

Kurnell Terminal SSD- 5544 MOD-7

Appendix J - Aboriginal Cultural Heritage Assessment Report

12 May 2025

Aboriginal and Torres Strait Islander peoples are advised that this report contains references to people who have passed away

Kurnell Terminal SSD-5544 MOD-7

Appendix J - Technical Report - Aboriginal Cultural Heritage Assessment Report

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Executive summary

The Kurnell Terminal ('the Site') is located on the southern side of Botany Bay, at 2 Solander Street Kurnell, New South Wales (NSW). The Site is located within the Sutherland Shire Local Government Area (LGA). In 2012, Ampol Refineries (NSW) Pty Ltd (Ampol) announced that the oil refinery and fuel terminal would be converted to a finished product terminal (the 'approved project'), ceasing refinery operations in 2014.

Development consent was received to complete the approved project under State Significant Development (SSD) application reference 5544 (SSD-5544). Ampol has modified SSD-5544 six times to complete the conversion and demolition works.

Ampol intends to consolidate operational infrastructure, remove redundant assets, and undertake remediation and grading. Completion of these works (the 'proposed modification', MOD-7) would continue the safe, viable, and reliable operation of the Kurnell Terminal, whilst preparing the land for future uses. The location within the Site that these works would occur is referred to as the 'Project Area.'

AECOM Australia Pty Ltd (AECOM) was commissioned by Ampol to complete an Aboriginal Cultural Heritage Assessment Report (ACHAR) for a modification to SSD-5544. This ACHAR documents the results of AECOM's assessment and has been compiled with reference to Heritage NSW's *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (DECCW 2010a), *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW 2010b) and *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH 2011).

Information regarding the Aboriginal heritage values of the Project Area was obtained by a combination of background research, archaeological survey, and Aboriginal community consultation. A total of 14 Registered Aboriginal Parties (RAPs) were consulted for the assessment, with key consultation activities including:

- RAP review of AECOM's draft assessment methodology
- RAP participation in the Site inspection
- RAP review of a draft of this ACHAR.

A search of the AHIMS database was undertaken on 10 November 2023 for a 4 x 4 km area centred on the Project Area. A total of 70 Aboriginal archaeological sites were identified within the search area comprising 42 middens, 20 open artefact sites (i.e., artefact scatters and isolated artefacts), four areas of Potential Archaeological Deposit (PAD), three burials, and one rock engraving. Consideration of the locations of previously recorded sites indicates that none are located within the Project Area, with the closest being a PAD – "Captain Cook Drive PAD 1" (AHIMS ID#52-3-2061) – located 80 m to the west of the Project Area.

Visual inspections of the Project Area were conducted on 6 June 2024 and 5 December 2024 by AECOM Principal Heritage Specialists Dr. Darran Jordan and Dr. Andrew McLaren, along with Steven Ella, a site officer from the La Perouse Local Aboriginal Land Council (LALC). No Aboriginal objects or sites were identified during the inspections, nor were any specific cultural values communicated to AECOM during the process. However, Steven Ella suggested the possibility of sites located beneath the disturbed soil layers.

AECOM's review of the environmental context of the Project Area indicates that land within the Site formerly comprised part of a broader aeolian landscape characterised by gently undulating to rolling plains, dunes, and swales, as well as lagoons and swamps. Historical land use activities within the Project Area are expected to have disturbed the upper portions of these original landforms, as well as any associated Aboriginal archaeological deposits that may have been present before the development of the refinery. Nonetheless, the majority of the land within the Project Area is assessed as retaining moderate potential for the preservation of subsurface Aboriginal archaeological deposits below fill layers, which may be associated with buried sand profiles. If present, such deposits may include midden material, stone artefacts, and hearths, with some, albeit limited, potential for Aboriginal burials to be present on-site.

A management strategy to address the impacts of the Project on the potential Aboriginal archaeological resource of the Project Area is provided in Section 12.0. It is recommended that this strategy be detailed in an Aboriginal Cultural Heritage Management Plan (ACHMP) for the proposed modification, prepared in consultation with RAPs, and to the satisfaction of the Heritage NSW and the Department of Planning, Housing and Infrastructure. Key components of the ACHMP include the following.

- RAP monitoring of works (where required)
- An unanticipated finds protocol for Aboriginal objects
- An unanticipated finds protocol for human skeletal remains
- Details for an Aboriginal cultural awareness training package to form part of Site inductions
- Consultation protocols
- Reporting under the ACHMP
- ACHMP review requirements.

1.0 Introduction and background

1.1 Introduction

AECOM Australia Pty Ltd (AECOM) was commissioned by Ampol Refineries (NSW) Pty Ltd (Ampol) to complete an Aboriginal Cultural Heritage Assessment Report (ACHAR) for a modification to State Significant Development (SSD) application reference 5544 (SSD-5544).

This ACHAR documents the results of AECOM's assessment and has been compiled with reference to Heritage NSW's *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (DECCW 2010a), *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW 2010b) and *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH 2011).

1.2 Overview

The Kurnell Terminal ('the Site') is located on the southern side of Botany Bay, in Kurnell, New South Wales (NSW) (Figure 1-1). In 2012, Ampol announced that the oil refinery and fuel terminal would be converted to a finished product terminal (the 'approved project'), ceasing refinery operations in 2014.

Development consent was received to complete the approved project under State Significant Development (SSD) application reference 5544 (SSD-5544). Ampol has modified SSD-5544 six times to complete the conversion and demolition works.

Currently, the operational infrastructure is primarily located in the northern part of the Site (Zones 1 and 1A, as shown in Figure 1-1). Other parts of Ampol's landholdings at Kurnell include largely vacant areas of previously developed land (Zones 2 and 3) and areas of undeveloped land containing extensive native vegetation (Zones 4 and 5).

Ampol intends to consolidate operational infrastructure, remove redundant assets, and undertake remediation and grading. Completion of these works (the 'proposed modification', MOD-7) would continue the safe, viable, and reliable operation of the Kurnell Terminal, whilst preparing the land for future uses. The location within the Site that these works would occur is referred to as the 'Project Area.'

A Modification Report has been prepared to support a modification application to SSD-5544. This ACHAR is one of a number of technical documents that forms part of the Modification Report. In line with the requirements of Section 4.55 of the *Environmental Planning & Assessment Act 1979* (EP&A Act), the Modification Report provides the information required by Section 100 of the *Environmental Planning and Assessment Regulation 2021* (EP&A Regulation).

1.3 The proposed modification

1.3.1 Key elements of the proposed modification

To support the continued safe, viable, and reliable operation of the Site and to facilitate the future use of the Site, the proposed modification works involve:

- **Stage 1 – Preparation works:** Preparing the Project Area for proposed modification works.
- **Stage 2 – Removal, relocation and/or augmentation of infrastructure,** including:
 - Relocation and/ or augmentation of firewater systems (FWS) and oily water sewer (OWS) systems and construction of new operational facilities, including replacement warehouses
 - Decommissioning and removal of non-operational assets, redundant structures and electrical assets.
- **Stage 3 – Remediation:** Addressing legacy ground contamination, including asbestos-contaminated soil (ACS).
- **Stage 4 – Grading:** Landforming the Project Area following removal of infrastructure and ground remediation activities and preparing Zones 2 and 3 for future use.
- **Stage 5 – Demobilisation:** Demobilisation of construction and remediation equipment.

