

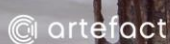
Port Kembla Outer Harbour Configuration Mod5

Archaeological Technical Report

LGA: City of Wollongong

Report to Arup on behalf of the
Trustee of the Port Kembla Unit Trust

August 2025



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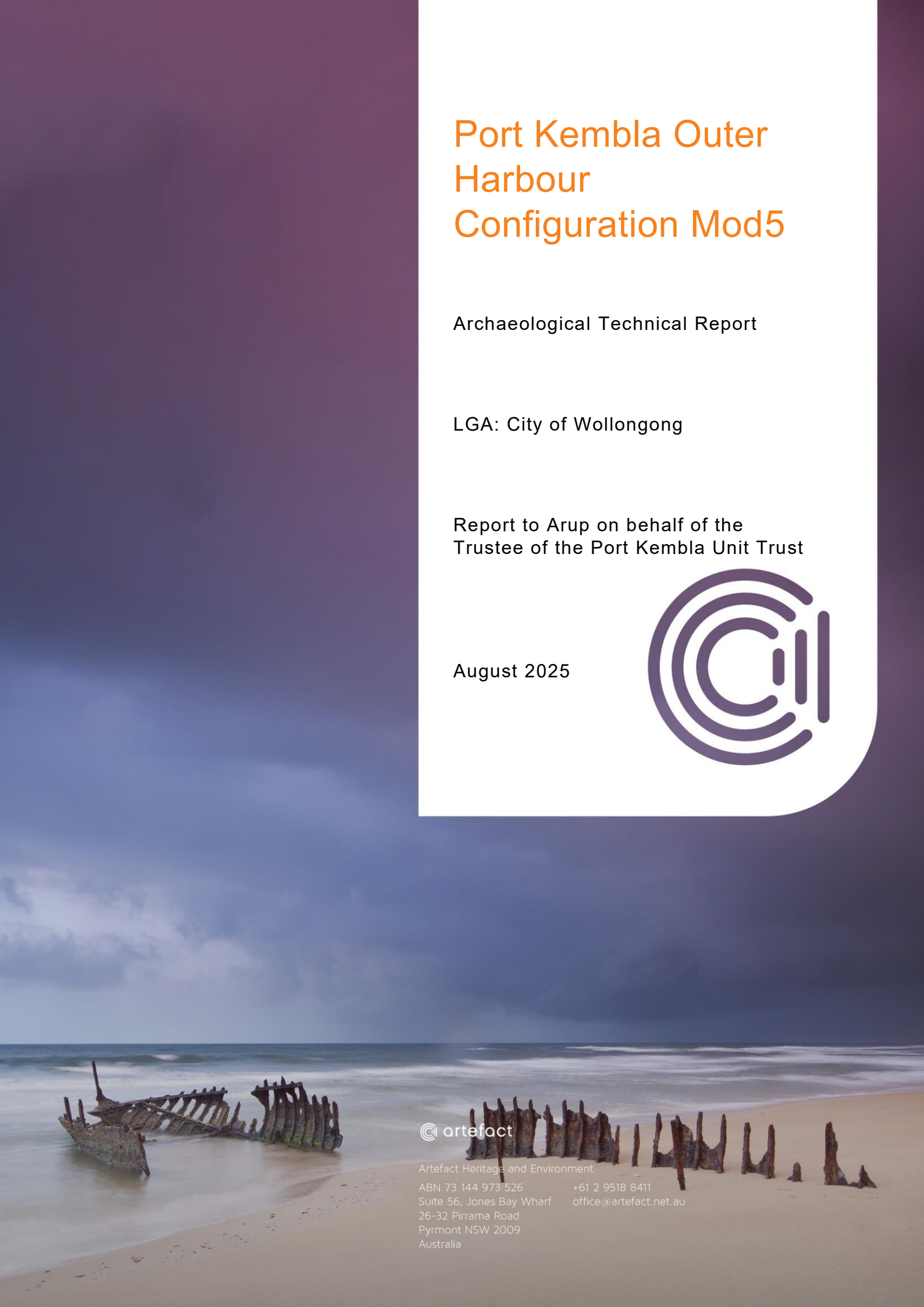
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EXECUTIVE SUMMARY

Arup have engaged Artefact Heritage and Environment (Artefact) on behalf of The Trustee for the Port Kembla Unit Trust (the proponent) to prepare an Archaeological Technical Report assessing the impact of the proposed expansion of approved works to Port Kembla's Outer Harbour on Aboriginal cultural heritage.

Planning approval for developments to the Outer Harbour area was previously granted on 3 March 2011 (Major Project 08_0249) under Section 75J of the *Environmental Planning and Assessment Act 1979*. The Major Project was subsequently modified by the former Planning Assessment Commission on 8 September 2011. The proponent now intends to modify plans for the Outer Harbour developments (MOD 5) and has sought approval for these modifications from the Department of Planning, Housing and Infrastructure under Division 5.2 of the *Environmental Planning & Assessment Act 1979*.

The Secretary's Environmental Assessment Requirements (SEARs) for the proposed modification were issued on 26 February 2025 (MP08_0249 Mod-5). Requirement 6 of the SEARs specify that an Aboriginal Cultural Heritage Assessment Report should be prepared to assess the impacts of the proposed modifications on Aboriginal cultural heritage.

The present Archaeological Technical Report has been prepared to determine whether Aboriginal objects or areas of archaeological potential are present within the proposed modification area, whether any identified objects or areas of archaeological potential will be impacted by the proposed works, and whether an Aboriginal Cultural Heritage Assessment Report is necessary to mitigate any potential impacts.

Through a combination of desktop assessment, a search of the Aboriginal Heritage Information Management System, and archaeological survey, this report has identified the following:

- No Aboriginal Heritage Information Management System sites have been identified within the study area
- Previous archaeological assessments of the study area and its surrounds have noted that the port of Port Kembla has been subject to significant disturbance which has removed Aboriginal archaeological potential
- No Aboriginal objects or areas of archaeological potential were identified during the archaeological survey conducted for this assessment.

Based on these findings the following recommendations are made:

- No additional Aboriginal archaeological assessment is required as no Aboriginal objects have been identified in the study area, nor are any likely to be present
- While the Secretary's Environmental Assessment Requirements for the proposed modification specify that an Aboriginal Cultural Heritage Assessment Report should be prepared, the present Archaeological Technical Report has assessed that the impacts of the proposed modification would have no impact on Aboriginal objects. Therefore, an Aboriginal Cultural Heritage Assessment Report should not be required
- An unexpected finds procedure is recommended to protect against the unlikely event that unexpected Aboriginal objects are encountered during the works

- Where there are changes to the project area, additional archaeological assessment may be required.

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1.0 INTRODUCTION

1.1 Project brief

Arup have engaged Artefact Heritage and Environment (Artefact) on behalf of The Trustee for the Port Kembla Unit Trust (the proponent) to prepare an Archaeological Technical Report (ATR) assessing the impact of the proposed expansion of approved works to Port Kembla's Outer Harbour on Aboriginal cultural heritage.

Planning approval for developments to the Outer Harbour area was previously granted on 3 March 2011 (Major Project 08_0249) under Section 75J of the *Environmental Planning and Assessment Act 1979 (EP&A Act)*. The Major Project was subsequently modified by the former Planning Assessment Commission on 8 September 2011. The proponent now intends to modify plans for the Outer Harbour developments (MOD 5) and has sought approval for these modifications from the Department of Planning, Housing and Infrastructure under Division 5.2 of the *EP&A Act*.

MOD 5 will optimise the layout and functionality of the site. The modified project will be conducted across three key stages, as follows:

- **Stage 1:** Demolition of old jetties; reclamation of land; and construction of berths, drainage, road access, and a grinding mill.
- **Stage 2:** Development and operation of a multi-purpose terminal.
- **Stage 3:** Development of a container terminal with new road, rail, and breakwater adjustments.

The proposed changes involve reconfiguring the facility layout to establish a contiguous land and berth area, which will:

- Enhance flexibility in accommodating a broader range of port uses;
- Enable the relocation of rail infrastructure to better support the expanded facility; and
- Maintain the total reclamation area in line with the originally approved 42 hectares under MP08_0249.

The Secretary's Environmental Assessment Requirements (SEARs) for the proposed modification were issued on 26 February 2025 (MP08_0249 Mod-5). Requirement 6 of the SEARs specify the following:

Heritage – Aboriginal

(a) Provide an Aboriginal Cultural Heritage Assessment Report (ACHAR) prepared in accordance with relevant guidelines, identifying, describing and assessing any impacts to any Aboriginal cultural heritage sites or values associated with the site, if required.

(b) Where impacts to Aboriginal Cultural Heritage are likely, consultation must be undertaken with Aboriginal people and stakeholders in accordance with the National Parks and Wildlife Regulation 2019 and current guidelines.

This ATR will determine whether Aboriginal objects or areas of archaeological potential present within the proposed modification area, whether any identified objects or areas of archaeological potential will be impacted by the proposed works, and whether an Aboriginal Cultural Heritage Assessment Report (ACHAR) is necessary to mitigate any potential impacts.

1.2 Description of the study area

The study area (Figure 1) is defined as a portion of Port Kembla Outer Harbour and includes sections of land and of the harbour as well. It is situated within the City of Wollongong Local Government Area (LGA) and also within the boundaries of the Illawarra Local Aboriginal Land Council (LALC). The following lots are contained within the study area:

- Lot 2, DP1182823
- Lot 2003, DP1176582
- Portion of Lot 9, DP1013971
- Lot 105, DP1013971
- Lot 7, DP1304363
- Lot 1, DP88752
- Lot 8, DP1304364
- Lots 1 and 2, DP1079726
- Lot 12, DP1006859.

1.3 Aims and objectives

The aim of this ATR is to identify whether Aboriginal objects will be harmed by the proposal, and to recommend if management or mitigation measures are required. The report will provide further guidance as to whether the project will be likely to harm Aboriginal objects.

This report has been prepared in accordance with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (Department of Environment, Climate Change & Water 2010); hereafter the Code of Practice.

The main objectives of this report are:

- Review of existing knowledge - review of previous archaeological reports and works, and Aboriginal Heritage Information Management System (AHIMS) search results.
- Review of the landscape context through a desktop assessment of the archaeological implications of the landscape features (soil landscapes, historic land use, geomorphic character, and natural resources) relevant to the terrestrial study area.
- Summary and discussion of the local and regional archaeological character of Aboriginal land use and its material traces based on the finds of the previous two steps.
- Development of a predictive model for the nature and distribution of archaeological evidence of Aboriginal land use based on the previous three steps.
- Completion of an archaeological survey to test the predictions developed in the previous step.

- Complete an archaeological survey to test the predictions developed in the previous step. Archaeological survey will not include test excavations, or any ground disturbing works and is limited to a walkover of the study area.
- Discussion of the results of the archaeological survey and re-evaluation of the regional and local archaeological character.
- Assessment of likely impacts to Aboriginal objects and Potential Archaeological Deposits (PADs) based on the current design plans.
- Consideration of any practical measures that may be required to protect and conserve identified Aboriginal objects and places identified within the study area.

Figure 1: Study area



1.4 Limitations and constraints

This ATR does not include assessment of historical (non-Aboriginal) heritage as that is beyond the scope of this report. Additionally, assessment is only limited to terrestrial portions of the study area. Assessment of submerged portions of the study area is excluded from this report due to its marine environmental context, the noted historical dredging which has occurred within the area, and the operation of the port, all of which are considered likely to have removed any potential for underwater Aboriginal cultural heritage within the study area.

1.5 Authors and contributors

This report was prepared by Sammut Sammut (Senior Heritage Consultant, Artefact Heritage), Katherine Douglas (Graduate Heritage Consultant, Artefact Heritage) and Dr Stephen Gapps (Historian, Artefact Heritage). Management and review were provided by Dr. Samantha Higgs (Aboriginal Heritage Team Leader, Artefact Heritage), and Josh Symons (Technical Executive, Artefact Heritage). Mapping was provided by Mike Douglas (Geographic Information System Officer, Artefact Heritage). A summary of the authors, contributors and their role are provided in Table 1: below.

Table 1: Summary of authors and contributors.

