephemeral streams in the west, and low-lying, marshy ground bordering Joes Creek. The majority of the assessment area contained dense vegetation or pasture grasses. Soils across the assessment area ranged from stony soils on the ridges and upper slopes in the west and stony colluvial soils on the lower slopes, to deep alluvial soils at the base of ridge slopes. Peat soils were present within low lying marshy areas.

One artefact scatter site and two isolated artefacts were identified as a result of the archaeological survey. The artefact scatter site comprised two artefacts . The artefacts recorded were a flaked piece made from a fragment of quartz porphyry beach pebble and a fine grained siliceous broken backed blade (ANUTECH Pty Ltd 1988:6). It was determined that there was potential for further archaeological deposit to be present within less disturbed areas in proximity to the artefact scatter site. One isolated non-bipolar quartz core was identified . The artefact was identified amongst naturally shattered quartz fragments associated with extensive disturbance by earthmoving equipment at the site location. One additional isolated find was identified . The artefact consisted of a fine-grained siliceous flaked piece. Natural quartz fragments were also identified at the site location. It was determined that the Aboriginal archaeological sites identified as a result of the survey should be avoided by the proposal. If the sites could not be avoided, it was recommended that further archaeological investigation involving test excavation of the artefact scatter be undertaken.

Batemans Bay Bridge Replacement Project

KNC undertook archaeological investigations for the proposed Batemans Bay Bridge replacement in 2017 and 2018. The assessment included desktop review and background research, archaeological field survey, the preparation of a Cultural Heritage Assessment Report (CHAR) including Aboriginal community consultation and test and salvage excavation programs. The assessment encompassed lands located north of the current study area, on the Clyde River at Batemans Bay. Desktop assessment showed that previously recorded archaeological sites within the region consisted of shell middens, surface artefact scatter and isolated finds . Additionally, open context artefact sites (artefact scatters and isolated finds) and shell midden sites demonstrated that these areas were natural focal points that were exploited for resources. Aboriginal archaeological sites that had been identified further away were characterised by low density artefact scatters and isolated artefacts .

The archaeological survey assessment identified three previously recorded shell middens (B Bay Shell 1, B Bay Shell 2 and B Bay Shell 3), one previously identified artefact scatter (Batemans Bay Artefact Scatter 1/BBAS1) and one newly identified PAD area PAD 1). Sites Batemans Bay Artefact Scatter 1/BBAS1, B Bay Shell 1, B Bay Shell 2 and B Bay Shell 3 . All three previously recorded shell midden sites had previously been subject to archaeological test excavation undertaken by Australian Archaeological Survey Consultants in 2007. Test excavations uncovered a total of 1,415 pieces of shell across the three shell midden sites. The shell material consisted of four shellfish species (Sydney Rock Oyster, Sydney Cockle, Common Mud Oyster and Hercules Club Whelk) which were noted to be commonly found within the Clyde River (AASC 2007: 28). AASC noted that , the nearest fresh water source was approximately 400 metres away and suggested that the shell fish were consumed and discarded close to the point of collection without regard for the distance to water (AASC 2007: 33). The shell midden sites were interpreted as being the remnant portions of larger midden sites or a single large midden which was disturbed by the construction of (AASC 2007: 33). A total of 48 stone artefacts were also recovered during the test excavation program across the three sites. The majority of stone artefacts were made from quartz (54%) and silcrete (42%) with two flakes of igneous material also found.

The newly identified PAD area (PAD 1) identified as a result of the archaeological survey was located on an elevated flat landform . The area of PAD exhibited archaeologically favourable topography, relatively stable deposits, and a location similar to other identified archaeological sites in the region. The survey results confirmed the sites exhibited variable levels of visible subsurface disturbance. The Aboriginal archaeological sites within the assessment area No Aboriginal archaeological sites or areas of potential archaeological deposit were identified south of Clyde River at Batemans Bay. The results of the archaeological survey corresponded with the results of archaeological investigations within and in the vicinity of the proposal area. The assessment determined that the majority of the surveyed area contained no potential for subsurface archaeology due to unfavourable location or ground surface disturbance from natural processes including erosion and fluvial activity or modern land use practices including the construction of structures and roads, the installation of above and below ground utilities, landscaping and bulk earthworks.

Subsequent test excavation was undertaken at PAD 1 by KNC in September 2017. A total of 15, 50 x 50 centimetres test squares were excavated. The test excavation program at PAD 1 found that a fill deposit of sand, small bivalve shell, granite and other modern contaminants had been deposited across the tested area. The fill material was found to overlay natural medium grained sands that contained small bivalve shell in test squares adjacent to the deposit further did not. A total of two artefacts were identified within one of the 15 test squares excavated. The artefacts were recovered from the top 15 centimetres of the fill deposit which also contained inclusions of granite and small bivalve shell. The artefacts consisted of a flake of medium grained siliceous (MGS) material and a quartz bipolar core. The test excavation program PAD 1 demonstrated that whilst natural sands occurred within the tested area, the deposit was culturally sterile and in situ subsurface archaeological deposits did not exist. The two artefacts recovered from the area were from a fill deposit and were not in situ. The presence of shell similar to that present within the natural sands indicated that the fill was sourced from an environment in close proximity . Due to the presence of artefacts identified during test excavation, the PAD area was reclassified and renamed AFT 1. The archaeological significance of the site was low as a result of the contemporary and geomorphic disturbance to the sand matrix.

Cultural heritage assessment determined that of the five Aboriginal archaeological sites identified within the assessment as a result of archaeological survey and test excavation, three sites were identified as being of low archaeological significance (Batemans Bay Artefact Scatter 1/BBAS1, B Bay Shell 3 and AFT 1) and two sites were identified as being of moderate archaeological significance (B Bay Shell 1 and B Bay Shell 2). An Aboriginal Heritage Impact Permit (AHIP) was sought for all five sites located within the Batemans Bay Bridge Replacement Project area. The AHIP was sought with a provision for impact mitigation through archaeological salvage excavation of sites of moderate archaeological significance, B Bay Shell 1 and B Bay Shell 2.

AHIP #C0003661 (AHIMS Permit ID 4266) was subsequently issued to TfNSW in June 2018 for construction of the proposal and included surface collection and salvage for the abovementioned sites. A salvage program for the project was undertaken by KNC in July 2018. The program for the two salvage sites (B Bay Shell 1 and B Bay Shell 2) involved the hand excavation of 100m^2 resulting in the recovery of 3,414 stone artefacts and 27,549g of shell. A MNI (Minimum Number of Individuals) count of 1,022 was identified across nine shellfish species. Archaeological investigations identified two areas that contained evidence of repeated occupation events with a range of activities. The majority of squares excavated during the salvage program contained a moderate density of artefacts. Squares containing a high density of artefacts (>100 artefacts per square) were encountered at site B Bay Shell 2, while the highest density at B Bay Shell 1 was 70/m2. B Bay Shell 1 and B Bay Shell 2 shared the same geological and soil conditions; soils encountered were shallow and erosional with some deflation evident. Both sites displayed various levels of disturbance resulting from natural processes and modern land use activities.

A range of raw materials, artefact types and shell species were recovered from both sites. Half of the artefact assemblage consisted of silcrete artefacts. This was followed closely by quartz and metamorphic stone. Other raw materials such as a dominant black fine-grained siliceous stone (previously not described in the region), medium-grained siliceous, rhyolite, basalt, chert, chalcedony and petrified wood were also identified along with other metaphoric and igneous materials. Artefact types included flakes, flake fragments, angular fragments and cores. These included modified artefacts such as backed artefacts, retouched artefacts, scrapers, hammerstones and artefacts demonstrating usewear. The wide variety of recorded artefact and tool types were indicators of various activities practiced on site. Backed and retouched tools were widely distributed across the sites, as well as a range of flakes and tools that had traces of usewear. The high levels of usewear and retouch on many of these tools suggested extensive usage, potentially associated with the exploitation of shellfish resources. The number of partially backed and broken microliths indicated the possibility that training activities on how to make tools were practiced in the area. Heavily retouched and backed flakes indicated that more specialised, deliberate activities were being undertaken at both sites, or perhaps prepared for at the site and subsequently undertaken off-site (given that these artefacts did not appear to have been reworked or obviously used). A higher proportion of backed artefacts at B Bay Shell 1 indicated intensive onsite production of these specialised tools.

The dominant shell species identified included Anadara trapezia (Sydney Cockle), Australomytilus rostratus (Beaked Mussel) and Saccostrea glomerata (Sydney Rock Oyster). Analysis of the shell midden material indicated that Aboriginal people exploited a range of both estuarine and rock platform species along the Clyde River. Due to the high frequency of shell fragmentation at both sites, and clear redeposition of some of the shell material, it was determined that both sites were most likely originally much larger and that deposits recovered during the salvage program represented only a portion of a previously extensive shell midden. Recovered shell species, their frequencies and shell sizes confirmed that shell material at the sites derived from a partially disturbed and redeposited cultural shell midden.

The results of the salvage program demonstrated that sufficient archaeological integrity was retained at the sites to demonstrate multiple individual activity events. This collection of overlapping events included reduction of various raw materials and the production and use of different tool types. Despite some limited horizontal movement and the lack of vertical stratigraphy, the deposit exhibited useful archaeological information.

3.1 South Batemans Bay Link Road: Aboriginal archaeological survey report

An archaeological survey report (Stage 2 PACHCI) was prepared to inform the concept design for the proposal (KNC 2020). The assessment area incorporated all four of the original strategic design options for the project. The selected preferred option (Option 1 – roundabout) was wholly contained within the assessment area. The assessment comprised a desktop review of previous archaeological investigations, additional background research and archaeological field survey.

The desktop review and background research revealed that previously recorded sites in the immediate area generally consisted of low density open artefact scatters and isolated finds. Open context surface artefact sites had previously been recorded on elevated, gentle gradient ridge crests and elevated ground adjacent to the valley floor. Artefact raw materials were mostly locally-sourced quartz, with a moderate component of silcrete and a variety of other raw materials, all available from regional geologies. Reported artefact types from previously recorded sites included predominantly flakes and flake fragments however cores, backed artefacts and flakes with retouch/usewear were also recorded. Background research suggested that these sites represented the movement of Aboriginal people along ridgelines between more permanent occupation areas of the coast and inland rivers. Shell midden sites were also noted as occurring further to the north, which would have been more extensively exploited by Aboriginal people for their resources.

Three previously registered AHIMS sites had been recorded within the assessment area. All three sites were open context artefact sites which had been destroyed in accordance with a previous NPWS Section 90 Consent to Destroy and Permit to Salvage and are no longer extant. The desktop review also noted that the assessment area was located within a landscape containing varying levels of human disturbance relating to forestry and logging activities and the construction of roads and utilities. Natural processes such as erosion and colluvial movement of material from the steep upper slopes were also assessed as having contributed to disturbance across the assessment area.

Archaeological survey of the assessment area was undertaken with representatives of the Batemans Bay Local Aboriginal Land Council (BBLALC), Mogo Local Aboriginal Land Council (MLALC) and the Native Title Claimant, the South Coast People. The survey closely inspected any areas of exposed ground, such as eroded surfaces, for artefacts, or evidence of intact soils, while mature trees were inspected for any evidence of cultural modification. Ground surface visibility occurred in areas where natural processes such as erosion, or land use practices such as recent ground excavation had removed vegetation or restricted its growth. Assessment of archaeological potential was based on topographic location and visible ground surface disturbance.

The assessment identified one newly recorded Aboriginal archaeological site South Batemans Bay Link Road AFT 1 and one newly recorded PAD, South Batemans Bay Link Road PAD 1 (Figure 5). Both the artefact scatter and PAD area were identified

South Batemans Bay Link Road AFT 1 comprised two quartz surface artefacts. The deposit displayed moderate archaeological potential for subsurface deposit. South Batemans Bay Link Road PAD 1 . The area displayed localised disturbance, with some depth of topsoil and was considered to have moderate archaeological potential. The survey report recommended that a test excavation of both sites be undertaken to determine the intactness, extent and significance of any subsurface archaeological deposits.

The results of the archaeological survey corresponded with the results of archaeological investigations within and in the vicinity of the proposal area which indicated that the ridgelines and crests across the study area may have functioned as pathways between the coast and inland regions. The assessment determined that the majority of the surveyed area contained no potential for subsurface archaeology due to unfavourable location or ground surface disturbance from natural processes including erosion or modern land use practices including the construction of roads, utilities corridors and bulk earthworks.

Cultural heritage survey reports received from BBLALC, MLALC and the Native Title Claimant generally indicated that the area surveyed had been subject to extensive land use disturbance and that no significant Aboriginal cultural heritage features had been identified within the assessment area. Additional comments were received regarding the utilisation of environmental resources in the coastal hinterland and the advantaged position associated with the elevated landscape and coastal vistas.