These stages may occur sequentially or concurrently, depending on site requirements.

A summary of project elements requiring modification and how they relate to the approved project is provided in Table 1-1. The proposed modification works would be undertaken within the Project Area shown on Figure 1-2. All activities would adhere to the Kurnell Terminal permit to work system to ensure compliance with environmental and safety protocols.

Table 1-1 Modified project summary table

Stage	Element	Approved project	Modified project
Stage 1	Project Area	Project Area delineation	<ul style="list-style-type: none"> • Prepare the Project Area for the proposed modification works required under Stages 2, 3 and 4 and exclude other parts of the Site from proposed modification works.
Stage 2	Oily water sewer (OWS)	Maintain location in Zones 2 and 3	<ul style="list-style-type: none"> • Divert surface water runoff from potentially contaminated areas in Zone 2 to Zone 1 via new OWS interception pits/ lines until Stage 3 remediation is complete. • Divert potential leachate from ACS containment cell in Zone 2 to Zone 1 OWS system. • Remove all redundant OWS infrastructure.
	Fire-water systems (FWS)	Maintain location in Zone 2 and 3	<ul style="list-style-type: none"> • Augment or remove FWS infrastructure from Zones 2 and 3. • If removed from Zone 2, augment existing FWS in Zone 1 with a new firewater tank and pipework to service the terminal infrastructure. • Locate the new firewater tank and pumphouse within the FWS Relocation Area (specific siting selected during detailed design).
	Electrical assets	Maintain location in Zone 2 and 3	<ul style="list-style-type: none"> • Remove redundant electrical assets in Zones 2 and 3, including five substations.

Stage	Element	Approved project	Modified project
	Structures	Maintain location in Zone 2 and 3	<ul style="list-style-type: none"> Demolish remaining structures in Zones 2 and 3. Construct new 'fit for purpose' warehouse and Oil Spill Equipment Storeroom within Zone 1. Construct new storage shed in Zone 1A.
Stage 3	Remediation	Removal of ACS from pipeways and either containment onsite or offsite disposal	<ul style="list-style-type: none"> Remediate land in Zones 2 and 3 as necessary. Remediate land in Zone 1 where infrastructure is relocated and/ or augmented as necessary. Conduct remediation to a commercial/ industrial land use under the ASC NEPM (2013).
Stage 4	OWS	Maintain location in Zones 2 and 3	<ul style="list-style-type: none"> Disconnect and remove remaining underground OWS lines from Zones 2 and 3, except for lines connecting to the ACS Containment Cell. Install a new pump adjacent to the ACS Containment Cell. Two site options have been identified (specific siting selected during detailed design).
Stage 4	Grading	Grading following demolition of structures and removal of infrastructure across the Site and relevant Project Areas	<ul style="list-style-type: none"> Construct new onsite detention (OSD) basins in Zone 3 to attenuate runoff and maintain pre-construction surface water flow rates. Grade Zone 2 following Stage 2 and Stage 3 activities to manage stormwater and prepare for future land uses. Grade Zones 1 and 3 as necessary.
Stage 5	Demobilisation	Demobilisation of construction equipment.	<ul style="list-style-type: none"> Demobilisation of construction equipment.

Once the modification works are complete, the Site would continue to operate as described in the approval documentation for the approved project and would be consistent with the development consent for SSD-5544.

In line with Figure 1-2, relocated equipment would operate in their new locations.

1.3.2 Construction timeline and equipment

Works are planned to commence in August 2025 and would continue for about 12 months for infrastructure removal scopes and up to four years for remediation works in accordance with the schedule in Table 1-2.

In line with Condition C18 of SSD-5544, construction works would comply with following hours:

- Monday to Sunday – 7am to 10pm.

High noise generating construction works, including works within the Eastern Right of Way (Zone 1A), would be confined to less sensitive times of the day and not undertaken on Sundays, public holidays, or outside of the hours 7am and 6pm Monday to Saturday (in line with Condition C19).

Construction works outside of the work hours identified above would only be undertaken in the following circumstances (in line with Condition C20):

- Works that are inaudible at nearest sensitive land receivers
- Works that are consistent with Ampol's existing maintenance procedures and are in accordance with EPL 837
- Works agreed to in writing by the Environment Protection Authority (EPA) or the Department of Planning, Housing, and Infrastructure (DPHI)
- For the delivery of materials required outside these hours by the NSW Police Force or other authorities for safety reasons
- Where it is required in an emergency to avoid the loss of lives, property and/ or to prevent environmental harm.

Plant and equipment that would be used to deliver the modification works is shown in Table 1-3.

Table 1-2 Proposed modification program

Stage	Timeframe
Stage 1 – Preparation works	August 2025
Stage 2 – Removal and/or relocation of infrastructure ¹	August 2025 – August 2026
Stage 3 – Remediation	August 2025 – July 2029
Stage 4 – Grading	Zone 2: August 2026 – December 2026 Zone 3: up to July 2029
Stage 5 – Demobilisation	September 2026 (for all works except remediation)
¹ Construction in Zone 1A expected to last 3 months.	

Table 1-3 Indicative plant and equipment

Plant/equipment	Maximum number required per day (all stages except Stage 3)	Maximum number required per day (Stage 3)
Front end loader	6	6
20 t excavator	6	6
Dump truck	6	6
Grader (up to 7 m blade)	-	4
Large crane (60 t)	4	-
Elevated work platform	6	-
Franna crane (30 t)	6	-
Cement truck	6	-
Bobcat	6	2
Water cart	6	6
Concrete crusher	2	-
Telehandler	6	-
Truck and dog (offsite disposal)	6	6
Truck and dog (imported fill)	-	12

Plant/equipment	Maximum number required per day (all stages except Stage 3)	Maximum number required per day (Stage 3)
Generator	2	2
Biopiling blower	-	8

1.4 Report structure

This report contains thirteen sections. This section, **Section 1.0**, has provided background information on the approved project, the proposed modification and assessment undertaken. The remainder of this ACHAR is structured as follows:

- **Section 2.0** outlines the statutory framework within which this assessment has been undertaken
- **Section 3.0** outlines the methodology adopted for this ACHAR
- **Section 4.0** details the Aboriginal community consultation program undertaken for this assessment
- **Section 5.0** describes the existing environment of the Project Area and its associated archaeological implications
- **Section 6.0** describes the archaeological context of the Project Area on a regional and local scale. Predictions regarding the nature of the Aboriginal archaeological record within the Project Area are also provided
- **Section 7.0** summarises relevant ethnohistoric information for the Project Area
- **Section 8.0** describes the visual inspection component of the assessment
- **Section 9.0** assess the Aboriginal heritage significance of land within the Project Area
- **Section 10.0** provides an assessment of the potential impacts of the proposed modification on identified Aboriginal heritage values
- **Section 11.0** provides details on strategies to avoid and minimise harm to Aboriginal heritage values
- **Section 12.0** details an appropriate management strategy for potential Aboriginal heritage values within the Project Area
- **Section 13.0** lists the references cited in-text.