Authors and Contributors	Qualifications	Experience	Tasks
Josh Symons (Technical Executive)	Bachelor of Arts (Hons), Prehistoric and Historical Archaeology	20+ years	<ul style="list-style-type: none"> Quality control Technical support
Dr. Samantha Higgs (Archaeology Team Leader/Principal)	Bachelor of Arts (Hons), Prehistoric and Historical Archaeology PhD, Archaeology and Anthropology	20+ years	<ul style="list-style-type: none"> Technical review
Mike Douglas (GIS Officer)	Bachelor of Arts North American Archaeology Master of Science Geology Master's Certificate in GIS Science	20+ years	<ul style="list-style-type: none"> Preparation of mapping GIS support
Dr Stephen Gapps (Historian)	Bachelor of Arts (Hons)., History Master of Applied History PhD History	20+ years	<ul style="list-style-type: none"> Background Histories
Sammut Sammut (Senior Heritage Consultant)	Bachelor of Arts (Hons.), Archaeology Master of Archaeological and Evolutionary Science	4+ years	<ul style="list-style-type: none"> Report preparation Archaeological survey Project management
Katherine Douglas (Graduate Heritage Consultant)	Bachelor of Arts (Hons.), Archaeology	<1 year	<ul style="list-style-type: none"> Background research Report writing

2.0 PROJECT FRAMEWORK

2.1 Commonwealth legislation

2.1.1 Environment Protection and Biodiversity Conservation Act 1999

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) provides a legal framework for the protection and management of Australia's unique environment, including biodiversity and culturally significant places. The EPBC Act also includes provisions to identify places for addition to the National Heritage List (NHL) and Commonwealth Heritage List (CHL) to enhance the protection, conservation and presentation of those places. A search of the NHL and CHL was completed on 26 May 2025. No items listed on the NHL or CHL were identified within the study area.

2.1.2 Aboriginal and Torres Strait Islander Heritage Protection Act 1984

The Commonwealth *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* (ATSIHP Act), deals with Aboriginal cultural property (intangible heritage) in a wider sense. Such intangible heritage includes any places, objects and folklore that 'are of particular significance to Aboriginals in accordance with Aboriginal tradition'.

There is no cut-off date and the ATSIHP Act may apply to contemporary Aboriginal cultural property as well as ancient sites. The ATSIHP Act takes precedence over state cultural heritage legislation where there is conflict. The Commonwealth Minister who is responsible for administering the ATSIHP Act can make declarations to protect these areas and objects from specific threats of injury or desecration. The responsible Minister may make a declaration under Section 10 of the Commonwealth Act in situations where it is determined that state or territory laws do not provide adequate protection.

Where an Aboriginal individual or organisation is concerned that cultural values within the proposal are not being adequately protected, they can apply to the Minister for a declaration over a place.

A search of the Federal Gazette was undertaken on 26 May 2025 to determine whether there are any known sites under the ATSIHP present within the study area. No gazetted sites within the study area were identified.

2.1.3 Native Title Act 1993

The main purpose of the *Native Title Act 1993* is to recognise and protect native title. Native title is the rights and interests in land and waters that Aboriginal and Torres Strait Islanders have under their traditional laws and customs. Under the *Native Title Act 1993* the National Native Title Tribunal has a number of functions including maintaining the Register of Native Title Claims, the National Native Title Register and the Register of Indigenous Land Use Agreements and mediating native title claims.

Proponents are not required to comply with the requirements of steps 4.1.2 to 4.1.7 of the Consultation Requirements where there is an approved determination that native title exists in relation to the entire study area. In this circumstance, proponents need only consult with the native title holders. However, steps 4.1.2 to 4.1.7 are applicable for any portion of the study area not covered by a native title determination. A search of the National Native Title Tribunal database was completed on 26 May 2025. The study area is located within land that is current the subject of a Native Title claim by the South Coast People (NC2017/003). As Native Title has

not yet been determined, steps 4.1.2 to 4.1.7 of the Consultation Requirements are applicable, and the South Coast People should be included in any consultation that is undertaken for the proposed works. However, as this report is being prepared in accordance with the Code of Practice, no consultation is required for this archaeological assessment.

The Native Title Services Corporation (NTSCorp) performs functions under section 203B-BK of the *Native Title Act 1993 (Cth)* which include:

- Facilitation and assistance;
- Dispute resolution;
- Agreement making;
- Internal review; and
- Other functions.

Both the National Native Title Tribunal and NTSCorp should be consulted under Requirement 4.1.2 of the Consultation Requirements to ascertain the names of Aboriginal people who may hold cultural knowledge relevant to determining the significance of Aboriginal objects or places.

2.2 State legislation

2.2.1 National Parks and Wildlife Act 1974

The *National Parks and Wildlife Act 1974* (NPW Act), administered by Heritage NSW provides statutory protection for all Aboriginal 'objects' (consisting of any material evidence of the Aboriginal occupation of NSW), and for 'Aboriginal Places' (areas of cultural significance to the Aboriginal community).

The protection provided to Aboriginal objects applies irrespective of the level of their significance or issues of land tenure. However, areas are only gazetted as Aboriginal places if the Minister is satisfied that sufficient evidence exists to demonstrate that the location was and/or is of special significance to Aboriginal culture.

There are no gazetted Aboriginal places in the study area. All Aboriginal objects, whether recorded or not, are protected under the NPW Act.

Section 86 of the NPW Act identifies that it is an offence to harm or desecrate an Aboriginal object and/or an Aboriginal place. Section 86 outlines penalty units applicable where it is identified that a person or corporation is in breach of Section 86.

The NPW Act defines harm to an object or place as any act or omission that:

- (a) destroys, defaces or damages the object or place, or
- (b) in relation to an object moves the object from the land on which it had been situated, or
- (c) is specified by the regulations, or
- (d) causes or permits the object or place to be harmed in a manner referred to in paragraph (a), (b) or (c).

An Aboriginal Heritage Impact Permit (AHIP) may be granted under s90 of the *National Parks and Wildlife Act 1974* by Heritage NSW. Various factors are considered by Heritage NSW in the AHIP application process, such as site significance, Aboriginal consultation requirements, Ecological Sustainable Development (ESD) principles, project justification and consideration of alternatives.

As this project is being assessed under Part 5 Division 2 of the EP&A Act, permits issued under the NPW Act are not required for impacts approved under the SSI provisions. Impacts to Aboriginal objects will be authorised by the Conditions of Approval for the project issued under the EP&A Act.

2.2.2 Heritage Act 1977

The Heritage Act 1977 protects protection to heritage items (natural and cultural) in NSW. Under the *Heritage Act 1977*, 'items of environmental heritage' include places, buildings, works, relics, moveable objects and precincts identified as significant. While Aboriginal heritage is primarily protected under the *National Parks and Wildlife Act 1974* but may also be subject to the provisions of the *Heritage Act 1977* if an item listed on the State Heritage Register (SHR) or subject to an interim heritage order. In such cases, Aboriginal objects and places are protected under Section 60 of the *Heritage Act 1977* and approval from the Heritage Council of NSW may also be required in addition to an AHIP. Section 60 approvals are not required for an approved SSI project.

A search of the State Heritage Inventory conducted on 26 May 2025. It was identified that one SHR item is located within 200m of the study area:

- Hill 60/Illowra Battery (SHR #01492).

Examination of this item's SHI listing demonstrates that the Hill 60/Illowra Battery item has been categorised as being of state significance for its Aboriginal archaeological and historical significance. The statement of significance for the item states the following (Heritage NSW 2002):

Hill 60 and its environs (MM Beach, Boilers Point, Fisherman's Beach and Hill 60 Park) contains a rare suite of Aboriginal sites which demonstrate the evolving pattern of Aboriginal cultural history and the Aboriginal land rights struggle. The quality, extent and diversity of the prehistoric archaeological remains at this place are rare on the NSW coast particularly in the local region. These include extensive shell midden deposits rich in stones, artifacts and burials (Dallas, 2000).

There is demonstrated cultural affiliation with the place by the Aboriginal community, through near continuous occupation of the place, a history of struggle to gain land tenure and ongoing association and use of the place. The historic Aboriginal occupation was characterised by a relatively isolated and self sufficient Aboriginal community that participated in the economic maintenance of the wider community by the provision of labour to local industry and produce (seafood's) at a commercial level. The people also maintained a culturally distinct Aboriginal lifestyle firmly based on the maintenance of family connections over the wider region and traditional economic practices (ibid, 2000).

2.2.3 Environmental Planning and Assessment Act 1979

The EP&A Act establishes the framework for cultural heritage values to be formally assessed in the land use planning, development assessment and environmental impact assessment processes. Part 3, Division 3.4 deals with the development of Local Environmental Plans (LEPs). Planning decisions within Local Government Areas (LGAs) are guided by LEPs and/or State Environmental Planning Policies (SEPPs). Each LGA is required to develop and maintain an LEP and/or SEPP that includes Aboriginal and historical heritage items which are protected under the *EP&A Act* and in some cases also protected under the *Heritage Act 1977*.

The study area is situated within land that is subject to the *SEPP (Transport and Infrastructure) 2021 Three Ports*. A search of the SEPP was conducted on 26 May 2025 and identified that there are five heritage items listed on the SEPP within 200m of the study area:

- Commonwealth Rolling Mill Plant and Gardens – SEPP Item 1
- Office and House, Port Kembla Copper – SEPP Item 2
- Brick Chimney, Port Kembla Copper – SEPP Item 3
- Mobile Block Setting Steam Crane – SEPP Item 4
- Hill 60, Illowra Battery (State Heritage Register listing 01492) – SEPP Item 5.

The study area is located within the boundaries of the City of Wollongong LGA and is covered by the Wollongong LEP 2009. A search of the LEP was conducted on 26 May 2025 and identified that one item listed on the LEP is located within 200m of the study area:

- Hill 60, Fisherman's Beach, Boilers Point, Red Point and MM Beach – LEP #61043.

As discussed in Section 2.2.2 of this report, the Hill 60 item (SEPP Item 5, LEP #61043) is known to be of state value for its Aboriginal archaeological and historical value.

The proposal will be assessed under Part 5, Division 2 of the EP&A Act, which establishes an assessment and approval regime for SSI. Part 5, Division 2. applies to development that is declared to be an SSI by a State Environmental Planning Policy (SEPP). Section 5.23d of the EP&A Act specifies that approvals or permits under section 90 of the NPW Act 1974 are not required for approved SSD.

2.2.4 NSW Native Title Act 1994

The *Native Title Act 1994* was introduced to ensure that the laws of NSW are consistent with the Commonwealth *Native Title Act 1993*. Native Title claims, registers and Indigenous Land Use Agreements are administered under the Act. As discussed in Section 2.1.3 of this report, the study area is situated within land that is currently under a Native Title claim by the South Coast People. As such, steps 4.1.2 to 4.1.7 of the Consultation Requirements are applicable, and the South Coast People should be included in any consultation that is undertaken for the proposed works. However, as this report is being prepared in accordance with the Code of Practice, no consultation is required for this archaeological assessment.

2.2.5 Aboriginal Lands Right Act 1983

The *Aboriginal Land Rights Act 1983* (ALR Act) established Aboriginal Land Councils (at State and Local levels). The study area is within the boundary of the Illawarra LALC which has a statutory obligation under the ALR Act to:

(a) take action to protect the culture and heritage of Aboriginal persons in the council's area, subject to any other law, and

(b) promote awareness in the community of the culture and heritage of Aboriginal persons in the council's area.

The ALR Act also establishes the Registrar whose functions include maintaining the Register of Aboriginal Land Claims and the Register of Aboriginal Owners. Registration as an Aboriginal owner

does not confer land title rights but acknowledges the person's cultural association with the land. Under the ALR Act, the Registrar is to give priority to the entry in the Register of the names of Aboriginal persons who have a cultural association with:

- Lands listed in Schedule 14 to the *National Parks and Wildlife Act 1974*
- Lands to which Section 36A of the *Aboriginal Land Rights Act 1983* applies.

Requirement 4.1.2 of the Consultation Requirements stipulates that the Illawarra LALC and the Registrar should be contacted to ascertain the names of Aboriginal people who may hold cultural knowledge relevant to determining the significance of Aboriginal objects or places. However, as this report is being prepared in accordance with the Code of Practice, no consultation is required for this archaeological assessment.