It was determined that based on a study wide impact assessment, South Batemans Bay Link Road AFT 1 and South Batemans Bay Link Road PAD 1 would be at least partially impacted by the proposed works and that if South Batemans Bay Link Road AFT 1 and South Batemans Bay Link Road PAD 1 could not be avoided, further investigation and assessment would be required.

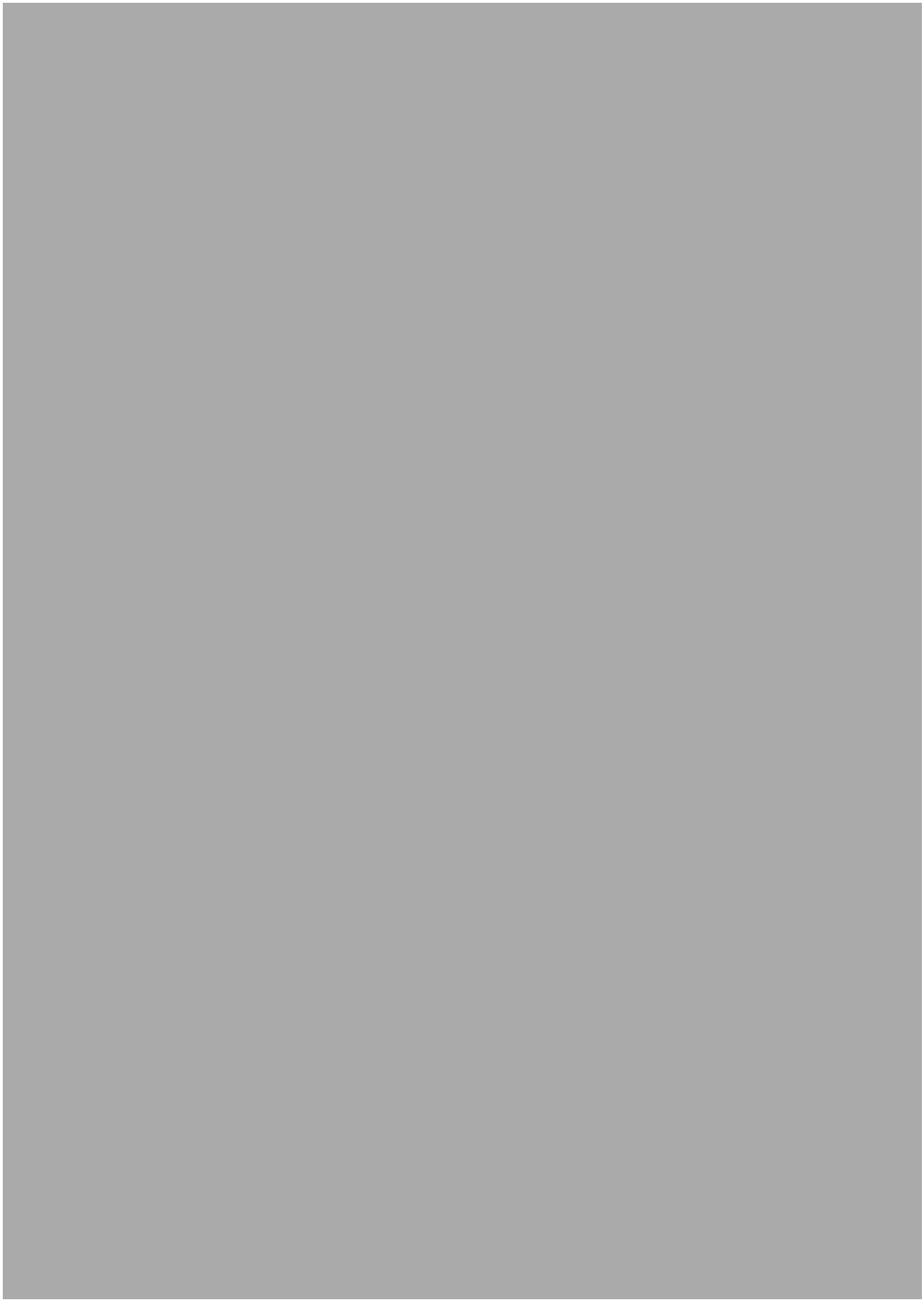


Figure 5. PACHCI Stage 2 assessment results

4 Archaeological Test Excavation

Previous investigation undertaken as part of the Stage 2 PACHCI assessment recorded one newly identified low density open artefact scatter (South Batemans Bay Link Road AFT 1) and one newly identified PAD (South Batemans Bay Link Road PAD 1) within the study area.

The Stage 2 PACHCI assessment recommended a program of archaeological test excavation at both South Batemans Bay Link Road AFT 1 and South Batemans Bay Link Road PAD 1 to obtain further information in regards to the nature and significance of the Aboriginal cultural heritage resource at these locations. The purpose of the test excavation program is to collect information about the nature and extent of subsurface Aboriginal objects through excavation of a sample of the identified site area at South Batemans Bay Link Road AFT 1 and the area of potential archaeological deposit at South Batemans Bay Link Road PAD 1.

Archaeological test excavation was carried out by KNC and field representatives of registered Aboriginal parties in January 2020 as recommended by the Stage 2 PACHCI assessment and in accordance with the OEH *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*.

Aims, methodology and results of the test excavation program are presented below.

4.1 Aims

The purpose of the test excavation program was to collect information about the presence/absence, nature, extent and condition of subsurface Aboriginal objects through excavation of a sample of the test areas. Test excavation aimed to build on the information already obtained through archaeological survey and existing archaeological assessment for the area carried out in accordance with the requirements of the *Code of Practice* and Stage 2 PACHCI assessment. Test excavation results were then used to inform the archaeological assessment. The first priority during the archaeological program was to minimise, as far as practicable, the risk of harm to objects under investigation.

Additional goals of the test excavation were: to assess the boundary of any archaeological deposits in relation to the proposal, to investigate the relationship between specific topographic features and archaeological deposits and to observe the effects of disturbance on archaeological deposits. This information was sought to assist in interpreting the archaeological landscape that remains in the study area and aid management of the archaeological resource. The sampling area was restricted to ensure an adequate sample without having significant impact on any archaeological value of the identified sites.

4.2 Sampling strategy and methodology

Field methodology was developed and carried out in accordance with the TfNSW PACHCI and DPIE *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*. The test excavation program was specifically designed to target questions of artefact survivability through assessing the intactness of the deposit.

In accordance with the *Code of Practice*, test excavation units measured 50cm x 50cm (0.25m^2). Site datums were recorded at each test area, with test units then aligned along transects. The spacing of units along transects was generally 15 metres and varied by excavation area depending on localised disturbances and the size of the investigation area. Squares were occasionally offset from transects to avoid vegetation or localised disturbance.

Easting/northing GPS coordinates (GDA 94, Zone 56) were taken at the north-west corner of each excavation unit. The test units were then given an arbitrary identifying number (e.g. TS 1, TS 2, TS 3, etc.). A total of twenty-four 50cm x 50cm units were excavated during the program across both areas. Excavated totals for each test area are shown in Table 1. It was considered that sufficient information was recovered from the excavated sample at each area to adequately characterise the presence/absence and nature of the archaeology. Following DPIE guidelines, the first excavation unit at each test area was excavated in 5cm spits onto a culturally sterile deposit (basal clay) to determine the nature of the subsurface deposit and the presence or absence of artefactual material. Based on the results of the first excavation square, subsequent squares in each area were excavated in 10cm spits until culturally sterile soils (B horizon clays or bedrock) were reached.

Data including a detailed deposit description, excavated features and unit depths, was recorded by the excavators on standardised excavation unit recording sheets. At the end of the excavation program, all squares were photographed and soil section profiles were drawn. Site plans were prepared for each excavated area showing the location of test squares and their relationship to the surrounding environment including landform/topography, existing road infrastructure and areas of disturbance. Additional photographs were taken showing the field conditions at each area during testing. Plates 1-4 show typical test conditions at each area.

All excavation was undertaken using hand tools. All excavated material was placed in buckets and dry sieved on site using a nested 2.5 millimetre wire mesh screen. Sieved spoil was retained for backfilling the test excavation squares at the completion of the excavation.

A field catalogue of recovered artefacts was maintained to track artefact counts and recovery locations as the test excavation progressed. Following the completion of the excavation program, artefacts were retained for more detailed analysis including a precise recording of size, raw material and technical attributes. This information was compiled into a lithics database (Appendix B).

Table 1. Test excavation sample

Test Area	No. of test squares	TS numbers	Total sample
South Batemans Bay Link Road PAD 1	10	TS1-TS10	2.5m^2
South Batemans Bay Link Road AFT 1	14	TS1-TS14	3.5m^2

Plate 1. South Batemans Bay Link Road PAD 1, view south showing steep slope descending south from crest. TS1 in foreground.

Plate 2. Example of disturbance through erosion at northern extent of South Batemans Bay Link Road PAD 1.

Plate 3. View south along western transect at South Batemans Bay Link Road AFT 1 showing localised land use disturbance

Plate 4. View east. South Batemans Bay Link Road AFT 1, TS5 excavation complete with shale bedrock material (left) excavated from test square.

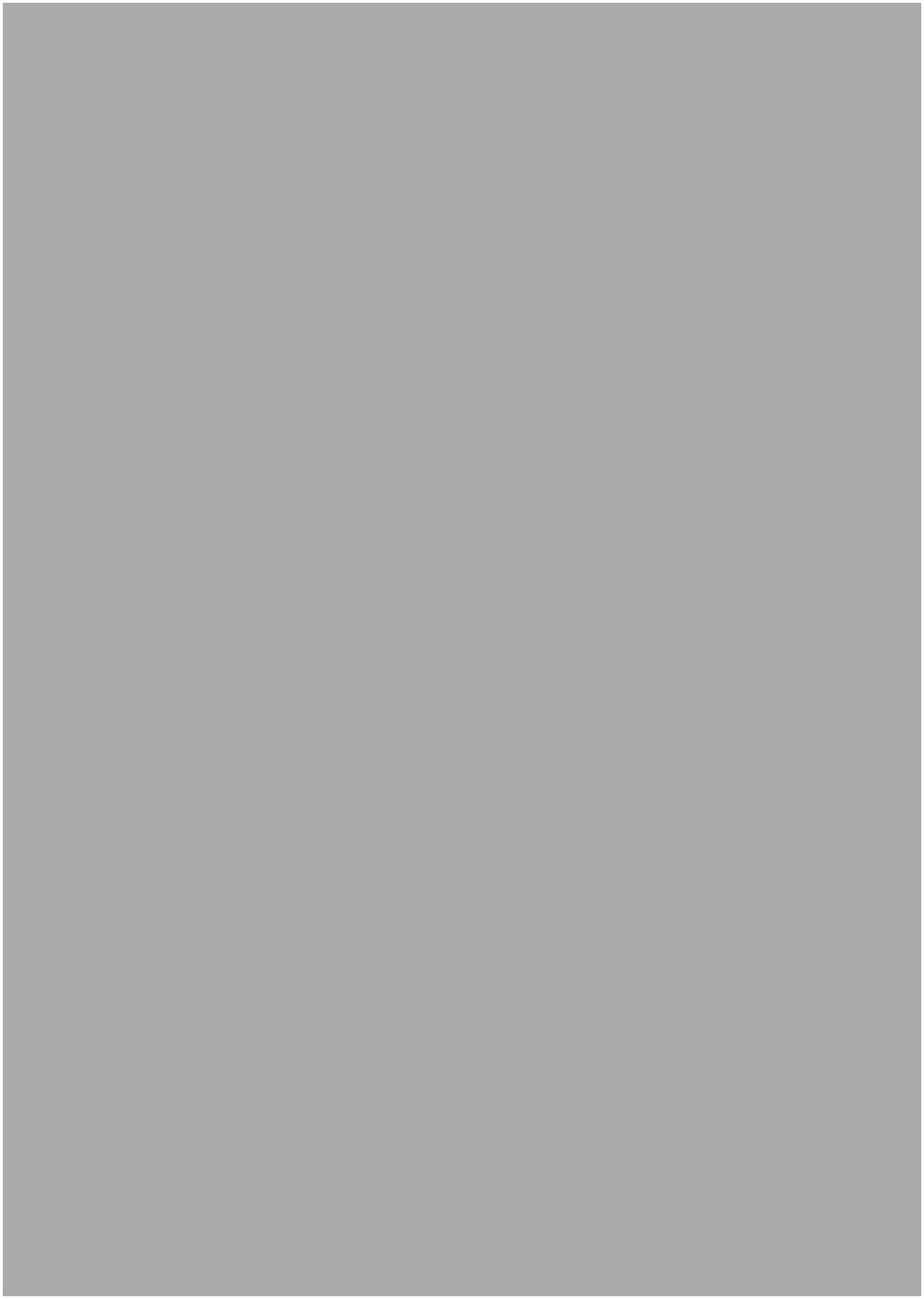


Figure 6. Archaeological test square locations and artefact density at South Batemans Bay Link Road PAD 1 and South Batemans Bay Link Road AFT 1

4.3 Results

4.3.1 South Batemans Bay Link Road PAD 1

South Batemans Bay Link Road PAD 1 was identified ridgeline descending generally south to the Clyde River and Batemans Bay.