Figure 1-1 Regional context

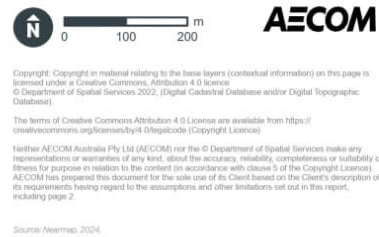
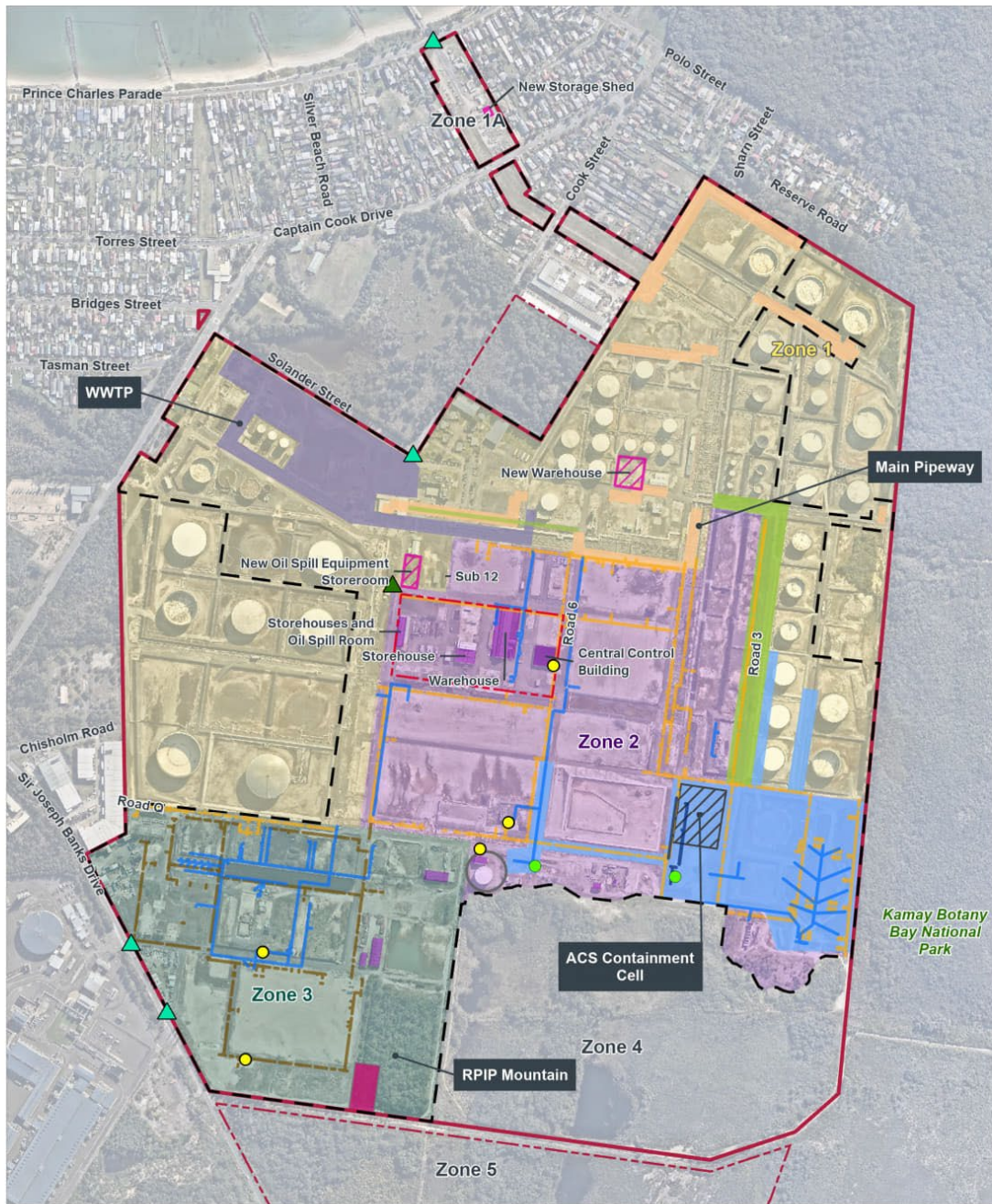


Figure 1-2 Proposed modification

2.0 Applicable policy and legislation

2.1 Commonwealth legislation

2.1.1 Aboriginal and Torres Strait Islander Protection Act 1984

The *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* (the ATSIHP Act) provides for the preservation and protection of places, areas, and objects of particular significance to Indigenous Australians. The stated purpose of the ATSIHP Act is the “*preservation and protection from injury or desecration of areas and objects in Australia and in Australian waters, being areas and objects that are of particular significance to Aboriginals in accordance with Aboriginal tradition*” (Part I, Section 4).

Under the Act, ‘Aboriginal tradition’ is defined as “*the body of traditions, observances, customs and beliefs of Aboriginals generally or of a particular community or group of Aboriginals, and includes any such traditions, observances, customs or beliefs relating to particular persons, areas, objects or relationships*” (Part I, Section 3). A ‘significant Aboriginal area’ is an area of land or water in Australia that is of “*particular significance to Aboriginals in accordance with Aboriginal tradition*” (Part I, Section 3). A ‘significant Aboriginal object’, meanwhile, refers to an object (including Aboriginal remains) of like significance.

For the purposes of the Act, an area or object is considered to have been injured or desecrated if:

- a. In the case of an area:
 - i. It is used or treated in a manner inconsistent with Aboriginal tradition;
 - ii. The use or significance of the area in accordance with Aboriginal tradition is adversely affected; and
 - iii. Passage through, or over, or entry upon, the area by any person occurs in a manner inconsistent with Aboriginal tradition
- b. In the case of an object:
 - i. It is used or treated in a manner inconsistent with Aboriginal tradition.

The ATSIHP Act can override state and territory laws in situations where a state or territory has approved an activity, but the Commonwealth Minister prevents the activity from occurring by making a declaration to protect an area or object. However, the Minister can only make a decision after receiving a legally valid application under the ATSIHP Act and, in the case of long term protection, after considering a report on the matter. Before making a declaration to protect an area or object in a state or territory, the Commonwealth Minister must consult the appropriate minister of that state or territory (Part 2, Section 13).

No declarations relevant to the Project Area have been made under the ATSIHP Act.

2.1.2 Native Title Act 1993

The *Native Title Act 1993* (NTA) provides for the recognition and protection of native title for Aboriginal peoples and Torres Strait Islanders. The NTA recognises native title for land over which native title has not been extinguished and where persons able to establish native title are able to prove continuous use, occupation or other classes of behaviour and actions consistent with a traditional cultural possession of those lands. It also makes provision for Indigenous Land Use Agreements (ILUA) to be formed as well as a framework for notification of Native Title Stakeholders for certain future acts on land where Native Title has not been extinguished.

Searches of the National Native Title Tribunal’s online tool, Native Title Vision, was undertaken on 20 January 2025 to identify registered Native Title Claims (both registered and determined), as well as Indigenous Land Use Agreements (ILUAs), for the Project Area. These searches returned no registered native title determinations or relevant ILUAs for the Project Area.

2.1.3 Environment Protection and Biodiversity Act 1999

The Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) took effect on 16 July 2000. Under Part 9 of the EPBC Act, any action that is likely to have a significant impact on a Matter of National Environmental Significance (MNES) may only progress with approval of the Commonwealth Minister for the Environment. An action is defined as a project, development, undertaking, activity, series of activities, or alteration. An action will also require approval if:

- It is undertaken on Commonwealth land and will have or is likely to have a significant impact
- It is undertaken outside Commonwealth land and will have or is likely to have a significant impact on the environment on Commonwealth land
- It is undertaken by the Commonwealth and will have or is likely to have a significant impact.