3.0 ARCHAEOLOGICAL CONTEXT

3.1 AHIMS search

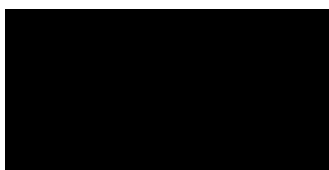
NOTE: The location of Aboriginal sites is considered culturally sensitive information. It is advised that this information, including the AHIMS data appearing on mapping below must be removed from this report if it is to enter the public domain.

An extensive search of the Aboriginal Heritage Information Management System (AHIMS) was undertaken on 27 May 2025 (Client Service ID: 1008464) to determine the location of Aboriginal sites in relation to the current study area. The search area was defined the study area and the region around it to inform the characterisation of the local archaeological context. The AHIMS search parameters were as follows:

GDA, Zone 56

Buffer

Number of sites



There were no AHIMS registered site located within the study area (Figure 2 and Figure 3).

Examination of the status of the AHIMS sites identified within the search area demonstrated that one site, AHIMS ID 52-2-0476, has been listed as 'Not a Site' meaning that it has excluded from this analysis. Therefore, 18 valid AHIMS sites have been identified within the search area. Two restricted sites were also identified within the extensive search area. However, following correspondence with Heritage NSW, it was determined that the restricted AHIMS sites will not be impacted by the proposed works (Appendix B – Correspondence with Heritage NSW). The frequency of site features within the search area is outlined below in Table 2.

Table 2: Site features within the extensive search area

Site Feature	Frequency	Percentage
Artefact; Shell	7	38.8
Artefact	3	16.6
Restricted	2	11.1
Shell	2	11.1
Aboriginal Ceremony and Dreaming; Aboriginal Resource and Gathering	1	5.6
Aboriginal Resource and Gathering	1	5.6
Aboriginal Resource and Gathering; Aboriginal Ceremony and Dreaming; Habitation Structure	1	5.6
Burial; Shell; Artefact	1	5.6
Total	18	100

Figure 2: Extensive AHIMS search results

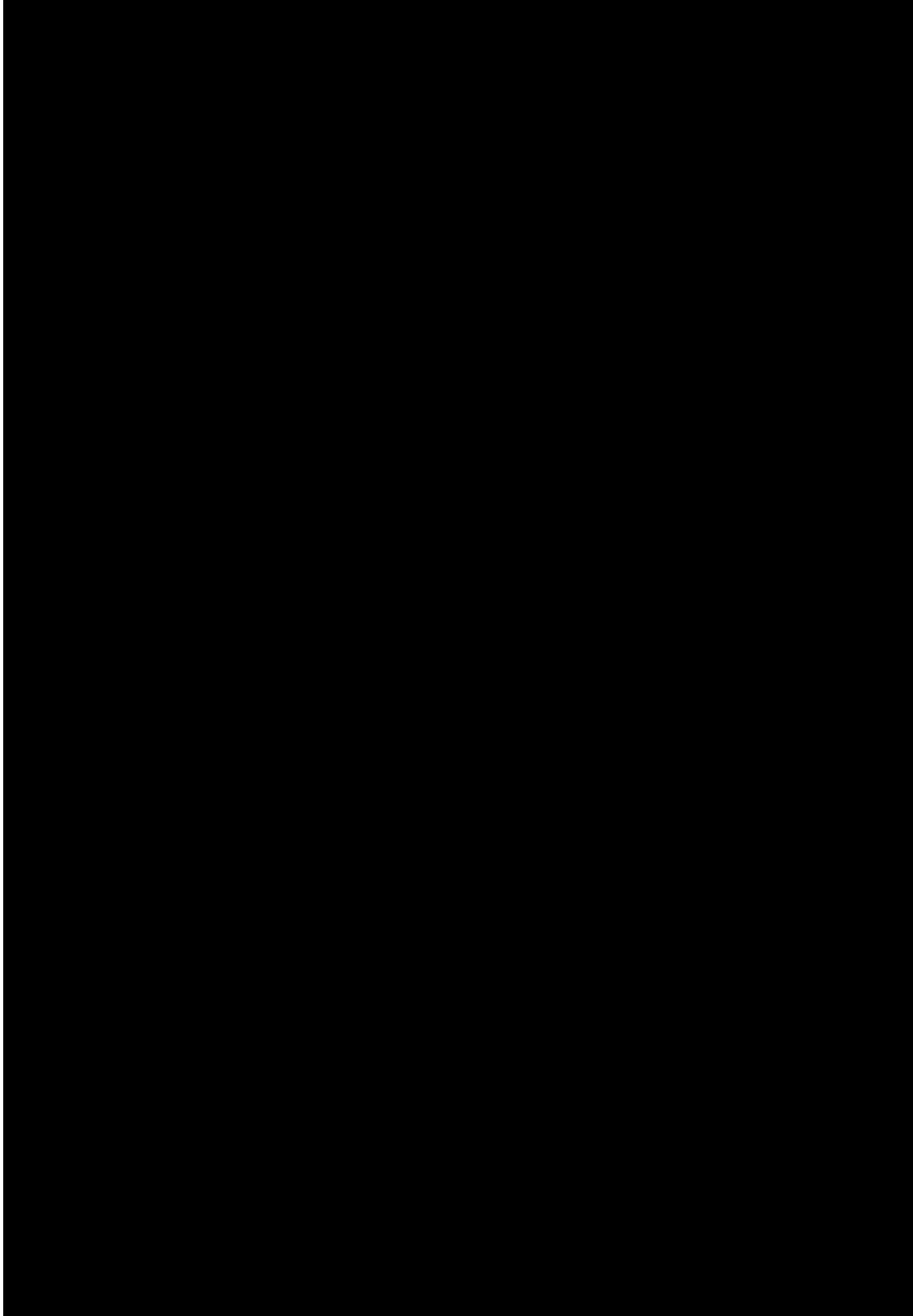
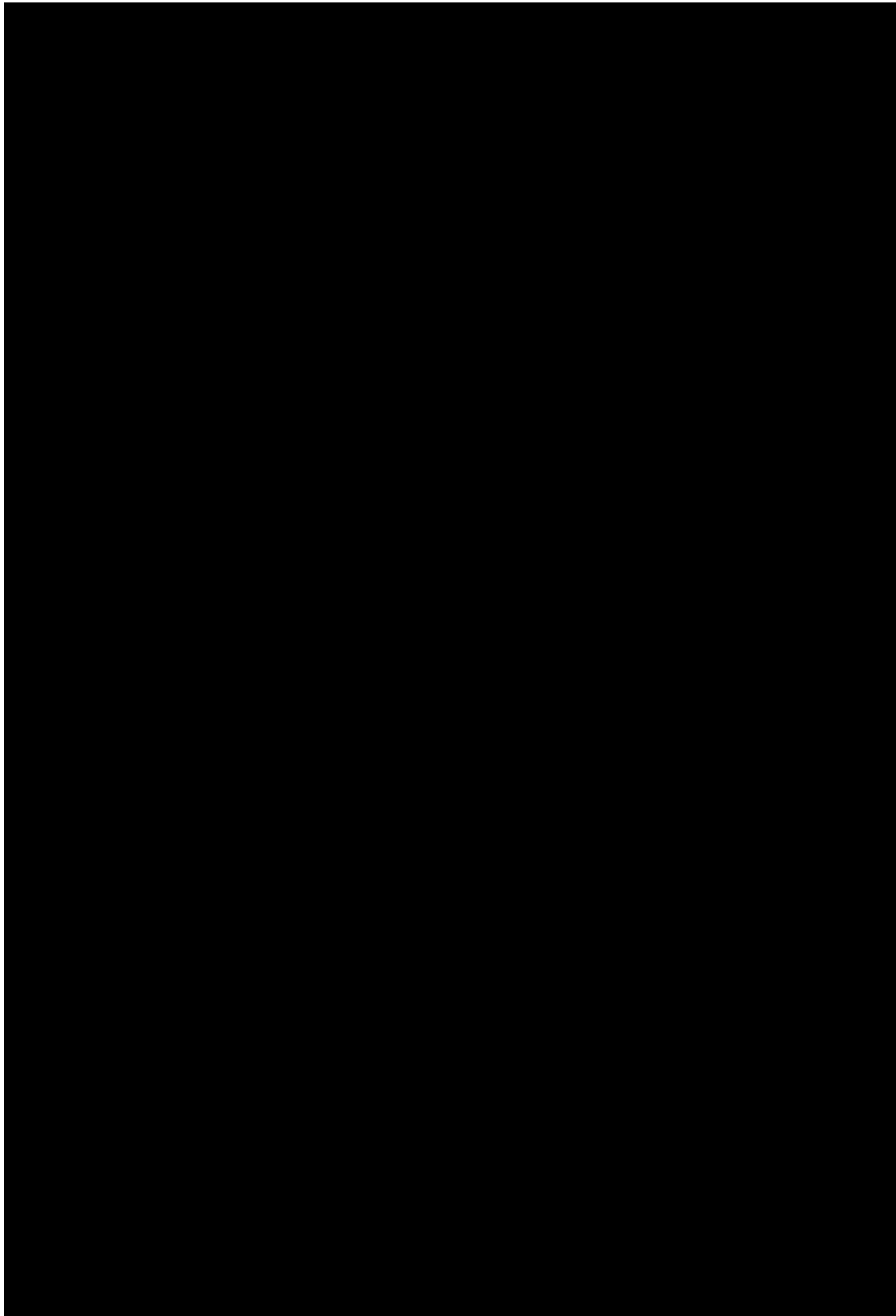


Figure 3: Detailed AHIMS search results



The most common site features identified in the search area are 'Artefact; Shell' sites (n = 7, 38.8%). These sites consist of stone artefacts (both isolated finds and artefact scatters) associated with middens. The concentration of these site features within the search area is logical: stone artefacts are typically the most common form of Aboriginal archaeological evidence identified in NSW due to their durability, and the concentration of archaeological shell material serves as a function of the search area's coastal context. Several other different site features were also apparent within the search area, including 'Aboriginal Ceremony and Dreaming', 'Aboriginal Resource Gathering', 'Habitation Structure' and 'Burial' sites. The presence of these sites within the search area are reflective of diverse Aboriginal land use practices across the region around Port Kembla.

The limited number of sites identified within the search area make it difficult to make more substantive statements about the spatial distribution of Aboriginal sites within the search area. However, many of the AHIMS sites within the search area are located in proximity to the coastline, likely reflecting the cultural significance and abundant resources associated with such coastal areas. Additionally, other AHIMS sites have been identified on elevated landforms. Such landforms potentially may have served as desirable occupation or activity sites for local Aboriginal groups. Therefore, the extensive search results suggest that Aboriginal sites within the search area are more likely to be encountered in areas close to the coast and associated with elevated landforms.

The closest AHIMS site to the study area, AHIMS ID 52-2-1290, is located approximately 400m southeast of the study area at its closest extent. This site was identified as a midden and artefact site and was found to contain numerous shells species as well as a large number of stone artefacts made from various raw materials. It was identified within an eroding dune that had been disturbed by vehicle tracks and natural erosion. The site was at least partially destroyed [REDACTED] under consent from the National Parks and Wildlife Service in 1994. This site appears typical of many of the other AHIMS sites identified within the search area and is potentially representative of Aboriginal sites that may be encountered within the study area.

3.2 Public AHIP register search

A search of the public AHIP register was undertaken on 27 May 2025 to determine whether there are any active AHIPs within the study area. The search determined that there are no active AHIPs within the study area.