Ground surface visibility across the PAD was relatively low during previous survey and no artefacts were identified. Disturbance appeared localised Some portions displayed some depth of soil and were assessed as having moderate archaeological potential. Testing at this location aimed to confirm whether Aboriginal objects were present, and if so, to determine the nature and extent of the deposit.

Since the completion of PACHCI Stage 2 survey, a bushfire burnt the study area resulting in some disturbance from fallen trees and subsurface tree root burning causing localised sink holes.

A total of 10, 50cm x 50 cm test squares were excavated across the PAD, giving a total excavated sample of 2.5m^2. Squares were aligned along two main transects spaced 20 metres apart running southwest to northeast across the area (see Figure 6). The first transect was located on the western side of the test area (TS1 –TS6), and the second transect located on the eastern side of the test area (TS7 and TS 8). TS6 was offset two metres to the east due to disturbance. Two additional pits (TS9 and TS10) were aligned along a third transect, positioned 5 metres east of the first transect

Plate 5. View to the northwest . Photo showing excavation of TS9.

Plate 6. Excavation of TS10 facing west. Note disturbance of soils resulting from burnt tree remains in foreground.

Soils and disturbance

The nature of the deposit was generally consistent across the ten test squares, with slight variations resulting from increased erosion and modern land use disturbance across parts of the tested area. Recent bushfires across the area have resulted in the disturbance and removal of the humic layer (O horizon) across the ground surface and subsequently, an increase and acceleration in surface erosion across the crest landform prior to test excavation.

In general, soils were relatively shallow and contained varying degrees of bedrock intrusions. The upper level of the soil profile (0-10cm) comprised loose, dark grey charcoal-stained sandy clay loam to silty clay loam with little to no humic layer. Deeper A Horizon soils consisted of firm and compacted light orange silty clay loam with light orange to light brown fine grained sands which overlay a B Horizon of light brown, yellow and red clays with decomposing shale bedrock material. The deepest excavated square was TS2 (Figure 7), excavated to a depth of 25cm and the shallowest excavated square was TS8, excavated to a depth of 11 cm.

Fractured shale and natural quartz gravels were common throughout the deposit, with frequency increasing with depth. These coarse fragments comprised up to 20% of material in upper levels (between 0-10cm depth) and increased to up to 70% at depths between 7cm-25cm. Several squares were terminated at bedrock. Exposed bedrock was also present at the upper break of slope below the crest landform. Several squares contained thin grass roots, with 3 test squares (TS1, TS2 and TS8) containing larger tree roots between 2cm-8cm in width.

I. 0-7cm: Loose, dark charcoal stained grey sandy clay loam with shale bedrock inclusions and fine burnt roots throughout. Large tree root at eastern corner (2-8cm depth). Clear boundary to:
II. 7-17cm: Moderately compacted light brown sandy clay loam with shale bedrock and orange clay inclusions, fine tree roots throughout. Diffuse boundary to:
III. 17cm - base: Moderately to lightly compacted, light orange brown sand, mottled with brown clay nodules. Clay content and decomposing shale bedrock inclusions increasing with depth.
IV. Base: Decomposing shale bedrock, mottled with brown clay.

Figure 7. TS2 west section and soil profile description

I. 0-3cm: Loose, dark grey and light orange mottled sandy clay loam with shale bedrock inclusions throughout. Diffuse boundary to:
II. 3cm to base: Moderately compacted, light orange fine grained sand with decomposing shale bedrock inclusions up to 60%. Natural quartz fragments throughout.
III. Base: Moderately compacted, light brown and orange clay mottled with decomposing shale bedrock.

Figure 8. TS8 east section and soil profile description

I. 0-14cm: Eroded, moderately compacted, pale grey brown sandy clay loam with decomposing shale bedrock up to 70% and thin tree roots throughout.
II. Base: Decomposing shale bedrock.

Figure 9. TS9 west section and soil profile description

Artefact distribution

A total of ten artefacts were recovered from test excavation at South Batemans Bay Link Road PAD 1 (Table 2). TS2 contained three artefacts and TS7 (Figure 8) contained four artefacts. Isolated artefacts were also recovered from TS3, TS4 and TS6. Artefacts were predominantly recovered from Spit 1 (0-10cm depth) with two artefacts recovered from Spit 2 of TS2 (10-20cm). The majority of the artefacts (n=7) were recovered from the southern portion . Mean artefact density across the test area was 4/m^2.

Table 2. Artefact distribution – South Batemans Bay Link Road PAD 1

Square number	n	Square number	n
TS 1	0	TS 6	1
TS 2	3	TS 7	4
TS 3	1	TS 8	0
TS 4	1	TS 9	0
TS 5	0	TS 10	0

Lithic characteristics

All artefacts recovered from South Batemans Bay Link Road PAD 1 were quartz, with no other raw material types identified. The quality of quartz across the tested area ranged from moderate to poor on both artefactual material and the natural quartz gravels and pebble/cobble fragments that occurred across the tested area. Internal fracturing and flaws were present across the majority of artefacts. Artefacts were predominantly white in colour, some with grey inclusions.

Reduction types consisted wholly of flaking debitage (Table 3), with angular fragments the most common (30%, n=3). Complete flakes, medial and distal flake fragments each had two examples (60% of assemblage). Terminations were feather (n=2) and one hinge. One proximal flake fragment was also identified; broken into three pieces (ID 3).

Table 3. Reduction types – South Batemans Bay Link Road PAD 1

Raw material	Flake	Proximal fragment	Medial fragment	Distal Fragment	Angular fragment	Total
n	2	1	2	2	3	10
%	***20***	***10***	***20***	***20***	***30***	***100***

Artefact sizes were mostly small in size, with the most frequent size class being 10-14mm (n=5, 50%) followed by slightly larger artefacts measuring 15-19mm (no=3, 30%). One artefact measured 20-24mm and one artefact measured 5-9mm (Table 4). In total, 90% of the assemblage was smaller than 20mm. The smallest artefact consisted of an angular fragment and the largest, a distal flake fragment. The distal flake fragment was one of two artefacts which retained cortical surfaces. The distal flake fragment contained 1-30% cortex, with the other, a medial flake fragment containing 31-69% cortex.

Table 4. Artefact size ranges – South Batemans Bay Link Road PAD 1

Size range	0-5mm	10-14mm	15-19mm	20-24mm	Total
n	1	5	3	1	16
%	***10***	***50***	***30***	***10***	***100***

One modified artefact was recovered, comprising an elongated backed complete flake with a faceted platform (ID 6). The other complete flake in the assemblage was wider than long and contained a ridged platform and step termination (ID 4).

Plate 7. Quartz backed elongated complete flake, ID 6. TS6 Spit 1 (0-10cm depth).

Plate 8. Quartz complete flake with ridge platform, ID 4. TS3 Spit 1 (0-10cm depth).

Plate 9. Quartz artefacts ranging in quality, L-R ID 3, ID 2 (TS2 Spit 2) and ID 1 (TS2 Spit 1).

4.3.2 South Batemans Bay Link Road AFT 1

South Batemans Bay Link Road AFT 1 was identified on the ridgeline descending generally south to north to the Clyde River and Batemans Bay. Two surface artefacts were previously identified on an eroded portion during archaeological survey. Surface artefacts comprised two milky quartz artefacts with negative flake scars on the dorsal surface. Both artefacts displayed 0% cortex. Moderate to steep slopes drop off to the east and west, with gentle to moderately inclined slopes to the north and south along the ridgeline. Testing at this location aimed to confirm the nature and extent of the archaeological deposit.

A total of 14, 50cm x 50 cm test squares were excavated across the site area, giving a total excavated sample of 3.5m^2. Squares were aligned along three transects, placed south to north . The first transect contained test squares TS1-TS6, spaced 15 metres apart (TS1-TS6). TS4 was offset two metres to the east and TS6 offset 38 m north of TS5; both squares were offset due to extensive disturbance in the original test square location.

The second and third transects were located on the western side of test area (TS7 – TS14). Test squares along the second transect (TS7-TS9) were spaced at varying lengths due to disturbance. TS8 was spaced 16.5 metres north of TS7 and TS9, 39 metres north of TS7. The third transect contained an additional five test squares (TS10-TS14). Several test squares were offset along the third transect to avoid disturbance resulting from recent bushfire (see Figure 6).

Plate 10. View to north down eastern transect along the spurline at South Batemans Bay Link Road AFT 1.

Plate 11. View to north from TS11 showing removal of O horizon as a result of recent bushfires.

Soils and disturbance

Soils across the tested area varied as a result of erosion and land use disturbance. Test squares contained little to no humic layer as a result of recent bushfire. Bushfire clean-up activities across the landform including clearing and removal of hazardous tree remains have also contributed to increased disturbance across the tested area.

The upper layers of the soil profile (0-14cm) consisted of loose and crumbly grey brown charcoal-stained sandy clay loam to clay loam overlying 15-20cm of fairly compacted orange to light brown fine grained sands and silty clay loam. Shale bedrock inclusions were present throughout and increased towards the B Horizon, which consisted of orange to light greyish brown clay and decomposing shale bedrock materials. Excavation depths ranged from approximately 10cm to 30cm due to erosion of the upper levels of the A Horizon soils in some parts of the tested area. The deepest excavated squares were TS6, TS8 and TS9, excavated to a depth of 30cm and the shallowest excavated squares were T13 and TS14, excavated to a depth of 10cm.

Fractured (decomposing) shale was common throughout the deposit and increasing with depth. These gravels and coarse fragments comprised up to 15% of material in upper levels (0-10cm depth) and increased to up to 70% at depths between 7cm-25cm. Several squares were terminated at bedrock. The majority of the squares featured thin grass roots throughout the deposit; several squares featured tree roots between 2-5cm and 10-15cm in width. Thick tree roots were identified at all excavated depths. Natural quarts fragments inclusions (5%) were also recorded with the deeper A Horizon soils at TS13.

I. 0-12cm: Loose, greyish brown sandy clay loam with small decomposing shale bedrock inclusions (1%) and fine roots throughout. Very clear boundary to:
II. 12cm -base: Moderately compacted, orange mixed silty clay loam with frequent (30%) decomposing shale bedrock. Orange clay content increasing with depth.
III. Base: Decomposing shale bedrock (50%) mixed with orange clay.

Figure 10. TS1 west section and soil profile description

I. 0-7cm: Loose and crumbly, greyish brown sandy clay loam with fine burnt roots and small gravels.
II. 7-22cm: Lightly compacted orangey brown silty clay loam mottled with brown sandy clay loam. Decomposing shale bedrock fragments and natural quartz inclusions throughout (10%).
III. 22cm – base: Light orange silty clay loam with increased decomposing shale bedrock and brown clay inclusions.
IV. Base: Orange brown clay mixed with decomposing shale bedrock

Figure 11. TS6 south section and soil profile description

I. 0-6cm: Eroded and loose, charcoal stained pale grey brown sandy clay loam with frequent fine tree roots and coarse shale pebbles throughout (15%).
II. 6cm-base: orange brown silty clay loam with frequent coarse shale fragments (55%) throughout.
III. Base: Decomposing shale bedrock mixed with orange brown clay. Small (2-3cm) tree root at north eastern corner.

Figure 12. TS12 north section and soil profile description

Artefact distribution

A total of three artefacts were recovered from test excavation at South Batemans Bay Link Road AFT 1 (Table 5). TS1 contained one artefact and TS6 contained two artefacts. The isolated artefact recovered from TS1 was recovered from Spit 4 (15-20cm) and the two artefacts from TS6 were recovered from Spit 1 (0-10cm).