The EPBC Act defines 'environment' as incorporating both natural and cultural environments and therefore includes Aboriginal heritage. Under the EPBC Act, protected heritage items are listed on the National Heritage List (items of significance to the nation) or the Commonwealth Heritage List (items belonging to the Commonwealth or its agencies). These two lists replaced the Register of the National Estate (RNE), closed in 2007 and no longer a statutory list. Statutory references to the RNE in the EPBC Act were removed on 19 February 2012. However, the RNE remains an archive of over 13,000 heritage places throughout Australia.

A search of the Australian Heritage Database, which includes places listed on the World Heritage List (WHL), National Heritage List (NHL), Commonwealth Heritage List (CHL), RNE and List of Overseas Places of Historic Significance to Australia, was undertaken in 20 January 2025, with no relevant Aboriginal heritage listings identified for the Project Area.

2.2 State legislation

2.2.1 Aboriginal Land Rights Act 1983

The *Aboriginal Land Rights Act 1983* (ALR Act) was established to return land in NSW to Aboriginal peoples through lodging claims for certain Crown lands. The Act, administered by the NSW Department of Aboriginal Affairs, is a compensatory regime which recognises that land is of spiritual, social, cultural and economic importance to Aboriginal people.

The ALR Act establishes the NSW Aboriginal Land Council (NSWALC) and a network of over 120 autonomous Local Aboriginal Land Councils (LALCs) and requires these bodies to:

- a. Take action to protect the culture and heritage of Aboriginal persons in the LALC's area, subject to any other law
- b. To promote awareness in the community of the culture and heritage of Aboriginal persons in the LALC's area.

LALCs constituted under the ALR Act can make claims. The Registrar of the ALR Act has responsibility for maintaining the Register of Aboriginal Land Claims under section 166 of the Act. All land claims made since the Act came into force in 1983 have been recorded in the Register.

Under Section 36(1) of the ALR Act 'claimable Crown lands' are defined as those that:

- a. Are able to be lawfully sold or leased, or are reserved or dedicated for any purpose, under the *Crown Lands Consolidation Act 1913* or the *Western Lands Act 1901*,
- b. Are not lawfully used or occupied,
- b1. Do not comprise lands which, in the opinion of the Crown Lands Minister, are needed or are likely to be needed as residential lands,
- c. Are not needed, nor likely to be needed, for an essential public service,
- d. Do not comprise lands that are the subject of an application for a determination of native title (other than a non-claimant application that is an unopposed application) that has been registered in accordance with the Commonwealth Native Title Act, and

- e. Do not comprise lands that are the subject of an approved determination of native title (within the meaning of the Commonwealth Native Title Act) (other than an approved determination that no native title exists in the lands).

Land within the Project Area is exclusively freehold land and is not claimable under the ALR Act.

2.2.2 Environmental Planning and Assessment Act 1979

The EP&A Act, administered by the Department of Planning, Housing and Infrastructure (DPHI) requires that consideration be given to environmental impacts as part of the land use planning process in NSW. In NSW, environmental impacts are interpreted as including impacts to Aboriginal and non-Aboriginal cultural heritage.

Ampol is seeking approval for the proposed modification under section 4.55(2) of the EP&A Act. Pursuant to section 4.41 of the EP&A Act, Aboriginal Heritage Impact Permits (AHIPs) are not required for approved SSD projects. Impacts to Aboriginal heritage values associated with such projects are typically managed under Aboriginal Cultural Heritage Management Plans (ACHMPs), which are statutorily binding once approved by DPHI.

2.2.3 National Parks and Wildlife Act 1974

The *National Parks and Wildlife Act 1974* (NPW Act), administered by Heritage NSW, is the primary legislation for the protection of Aboriginal cultural heritage in NSW. The NPW Act gives the Director-General of the DPHI responsibility for the proper care, preservation and protection of 'Aboriginal objects' and 'Aboriginal places', defined under the Act as follows:

- An *Aboriginal object* is any deposit, object, or material evidence (that is not a handicraft made for sale) relating to Aboriginal habitation of NSW, before or during the occupation of that area by persons of non-Aboriginal extraction. This includes Aboriginal remains.
- An *Aboriginal place* is a place declared so by the Minister administering the NPW Act because the place is or was of special significance to Aboriginal culture. It may or may not contain Aboriginal objects.

Part 6 of the NPW Act provides specific protection for Aboriginal objects and places by making it an offence to harm them and includes a 'strict liability offence' for such harm. A 'strict liability offence' does not require someone to know that it is an Aboriginal object or place they are harming to be prosecuted. Defences against the 'strict liability offence' in the NPW Act include the carrying out of certain 'Low Impact Activities', prescribed in Clause 58 of the *National Parks and Wildlife Amendment Regulation 2019* (NPW Regulation), and the demonstration of due diligence.

As indicated in Section 2.2.2, pursuant to section 4.41 of the EP&A Act, AHIPs are not required for approved SSD projects. Impacts to Aboriginal heritage values associated with such projects are typically managed under ACHMPs, which are statutorily binding once approved by DPHI.

Section 89A of the NPW Act requires notification of the location of Aboriginal sites within a reasonable time, with penalties for non-notification. Section 89A is binding in all instances, including SSD projects.

2.3 Local government

2.3.1 Sutherland Shire Local Environmental Plan 2015

Clause 5.10 of the *Sutherland Shire Local Environmental Plan 2015* (Sutherland Shire LEP 2015) provides specific provisions for the protection of heritage items, heritage conservation areas, archaeological sites, Aboriginal objects and Aboriginal places of heritage significance within the Sutherland Shire LGA, with the objectives of the clause as follows:

- a. To conserve the environmental heritage of the Sutherland Shire,
- b. To conserve the heritage significance of heritage items and heritage conservation areas, including associated fabric, settings, and views,
- c. To conserve archaeological sites,
- d. To conserve Aboriginal objects and Aboriginal places of heritage significance.

Under Section 2 of Clause 5.10 of the Sutherland Shire LEP 2015, development consent is required for any of the following:

- a. *Demolishing or moving any of the following or altering the exterior of any of the following (including, in the case of a building, making changes to its detail, fabric, finish or appearance):*
 - (i) *a heritage item,*
 - (ii) *an Aboriginal object,*
 - (iii) *a building, work, relic or tree within a heritage conservation area,*
- b. *Altering a heritage item that is a building by making structural changes to its interior or by making changes to anything inside the item that is specified in Schedule 5 in relation to the item,*
- c. *Disturbing or excavating an archaeological site while knowing, or having reasonable cause to suspect, that the disturbance or excavation will or is likely to result in a relic being discovered, exposed, moved, damaged or destroyed,*
- d. *Disturbing or excavating an Aboriginal place of heritage significance,*
- e. *Erecting a building on land:*
 - (i) *on which a heritage item is located or that is within a heritage conservation area, or*
 - (ii) *on which an Aboriginal object is located or that is within an Aboriginal place of heritage significance,*
- f. *Subdividing land:*
 - (i) *on which a heritage item is located or that is within a heritage conservation area, or*
 - (ii) *on which an Aboriginal object is located or that is within an Aboriginal place of heritage significance.*

Schedule 5 of the Sutherland Shire LEP 2015 provides a list of heritage items, heritage conservation areas, and archaeological sites within the Sutherland Shire LGA. There are no Aboriginal objects or places of Aboriginal heritage significance listed in this schedule that are located within the Project Area.