3.3 Review of existing archaeological literature

AECOM, 2010. *Port Kembla Outer Harbour Development: Environmental Assessment. Report prepared for Port Kembla Corporation.*

AECOM previously prepared an environmental assessment for developments to the Outer Harbour area of the port as part of Concept Plan Approval and Major Project Plan Approval under Part 3A of the *EP&A Act 1979*. Part of this environmental assessment involved a high-level consideration of the proposed development's impact on Aboriginal heritage. Through background assessment, AECOM identified that the port area had been subject to significant levels of disturbance and development throughout the nineteenth and twentieth centuries. Additionally, no recorded AHIMS sites were identified within the site, although no inspection of the site was carried out to ground truth whether Aboriginal objects were present or were likely to be present. From their assessment, AECOM determined that there was no evidence to suggest that Aboriginal sites would be impacted by the proposed development, and there was little to no likelihood that any *in situ* Aboriginal archaeological material would be present within the study area. As a result, no further Aboriginal archaeological investigation was recommended. The results of AECOM's report suggest that there is limited

Aboriginal archaeological potential within the study area, although archaeological survey will be required to support or contravene this conclusion.

GHD, 2018. *Port Kembla Gas Terminal: Aboriginal Heritage Due Diligence Assessment. Report prepared for Australian Industrial Energy.*

GHD undertook a Due Diligence assessment ahead of proposed developments to the Port Kembla Gas Terminal. The area assessed was located approximately 2.4km west of the study area at its closest point. GHD noted that the area they investigated, and indeed the port overall, was significantly disturbed from the development of the site. This led to GHD concluding that the majority of the study area possesses little to no Aboriginal archaeological potential. However, the exception to this were portions of land near Spring Hill. Spring Hill is known to be of cultural significance to local Aboriginal groups and is predominantly undeveloped. Based on their desktop assessment and visual inspection of the site, GHD concluded that Aboriginal archaeological remains were likely present within areas around Spring Hill that had not been developed, but the proposed works were unlikely to harm Aboriginal objects due to being located in a heavily developed and modified industrial landscape. These findings suggest there is also limited potential for Aboriginal objects to be located within the study area due to it also being a modified industrial landscape.

3.4 Ethnographic records of Aboriginal material culture

The study area is located within the Dharawal language group area. Dharawal language speakers lived and continue to live on their Country from Kamay-Botany Bay in the north, through Campbelltown and Moss Vale to the west, and south to the Shoalhaven River and Jervis Bay. The traditional Country of the Dharawal language speaking Wodi Wodi (or Wadi Wadi) has been identified as extending from north of the Shoalhaven River at Nowra to Wollongong and inland to Moss Vale. The Wodi Wodi have been called the 'people of the Illawarra' (Attenbrow 2010; Tindale 1974; Wesson 2005, 5).

People did not usually identify themselves by the name of the language they spoke (they often spoke several languages) but by the clan group within which they lived. According to Dharawal historian Les Bursil, the 'Camayragal, Dhargarigal, Gweagal, Goonamattagal, Goorungurragal, Murro-ore-dial, Noron-Geragal, Oaree, Ory-ang-ora, Tagarigal, Threawal, Wandandegal and Wodi Wodi clans spoke Dharawal as their first language (Bursil, Donaldson, and Jacobs 2015, 2).

Dharawal language people are distinguished as fresh water, bitter water or saltwater people, depending on whether they live in coastal regions, estuarine areas, or the plateaus and inland river valleys. Traditional stories tell of their arrival at the mouth of Lake Illawarra in canoes when the Ancestors were animals. According to Dharawal Elders, the Ancestors 'brought the Dharawal or Cabbage Tree Palm with them from the north and are named for this sacred tree' (Wesson 2005, 6–10).

Dharawal stories say 'people were always here, from the beginning'. Archaeological evidence has found people living in the Illawarra from at least 20,000 years ago, during the time of ancient megafauna such as the diprotodon. Around 8,000 years ago sea levels were higher. The coastline at Stanwell Park was around 15-20kms further east and under coastal waters today lies further evidence of their long history. A creation story tells of the sea covering land that was once dry, with the Five Islands north of Bass Point joined by land to Hill 60 at Port Kembla – a story told down hundreds of generations (Bursil, Donaldson, and Jacobs 2015, 1).

Dharawal people moved around defined areas according to the seasons and the availability of resources in an economy that had finely tuned for tens of thousands of years. The Wodi Wodi remained on the coast during the warm seasons, taking advantage of the abundant marine resources. There were once vast middens along the coastline but many were later destroyed to make lime for

brick mortar in building. In the colder seasons people moved away from the coast to the many rock shelters in the deep valleys of the escarpment and further inland. Here they depended on fish, eels and yabbies and the men would join women in collecting plant foods (Bursil, Donaldson, and Jacobs 2015, 3).

They also moved beyond these local areas and were known to have travel, trade and ceremonial connections with neighbouring Dhurga, Yuin, Gundangurra and Darug people, and further afield with Awabakal and Wiradjuri people along the coast to the north and west inland. Stone from Bombo was known to have been traded long distances. Longer journeys were usually travelled along a songline or storyline, a pathway journeyed by a creative spirit while bringing the Country into existence. Particular favoured travel routes were coastal, running north-south. Some were east-west and others inland. One path ran 150kms from Jervis Bay via Nowra through Kangaroo Valley, Wilde's Meadow and Robertson to Appin, a five day journey. Gundangurra and Wiradjuri people travelled onto Dharawal Country on the coast to exchange foods, raw materials and artefacts. The fish, oysters, water-fowl and grubs of the Illawarra were particularly valued by inland people. These favoured travel routes, and the associated movement of artefacts are likely to be represented archaeologically in the present-day by site types such as middens, scatters and isolated artefacts (Bursil, Donaldson, and Jacobs 2015, 25; Wesson 2005, 7).

The landscape along the Wodi Wodi (and broader Dharawal) coast was richly worked with culture, art and industry. So too, Dharawal peoples had a vast array of possessions, tools, clothing and weapons. Artefacts such as spears (karmai), woomeras (womra), boomerangs (bumarin), shields (hilamin), canoes (maduri) were made from timbers, gums and resins. Nuts, feathers, teeth, ochres, animal skins and plant fibres were used to create decorative clothing, cloaks and both everyday and ceremonial ornamentation. Leaves, bark and stems were used to make baskets, string, rope, nets and toys. Bark, stems and leaf fronds made short-term shelter structures. Although artefacts made of organic materials are inherently susceptible to degradation, these materials may, in some circumstances, still be preserved today in moist, anaerobic depositional environments (Wesson 2005, 12–13).

Swamp wallabies, possums and other macropods were eaten and their bones and skin used in the manufacture of cloaks, rugs, artefacts and ornaments. The cloaks were worn fur side out in the rain and skin out in dry, cold weather. The skins were pegged out on the ground for curing and finished with decorative markings stained and etched into the suede using a sharp bone or shell. Skins were sewn together with animal sinews through holes pierced by bone awls. As one early colonist on the south coast described a Dharawal possum-skin cloak, 'an opossum cloak, the flesh side out, of one uniform grey colour; the skins were in squares, beautifully sewn together, and ornamented with delicate red lines and dots arranged in geometrical regularity (Wesson 2005, 103).

Ceremonial areas are marked by certain trees which may be carved with significant designs to define the area. Trees were also marked to indicate a burial using both symbols and drawings. During gatherings trees were marked to define the temporary home areas for a visiting group. The survival of culturally modified trees today however is directly related to disturbance and land clearing. The forests and grasslands were carefully maintained the continuing application of at least four different fire regimes. 'Cool' fires were used in September and October, but hot fires from January to March to open hard seeds and pods and to germinate legumes. Skilful and controlled fires kept the forests dense, the woodlands open, the grass copious and the game convenient (Bursil, Donaldson, and Jacobs 2015, 17).

Dharawal people could communicate by smoke signals for long distance. Variants in the smoke (colour, density, height and duration) communicated different meanings. In 1770 when James Cook and his crew in the HMB *Endeavour* sailed north along the Yuin and Dharawal coastline, they saw smoke from fires all along the shore as people communicated the ship's presence along the coast (Organ 1990, 213).

Plants were more than just staple foods – they could also be indicators for hunting. The Bangalow Palm for example, has leaves that can be used to make water carriers, baskets and thatching for shelter, and its presence is an indicator for swamp wallabies, bushrats and bandicoots (Wesson 2005, 69).

Bass and Flinders sailed south along the coast from Sydney in 1796 and encountered the Wodi Wodi at Lake Illawarra and Red Point (Department of Environment and Conservation 2005). Barron Field later noted that additional encounters with the Wodi Wodi in this region, stating:

...this day we crossed the shallow entrance from the sea of Lake Illawarra – a large opening a little to the south of Tom Thumbs Lagoon. The lake was illustrated by natives in their canoes looking characteristic and beautiful... (Organ 1990, 132).

Additional documentary evidence by Stewart in 1828 and artistic representations of Aboriginal people by John Skinner Prout in the 1840s (Figure 4) further support the importance of Tom Thumb Lagoon's shores as an occupation and resource gathering site, with Stewart in particular noting that apparent importance of fish in the Wodi Wodi peoples' diets (Stewart 1894).

The shores of the lagoon were dotted with Aboriginal camps until at least 1914, when Aboriginal people were forced to move to sites around Hill 60 as part of the industrial development of the lagoon (Department of Environment and Conservation 2005). While the Wodi Wodi's occupation centred around Hill 60 following 1914, they continued to gather resources from Tom Thumb Lagoon for some time after (GHD 2018). Hill 60 became an important location for the local Aboriginal community from the late 1800s onwards, becoming the locus of a successful Aboriginal commercial fishing venture, an economically self-sufficient Aboriginal community that maintained good relations with the surrounding white community while still maintain cultural practices (Heritage NSW 2002). However, in 1942, this community was forcibly removed from Hill 60.

Figure 4: 'Tom Thumbs Lagoon, New South Wales', John Skinner Prout c. 1847



3.5 Conclusion and summary

The Illawarra region, and in particular its coastline, is known to be an important location for Aboriginal groups. The archaeological context established in this report has demonstrated that numerous Aboriginal sites are distributed up and down the coastline, reflecting intensive occupation of this region that extends back several thousand years. However, the presence of Aboriginal archaeological remains has been significantly affected by the development of the Port Kembla area, and the heavy industrialisation, disturbance and modification of the port itself is likely to have significantly impacted the potential for Aboriginal objects to be present within the study area. This includes the underwater portions of the study area which, due to marine processes, extensive dredging and the operation of the port, have been identified as being unlikely to possess any potential for underwater Aboriginal cultural heritage.

4.0 LANDSCAPE CONTEXT

4.1 Soils and geology

The study area (Figure 5) is situated within a landscape that is recognised as being 'Disturbed Terrain' (eSpade 2015). Disturbed Terrain is categorised as land that has been significantly altered by human activity and disturbed to a depth of at least 1m. This disturbance is attributable to the long-standing industrial usage of the study area and its surrounds, and the development of the port over the nineteenth and twentieth centuries. The significant levels of disturbance within the study area are likely to have removed or destroyed natural soil profiles that existed within the site previously, reducing the potential for Aboriginal objects to be present.

Geological mapping indicates that the study area is on a liminal point between the Gerringong Volcanics formation and a body of anthropogenic material. Gerringong Volcanics are generally composed of latite, banded tuff, sandstone and minor siltstone inclusions. Some of these materials were utilised as raw materials for stone tools or within the manufacturing process, and these suggest the types of materials any artefactual remains present within the study area might consist of. The anthropogenic deposits identified within and surrounding the study area were created through human processes associated with the development of the port. Due to the artificial nature of this geology, there is limited potential for Aboriginal objects, and any present Aboriginal objects are unlikely to be *in situ* and were most likely transported to the site within fill soils during the creation and development of the port.

4.2 Hydrology

The region around the study area is surrounded by various water sources, which may have proved attractive to Aboriginal groups in the past. The most significant of these is the Pacific Ocean, which borders the suburb of Port Kembla to the east. Additionally, the broader region around the study area features numerous creeks flowing eastwards from the Illawarra Escarpment, many of which converge into Allans Creek, and subsequently Tom Thumbs Lagoon (Inner Harbour) and the Outer Harbour. Additionally, Lake Illawarra is situated southeast of the study area, and the undulating terrain of the broader region around the study area support numerous other ephemeral and permanent watercourses.

The numerous water sources within and surrounding the study area were likely utilised by Aboriginal groups within this region for freshwater, dietary resources and various raw materials. The resource rich nature of this environment may indicate a desirable location for Aboriginal activity and occupation in the pre-European period. However, the marine context of the study area may have negatively contributed to the preservation of potential archaeological resources through the erosion and transformation of coastlines by wave action. As such, marine processes are likely to have contributed to the destruction or removal of Aboriginal objects from the study area.