Table 5. Artefact distribution – South Batemans Bay Link Road AFT 1

Square number	n	Square number	n
TS 1	1	TS 8	0
TS 2	0	TS 9	0
TS 3	0	TS 10	0
TS 4	0	TS 11	0
TS 5	0	TS 12	0
TS 6	2	TS 13	0
TS 7	0	TS 14	0

Lithic characteristics

Artefacts recovered from South Batemans Bay Link Road AFT 1 consisted of one quartz unifacial quartz core (10-14mm) containing three negative flake scars (ID 12) and one large rhyolite complete flake (35-39mm) recovered from TS6. The rhyolite flake was shaped wider than long with a plain platform and feather termination and retained 1-30% cortex (ID 11). The isolated quartz complete flake (20-24mm) recovered from TS1 had a plain platform with a feather termination and was longer than wide (ID 13).

Plate 12. Rhyolite complete flake and quartz core, IDs 11 & 12. TS6 Spit 1 (0-10cm depth).

Plate 13. Quartz complete flake, ID 13. TS1 Spit 4 (15-20cm depth).

4.4 Summary and discussion

Test excavation confirmed the presence of subsurface archaeological deposit at both tested locations, South Batemans Bay Link Road PAD 1 and South Batemans Bay Link Road AFT 1. Given the presence of Aboriginal objects within South Batemans Bay Link Road PAD 1, it has been designated as archaeological site South Batemans Bay Link Road AFT 2 (Figure 13).

The nature and extent of the identified archaeological deposit was generally similar between tested areas. Both tested areas were located along the ridgeline descending generally south to north across the study area. South Batemans Bay Link Road AFT 1 and South Batemans Bay Link Road AFT 2 represent low density archaeological deposits which have been affected by historic/modern land use disturbance and erosional processes.

Soils generally consisted of light brown sandy clay loams to orange brown silty clay loams with little to no humic layer (resulting from recent bushfire activity), overlying deeper A Horizon soils consisting of orange and light brown clays mixed with shale bedrock materials. Soil deposits across both tested areas displayed evidence of bioturbation and increased erosion and mixing of the shale bedrock material from both fine tree roots and large tree roots present throughout soil profiles.

The combination of decomposing bedrock and erosion on the crests indicated a cyclical soil process where the unconsolidated surface of the Adaminaby shales allowed erosion events, if not constrained by vegetation. The recent bushfires displayed part of this cycle where removal occurred of the upper humic soil layers. The result is that was found to be a remnant soilscape affected by long term erosion (aggrading/degrading) cycles. Archaeologically, the spur is not intact – despite visible A Horizons – because the soils are recent accumulations and exhibit only remnant archaeology, which must survive successive soil cycles. Lag deposits containing relatively intact archaeological deposits were not encountered by the test program.

Test excavation results at previously identified surface artefact scatter South Batemans Bay AFT 1 revealed a low density of subsurface deposit The three artefacts recovered from the test excavation program . Two of these artefacts were recovered from TS6 in proximity to the two previously recorded surface quartz artefacts. No Aboriginal objects were recovered in the western portion of the tested area, despite the presence of relatively intact soils in this area. At South Batemans Bay Link Road AFT 2, a low density subsurface archaeological deposit was identified Artefacts recovered from the tested area were identified spread across the landform and consisted mostly of unmodified debitage. However, one modified artefact, an elongated backed flake was identified.

All artefacts across both South Batemans Bay Link Road AFT 1 and South Batemans Bay Link Road AFT 2, with the exception of one rhyolite complete flake, were of quartz raw material which occurs in the local geology and is a readily available resource for artefact production. This is also reflected in the presence of cortical surface on several artefacts recovered from the assemblage. This also accounts for the predominance of natural quartz fragments throughout the deposit at both tested areas. Natural quartz fragments share many similarities to quartz artefacts and artefacts can be difficult to distinguish from naturally shattered quartz fragments, particularly if impacted by grading machinery. Artefacts in the assemblage were carefully analysed and included on the basis of particular diagnostic features.

Aboriginal objects recovered from the test program are considered to be part of the wider spread of archaeological material associated with transitory Aboriginal landscape use , but in and of themselves are only a remnant deposit and do not offer additional scientific information related to Aboriginal landscape activity within the study area. They are unable to contribute more information than is intrinsic to the objects themselves. While Aboriginal objects are likely to remain distributed across this landscape, potential for intact archaeological deposit and scientifically significant information is low.

The findings of the test excavation program are consistent with previous archaeological studies undertaken in the study area and the locality. The study area was likely used as a travel corridor and access route due to its advantageous vistas of the surrounding landscape. The local coastal hinterland would have been utilised periodically by Aboriginal people for hunting and resource gathering. This corresponds with comments from Aboriginal stakeholders present at both the test excavation program and previous archaeological survey which reflect that the area was widely utilised by Aboriginal people for its environmental resources.

5 Consultation Process

5.1 Aboriginal stakeholder consultation

TfNSW is committed to effective consultation with Aboriginal communities regarding TfNSW activities and their potential for impact on Aboriginal cultural heritage. The TfNSW PACHCI was developed to provide a consistent means of effective consultation with Aboriginal communities regarding activities which may impact on Aboriginal cultural heritage and a consistent assessment process for TfNSW activities across NSW.

The aim of consultation is to integrate cultural and archaeological knowledge and ensure registered Aboriginal parties have information to make decisions on Aboriginal cultural heritage. For the preparation of this CHAR, consultation with Aboriginal people has been undertaken in accordance with the DPIE *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (OEH 2010) and the requirements of Clause 61 of *the National Parks and Wildlife Regulation 2019*.

TfNSW advertised in local media (Appendix A) and contacted potential Aboriginal stakeholders identified from government agency notification responses. TfNSW invited Aboriginal people who hold knowledge relevant to determining the cultural heritage significance of Aboriginal objects and Aboriginal places in the area in which the proposed activity is to occur to register an interest in a process of community consultation. Investigations for the South Batemans Bay Link Road project have included consultation with nine Aboriginal community groups and individuals as listed in Table 6 below.

Table 6. Registered Aboriginal parties

Registered Aboriginal party	Representative and/or Contact Person
Batemans Bay Local Aboriginal Land Council	Alisha Davis
Mogo Local Aboriginal Land Council	Linda Carlson
Didge Ngunawal Clan	Paul Boyd and Lily Carroll
Murra Bidgee Mullangari Aboriginal Corporation	Darleen Johnson
Corroboree Aboriginal Corporation	Marilyn Carroll-Johnson
South Coast NSW Elders Aboriginal Corporation Elders Incorporated Association	Geoff Berry
Goobah Development	Basil Smith
Jambi Culture and Heritage	Billy Campbell
South East Coast Gadu Elders	Maureen Davis
Robyn Goodsell	Robyn Goodsell
Registered Aboriginal Stakeholder [details withheld]*	Registered Aboriginal Stakeholder [details withheld]*

*One Aboriginal stakeholder has registered for the project but has chosen to withhold their details in accordance with item 4.1.5 of the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (OEH 2010b).

The formal consultation process has included:

- advertising for registered Aboriginal parties (Appendix A);
- government agency notification letters;
- notification of closing date for registration;
- provision of proposed archaeological and cultural values assessment methodology (allowing 28 day review) outlining the methodology to prepare the CHAR;
- ongoing compilation of registrants list, through continuing to register individuals and groups for consultation on the project;
- Provision of draft CHAR for review (a 28 day review period ending on 14 April 2020)
- An Aboriginal Community Engagement Day (ACED) meeting was held on 14 March 2020 to discuss investigation results, the findings of the draft CHAR and additional comments regarding cultural values of the study area
- ongoing consultation with the local Aboriginal community.

5.2 Provision of test excavation methodology and CHAR methodology

All registered stakeholders were provided with a copy of the proposed text excavation methodology and CHAR methodology as part of an information package sent to stakeholders on 21 November 2019. Stakeholders were requested to review the information and provide and comments or cultural information that may affect, inform or refine the methodology.

Stakeholders were also invited to attend an ACED to be held on the 7th December 2019 during the review period to discuss the draft methodology. The event however was cancelled due to severe bushfires in the Batemans Bay area.

No formal responses to the proposed test excavation and CHAR methodology were received from the registered Aboriginal parties during the review period.

5.3 Review of draft CHAR

The draft CHAR was provided to registered Aboriginal stakeholders for review and comment (letters dated 16 March 2020). All registered Aboriginal stakeholders were provided a 28 day period for review. Stakeholders were invited to attend an ACED during the review period to discuss the draft CHAR and assessment findings.

No formal comments or feedback was received during the draft CHAR review period. However, Aboriginal stakeholders who attended the ACED requested that artefacts recovered from South Batemans Bay Link Road AFT 1 and South Batemans Bay Link Road AFT 2 are reburied in an undisturbed area, within proximity to original site recording locations.

5.4 Aboriginal cultural values

Whilst, no specific cultural values attached to the identified archaeological sites within the study area have been identified by stakeholders to date, it has been identified that the locality has cultural heritage value to the local Aboriginal community.

Some of the Aboriginal cultural heritage values expressed by Aboriginal community in the region and identified through archaeological survey of the project area include: a strong association with the land, family and ancestral connection with the local area and a responsibility to look after the land, including the heritage sites, plants, animals and creeks. Heritage values are also attached to scarred trees, artefact sites and landscape features, creeklines and other watercourses and indigenous plants and animals.

6 Summary and Analysis of Background Information

Analysis of the background information presented in sections 2, 3 and 4 allows an assessment of the cultural heritage values within the proposal area to be made. Combining data from historical/ethnographic sources, Aboriginal community consultation, landscape evaluation and archaeological context provides an insight into how the landscape around the study area was used and what sort of events took place in the past. This section draws together a variety of information to bring further understanding to the cultural landscape of the study area.

The study area and surrounding region are known to have been important to and extensively used by past Aboriginal people. Aboriginal people's use of the Batemans Bay area is well-documented in historic accounts, as are local groupings such as the Walbanja –Yuin. While European expansion and settlement adversely affected the social and economic lifestyle of Aboriginal people living in the Batemans Bay area, a strong connection to the region endured and continues to this day. Members of the contemporary Aboriginal community continue to experience connection with the area through cultural and family associations.

Archaeological investigations within the region have revealed physical traces of a range of Aboriginal land use activities, which have survived in the form of archaeological sites. Archaeological sites in the region generally occur as surface artefact scatters and isolated artefacts on relatively elevated landforms in the coastal hinterland. Shell midden sites and more significant archaeological deposit are known to occur [redacted] Elevated locations on hilltops and ridge crests further from water sources [redacted] tend to display a different archaeological signature, chiefly a sparser artefact distribution and less evidence for 'everyday' or utilitarian activities, suggesting that these areas were often used differently.

Archaeological findings corroborate community interpretations which indicates that the coastal hinterland would have likely been utilised for its available environmental resources, but not long-term occupation or camping. [redacted]

The study area is located within a landscape with varying levels of natural and human disturbance. The construction of roads, utilities corridors in addition to earthworks, landscaping and natural processes such as erosion disturb both surface and subsurface deposits and Aboriginal objects are unlikely to survive in situ within these contexts.

Archaeological investigations have identified two Aboriginal archaeological sites within the study area: South Batemans Bay Link Road AFT 1 (58-4-1385) and South Batemans Bay Link Road AFT 2 (58-4-1386). South Batemans Bay Link Road AFT 1 consists of a low density surface and subsurface archaeological deposit. South Batemans Bay Link Road AFT 2 consists of a low density subsurface archaeological deposit. Archaeological test excavations undertaken at the sites have demonstrated variable levels of disturbance from modern land use practices and natural erosional processes. South Batemans Bay Link Road AFT 1 and South Batemans Bay Link Road AFT 2 were found to exhibit remnant archaeology and low potential for intact archaeological deposits.

6.1 Summary of known Aboriginal sites within the proposal area

Review of background information, Aboriginal community consultation, and archaeological assessment has resulted in the identification of two Aboriginal archaeological sites of Aboriginal archaeological value containing Aboriginal objects within the study area (Table 7). The locations of these sites are shown on Figure 13.

Table 7. Identified Aboriginal archaeological sites within the proposal area

Site Name	AHIMS ID	Site Feature
South Batemans Bay Link Road AFT 1	58-4-1385	Artefact
South Batemans Bay Link Road AFT 2	58-4-1386	Artefact

6.2 Aboriginal sites within the proposal area

Site name: South Batemans Bay Link Road AFT 1
AHIMS site ID: 58-4-1385

South Batemans Bay Link Road AFT 1 [redacted]. The site comprised two surface artefacts [redacted]. Artefacts comprised two milky quartz artefacts with negative flake scars on the dorsal surface with feather terminations. Both displayed 0% cortex. [redacted]. The deposit [redacted] was assessed as displaying moderate archaeological potential.

The site was subject to archaeological test excavation, which recovered a total of three subsurface artefacts from 2 of 14 test squares across the bench landform. Artefacts recovered consisted of one rhyolite complete flake, one quartz complete flake and one quartz core. Due to the presence of localised disturbance and the low density of the deposit, the site was assessed as having low archaeological significance. The site shape has been updated to reflect the extent of the archaeological deposit (Figure 13).