3.0 Methodology

3.1 Assessment objectives

The overarching objectives of this ACHAR are:

- To identify the Aboriginal cultural heritage values of the Project Area using a combination of background research, Aboriginal community consultation, and a site inspection
- To assess potential impacts to these values (if present) as a result of the proposed modification to provide an appropriate management strategy for any identified values
- To compile an ACHAR that will assist DPHI in their assessment of Ampol's SSD modification application.

3.2 Methodology overview

This assessment has been undertaken in accordance with the environmental assessment matters outlined in the assessment requirements document provided by DPHI and with reference to the following guidelines:

- *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH, 2011)
- *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (DECCW, 2010a)
- *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW 2010b)
- *The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance* (Australia International Council on Monuments and Sites [ICOMOS], (2013)
- *Ask First: A Guide to Respecting Indigenous Heritage Places and Values* (Australian Heritage Commission, 2002)
- *Engage Early: Guidance for proponents on best practice Indigenous Engagement for environmental assessments under the Environmental Protection and Biodiversity Conservation Act 1997 (EPBC Act)* (Australian Government Department of the Environment, 2016).

As such, the key tasks of this assessment were as follows:

- To conduct a search of the Aboriginal Heritage Information Management System (AHIMS) administered by Heritage NSW
- To review the landscape context of the Project Area, with specific consideration to its implications for past Aboriginal land use and the survival of associated archaeological materials
- To review relevant archaeological and ethnohistoric information for the Project Area and environs
- To prepare a predictive model for the Aboriginal archaeological record of the Project Area
- To undertake a visual inspection of the Project Area
- To identify any Aboriginal sites and areas of archaeological sensitivity present within the Project Area
- To identify, notify, and register Aboriginal people who hold cultural knowledge relevant to determining the cultural significance of Aboriginal objects and/ or places in the Project Area
- To provide RAPs with information about the scope of the proposed works and Aboriginal heritage assessment process
- To facilitate a process whereby RAPs can:
 - contribute culturally appropriate information to the proposed assessment methodology

- provide information that will enable the cultural significance of Aboriginal objects and/ or places within the Project Area to be determined
- have input into the development of cultural heritage management options.
- To prepare and finalise an ACHAR with input from RAPs that identifies the Aboriginal cultural values of the Project Area and provides appropriate management recommendations to manage impacts to these values.

3.3 Project team

Geordie Oakes (Principal Heritage Specialist, AECOM) managed the Aboriginal heritage assessment process and was the primary author of this ACHAR. Dr Andrew McLaren (Principal Heritage Specialist, AECOM) provided technical review of this ACHAR. Dr Darran Jordan and Dr Andrew McLaren completed the site inspection component of the assessment.

Geordie holds a Bachelor of Arts (Honours) degree in historic and prehistoric Archaeology from Sydney University and a Graduate Certificate in Paleo-anthropology from the University of New England. Geordie has over 16 years of Australian Aboriginal cultural heritage management experience.

Darran has over 18 years of experience as an archaeologist in both Indigenous and historical archaeology, across multiple states of Australia including NSW, Queensland, Northern Territory and Victoria. Darran was awarded a PhD in Archaeology from the University of Sydney in 2012 and has worked across multiple legislative frameworks in developing impact assessments. Andrew holds a Bachelor of Arts (Honours) degree from the University of Queensland, a Masters of Cultural Heritage from Deakin University, and a PhD from the University of Cambridge in England and has over 14 years of Australian Aboriginal cultural heritage management experience.

4.0 Aboriginal community consultation

Aboriginal community consultation acknowledges the right of Aboriginal people to be involved, through direct participation, on matters that directly affect their heritage. Involving Aboriginal people in all facets of the assessment process ensures that they are given adequate opportunity to share information about cultural values, and to actively participate in the development of appropriate management and/or mitigation measures. The successful identification, assessment, and management of Aboriginal cultural heritage values are dependent on an inclusive and transparent consultation process.

Aboriginal community consultation for the current assessment was undertaken in accordance with Heritage NSW's *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (the Consultation Requirements). The results of the consultation process undertaken are detailed below. A consultation log is provided in Appendix A.

4.1 Stage 1 – Notification and registration

Stage 1 of the Consultation Requirements aims to identify, notify, and register Aboriginal people who hold cultural knowledge relevant to determining the cultural significance of Aboriginal objects/ sites and/or places in the Project Area.

4.1.1 Consultation with regulatory agencies

Section 4.1.2 of the Consultation Requirements stipulates that proponents are responsible for ascertaining, from reasonable sources of information, the names of Aboriginal people who may hold cultural knowledge relevant to determining the cultural significance of Aboriginal objects and/or places. Proponents are required to compile a list of Aboriginal people who may have an interest in the Project Area and hold knowledge relevant to determining the cultural significance of Aboriginal objects and/or places by writing to:

- a. Heritage NSW
- b. The relevant LALC
- c. The Registrar, *Aboriginal Land Rights Act 1983* for a list of Aboriginal owners
- d. The National Native Title Tribunal (NNTT) for a list of registered native title claimants, native title holders, and registered Indigenous Land Use Agreements
- e. NTSCORP Limited
- f. The relevant local council(s)
- g. The relevant catchment management authorities for contact details of any established Aboriginal reference group (these have previously notified AECOM that they will not provide this information).

In accordance with this requirement, the following agencies were contacted via email/ letter on 14 March 2024 requesting information on relevant Aboriginal persons and organisations:

- Heritage NSW
- La Perouse LALC
- Office of the Registrar, *Aboriginal Land Rights Act 1983* (NSW)
- The NNTT
- NTSCORP Limited
- Sutherland Shire Council.

The following three agencies responded:

- The Office of Registrar responded on 15 March 2024, stating that there were no Aboriginal Owners within the Project Area, and suggested we get in contact with La Perouse LALC
- Heritage NSW responded on 26 April 2024, providing a list of Aboriginal parties for the Sutherland Shire LGA. A copy of the response is provided as Appendix B

- Sutherland Shire Council responded on 28 March 2024, providing a list of agencies and Aboriginal parties.

4.1.2 Public notification

Section 4.1.3 of the Consultation Requirements requires that, in addition to writing to the Aboriginal people identified by the agencies listed in Section 4.1.1, the proponent must also place a notice in the local newspaper circulating in the general location of the proposed project. The notification must outline the project and identify its location.

In accordance with this requirement, a public notice was placed in the St George and Sutherland Shire Leader on 17 April 2024 (Appendix C). The closing date for registration via this notice was 2 May 2024, which provided the necessary minimum 14-day period for an expression of interest.

4.1.3 Registration of interest

Section 4.1.3 of the Consultation Requirements requires that proponents must write to the Aboriginal people whose names were obtained through the regulatory agencies and the relevant LALC(s) to notify them of the proposed project and invite them to register an interest in participating in the process of community consultation.

In accordance with this requirement, on 15 April 2024, a letter/ email inviting an expression of interest and containing summary information on the proposed modification was sent to all Aboriginal persons and organisations identified by the regulatory agencies. A total of 68 Aboriginal individuals and organisations were invited to register an interest in being consulted. The closing date for expressions of interest was 2 May 2024, which provided the minimum 14-day period for registering interest.