4.3 Landforms

The study area is situated within a level landform that is associated with the modified and disturbed nature of the port area (Figure 6). The flatness of this terrain further reinforces the disturbance which has occurred across the site and limits the potential for Aboriginal objects to be present.

Figure 5: Soil landscapes within the study area

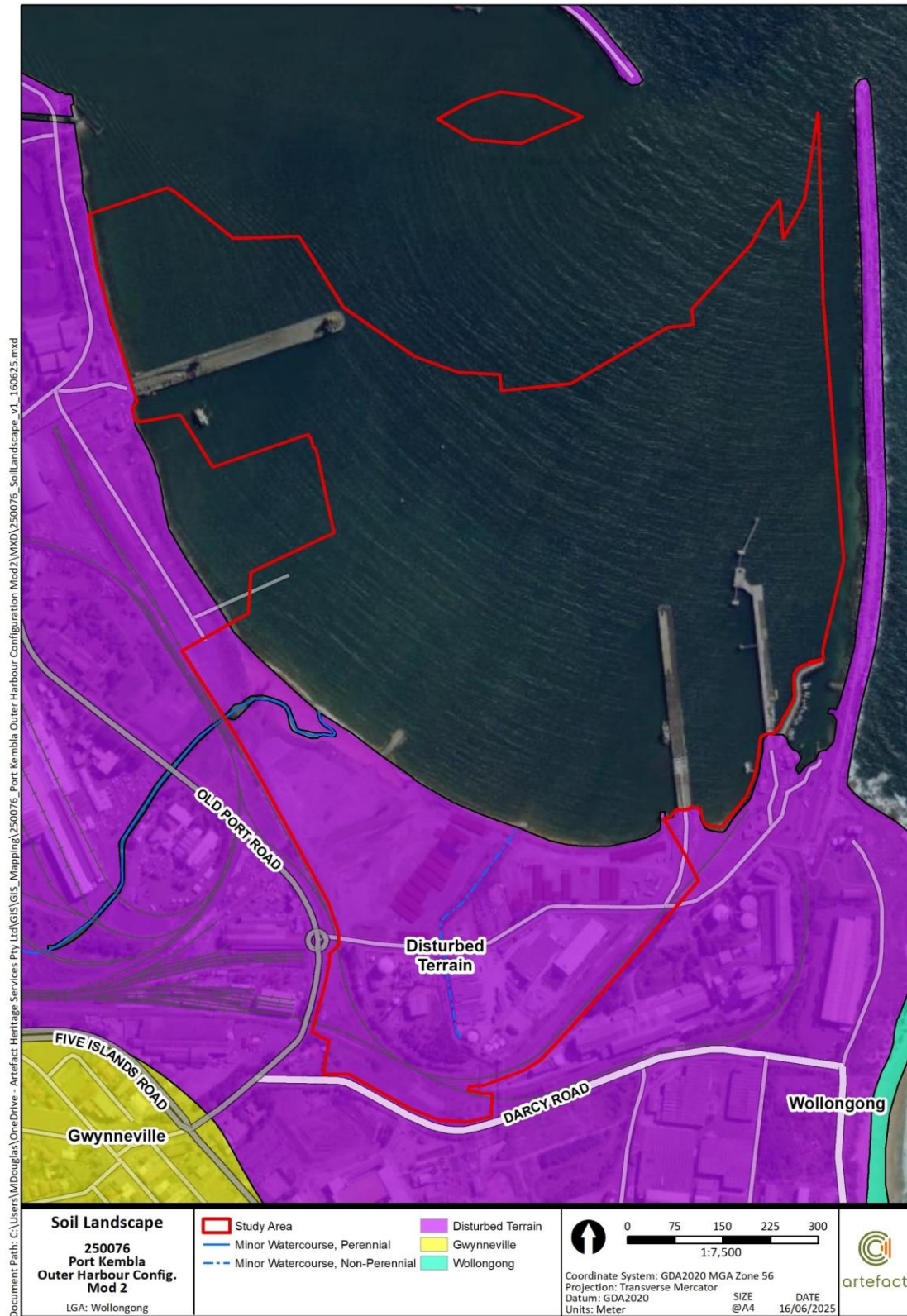
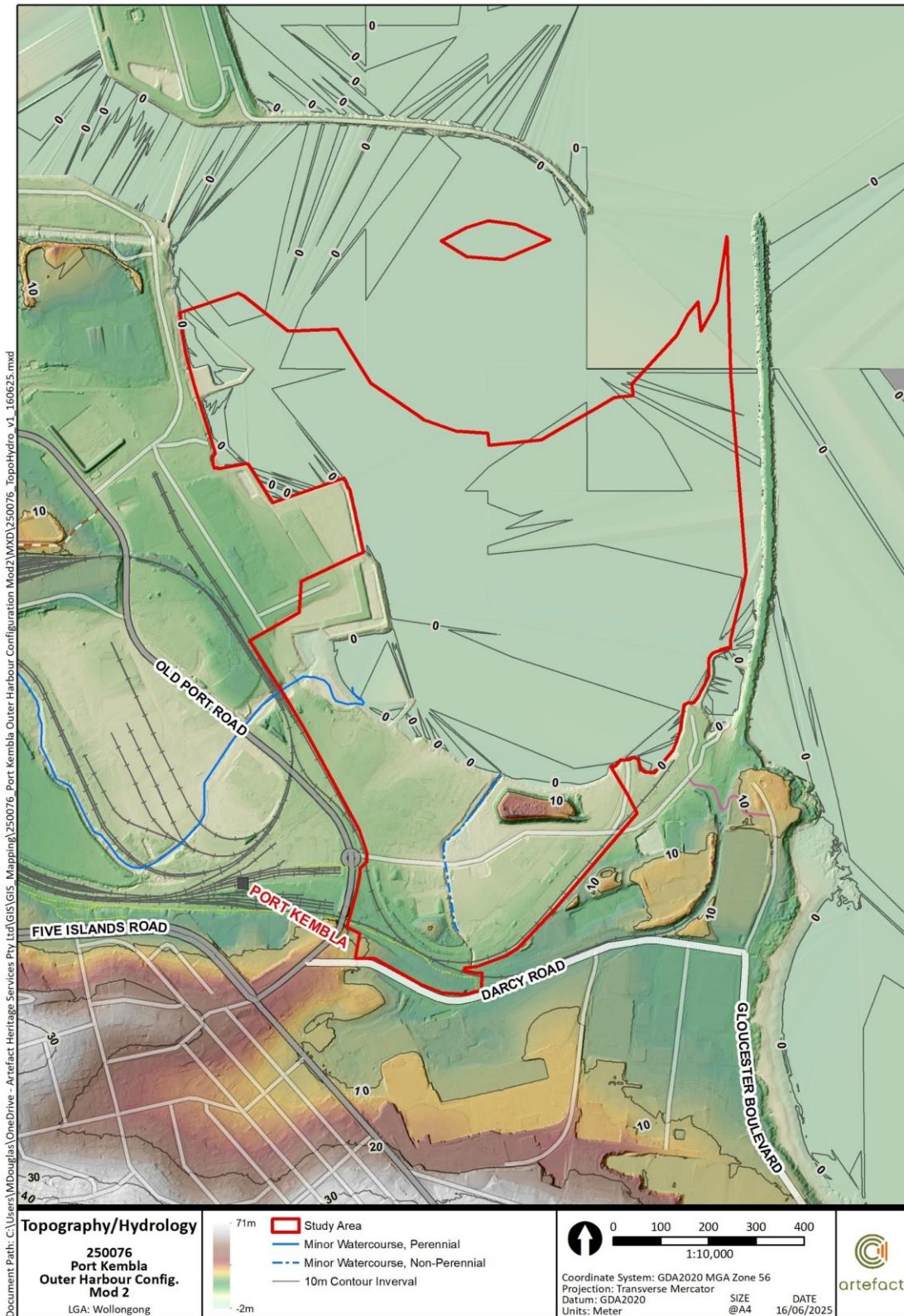


Figure 6: Topography and hydrology of the study area



4.4 Historic land disturbance

The area of Port Kembla was included as part of originally part of 2,200 acres granted to David Allan in 1817 which he named Illawarra farm and used to graze cattle. The battery was 'bounded on east by ocean, north by Tom Thumb Lagoon, Allan's creek, a line southerly to Illawara Lake at Griffin' Bay, then easterly to 'Red Point' (Dowd 1960). Allan's farm was sold in 1827 to Richard Jones and subsequently sold again to William Charles Wentworth where the farm was renamed to 'Five Islands estate' (Wollongong City Libraries).

The Outer Harbour of Port Kembla was first developed in the late 1800's. Mount Kembla Coal and Oil Co, built a private jetty at Port Kembla with a rail link to the Company's mine at Mount Kembla. Because of its association with the jetty servicing the Mount Kembla mine, the area became known as Port Kembla, rather than Red Point as it was previously known (Port Kembla Public School Heritage Assessment, 2002).

As the Coal Company extended during the 1880s, it constructed several buildings near the end of the railway line and jetty. These buildings were occupied by a number of company employees and their families. The Port Kembla Harbour Act was passed on 23 December 1898 at the request of local businesses and coal companies. The Act formally proclaimed the area as a port and set aside an initial £200,000 for breakwater construction. The eastern breakwater was commenced in 1901 but was not completed until 1930. Work on the northern breakwater commenced in 1912 and was completed in 1925 (McDonald McPhee 1991: 50).

In 1900, the Public Works Department resumed nearly 500 acres for harbour works. Stone from local quarries was used, with work commencing in 1900. All of the breakwaters were completed and functioning by 1937.

In 1908 a low-level jetty was built by the newly established Electrolytic Refining and Smelting Co. (ER & S) and was known as No. 4 jetty (now known as Berth 206). It was to be used for general cargo loading and unloading (Catterall, 1994; Port Kembla Public School Heritage Assessment, 2002). It originally measured 500 feet long and 51 feet wide, but in 1929 it was extended another 300 feet into deeper water to allow handling of larger vessels (Hoogendoorn 1999: 39-40).

No. 3 Jetty was built in 1940 when the old No. 3 (Port Kembla) Jetty was replaced by the current structure. The new jetty was 750 feet in length and was constructed to service general cargo handling. On completion of the new jetty, the old No. 3 Jetty was demolished (AECOM 2010 p.5).

The No. 6 Jetty, now known as the Gateway Jetty, was completed in 1958 with an overall length of 298 metres (977 feet). By that time there were five large jetties servicing the Outer Harbour (shown in Figure 10).

4.4.1 Development of the Port Kembla Inner Harbour

The port experienced extensive shipping traffic during the 1940s to 1960 which necessitated a secondary harbour to overcome increasing demand and a need for additional loading space. The State Government agreed to proceed with the construction and dredging of the Inner harbour which commenced in the 1950s. The Inner Harbour opened on 28 November 1960 (Catterall 1994).

The ensuing port evolved into two distinct areas – the Inner Harbour, where most development since 1960 has been concentrated, and the Outer Harbour (where the study area is located), which by comparison was at its peak of activity in 1960. By 1960 six jetties had been constructed in the Outer Harbour to service local coal mining, steel works and other industry. Visible in the historical aerials

between 1951 and 1961 there was extensive development of additional warehousing and other structures on the southern shoreline of the outer harbour.

It is visible in the historic aerials that the Outer Harbour was characterised by minimal development from the 1960's onwards along the southern shore buildings of the harbour up until the 2000's where drastic change, including land reclamation works, has occurred along the harbour.

Port Kembla was reliant on the harbour facilities to undertake its function as a port, particularly on its jetties. Today there are only two jetties in the Outer Harbour that remain operational, Jetty 4 (Berth 206) and Jetty 6 (Gateway Jetty).