Site name: South Batemans Bay Link Road AFT 2
AHIMS site ID: 58-4-1386

South Batemans Bay Link Road AFT 2 [redacted] originally comprised an area of potential archaeological deposit identified [redacted] during archaeological survey undertaken for the current project in July 2019. Localised disturbance was present [redacted]. However, it was determined that a remnant portion [redacted] displayed some depth of topsoil and was considered to have moderate archaeological potential for Aboriginal objects. The location of the PAD [redacted] also offered advantageous views to the north and northeast, across Batemans Bay and the valley below.

The PAD was subject to archaeological test excavation and recovered a total of 10 artefacts from 5 of 10 test squares excavated [redacted]. The PAD area was subsequently designated as site South Batemans Bay Link Road AFT 2 and the site extent updated to reflect the extent of the archaeological deposit present (Figure 13). Artefacts consisted predominantly of quartz flake fragments, with two quartz complete flakes identified (including one elongated backed flake). Due to erosion, localised disturbance and the low density of the deposit, the site was assessed as having low archaeological significance.

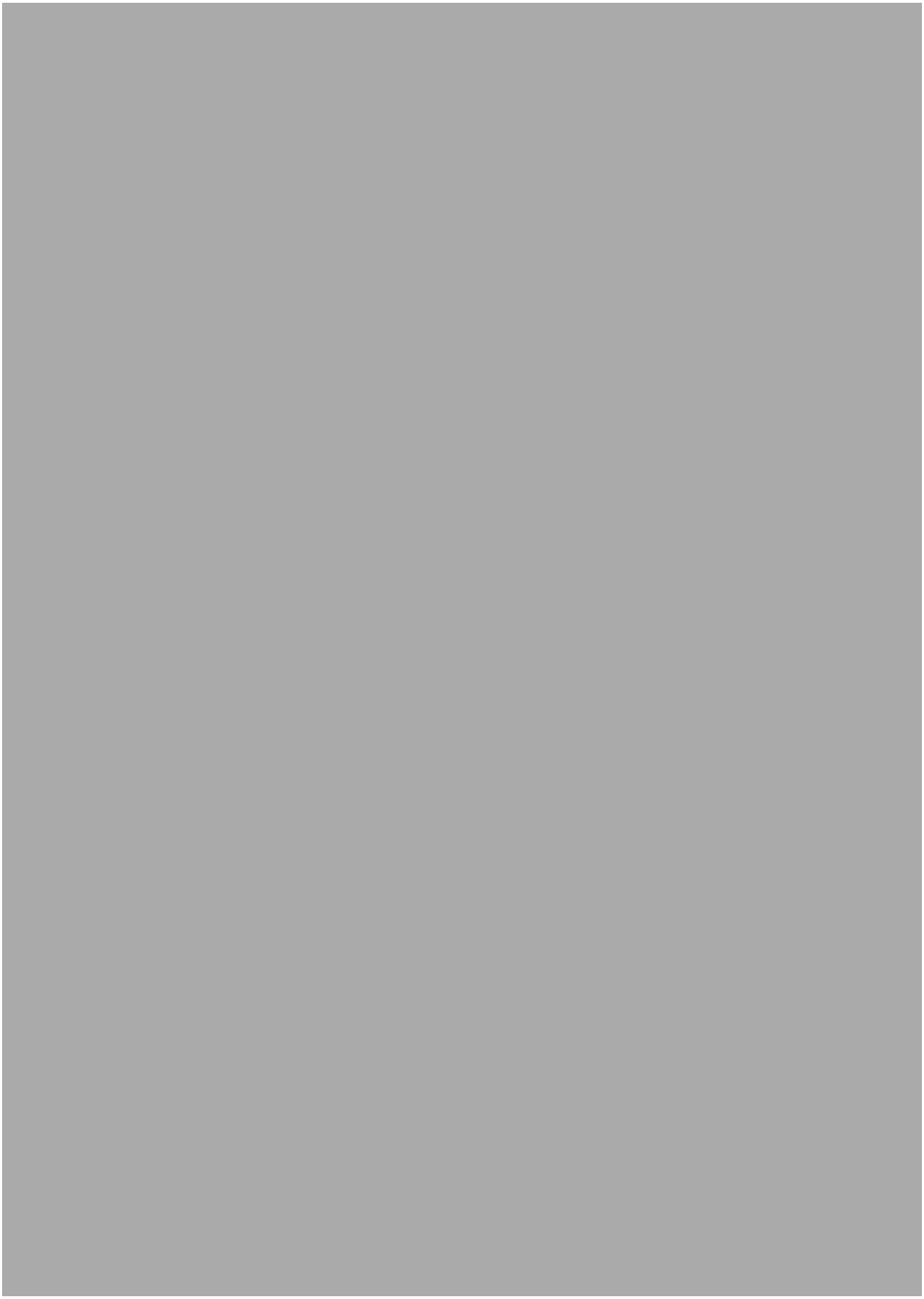


Figure 13. Identified Aboriginal archaeological sites within the study area

7 Cultural Heritage Values and Statement of Significance

7.1 Significance Assessment Criteria

One of the primary steps in the process of cultural heritage management is the assessment of significance. Not all sites are equally significant and not all are worthy of equal consideration and management (Sullivan and Bowdler 1984; Pearson and Sullivan 1995:7). The determination of significance can be a difficult process as the social and scientific context within which these decisions are made is subject to change (Sullivan and Bowdler 1984). This does not lessen the value of the heritage approach, but enriches both the process and the long term outcomes for future generations as the nature of what is conserved and why, also changes over time.

The assessment of significance is a key step in the process of impact assessment for a proposed activity as the significance or value of an object, site or place will be reflected in resultant recommendations for conservation, management or mitigation.

The *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (OEH 2010a) requires significance assessment according to criteria established in the Australia ICOMOS Burra Charter, 1999 (Australia ICOMOS 1999). The Burra Charter and its accompanying guidelines are considered best practice standard for cultural heritage management, specifically conservation, in Australia. Guidelines to the Burra Charter set out four criteria for the assessment of cultural significance:

- Aesthetic value - relates to the sense of the beauty of a place, object, site or item
- Historic value - relates to the association of a place, object, site or item with historical events, people, activities or periods
- Scientific value - scientific (or research) value relates to the importance of the data available for a place, object, site or item, based on its rarity, quality or representativeness, as well as on the degree to which the place (object, site or item) may contribute further substantial information
- Social value - relates to the qualities for which a place, object, site or item has become a focus of spiritual, political, national or other cultural sentiment to a group of people. In accordance with the OEH *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW*, the social or cultural value of a place (object, site or item) may be related to spiritual, traditional, historical or contemporary associations. According to OEH, "social or cultural value can only be identified though consultation with Aboriginal people" (OEH 2011:8).

There are two locations of recorded Aboriginal cultural heritage value within the study area. The significance assessment for the identified archaeological sites has focussed on the social/cultural, historic, scientific and aesthetic significance of Aboriginal heritage values as identified in *The Burra Charter*.

Social Values

This area of assessment concerns the value/s of a place, feature or site to a particular community group, in this case the local Aboriginal community. Aspects of social significance are relevant to sites, objects and landscapes that are important or have become important to the local Aboriginal community. This importance involves both traditional links with specific areas as well as an overall concern by Aboriginal people for sites generally and their continued protection. Aboriginal cultural significance may include social, spiritual, historic and archaeological values.

It has been identified during the consultation process that the local area has cultural heritage value (social value) to the local Aboriginal community. Regarding Aboriginal sites identified within the study area, no specific cultural or social values have been identified to date. No specific cultural or social values for the sites within the project area were provided by the registered Aboriginal stakeholders following the review of the draft CHAR.

Historic Values

Historical research did not identify any information regarding specific historical significance of identified Aboriginal archaeological sites within the proposal area. No specific historical significance for the sites within the proposal area has been provided by the registered Aboriginal parties to date. No historic values for the sites within the project area were provided by the registered Aboriginal stakeholders following the review of the draft CHAR. Archaeologically, the study area and identified archaeological sites do not contain these values in relation to Aboriginal heritage.

Scientific Values

For archaeologists, scientific significance refers to the potential of a site to contribute to current research questions. Alternately, a site may be an in situ repository of demonstrably important information, for example rare artefacts of unusually high antiquity.

Scientific significance is assessed using criteria to evaluate the contents of a site, state of preservation, integrity of deposits, representativeness of the site type, rarity/uniqueness and potential to answer research questions on past human behaviour. The recommended criteria for assessing archaeological significance include:

- Archaeological Research Potential - significance may be based on the potential of a site or landscape to explain past human behaviour and can incorporate the intactness, stratigraphic integrity or state of preservation of a site, the association of the site to other sites in the region (connectivity), or a datable chronology.
- Representativeness - all sites are representative of those in their class (site type/subtype) however the issue here relates to whether particular sites should be conserved to ensure a representative sample of the archaeological record is retained. Representativeness is based on an understanding of the regional archaeological context in terms of site variability in and around the study area, the resources already conserved and the relationship of sites across the landscape.
- Rarity – which defines how distinctive a site may be, based on an understanding of what is unique in the archaeological record and consideration of key archaeological research questions (i.e. some sites are considered more important due to their ability to provide certain information). It may be assessed at local, regional, state and national levels.

High significance is usually attributed to sites which are so rare or unique that the loss of the site would affect our ability to understand an aspect of past Aboriginal use/occupation of an area. In some cases a site may be considered highly significant because it is now rare due to destruction of the archaeological record through development. Moderate (medium) significance is attributed to sites which provide information on an established research question. Sites with moderate significance are those that offer the potential to yield information that will contribute to the holistic understanding of the Aboriginal cultural landscape of the project area. Archaeological investigation of moderately significant sites will contribute knowledge regarding site type interrelationships, cultural use of landscape features and occupation patterns. Low significance is attributed to sites which cannot contribute new information about past Aboriginal use/occupation of an area. This may be due to site disturbance or the nature of the site's contents.

Aesthetic Values

Aesthetic values are often closely related to the social values of a site or broader cultural landscape. Aspects may include scenic sights, smells and sounds, architectural fabric and creative aspects of a place. No specific aesthetic values for the site within the project area were provided by the registered Aboriginal stakeholders following the review of the draft CHAR. Archaeologically; the proposal area does not contain these values.

7.2 Statements of Significance

The study area contains two Aboriginal archaeological sites as defined under the *National Parks and Wildlife Act 1974*. Based on the values assessment, the following levels of significance were ascribed to the two sites within the study area. The two identified Aboriginal archaeological sites within the study area are:

South Batemans Bay Link Road AFT 1	AHIMS 58-4-1385
South Batemans Bay Link Road AFT 2	AHIMS 58-4-1386

South Batemans Bay Link Road AFT 1

South Batemans Bay Link Road AFT 1 represents a commonly recorded site type in the region, consisting of surface scatter and subsurface archaeological deposit [redacted]. Three artefacts were recovered from archaeological test excavation and are typical of the region in terms of type and raw material. The site has been subject to localised disturbance from historic/contemporary land use practices and erosional processes. The site demonstrates low scientific value and it is unlikely that further investigation could contribute to our understanding of Aboriginal landscape use in the region. Based on the intactness, representativeness and research potential of the site, South Batemans Bay Link road AFT 1 is determined to have *low archaeological significance.*

South Batemans Bay Link Road AFT 2

South Batemans Bay Link Road AFT 2 represents a commonly occurring site type in the region, consisting of subsurface archaeological deposit [redacted]. Test excavation identified 10 subsurface artefacts which are typical of the region in terms of type and raw material. The site has been subject to localised disturbance from historic/contemporary land use practices and erosional processes. The site demonstrates low scientific value and it is unlikely that further investigation could contribute to our understanding of Aboriginal landscape use in the region. Based on the intactness, representativeness and research potential of the site, South Batemans Bay Link road AFT 2 is determined to have *low archaeological significance.*

8 The Proposed Activity and Impact Assessment

TfNSW is planning the construction and operation of a new connection between the existing South Batemans Bay Link Road (Glenella Road) and the Princes Highway at South Batemans Bay. The proposed South Batemans Bay Link Road follows the existing alignment of Glenella Road, with a new roundabout proposed near the existing junction with the Princes Highway around 1.2 km south of Cranbrook Road. The project works would involve earthworks (including cut/fill operations), new road construction and road widening, vegetation clearance and drainage works.

At present, it is expected that the Old Sawmill Site and a section of Glenella Road between Heron Road and The Ridge Road would be utilised as ancillary facilities during construction. Access during construction is expected to be primarily from the Princes Highway; however Forestry Corporation tracks and Heron Road have also been investigated to provide alternative access, in particular between the two potential ancillary facilities.