Ultimately, a total of 14 organisations registered an interest in being consulted for the current assessment (Appendix D). In addition, the La Perouse LALC was automatically registered despite not responding to the registration of interest, bringing the total to 15 organisations. AECOM provided the opportunity for RAPs to withhold their details from being forwarded to the LALC and/or Heritage NSW and respects the wishes of RAPs to withhold their details at their discretion. No RAPs requested that their details be withheld.

Summary information on all RAPs, including registration dates, is provided in Table 4-1.

Table 4-1 RAPs for the current assessment

#	Organisation	Date of registration	Primary Contact Person(s)
1	La Perouse LALC	-	-
2	Wailwan Aboriginal Group	15/04/2024	Phil Boney
3	Butucarbin Aboriginal Corporation	15/04/2024	Jenny Beale
4	Didge Ngunawal Clan	15/04/2024	Paul Boyd
5	Yarrowalk PTY Limited	15/04/2024	Scott Franks
6	Yerrowah	15/04/2024	Teyarah Henry
7	Ninum	16/04/2024	Kevin Campbell, Marnya Donovan
8	Kamilaroi Yankuntjatjara Working Group	16/04/2024	Phil Kahn
9	Burroo Burroo	16/04/2024	n/a
10	Nerrigundah	16/04/2024	n/a
11	Yulay Cultural Services	18/04/2024	Arika Jalomaki
12	Thomas Dahlstrom	22/04/2024	Thomas Dahlstrom
13	Waawaar Awaa Aboriginal Corporation	22/04/2024	Rodney Gunther
14	Ngambaa Cultural Connections	24/04/2024	Kaarina Slater

#	Organisation	Date of registration	Primary Contact Person(s)
15	Guntawang Aboriginal Resources Incorporated	25/04/2024	Wendy Morgan

4.1.4 Notification of Registered Aboriginal Parties (RAPs)

Section 4.1.6 of the Consultation Requirements requires that the proponent make a record of the names of each Aboriginal person who registered an interest and provide a copy of that record, along with a copy of the expression of interest letter forwarded to the Aboriginal parties, to the relevant Heritage NSW regional office and LALC. Section 4.1.5 of the Consultation Requirements provides the opportunity for Aboriginal persons to withhold their details from being forwarded to these parties.

In accordance with these requirements, on 14 May 2024, a list of RAPs for the current assessment was forwarded to Heritage NSW and the La Perouse LALC. A copy of the expression of interest letter was included in this correspondence.

4.2 Stage 2 – Presentation of information about the proposed modification

The aim of Stage 2 of the Consultation Requirements is to provide RAPs with information about the scope of the proposed modification and the proposed cultural heritage assessment process.

For the current assessment, presentation of information about the proposed modification was provided to RAPs as part of the expression of interest letter, draft assessment methodology review process (Section 4.3.2), and during the visual inspection.

4.3 Stage 3 – Gathering information about cultural significance

The aim of Stage 3 of the Consultation Requirements is to facilitate a process whereby RAPs can:

- Contribute to culturally appropriate information gathering and the assessment methodology
- Provide information that would enable the cultural significance of Aboriginal objects and/ or places on the Project Area to be determined
- To have input into the development of any cultural heritage management measures.

For this assessment, consultation with RAPs regarding the cultural heritage values of the Project Area included:

- A request with the draft assessment methodology package for any initial comments regarding the cultural values of the Project Area
- Discussion of cultural heritage values during the visual inspection
- The provision of a draft of this ACHAR to all RAPs for comment prior to finalisation.

4.3.1 Registration of interest

No information on the cultural values of the Project Area or its environs was provided by RAPs as part of their responses to AECOM's expression of interest letter.

4.3.2 Draft assessment methodology

Sections 4.3.1 and 4.3.2 of the Consultation Requirements require that the proponent present and/ or provide the proposed methodology for the cultural heritage assessment to RAPs and that RAPs be given a minimum of 28 days to review and provide feedback on this methodology.

All RAPs were forwarded a draft of AECOM's proposed assessment methodology for the proposed modification on 3 May 2024 (Appendix E). The specified closing date for comments on the methodology was 1 June 2024, which provided the necessary minimum 28-day period for comment.

One response specific to the project methodology was received by Kamilaroi Yankuntjatjara Working Group, who indicated their support of the methodology. Four emails unrelated to the methodology were also received. All responses are attached as Appendix E.

4.3.3 Visual inspection

Visual inspections of the Project Area were completed on 6 June 2024 and 5 December 2024. The visual inspections were conducted by AECOM Principal Heritage Specialists Dr Darran Jordan and Dr Andrew McLaren with La Perouse LALC site officer Steven Ella. No specific cultural values were communicated to AECOM as part of the site inspections. However, Steven Ella suggested there might be sites below the disturbed soil layers.

4.4 Stage 4 – Review of draft assessment report

The aim of Stage 4 of the Consultation Requirements is to prepare and finalise an ACHAR with input from RAPs.

In accordance with Section 4 of the Consultation Requirements, on 17 July 2024, a draft of this ACHAR was issued to all RAPs for their review. The closing date for comments was 15 August 2024 which provided the necessary minimum 28-day period for comment.

Following this initial draft ACHAR being issued to RAPs, Ampol made minor design changes to the proposed modification, including:

- Firewater System (FWS) Relocation Area: The new firewater tank and pumphouse would be located within the FWS Relocation Area, with the specific siting selected as part of detailed design. This area would be excavated and remediated, where required.
- Augmentation of FWS in Zone 1 and 2: Augmentation of other FWS infrastructure within Zone 1 and 2 to maintain hydraulic performance
- New areas of the Project Area:
 - Zone 1: To accommodate augmentation of FWS infrastructure
 - Zone 2: Disturbed areas requiring remediation along the southern boundary of Zone 2.

The boundary of the Site was also amended following sale of the Western Right of Way in 2024.

Accordingly, the draft ACHAR was reissued to all RAPs on 3 February 2025 with a description of the proposed changes.

Combined responses to both draft ACHARs issued to RAPs are presented in Table 4-2 and attached as Appendix F.

Table 4-2 RAP responses to draft ACHAR

RAP Organisation	Representative(s)	Date of response	Type	Response	AECOM Response
Guntawang Aboriginal Resources Incorporated	Wendy Morgan	09/08/2024	Email	"Guntawang has no other information to add to this report. We agree and support all of the Draft ACHAR."	None required
Kamilaroi Yankuntjatjara Working Group	Phil Kahn	15/08/2024	Email	"We have reviewed your report and would like to agree and support your management recommendations."	None required
Didge Ngunawal Clan	Paul Boyd	3/02/2025	Email	"We're happy with the minor change that has been made to this project and it's happy to move on."	None required

RAP Organisation	Representative(s)	Date of response	Type	Response	AECOM Response
Guntawang Aboriginal Resources Incorporated	Wendy Morgan	4/02/2025	Email	Guntawang Aboriginal Resources Incorporated supports the recommendations in the Draft ACHAR made that No Aboriginal objects or sites were identified during the inspections, nor were any specific cultural values communicated to AECOM during the process. We also support Steven Ella suggestion that there is a possibility of sites located beneath the disturbed soil layers."	None required
Kamilaroi Yankuntjatjara Working Group	Phil Kahn	4/03/2025	Email	"Thank you for your Draft ACHAR for Kurnell Terminal SSD554 MOD-7, we would like to agree and support your management recommendations."	None required

5.0 Environmental context

This section describes the landform context of the Project Area as a basis for predicting both the nature of past Aboriginal activity within it and its associated archaeological record. Consideration of the landscape context of the Project Area is based on the proposition that the nature and distribution of Aboriginal archaeological materials are closely connected to the environments in which they occur. Environmental variables such as topography, geology, hydrology, and the composition of local floral and faunal communities would have played an important role in influencing how Aboriginal people moved within and utilised their respective Country. Amongst other things, these variables would have affected the availability of suitable campsites, drinking water, economic plant and animal resources, and raw materials for the production of stone and organic implements. At the same time, an assessment of historical and contemporary land use activities, as well as geomorphic processes, such as soil erosion and aggradation, is critical to understanding the formation and integrity of archaeological deposits.