These jetties were constructed between 1908 and 1958, numerous adjustments have been made to the harbour jetties from the 1960s to present day as detailed below:

- Jetty 1 was in use until 1963 and the remnants of Remnant of Jetty 1 and Jetty 2 demolished between 1990 and 1994 (Figure 11) (SMC Marine 2014)
- No. 3 Jetty was strengthened and modified in 2000 to allow its continued use as a tug berth against which all tugs in the port berth. Jetty 3 was demolished between 2013 and 2014 (AECOM 2010 p.5)
- No.4 Jetty (Berth 206) underwent major modifications in 1999 to make it suitable for the import and export of non-flammable bulk liquids.
- No. 6 Jetty (Port Kembla Gateway) is under a long-term lease to Port Kembla Gateway and the wharf structure has undergone major strengthening works over the past 15 years. The berth is currently used for import and export of dry bulk and other cargoes.

In addition to the extensive industrial and commercial development that occurred across the port area, a significant amount of land was reclaimed to facilitate the growth of the port. The process of land reclamation within the study area is illustrated between Figure 11 and Figure 12. The Outer Harbour has historically facilitated a range of heavy industries such as cokeworks, steel production steel coating, scrap metal storage and a power station. Industrial operations such as Brick and Block, Morgan Cement and BlueScope Steel and BHP Billiton are still active in the area.

In the 1990's PKPC established a dredge spoil emplacement area in the Outer Harbour which involved placing material originating from various Inner Harbour development dredging projects along and out from the southwestern foreshore area (AECOM 2010 p.8).

In addition to the extensive industrial and commercial development that occurred across the port area, a significant amount of land was reclaimed to facilitate the growth of the port. The process of land reclamation within the study area is illustrated in Figure 7-Figure 12.