Refinements of the concept design have resulted in a smaller impact area (Figure 14). In total, two Aboriginal archaeological sites would be impacted by the proposal. Proposed impacts to sites identified are detailed in Table 8 and shown in Figure 14.

Table 8. Proposed impact to Aboriginal archaeological sites within the proposal area

Site Name	AHIMS ID	Description	Significance	Type / Degree of Harm	Consequence of Harm
South Batemans Bay Link Road AFT 1	58-4-1385	Low density surface artefacts and subsurface deposit dispersed across [redacted] ridgeline spur	Low	Direct / Partial	Total loss of value
South Batemans Bay Link Road AFT 2	58-4-1386	Low density subsurface deposit dispersed across [redacted] ridgeline spur	Low	Direct / Total	Total loss of value

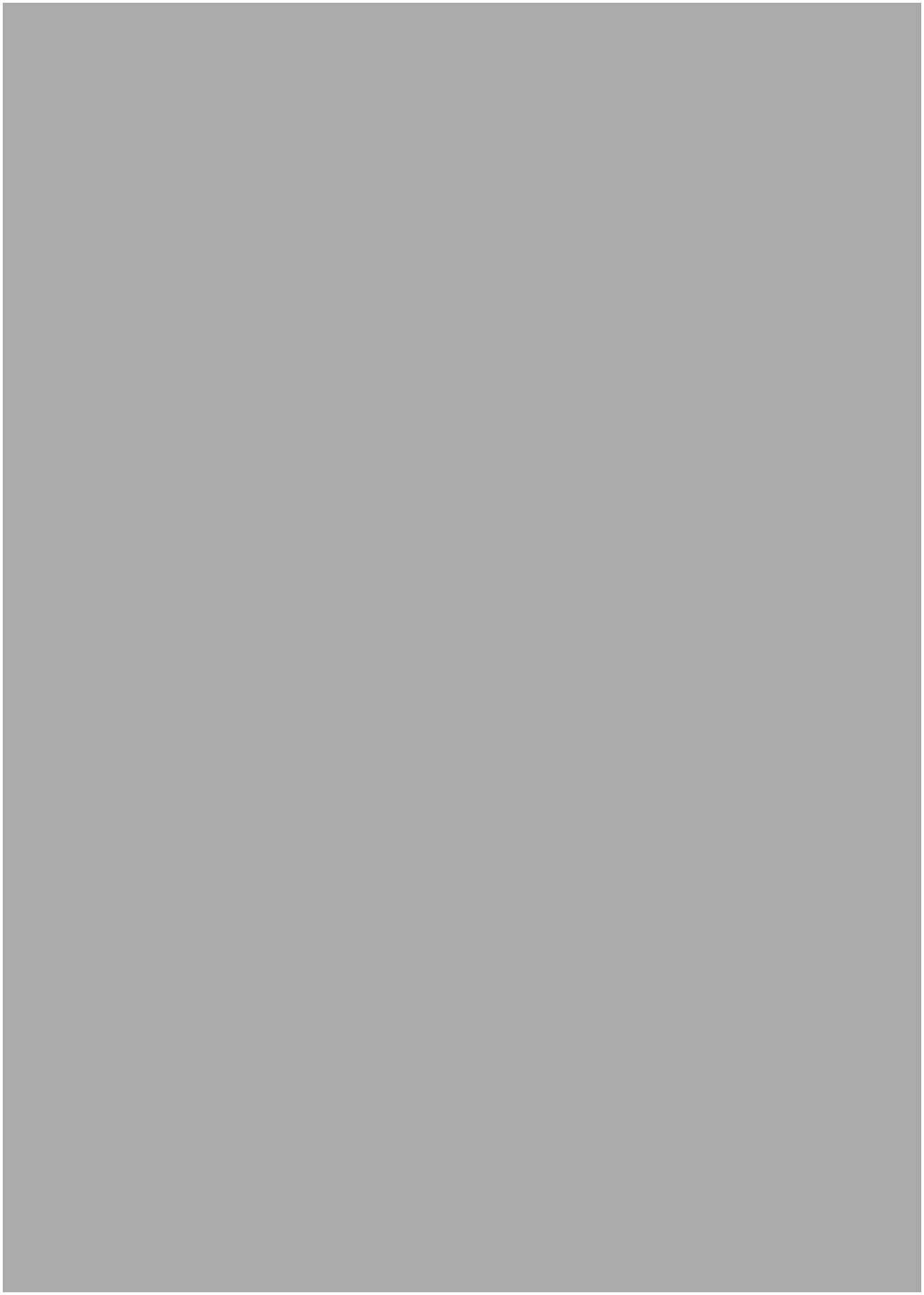


Figure 14. Study area (impact area) and Aboriginal heritage

9 Mitigating Harm

9.1 Ecologically Sustainable Development Principles

The assessment applied the principles of Ecologically Sustainable Development (ESD) to the current proposal. The principles of Ecologically Sustainable Development are defined in Section 6 of the NSW *Protection of the Environment Administration Act 1991*. The ESD principles relevant to Aboriginal cultural heritage within the study area are: the Precautionary Principle and the Principle of Inter-Generational Equity. The application of these principles in relation to the current proposal is discussed below.

The Precautionary Principle
The Precautionary Principle states "that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation".

The identified Aboriginal archaeological sites have been considered by TfNSW in relation to the proposed road construction activities. The Aboriginal sites located within the study area have been impacted by past landuse activities and would be further impacted by current landuse practices. Scientific confidence has been achieved through archaeological investigations which have included test excavation and survey (Sections 3 and 4). Aboriginal cultural heritage value confidence has been achieved through consultation with Aboriginal stakeholders (Section 5). As detailed in Sections 6 and 7, the assessment has determined that the proposal area contains low significance Aboriginal archaeological sites.

The Principle of Inter-Generational Equity
The Principle of Inter-Generational Equity states "that the present generation should ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations".

The archaeological sites located within the study area were evaluated in relation to intergenerational equality and in particular, the cumulative impact of the proposal on the Aboriginal heritage of the region. As discussed in Section 3, several previous archaeological survey projects have identified the presence of a significant number of artefact scatters in the region. While several sites have subsequently been impacted by development, the majority of identified sites were located within areas that have not been impacted; including several located within the general vicinity of the study area. The significance of the Aboriginal archaeological sites within the study area, in regards to integrity, rarity or representativeness has been assessed as low (Section 7).

9.2 Mitigation Measures

Suitable recommendations for the identified impacts to the sites have been developed based on ESD, environmental context and condition, background research and consultation with stakeholders. The study area contains low significance sites. Low significance sites exhibit minimal archaeological value and contain low (some) cultural value. Impact to low significance sites South Batemans Bay Link Road AFT 1 and South Batemans Bay Link Road AFT 2 do not warrant non-practicable avoidance or mitigation.

Aboriginal stakeholders requested collection of the remaining surface artefact at South Batemans Bay Link Road AFT 1. Stakeholders also requested that all artefacts recovered from the test excavation program undertaken at South Batemans Bay Link Road AFT 1 and South Batemans Bay Link Road AFT 2, and the collected surface artefact at South Batemans Link Road AFT 1 be reburied on country.

An AHIP is required for impacts to land and identified sites/objects prior to the commencement of pre-construction or construction activities associated with the proposal that would affect the sites. Measures for mitigating harm to the sites are outlined in Table 9 below.

Table 9. Mitigation measures for impacted Aboriginal sites

Site Name	AHIMS number	Mitigating Harm
South Batemans Bay Link Road AFT 1	58-4-1385	AHIP required prior to commencement of works affecting the site. Collection of surface artefact. Reburial of surface artefact and test excavation assemblage.
South Batemans Bay Link Road AFT 2	58-4-1386	AHIP required prior to commencement of works affecting the site. Reburial of test excavation assemblage.

10 Summary and Recommendations

A total of two Aboriginal sites are situated within the study area. An AHIP would be sought for Aboriginal objects within the boundaries of the proposal area, incorporating archaeological sites listed in Table 10.

AHIP

If impacts cannot be avoided, an application for an AHIP should be made under section 90A of the *National Parks and Wildlife Act 1974* for two Aboriginal archaeological sites. No current AHIPs or planned future AHIPs exist within the area which is the subject of this application.

An AHIP would be sought for the land and associated objects within the boundaries of the study area (Figure 15) prior to the commencement of any works associated with the proposal. The AHIP would also be sought for the specified Aboriginal sites and objects contained within the sites listed in Table 10.

Table 10. Known archaeological sites requiring AHIP and degree of harm

Site Name	AHIMS Number	Degree of Harm	Consequence of Harm	Significance of harm	Mitigation
South Batemans Bay Link Road AFT 1	58-4-1385	Partial	Total loss of value	Low	AHIP required. Collection of surface artefact. Reburial of surface artefact and test excavation assemblage.
South Batemans Bay Link Road AFT 2	58-4-1386	Total	Total loss of value	Low	AHIP required. Reburial of test excavation assemblage.

Collection and Reburial of Aboriginal objects

The management of collected Aboriginal objects is as follows:

- Aboriginal objects recovered from the test excavation program undertaken at South Batemans Bay Link Road AFT 1 and South Batemans Bay Link Road AFT 2 and the surface artefact collected from South Batemans Bay Link Road AFT 1 are to be reburied on country as requested by Aboriginal stakeholders.
- The collected artefacts will be reburied in accordance with Requirement 26 "Stone artefact deposition and storage" in the Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW (24 September 2010, available online at: http://www.environment.nsw.gov.au/resources/cultureheritage/10783FinalArchCoP.pdf) must be complied with.

Figure 15. AHIP application area boundary

Glossary of Terms

Aboriginal Object (as defined in the NPW Act)	Any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises NSW, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains.
Aboriginal Place (as defined in the NPW Act)	A place declared under s.84 of the NPW Act that, in the opinion of the Minister, is or was of special significance to Aboriginal culture.
Anvil	An object used as a stable base for producing stone artefacts. This will have percussion pitting from the impact of reducing an anvil rested core.
Artefact	Any object that has been physically modified by humans or that is unmodified but is out of its natural context and considered to have been brought to the location by humans (a manuport).
Attribute	A physical characteristic of an artefact
Backed Artefact	A tool made from a flake or flake fragment, with steep blunting retouch along one or opposite margin after the flake was removed from the core. Includes geometric microliths of various shapes and asymmetric Bondi points.
Backed Broken	Fragments of backed or partly backed flakes. Breakage often occurred during manufacture.
Backing Debitage	Small retouching flakes produced from the backing process using an anvil rested technique along its thick margin. May have bidirectional scars or a small distal cone from rebounding off an anvil.
Bipolar Core	A core reduced using the bipolar technique, being placed on an anvil and struck with a hammerstone.
Bipolar Flake	A flake with proximal and distal crushing produced by bipolar flaking technique. These may have a flattened ventral surface/bulb of percussion. Some flakes may only have crushing/step fractures at proximal end, having been removed before reaching the base of the core.
Bondi Point	An asymmetrical backed artefact which is widest at the proximal end and pointed at the distal end. The length of a bondi point is generally over twice the artefact width.
Bulb of Percussion	An attribute on the ventral surface of a flake during the detachment of the flake from a core by the movement of force from a blow applied to a single point. The bulb of percussion is characteristically a bulge which occurs just below the point of force application.
Bulbar (Éraillure) Scar	A scar on the ventral surface of a flake which sometimes occurs during the removal of the flake from a core by the force of percussion.
Chert	A fine rock of sedimentary origin, made up mostly of microcrystalline quartz, but sometimes with a chalcedony or opal component. Chalcedony is a microporous mass of silica. Includes banded varieties.
Cobble	An edge rounded stone more than 6.4 centimetres in size. e.g. core blank, hatchet blank, or hammerstone.
Colour	Recorded with particular reference to silcrete to determine if artefacts were heat altered material versus unheated stone.
Conchoidal	Exhibiting the characteristics of direct percussion such as a bulb of percussion or ripple marks
Cone-Split Broken Flake	A flake broken longitudinally through its point of force application (pfa) /cone. Retains some of the striking platform and point of impact. These are recorded as left or right half of the flake when viewing its ventral surface CSBF/Left, or CSBF/Right.
Conjoin	Two or more stone artefacts which are part of a knapping event that can be refitted to each other.
Core	Any stone used as a nucleus or blank for removing flakes large enough for use as implements. These must have negative flakes scars, although large retouched flakes used as cores may still retain a remnant ventral surface. Subsequent use as a core must intercept the old ventral surface. A core may be made on a cobble, pebble, flake, broken flake, flake fragment, heat shatter or naturally fragmented rock.