5.1 Physical context

The Project Area is located within the Kurnell Terminal at 2 Solander Street, Kurnell, approximately 21 kilometres south of Sydney's Central Business District (CBD). It lies on the Kurnell Peninsula, a geographical feature, that forms the southern side of Botany Bay, with Port Botany and Sydney Airport located to the north of the bay. Irregularly shaped, and comprising three discrete sections of the Site, the Project Area is approximately 144 ha in size and consists of operational fuel terminal (Zone 1), as well as the former refinery process area (Zone 2) and the former Caltex Lubrication Oil Refinery (Zone 3), which encompasses disused and demolished refinery infrastructure.

Land use immediately surrounding the Project Area includes terminal infrastructure. Outside the Site, in the immediate vicinity, the landscape features Marton Park, a playing field and freshwater wetland, and residential properties to the north and north-west; the Kamay Botany Bay National Park and Kurnell Headland to the north-east and east; swamp and bushland to the south; and Towra Point Nature Reserve (Ramsar), Towra Point Aquatic Reserve, and Quibray Bay, along with various industrial facilities, to the west.

5.2 Topography

The Kurnell Peninsula extends into the Tasman Sea and forms the southern arm of Botany Bay. The peninsula's topography features a predominantly low-lying, sandy isthmus that separates the peninsula from the mainland in the west, as well as a hills and plateaus of the Kurnell Headland in the east (Figure 5-1). The Project Area itself lies at the easternmost point of the low-lying sandy isthmus, just to the west of the Kurnell Headland (Figure 5-2).

The Project Area has been subject to significant historical disturbances from construction of the refinery in the 1950s, as well as its ongoing use over the past seven decades. Reference to photographs taken during its construction indicate that the preparatory works included clearing scrub and draining and filling swamps, as well as bulk earthworks to excavate and level the Site for the installation of various refinery infrastructure, such as large tanks for storing different petroleum products (Plates 1 and 2). In addition, large bunds were established around parts of the Site to separate the refinery from the surrounding landscape, with a significant portion of the sand for this and for filling the swamps sourced from dredging in Botany Bay. As a result, establishing the Site's pre-refinery topography in great detail is difficult, especially when viewing it as it is today. Nonetheless, available reference materials, including photographs of the pre-refinery landscape (Plates 3-6) and parish maps, indicate that land within the Project Area and immediate surroundings formerly comprised part of a broader aeolian landscape characterised by gently undulating to rolling coastal transgressive and relict dunes, as well as swales, lagoons, marshes, and swamps, much of it covered in relatively thick but low-lying heathland. The refinery was probably sited on a swampy/sandy "back plain," behind the beach foredunes, with the area containing relict dunes and various water features.

Today, elevation across the Project Area ranges from 2 m Australian Height Datum (AHD) in the north of the Project Area near Silver Beach, to 22 m AHD in the east where the land slightly slopes up to towards the Kurnell Headland providing a total relief of up to 20 m. Slope/ gradient also only varies slightly with the majority of the Project Area featuring artificially level terrain (0-1%).



Legend

- Project Area
- Watercourses
- Roads
- Contours (2m)

LANDFORM

Aboriginal Cultural Heritage Assessment Report



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Figure 5-1 Landform

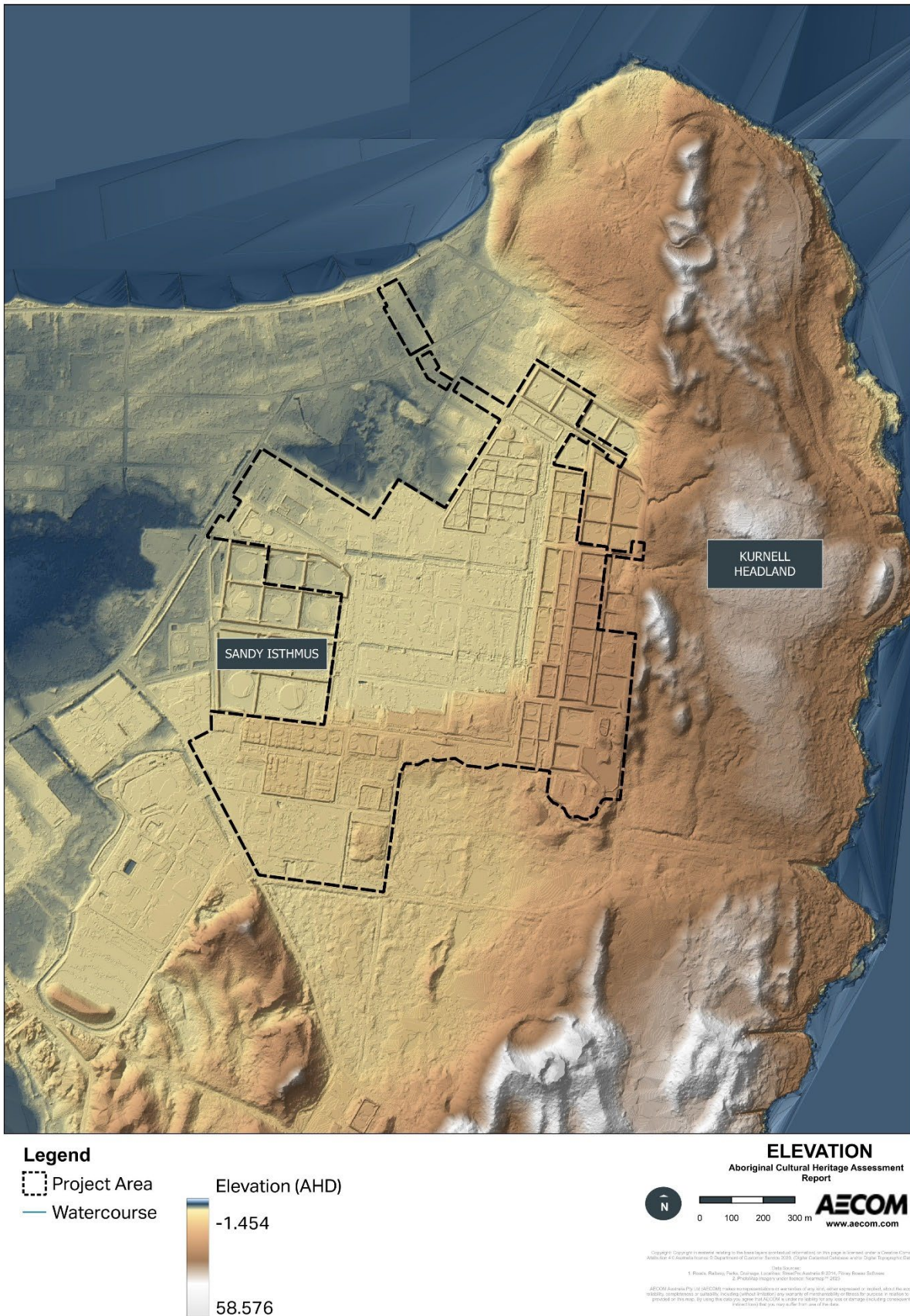


Figure 5-2 Elevation profile



Plate 5-1 Photo of the refinery under construction on 25 September 1954 looking northwest (source: State Library of NSW)