Figure 7: 1897 Parish map

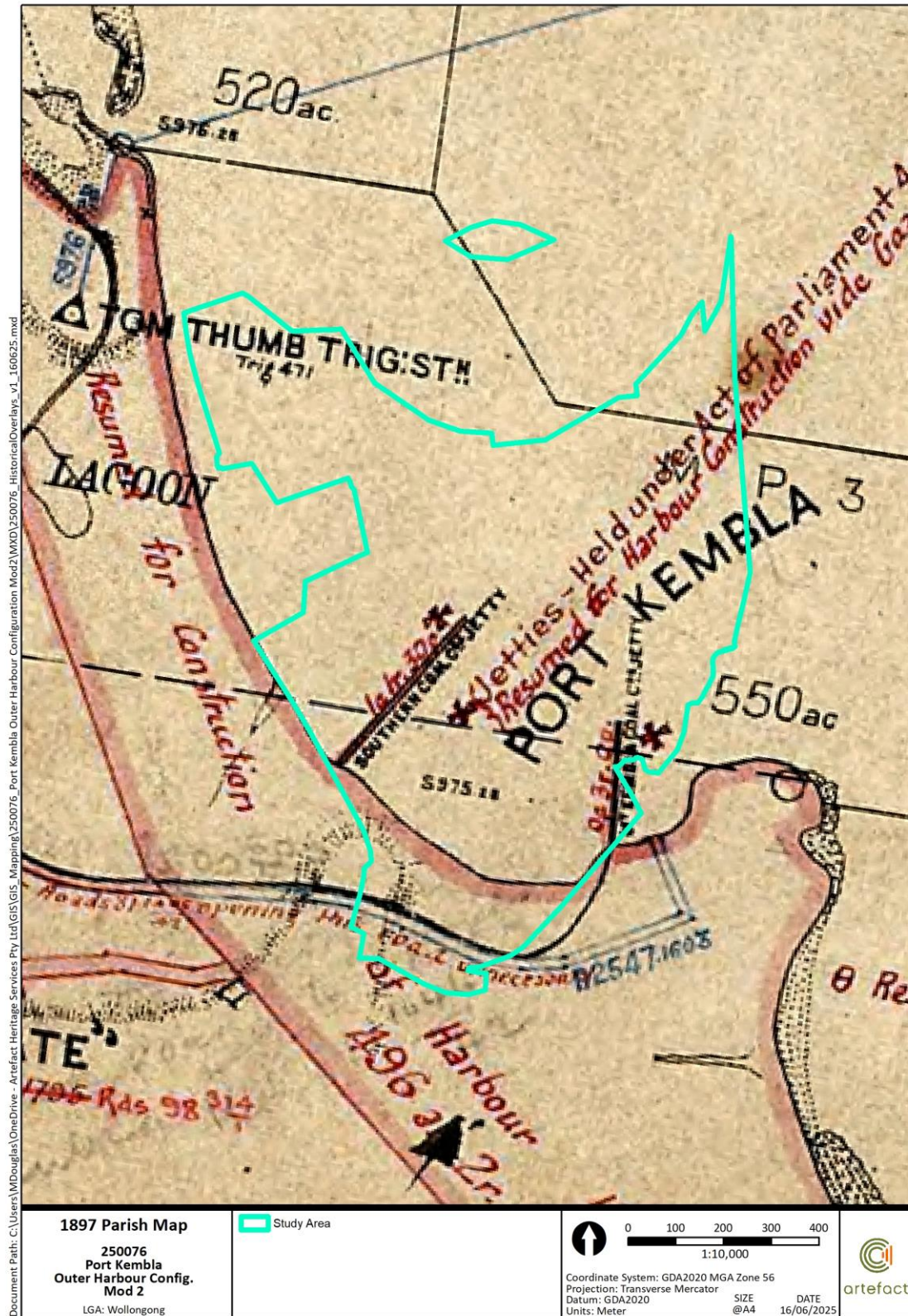


Figure 8: 1915 Wollongong Parish map

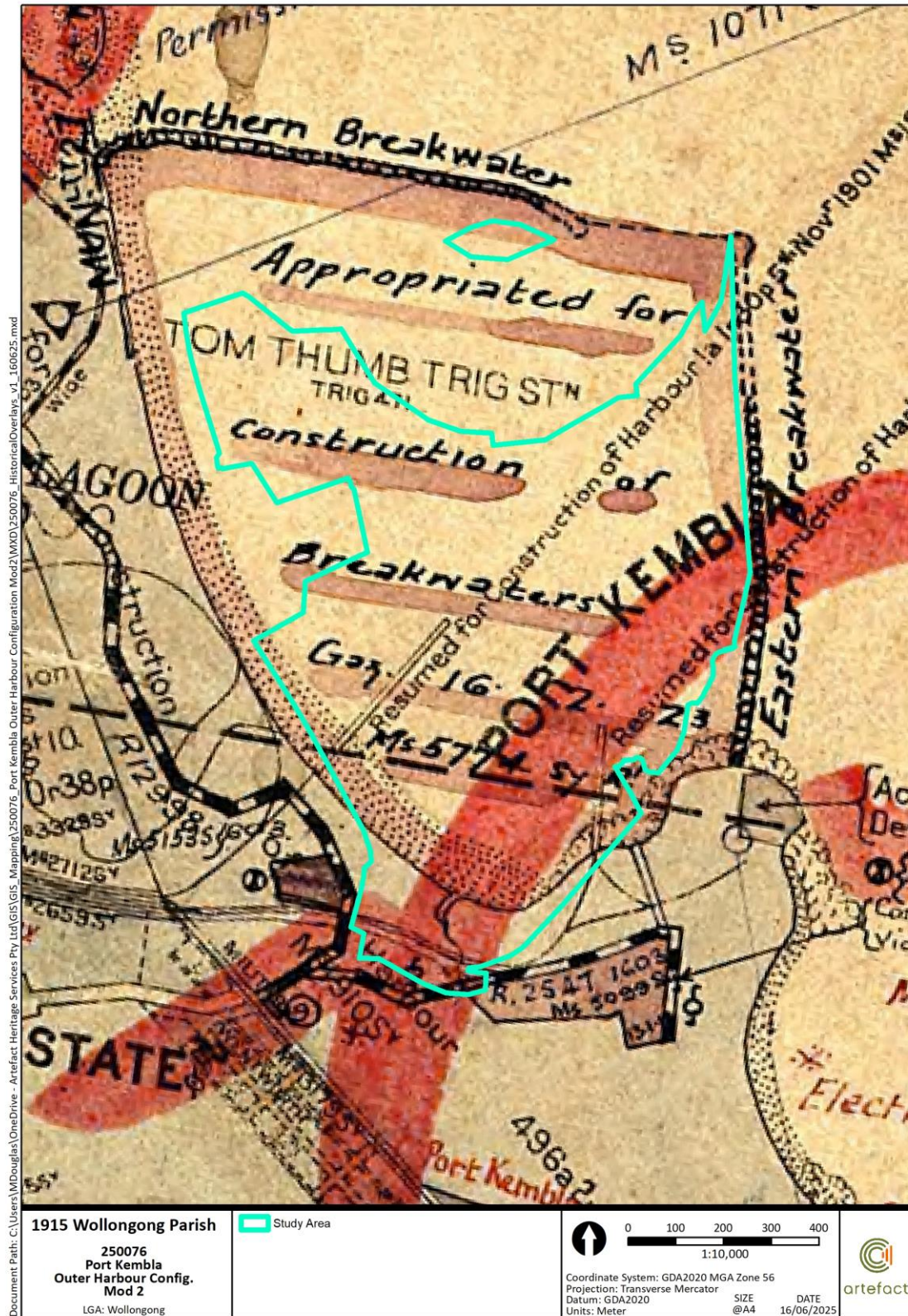


Figure 9: 1951 aerial photograph



Figure 10: 1975 aerial photograph



Figure 11: 1994 aerial photograph

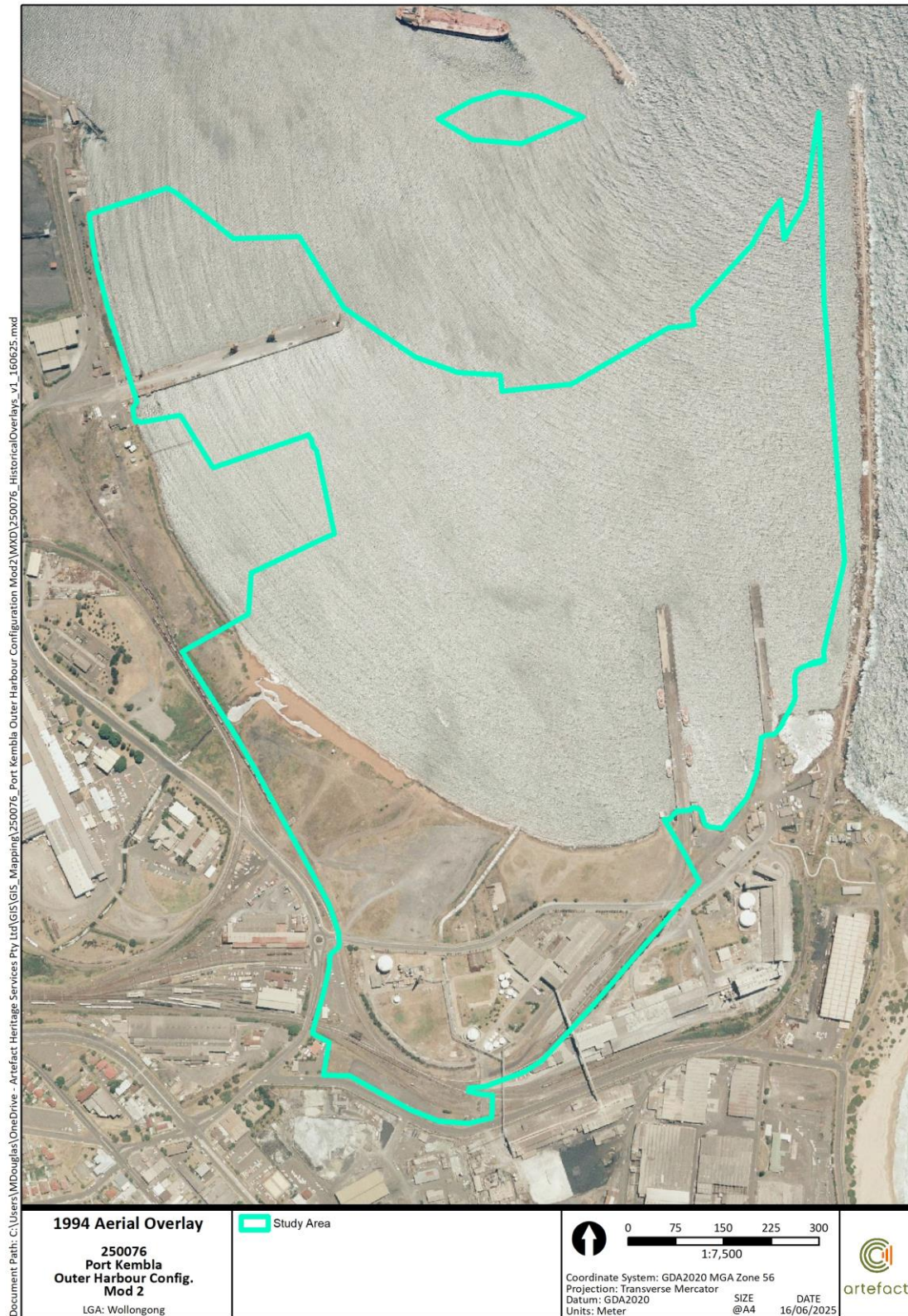
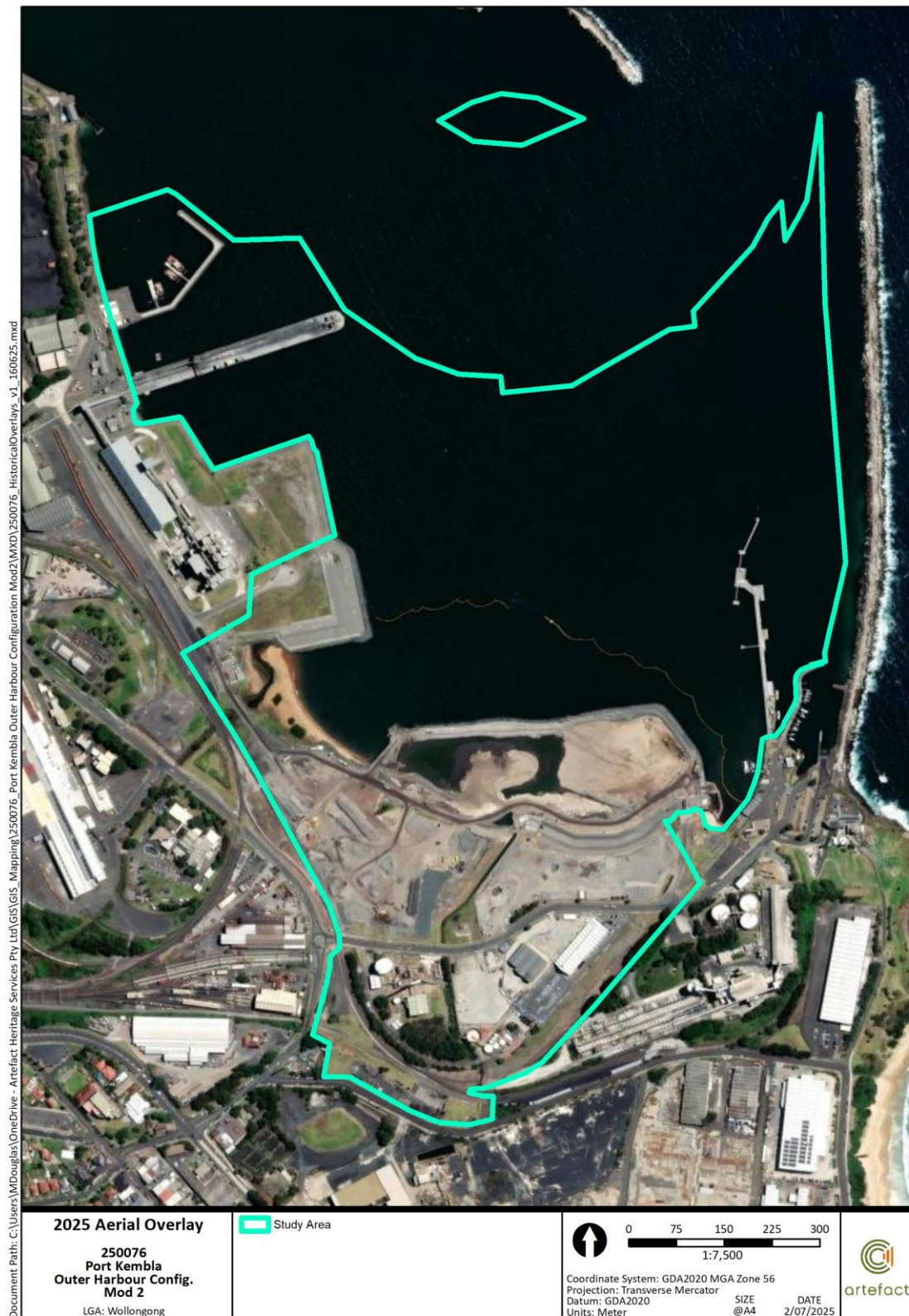


Figure 12: 2025 aerial photograph



5.0 SUMMARY AND PREDICTIONS

5.1 Regional and local archaeological character

The Illawarra region has been extensively occupied and utilised by Aboriginal groups. Some archaeological evidence places the arrival of the Aboriginal people within this region at approximately 20,000 years before European colonisation (Organ and Speechley 1997), and the results of previous archaeological investigations across the region as well as the AHIMS data discussed as part of this assessment demonstrate a widespread and longstanding connection between Aboriginal people and this region.

This is readily apparent when considering the ample archaeological evidence from around the broader Port Kembla region. Southwest of the study area is the Hill 60/Ilwora Battery heritage item, which is noted for its Aboriginal archaeological and historical significance (Heritage NSW 2002) and many of the AHIMS sites identified in the extensive search conducted for this assessment are located within the curtilage of this item. The Hill 60/Ilwora Battery item is noted for the quality and diversity of Aboriginal archaeological materials that have been identified in this location, which include extensive, stratified middens that remain *in situ*, artefact deposits and burial sites (Dallas 2000). Such archaeological resources affirm that the Port Kembla region was an area of diverse and long-standing use by local Aboriginal groups.

However, the survival of Aboriginal archaeological resources within this region has been significantly influenced by the development of Port Kembla, and in particular its intense industrialisation and commercialisation. Previous archaeological investigations of the study area and its immediate surrounds have noted that these factors have directly impacted the survivability of archaeological material in this locale, with much of the archaeological evidence identified within the Port Kembla region having been identified in undisturbed or less-impacted locations (AECOM 2010; GHD 2018). As such, while most of the Port Kembla area was likely utilised by Aboriginal groups in the pre-European era, much of this archaeological material has potentially been destroyed by the historical development of the area, including the extensive land reclamation actions which cover the majority of the study area. This suggests that archaeological material within the Port Kembla area is more likely to be identified in locations that have not been disturbed by historical development, or that have been subjected to minimal levels of disturbance.

5.2 Predictive model

The predictive model comprises a series of statements regarding the nature and distribution of evidence of Aboriginal land use that is expected in the study area. Based on desktop research, landscape context, geographic locations of the study area and nearby recorded sites, the following predictive statements are made:

- Due to the extensive development of the port area and widespread modifications to the landscape within the study area, it is unlikely that *in situ* Aboriginal objects or areas of archaeological potential will be identified.
- Any Aboriginal objects that are identified within the study area are likely to have been transported to the site as part of fill used in the development of the port.
- Aboriginal objects that are located within the study area are most likely to consist of stone artefacts or shell material, reflecting the broader archaeological context of this region, its coastal setting, and the durability of lithic materials in the archaeological record.

6.0 METHODOLOGY

6.1 Aims

The aims of archaeological survey are to:

- test the predictive model by ground truthing the findings of the desktop assessment
- identify and record all Aboriginal objects visible within the study area
- identify and define areas of PAD (as defined by the predictive model)
- gather enough information to assess scientific values of identified Aboriginal objects.

6.2 Constraints and limitations

The survey was confined to only areas of land within the study area. Additionally, portions of the study area for which access was not granted were not surveyed for Aboriginal artefacts or areas of archaeological potential.

6.3 Survey personnel

The survey was conducted on 19 June 2025 by Sammut Sammut (Senior Heritage Consultant, Artefact Heritage and Environment).

6.4 Sample strategy and procedure

A pedestrian archaeological survey of the land portions of the study area was conducted in accordance with the Code of Practice (Department of Environment, Climate Change & Water 2010). Photographic recording was undertaken of landscape features and any areas of archaeological potential or disturbance. The study area was examined as a single survey unit due to its consistent landform and levels of disturbance.

Archaeological survey was completed in accordance with the Code of Practice (Department of Environment, Climate Change & Water 2010). Ground exposures were inspected for Aboriginal objects. handheld Global Positioning System was used to tracks the path of the survey teams and record coordinates of any identified Aboriginal sites or areas of interest. The coordinates system projection used for all recording was GDA 2020 MGA 56. A photographic record was kept during the survey; photo scales were used for photographs where appropriate. The land surface, soil exposures, vegetation condition were observed and photographed with a scale where appropriate.

7.0 RESULTS

Due to the consistent landform and historically documented levels of disturbance, the study area was surveyed as one survey unit. The entire study area had been subject to modification to facilitate its industrial and commercial usage across the nineteenth and twentieth centuries. Evidence observed during the site survey demonstrated that this modification included extensive filling activities (particularly in areas that had previously been located over water), and some cutting and terracing in certain portions of the study area (Figure 13-Figure 17).

Much of the study area featured extant industrial and commercial structures, structures associated with the function of the Outer Harbour, and roadways, and only a relatively small portion of the site was vegetated (Figure 18). In these vegetated areas fill materials were ubiquitous, and it was apparent that the observed grass and plant cover were present as a function of intentional landscaping, or the growth of vegetation on soils that had accumulated on top of fill materials over time (Figure 19). In a handful of locations, bare soils were observed as a result of erosion or a lack of vegetation (Figure 20); however, these soils were not natural and no Aboriginal objects were identified or demonstrated potential to be present in those areas.

A beach and small associated dune system were present in one portion of the study area. Historic aerials and mapping demonstrated that a beach was present within this location prior to the development of the port. However, during the survey it became apparent that the beach and dune area had undergone modification associated with the usage and development of the port (Figure 21 and Figure 22). Portions of the beach had been destroyed or covered over by land reclamation or the introduction of boulders as part of seawalls. The survey demonstrated that additional modification to this beach and dune area had occurred through the creation of an outlet for a water canal, and potential terracing of the land within this area. Ground surfaces along the beach area contained orange-red sands that strongly contrasted to the white-yellow sands of nearby natural beaches (e.g. North Beach and MM Beach). The beach and dune area contained the highest level of ground surface visibility within the study area (approximately 50%). Shell material and assorted stone was identified across the beach and dune area (Figure 24), although no lithic artefacts or archaeological material was identified. The presence of these materials along the beach is not interpreted to indicate archaeological potential but rather reflected the coastal context of the study area (Figure 25).

The archaeological survey demonstrated that the study area has been predominantly disturbed through the creation and development of the port.

Figure 13: Railway siding in southeastern portion of the study area



Figure 14: Evidence of disturbance, fill and cutting activities near boundary with Darcy Road



Figure 15: Reclaimed land near Port Kembla Gateway



Figure 16: Reclaimed land parallel to Foreshore Road



Figure 17: Representative example of artificial terracing within study area



Figure 18: One of the few vegetated areas within study area



Figure 19: Grasses growing over imported fill area



Figure 20: Visible ground surface within the study area located near Darcy Road



Figure 21: View towards beach and dune area from reclaimed land



Figure 22: Modifications to beach area through development of Outer Harbour



Figure 23: Small dune present behind the beach which may be relatively intact



Figure 24: Ground surface within beach area with assorted stone and shell material



Figure 25: Overview of beach with evidence of tidal range apparent



7.1 Analysis of survey coverage and effectiveness

The Code of Practice (Department of Environment, Climate Change & Water 2010) specifies that survey coverage should be assessed to the nearest 10%, and provides the following definitions:

Visibility:

is the amount of bare ground (or visibility) on the exposures which might reveal artefacts or other archaeological materials. It is important to note that visibility, on its own, is not a reliable indicator of the detectability of buried archaeological material. Things like vegetation, plant or leaf litter, loose sand, stony ground or introduced materials will affect the visibility. Put another way, visibility refers to 'what conceals'.