Core Flaking Pattern	The pattern of negative flake scars on cores, used to determine stone reduction strategies. Sometimes a core may have evidence of more than one flaking pattern. These include: • Unifacial – scars show that useable flakes have been removed one edge at a time in one direction. Sometimes reduction continued in this way after the core was rotated. Flakes should have a flat unmodified platform. • Bifacial – scars show that larger potentially useable flakes were struck off both opposing faces of an edge. Core edges often appear 'wavy' when viewed in plan. • Asymmetric alternating – tiny preparation flakes are first removed off the core platform, then larger useable flakes struck off the opposing face. The preparation scars can be seen on flakes with faceted platforms, and are sometimes still present on abandoned cores or core fragments. • Bipolar – small negative step scars or crushing at opposing ends of a core, from it being rested on an anvil and struck with a hammerstone. There may also be a tiny distal cone on flakes, from the force rebounding off the anvil.
Core Fragment	Broken off a core, and still retaining technological attributes such as negative flake scars or core platform.
Core Tool	A core that also has evidence of tool use on its margins or ridges such as striations, edge rounding or polish.
Cortex	The natural outer weathering rind or surface of rock. This may be remnant on the dorsal surfaces of an artifact, and is recorded as a percentage of the dorsal surface area.
Crazing	The surface of a heat affected rock which resembles cracked ceramic.
Crenate Fracture (CF)	Debitage with crenate fracture. This could be from heat shatter but may be from chemical weathering, particularly in chert or tuff artefacts
Culturally Modified Tree (as defined in the NPW Regulation)	A tree that, before or concurrent with (or both) the occupation of the area in which the tree is located by persons of non-Aboriginal extraction, has been scarred, carved or modified by an Aboriginal person by: • The deliberate removal, by traditional methods, of bark or wood from the tree, or • The deliberate modification, by traditional methods, of the wood of the tree.
Debitage	Material from the stone knapping process with no signs of subsequent modification.
Distal End	The termination of a flake opposite the bulb of percussion or point of applied force.
Distal Flake Fragment	A fragment of a flake that has been broken but distal termination (also termed distal fragment or distal flake). It does not have a distal termination.
Dorsal	The outside or back of a flake when removed from a core. The dorsal surface may have negative flake scars from previous flake removals and/or cortex
Fine Grained Siliceous (FGS)	Fine grained siliceous rocks which could not be positively identified without detailed mineralogical investigation.
Flake	A stone artefact that has been removed from a core. A flake has a proximal striking platform, point of force application (pfa), bulb of percussion and distal termination. Also may have a bulbar (éraillure) scar, ripple marks and fracture lines
Flaked Piece	An artefact that has evidence of flaking but no characteristics of a flake, broken flake, flake fragment, retouched flake or core can be discerned. Also referred to as an angular fragment.
Geometric Microlith	A type of backed artefact which is symmetrical in shape. They are often made from flakes with backing along truncated proximal and or distal ends.
Grinding Grooves	Oval shaped indentations on rock surfaces, such as sandstone outcrops which occurred as the result of the shaping and sharpening of ground stone artefacts.
Grindstone	A portable stone with linear striations and/or polish which shows that it has ground. Often made from fine grained sandstone or quartzite. May retain evidence of multipurpose use such as grinding of seeds, ochre.
Ground Stone Artefact	A stone artefact with an edge or surface that had been modified by grinding on another piece of stone. See Grindstone and Hatchet

Hammerstone	A stone used to strike a core for removal of flakes. Often spherical pebbles or cobbles with evidence of percussion pitting or spall scars on ends or margins.
Hatchet	An ground edged hatchet head or fragment. Should have evidence of intentional grinding e.g. linear striations/polish from shaping or resharpening the cutting edge. Hatchets were multipurpose tools and may also have evidence of hammer percussion or anvil use.
Heat Shatter (HS) Debitage	Debitage caused by heat shatter. May have evidence of potlidding from excessive heat stress and/or irregular heat fractured surfaces.
Hornfels	A medium to fine grained metamorphic rock. Includes a variety known as spotted pelitic hornfels with tiny dark clasts or grains.
Igneous	A range of rocks of mixed mineral composition formed after cooling of molten subterranean materials. Occur as intrusions into older rocks such as dykes, diatremes, or spread onto the land surface from volcanic activity. Includes varieties such as basalt, dolerite.
Knapping Floor	An area where a core was flaked/knapped to produce flakes and tools.
Length	A measurement of the distance between the platform and the termination of a flake.
Lustre	A subjective record of lustre of stone artefact, also relating to heat treatment.
Manuport	An unmodified piece of stone out of natural context and considered to have been brought to the site by humans.
Medial Flake Fragment (Med Frag)	A fragment of the mid-section of a flake with no platform or termination.
Medium Grained	A medium grained Siliceous rock of unknown type.
Midden	Also called shell midden. An area with the remains of edible shellfish which were discarded as the result of human procurement/consumption. May included fish and anumal bones, stone artefacts and/or charcoal.
Mortar	A large base stone for grinding/pounding.
Modification/Activity Type	Refers to the activity associated with the lithic item e.g. debitage or waste from stone flaking, used as a hammer, anvil, core, bipolar core, retouched artefact, backed artefact.
Pebble	An edge rounded stone less than 6.4 centimetres in size. May have been used as core or small hammerstone.
Petrified Wood	Also called silicified or fossilized wood. Formed when trees were fossilized and their structure replaced by silica. Wood structure and growth rings are still visible as 'bands' within this material.
Platform Type	Records the type of platform on whole flakes or proximal flake fragments for information on flaking patterns and reduction strategies. These include: • Cortical – platform covered in cortex. Unifacial flaking. • Plain – platform is smooth flat surface. Unifacial flaking or unifacial with core rotation. • Ridged – platform has ridge from previous flake removal across core. Unifacial rotated or symmetric alternating (bifacial) flaking. • Scarred – platform has one or more flake scars. Symmetric alternating (bifacial) flaking or asymmetric alternating flaking. May indicate platform preparation. • Faceted – platform has multiple tiny flake scars struck from the dorsal. Indicates careful platform preparation. Asymmetric alternating flaking. • Focal – small platform less than twice the area of ring crack. • Crushed - platform has been crushed from force of flake removal but the rest of the flake is otherwise intact. The platform may have multiple step fractures. Bipolar or unifacial. • Indeterminate – platform is flawed, irregular, or partly collapsed with the remainder of the flake intact.
Potential Archaeological Deposit (PAD)	An area where no surface archaeological remains are present that has been assessed as having the potential to contain subsurface archaeological deposits on the basis of indicators which may include landform, distance to water and visible surface disturbance.
Proximal End	The striking end of a flake opposite the distal end or termination.
Proximal Flake Fragment (Prox Frag)	A fragment of a flake that has been broken but retains its proximal striking platform (also termed proximal fragment or proximal flake). It does not have a distal termination.

Quality	A record of the flaking quality of the stone. This is a subjective measurement based on how well the material flakes and the presence of flaws. Poor quality material may have large grains or internal flaws which may inhibit controlled reduction of the material. Certain fine grained material lacking in flaws or inclusions may have been preferred for its good flaking properties and selected for particular tasks or implement types e.g. precision cutting/slicing.
Quartz	A hexagonal crystalline form of silicon dioxide (SiO2). May occur as clear, white or coloured from mineral impurities. Can occur as single crystals, veins or geodes. Often has internal fractures or flaws.
Quartzite	Sandstone that had been metamorphosed by volcanic activity or recemented with silica in solution.
Raw Material	The type of stone out of which the artefacts have been made. See Chert, Silcrete and Quartz
Reduction Type	Refers to the technological aspects of reducing stone. For definitions on fracture mechanics and flake characteristics refer to work by Cotterell and Kamminga (1987) and Holdaway and Stern (2004). For non-debitage items it is used to describe the form of that item before it was modified or fractured e.g. a large flake may have been reflaked and used as a core to produce further useable flakes.
Retouched Artefact	A stone artefact with negative flake scars along its margins from intentional retouch after it was removed from the core. More recent scars show that the flakes removed were too small to have been used as tools. It could not always be determined whether these were intended for use as tools or were for core preparation.
Shape	Recorded for whole flakes and includes the following: • Wider than long (W>L) • Longer than wide (L>W) • Length equals width (L=W) • Elongate - length more than twice the width.
Silcrete	An indurated rock comprised of quartz grains cemented in a siliceous matrix.
Silicified Tuff	Also variously termed indurated mudstone, tuff or ryolitic tuff. A fine grained rock of volcanic ash or other fine sediments metamorphosed and consolidated with silica. Sometimes distinguished from chert by having a lack of lustre (Corkill 1999:45), although heat treatment may result in lustrous flaked surfaces (Flenniken & White 1983:43).
Site	An area where Aboriginal objects have been identified.
Size	The maximum or longest dimension of each item was recorded, and entered as individual size classes of 5 milimetres (0-4mm, 5-9mm, 10-14mm, 15-19mm etc.).
Termination	Records the type of termination on whole flakes or distal flake fragments. Termination variation depends on the amount of force used, nature of the raw material and core morphology. These include: • Feather – A distal end which has a gradual thinning towards the termination • Hinge – A rounded termination • Plunging – A distal end containing the bottom surface of the core it was removed from • Step – A squared off termination
Thickness	A measurement of the distance between the dorsal and ventral faces of a flake at point where length and width measurements meet.
Tool	A stone artefact which has been modified into a formal type or used (expedient tool).
Usewear	An artefact with evidence of use such as striations, rounding or tiny edge fracture scars
Ventral Surface	The face of a flake which can be joined back to the core the flake was removed from. The ventral surface of a flake may exhibit the bulb of percussion, the ringcrack, ripple marks or fissures
Weight	Weight for each artefact was recorded using an electronic balance to the nearest 0.1g.
Width	A measurement at right angles to the length measurement of a flake, at the midpoint of the length

References

ANUTECH Pty Ltd, 1988. An Archaeological survey of a proposed sub-division between Vista Avenue and Glenella Road, Batemans Bay, New South Wales.

Attenbrow, V. 1976. Aboriginal Subsistence Economy on the Far South Coast of New South Wales, Australia. BA (Honours) Thesis, University of Sydney.

Australian Archaeological Survey Consultants (AASC). 2007. Sub Surface Archaeological Investigations at Lot 1 DP 701830, Old Punt Road, Batemans Bay, NSW. Report prepared from the Doma Group.

Australia ICOMOS, 2013. *The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance 2013*. Australia ICOMOS Incorporated 2013. Burwood, Victoria.

Barz, R. Kari., 1979. An Archaeological survey of the Route of the 66kv Transmission Lines from Batemans Bay to Mossy Point and from Moruya to Narooma. Report prepared for the state Electricity Commission of New South Wales.

Blackwell, A. & G. Happ, 1984. S.E. Region Draft Document Resource., National Parks and Wildlife Service (NSW) Document C-1316

Byrne, D., 1984. *The Mountains Call Me Back: A History of the Aborigines and the Forests of the Far South Coast of N.S.W*., NSW Ministry of Aboriginal Affairs & NSW National Parks and Wildlife Service

Chesterman, J. & B Galligan, 1997. *Citizens without rights: Aborigines and Australian Citizenship*, Melbourne, Cambridge University Press,

Donaldson, S. 2008. *Eurobodalla Aboriginal Heritage Study.* Eurobodalla Shire Council & Department of Environment and Conservation.

Ellis, N. & M. 1997. *Dear Braidwood: A History of the Braidwood District*. N.N. and N.M. Ellis, Braidwood NSW.

Gibbney, H.J., 1980. Eurobodalla: History of the Moruya District. Library of Australian History, Sydney.

Goodall, H., 1996. *Invasion to Embassy: Land in Aboriginal Politics in New South Wales, 1770-198*, Sydney, Allen & Unwin in association with Black Books,

Goulding Heritage Consulting Pty Ltd (Goulding Heritage). 2005. *Eurobodalla Aboriginal Cultural Heritage Study: South Coast, New South Wales*. A Report Prepared for the Eurobodalla Shire Council, Department of Environment & Conservation, Batemans Bay Local Aboriginal Land Council, Bodalla Local Aboriginal Land Council, Cobowra Local Aboriginal Land Council, Merrimans Local Aboriginal Land Council, Mogo Local Aboriginal Land Council & Wagonga Local Aboriginal Land Council.

Governor Darling to Earl Bathurst, Despatch No.32, 24th February, 1827, Historic Records of Australia, Series 1, Vol. XIII, p.128.

Howitt, A.W. 1904. *The Native Tribes of South-East Australia*. Macmillan and CO., Limited: London

James, A.M., 2001. *Batemans Bay: Story of a Town*. Self-published, Batemans Bay.