Exposure:

is different to visibility because it estimates the area with a likelihood of revealing buried artefacts or deposits rather than just being an observation of the amount of bare ground. It is the percentage of land for which erosion and exposure was sufficient to reveal archaeological evidence on the surface of the ground. Put another way, exposure refers to 'what reveals'.

Overall, visibility was low to completely absent across most of the study area with the exception of small localised areas of bare earth and the small beach area, and visibility was estimated at approximately 5% for the entire land portion of the study area. Exposure was also low to absent across the study area (2%). In line with the Code of Practice, the ground visibility and exposure were recorded as 10% and 0% respectively. Effective survey coverage is outlined in Table 3, and landform survey coverage is outlined in Table 4.

Table 3: Effective survey coverage

Survey Unit	Landform	Survey unit area (m ²)	Visibility (%)	Exposure (%)	Effective Survey Coverage (m ²)	Effective Coverage (%)
1	Disturbed terrain	301,949	10	0	0	0

Table 4: Landform survey coverage

Landform	Landform area (m ²)	Area effectively surveyed (m ²)	% of landform effectively surveyed	Number of sites
Disturbed terrain	301,949	0	0	0

7.2 Aboriginal objects

No Aboriginal objects were identified within the study area, nor was it considered likely that any had the potential to be present.

8.0 DISCUSSION AND ANALYSIS

There is ample archaeological evidence to demonstrate that the Illawarra region was extensively occupied and utilised by Aboriginal groups, with some evidence proposing an initial settlement date of approximately 20,000 years before European colonisation (Organ and Speechley 1997). This land use continued well into the post-colonisation era, with the Wodi Wodi maintaining cultural practices within the Port Kembla area until the mid-twentieth century (Heritage NSW 2002).

While the usage of this landscape by Aboriginal groups for thousands of years is indisputable, the survivability of archaeological material reflecting this land use has been impacted by the industrial and commercial development of Port Kembla. Historical records have demonstrated that the Port Kembla area has undergone significant historical disturbance associated with the creation and development of the port. This level of disturbance was apparent during the archaeological survey, with widespread introduction of fills, the installation of subsurface services, and the general development of the site. These findings mirror previous relevant archaeological investigations, which have noted the impact of this historical development on the presence of Aboriginal objects in this region (AECOM 2010; GHD 2018).

The predictive model established for this assessment highlighted that the presence of Aboriginal objects within the study area was unlikely due to the extensive levels of disturbance that have occurred throughout the Outer Harbour area. The findings of the archaeological survey support this model, with the highly disturbed nature of the study area overall indicating that Aboriginal objects are unlikely to be present, and no areas of archaeological potential were identified. As such, the predictive model remains valid, and supports the archaeological character of the Port Kembla region that have been discussed in other relevant archaeological investigations.

9.0 SIGNIFICANCE ASSESSMENT

9.1 Significance assessment criteria

In accordance with the Code of Practice, an assessment of the scientific value of an Aboriginal object is required in order to form the basis of its management. The Guide provides the following criteria for the assessment of scientific value:

- Research potential - does the evidence suggest any potential to contribute to an understanding of the area and/or region and/or state's natural and cultural history?
- Representativeness - how much variability (outside and/or inside the subject area) exists, what is already conserved, how much connectivity is there?
- Rarity - is the subject area important in demonstrating a distinctive way of life, custom, process, land-use, function or design no longer practised? Is it in danger of being lost or of exceptional interest?
- Education potential - does the subject area contain teaching sites or sites that might have teaching potential?

It is important to note that heritage significance is a dynamic value.

9.2 Statement of scientific value

No Aboriginal objects were identified within the study area, nor has it been assessed that it contains any Aboriginal archaeological potential; therefore, the study area possesses no scientific value.

10.0 IMPACT ASSESSMENT

10.1 Description of likely impacts

NSW Ports holds existing approval to reconfigure Port Kembla's Outer Harbour for future expansion. A first modification has been approved, and a second (MOD 5) is now proposed to further adapt the concept design, enabling larger vessels, responding to evolving port needs, and supporting emerging opportunities such as offshore wind development in the Illawarra and Hunter regions.

The Port Kembla Outer Harbour Development is comprised of three key stages as follows:

- Stage 1:
 - Demolition of No.3, No.4 Jetties (including Berth 206) and Jetty No.6
 - Reconfigure the layout of the port facility to permit greater flexibility with the respect to the types of port uses that the development can accommodate. This reconfiguration aligns with the approved total reclamation area of 42 hectares. Reclamation works would now occur entirely within Stage 1
 - Slight adjustment of dredging footprint
 - Construction of berths
 - Extension of Salty Creek and Darcy Road drain, through the reclamation area, the the Outer Harbour
 - Construction of a new road link from Christy Drive
 - Execution of civil works including services
 - Construction of new navigation lead towers.
- Concept:
 - Stage 2:
 - Development and operation of a multi-use berth and terminal (including but not limited to an offshore wind and cargo terminal uses).
 - Stage 3:
 - Development and operation of container terminal
 - Construction of a rail link and siding to the container terminal.

The footprint of the proposed modification is shown in Figure 26.

Figure 26: Proposed modification footprint



10.2 Potential impacts to Aboriginal heritage

This assessment has determined that there are no Aboriginal objects within the study area, nor are there likely to be. Therefore, it has been determined that the proposed works would have no impact on Aboriginal cultural heritage.

11.0 MANAGEMENT AND MITIGATION MEASURES

11.1 Guiding principles

The overall guiding principle for cultural heritage management is that where possible Aboriginal sites should be conserved.

Where unavoidable impacts occur then measures to mitigate and manage impacts are proposed. Mitigation measures primarily concern preserving the heritage values of sites beyond the physical existence of the site. The most common methods involve detailed recording of Aboriginal objects, archaeological test and salvage excavations, artefact analysis and, where appropriate, reburial of Aboriginal objects in a location determined by the RAPs.

Mitigation measures vary depending on the assessment of archaeological significance of a particular Aboriginal site and are based on its research potential, rarity, representatives and educational value. In general, the significance of a site would influence the choice of preferred conservation outcomes and appropriate mitigation measures, usually on the following basis:

- Low archaeological significance – conservation where possible. SSI Conditions of Approval would be required to impact the site before work can commence.
- Moderate archaeological significance – conservation where possible. If conservation was not practicable, further archaeological investigation and mitigation may be required such as salvage excavations or surface collection in accordance with the SSI Conditions of Approval.
- High archaeological significance – conservation as a priority. Where all other practical alternatives have been discounted mitigation measures such as comprehensive salvage excavations in accordance with the SSI Conditions of Approval may be required.

No Aboriginal objects were identified within the study area, nor were any areas of Aboriginal archaeological potential; therefore, the proposed modification is unlikely to result in any impacts to Aboriginal heritage. Consequently, no mitigation measures are recommended, and an ACHAR is also not required. Rather, it is recommended that the works proceed under an unexpected finds procedure.

11.2 ACHAR

While the SEARs for this project have specified that an ACHAR should be prepared ahead of the proposed modifications, no cultural heritage assessment is recommended. As no Aboriginal objects or potential for Aboriginal objects have been identified by this ATR, it has also been assessed that there are unlikely to be any impacts to Aboriginal cultural heritage from the proposed modification. Therefore, it has been determined that an ACHAR is unnecessary as the present ATR has sufficiently assessed the impacts of the proposed modification on Aboriginal heritage, which is to say, that there are unlikely to be any.

11.3 Unexpected Finds Procedure

While no Aboriginal objects have been identified within the study area, nor has this assessment identified that there is potential for Aboriginal objects to be present, an unexpected finds procedure must be prepared ahead of the proposed works. This procedure should outline the necessary steps to

be taken in the event that unexpected Aboriginal objects are encountered during the works, including the specific parties that must be notified.

11.4 Changes to the project area

Advice provided within this report is based upon the most recent information provided by the proponent at the time of writing. Any changes made to the project should be assessed by an archaeologist in consultation with the RAPs. Any changes that may impact on Aboriginal objects not assessed as part of the project may warrant further investigation and result in changes to the recommended management and mitigation measures.

12.0 CONCLUSION

12.1 Summary of findings

This report has identified the following:

- No AHIMS sites have been identified within the study area
- Previous archaeological assessments of the study area and its surrounds have noted that the port of Port Kembla has been subject to significant disturbance which has removed Aboriginal archaeological potential
- No Aboriginal objects or areas of archaeological potential were identified during the archaeological survey conducted for this assessment.

12.2 Recommendations

Based on these findings the following recommendations are made:

- No additional Aboriginal archaeological assessment is required as no Aboriginal objects have been identified in the study area, nor are any likely to be present
- While SEARs for the proposed modification specify that an ACHAR should be prepared, the present ATR has assessed that the impacts of the proposed modification would have no impact on Aboriginal objects. Therefore, an ACHAR should not be required
- An unexpected finds procedure is recommended to protect against the unlikely event that unexpected Aboriginal objects are encountered during the works
- Where there are changes to the project area, additional archaeological assessment may be required.

13.0 REFERENCES

- AECOM. 2010. 'Port Kembla Outer Harbour Development: Environmental Assessment'. Report prepared for Port Kembla Corporation.
- Attenbrow, Val. 2010. *Sydney's Aboriginal Past: Investigating the Archaeological and Historical Records*. Sydney: UNSW Press.
- Brooks, G and Associates 2002, Port Kembla Public School: Heritage Assessment for Port Kembla Copper Pty Ltd
- Bursil, L., M. Donaldson, and M. Jacobs. 2015. *A History of Aboriginal Illawarra Volume 1: Before Colonisation*. Yowie Bay: Dharawal Publications.
- Catterall, K. 1994 A living history of Port Kembla. Living History Team.
- Dallas, M. 2000. 'Hill 60, Port Kembla: Conservation Management Plan'. Report prepared for Wollongong City Council & Department of Land & Water Conservation
- DECCW, Australasian Underwater Cultural Heritage Database
- Department of Environment and Conservation. 2005. A History of Aboriginal People in the Illawarra 1770 to 1970. Sydney: Department of Environment and Conservation.
- Department of Environment, Climate Change & Water. 2010. 'Code of Practice for Archaeological Investigations of Aboriginal Objects in New South Wales'.
- Dowd, B.T. The first five land grantees and their grants in the Illawarra. Illawarra Historical Society, 1960
- eSpade. 2015. <https://www.environment.nsw.gov.au/eSpade2Webapp/#>.
- GHD. 2018. 'Port Kembla Gas Terminal: Aboriginal Heritage Due Diligence Assessment'. Report prepared for Australian Industrial Energy.
- Heritage NSW. 2002. 'Hill 60/Illohra Battery'. State Heritage Inventory (blog). 2002. <https://www.hms.heritage.nsw.gov.au/App/Item/ViewItem?itemId=5052361>.
- McDonald and McPhee Pty Ltd., 1991, City of Wollongong Heritage Study, Volumes 1-5. Report for Wollongong City Council.
- Organ, M. 1990. Illawarra and South Coast Aboriginies 1770-1850, Volume 1. Wollongong: Aboriginal Education Unit, University of Wollongong.
- Organ, M., and C. Speechley. 1997. 'Illawarra Aboriginies - An Introductory History'. In A History of Wollongong, edited by J. S. Hagan and A. Wells, 7-22. Wollongong: University of Wollongong Press.
- Stewart, A. 1894. 'Reminiscences of Illawarra'. *Illawarra Mercury*, 1894.
- Tindale, N. 1974. *Aboriginal Tribes of Australia: Their Terrain, Environmental Controls, Distribution, Limits and Proper Names*. Canberra: ANU Press.
- Wesson, S. 2005. *Murni Dhungang Jirrar: Living in the Illawarra*. Hurstville: National Parks and Wildlife Service, Department of Environment and Conservation.
- Wollongong City Council, and McDonald McPhee Pty Ltd. 1991. *City of Wollongong Heritage Study*. Wollongong: Wollongong City Council.

APPENDIX A – AHIMS RECORDS

Redacted for public display

APPENDIX B – CORRESPONDENCE WITH HERITAGE NSW

Redacted for public display



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