Johnson, F., 1980. *Where Highways Meet: A History of Bateman's Bay and the Valleys of the Clyde and Tomakin River Valleys.* Clyde River & Batemans Bay Historical Society.

Kabaila, P., 2005. High Country Footprints: Aboriginal pathways and movement in the high country of southeastern Australia. Recognising the ancient paths beside modern highways, Canberra, Black Mountain Projects,

Kelleher Nightingale Consulting (KNC), 2020. South Batemans Bay Link Road: Aboriginal Archaeological Survey Report Stage 2 PACHCI. Report prepared for Roads and Maritime Services.

KNC, 2019. Batemans Bay Bridge Replacement, Aboriginal Archaeological Salvage Excavation: Aboriginal Heritage Impact Permit #C0003661. Report prepared for Roads and Maritime.

KNC, 2018. Batemans Bay Bridge Project: Aboriginal Cultural Heritage Assessment Report, Stage 3 PACHCI. Report prepared for Aurecon on behalf of Roads and Maritime Services.

KNC, 2017. Batemans Bay Bridge Project: Aboriginal Archaeological Survey Report, Stage 2 PACHCI. Report prepared for Aurecon on behalf of Roads and Maritime Services

McKenna, M., 2016. *From the Edge: Australia's Lost Histories.* The Miegunyah Press, Melbourne VIC.

McKenna, M., 2002. *Looking for Blackfella's Point: An Australian History of Place*. UNSW Press, Sydney.

"Minutes of Colonial Secretary re Protection of the Aborigines", dated 26th February, 1883, *Votes & Proceedings of the Legislative Assembly*, 1883, Vol.3, p.919.

Mitchell Library CY1529. 'Mr. Harper's Journal [October 1826]', transcription in the Wesleyan Mission House Despatches, Bonwick Transcripts Missionary, 1824-1829, B.T.53.

Morgan, G. 2001. Delineation and description of the Eastern Environmental Subregions (provinces) in New South Wales Study. NSW National Parks and Wildlife Service, Hurstville. Accessed online at http://www.environment.nsw.gov.au/resources/biodiversity/SBS_how_to_tocto1.pdf.

National Parks and Wildlife Service (NPWS), 2003. The Bioregions of New South Wales: Their Biodiversity, Conservation and History. National Parks and Wildlife Service NSW, Hurstville NSW

Navin Officer Archaeological Resource Management (Navin Officer), 1995. Archaeological Survey South Batemans Bay Bypass. Report prepares for the Council of the Shire of Eurobodalla.

Navin Officer, 2005. South Batemans Bay Bypass: Second Collection of Aboriginal Artefacts. Report prepared for Eurobodalla Shire Council.

National Parks and Wildlife Service NSW (NPWS), 2003. *The Bioregions of New South Wales: Their Biodiversity, Conservation and History*. National Parks and Wildlife Service NSW, Hurstville NSW.

New South Wales Department of Environment, Climate Change and Water, 2009. Vegetation Batemans Bay – 8926" Native Vegetation Mapping Report, Series 4.

Office of Environment and Heritage (OEH) (formerly Department of Environment, Climate Change and Water), 2010. *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales: Part 6 National Parks and Wildlife Act 1974*. Department of Environment, Climate Change and Water NSW, Sydney.

OEH, 2011. *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW: Part 6 National Parks and Wildlife Act 1974*. Office of Environment and Heritage, Department of Premier and Cabinet, Sydney South.

OEH, 2019. NSW Soil and Land Information System: Soil Profile Reports. Available online at eSpade, https://www.environment.nsw.gov.au/eSpade2Webapp. Accessed June 2019.

Pearson, M. and Sullivan, S. 1995. *Looking After Heritage Places: The Basics of Heritage Planning for Managers, Landowners and Administrators* Melbourne University Press.

Percival, I.G., C.D. Quinn and R.A. Glen, 2011. A review of Cambrian and Ordovician stratigraphy in New South Wales. Geological Survey of New South Wales Quarterly Notes. September 2011 (No 137). Division of Resources and Energy, NSW.

Poiner, G. 1976. 'The Process of the Year among Aborigines of the Central and South Coast of New South Wales', *Archaeology & Physical Anthropology in Oceania*, Vol. XI, No.3, October, pp.186-206.

Read, P., 1996. *The Stolen Generations: The Removal of Aboriginal Children in New South Wales 1883 to 1969*. NSW Department of Aboriginal Affairs.

Report from the Select Committee on the Condition of the Aborigines with Appendix, Minutes of Evidence and Replies to a Circular Letter. Response to Circular Letter from Francis Flanagan, Esq., J.P., Broulee. Government Printing Office, Sydney, 1845.

Report of the Protector of the Aborigines, to 31 December, 1899, *Votes & Proceedings of the Legislative Assembly of New South Wales*, 1900, Vol.6.

Report of the Protector of the Aborigines, to 31 December, 1882, *Votes & Proceedings of the Legislative Assembly of New South Wales*, 1883, Vol.3.

Roads and Maritime Services (Roads and Maritime), November 2011. Procedure for Aboriginal cultural heritage consultation and investigation.

State Records of NSW 4/6666B.3: Colonial Secretary Special Bundles: Aborigines 1833-35: Papers dealing with the issue of blankets, and including returns of the native population in the various districts.
'List of Stations to which Blankets are to be forwarded for distribution in 1834'
'Return of Aborigines taken at the respective Stations, 1839'

Sullivan, S. and Bowdler, S. 1984. *Site Survey and Significance Assessment in Australian Archaeology*. Canberra: RSPacS, Australian National University.

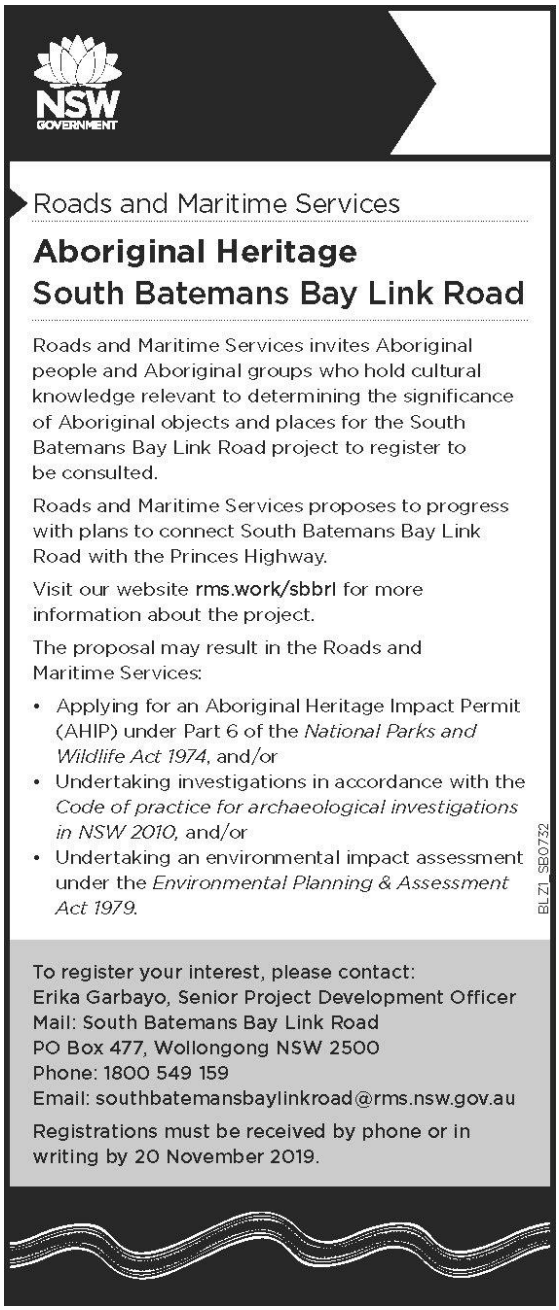
Susan Dale Donaldson Environmental & Cultural Services (SDDE&CS), 2006. *Stage Two Eurobodalla Aboriginal Cultural Heritage Study: Stories about the Eurobodalla by Aboriginal People*. Prepared for the Eurobodalla Aboriginal Heritage Steering Committee, Eurobodalla Shire Council, Department of Environment & Conservation, Southern Rivers Catchment Management Authority, Local Aboriginal Land Councils, Elders Groups & Aboriginal Community Members.

Susan Dale Donaldson Environmental & Cultural Services (SDDE&CS), 2007. *Eurobodalla Aboriginal Cultural Heritage Study Stage Three: Understanding & Managing Aboriginal Cultural Heritage*. Prepared for the Eurobodalla Aboriginal Heritage Steering Committee, Eurobodalla Shire Council, Dept of Environment & Climate Change, Southern Rivers Catchment Management Authority, Local Aboriginal Land Councils, Elders Groups & Aboriginal Community Members.

Troedson A.L. & Hashimoto T.R. 2013. *Eurobodalla 1:100 000 and 1:25 000, Coastal Quaternary Geology Map Series*. Geological Survey of New South Wales, Maitland

Young, M., 2000. *The Aboriginal People of the Monaro.* NSW National Parks & Wildlife Service, Sydney.

Appendix A Advertisement for registration of interest



NSW GOVERNMENT

Roads and Maritime Services

Aboriginal Heritage
South Batemans Bay Link Road

Roads and Maritime Services invites Aboriginal people and Aboriginal groups who hold cultural knowledge relevant to determining the significance of Aboriginal objects and places for the South Batemans Bay Link Road project to register to be consulted.

Roads and Maritime Services proposes to progress with plans to connect South Batemans Bay Link Road with the Princes Highway.

Visit our website rms.work/sbbrl for more information about the project.

The proposal may result in the Roads and Maritime Services:

- Applying for an Aboriginal Heritage Impact Permit (AHIP) under Part 6 of the *National Parks and Wildlife Act 1974*, and/or
- Undertaking investigations in accordance with the *Code of practice for archaeological investigations in NSW 2010*, and/or
- Undertaking an environmental impact assessment under the *Environmental Planning & Assessment Act 1979*.

BL Z1 SB0732

To register your interest, please contact:
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Registrations must be received by phone or in writing by 20 November 2019.

Appeared in:
The Koori Mail, Wednesday 6 November 2019
Batemans Bay Post- Moruya Examiner, Wednesday 6 November 2019

Appendix B Lithics Database

Site name	ID	Square Location Easting	Square Location Northing	TS #	Spit/ Bulk	Depth (cm)	Raw Material Type	Reduction Type	Tool Type/Core Type	Cortex %	Weight (g)	Size Range mm	Flake Termination Type	Platform Type	Percussion L mm	Width mm	Thickness mm	Flake Shape	Cores - number of scars	Cores - longest scar (mm)
SBBLR PAD 1	1			2	1	0-10cm	Quartz	Angular Fragment			1.2	10-14mm			14.81					
SBBLR PAD 1	2			2	2	10-20cm	Quartz	Distal Fragment			<0.1	10-14mm			11.44					
SBBLR PAD 1	3			2	2	10-20cm	Quartz	Proximal Fragment			4.1	15-19mm		Plain	19.59					
SBBLR PAD 1	4			3	1	0-10cm	Quartz	Flake			0.3	10-14mm	Step	Ridged	8.4	10.45	3.59	W>L		
SBBLR PAD 1	5			4	1	0-10cm	Quartz	Angular Fragment			1.8	15-19mm			17.15					
SBBLR PAD 1	6			6	1	0-10cm	Quartz	Flake	Backed		0.4	15-19mm	Hinge	Faceted	16.04	4.9	3.8	Elongated		
SBBLR PAD 1	7			7	1	0-10cm	Quartz	Distal Fragment		1-30%	3.7	20-24mm	Feather		24.72					
SBBLR PAD 1	8			7	1	0-10cm	Quartz	Medial Fragment			0.5	10-14mm			11.4					
SBBLR PAD 1	9			7	1	0-10cm	Quartz	Medial Fragment		31-69%	<0.1	10-14mm			10.69					
SBBLR PAD 1	10			7	1	0-10cm	Quartz	Angular Fragment			<0.1	5-9mm			6.28					
SBBLR AFT 1	11			6	1	0-10cm	Rhyolite	Flake		1-30%	13.1	35-39mm	Feather	Plain	25.05	38.1	9.89	W>L		
SBBLR AFT 1	12			6	1	0-10cm	Quartz	Core	Unifacial		0.8	10-14mm			12.27				3	11.81
SBBLR AFT 1	13			1	4	15-20cm	Quartz	Flake	Unifacial		3.1	20-24mm	Feather	Plain	23.9	11.9	7.64	L>W		