Plate 5-2 Photo of the refinery under construction on 25 September 1954 view west (source: Jack Hickson, State Library of NSW)

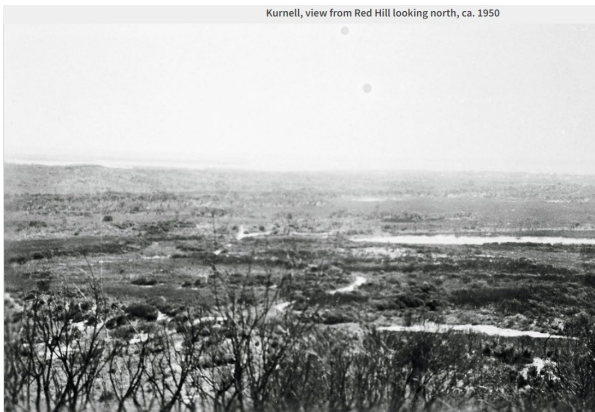


Plate 5-3 Photo of the pre-refinery landscape in 1950 looking north (source: Sutherland Shire Library)



Plate 5-4 Photo of the pre-refinery landscape in 1950 looking north (source: Sutherland Shire Library)



Plate 5-5 Aerial photo of the pre-refinery landscape in 1935 looking east. Refinery located on the right of the image (source: Searle E.W., Trove)



Plate 5-6 Aerial photo of the pre-refinery landscape in the 1930s looking southeast. Refinery would be located on the right of the image (source: Searle E.W., Trove)

5.3 Hydrology

As noted in Section 5.1, the Project Area is located on the southern side of Botany Bay with the Kurnell Peninsula forming the southern arm of the bay. Following Roy (1984), Botany Bay can be characterised as a drowned river valley type estuary. The bay maintains a generally shallow depth, typically less than 10 m, with its deepest point reaching 21 meters at the entrance, where dredging activities have been conducted. The water within the bay typically exhibits marine salinity levels. However, during flood events, stratification can occur. Tidal variations manifest with a range of 1 meter during neap tides and 1.9 meters during spring tides. Despite the presence of oceanic swell waves penetrating the bay, their impact on the beaches is not significant (Harris & O'Brien, 1998: 13).

Today, no natural watercourses are located within the Project Area. Nonetheless, early parish maps for the Project Area and environs indicate the former presence of a number of aquatic features including lagoons, marshland and swamp (Figure 5-3 and Figure 5-4), with such features predominately found on the low-lying areas of the peninsula's isthmus. In the absence of a detailed understanding of the pre- and early-post European settlement topography of the Project Area and environs, it is difficult to comment definitively on whether these features would have held fresh or brackish water. However, like many wetlands in coastal areas, they are likely to be influenced by both freshwater and tidal saltwater inputs, making it either a brackish water environment or part of the estuarine system, especially considering the proximity to Towra Point Nature Reserve, which is known for its estuarine and marine habitats.

Prior to the formation of the Kurnell Peninsula tombolo, around 9,000 years ago, when the sea level was approximately 30 m below its present level and Botany Bay not submerged, a complex network of watercourses flowed across the bay into the sea which at the time was several kilometres to the east (Figure 5-5). One of these watercourses, the "Kurnell River," (after Albani and Rickwood, 1998) flowed across the southern part of the bay between the peninsula and the mainland, with its headwaters located near the Project Area. Following the end of the Last Glacial Maximum (LGM) and rising sea levels, Botany Bay was submerged and this river engulfed (Albani and Rickwood, 1998).

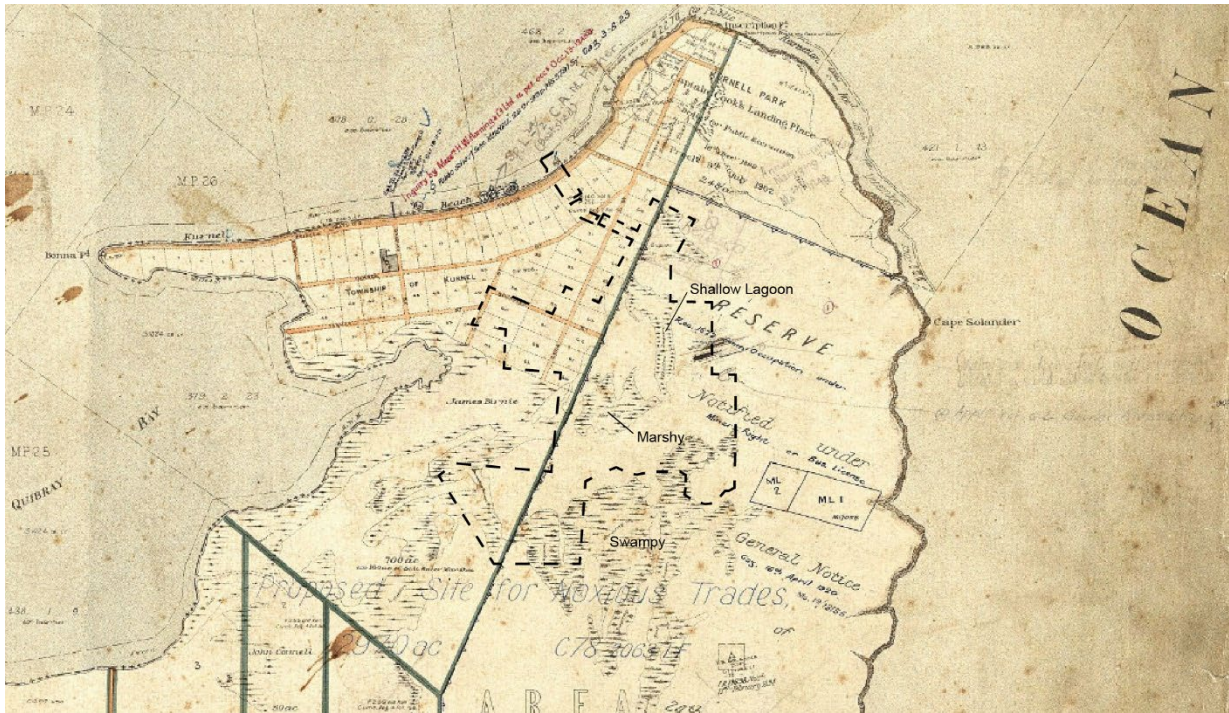


Figure 5-3 Excerpt of undated parish map of Sutherland with Project Area in black and labels enlarged (Source: NSW Land Registry Services, Historical Land Records Viewer)



- Legend**
- Project Area
 - Existing Water Features (Six Maps)
 - Legacy Water Features (Parish Map)
 - Watercourses
 - Roads

HYDROLOGY
Aboriginal Cultural Heritage Assessment Report

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Figure 5-4 Hydrology

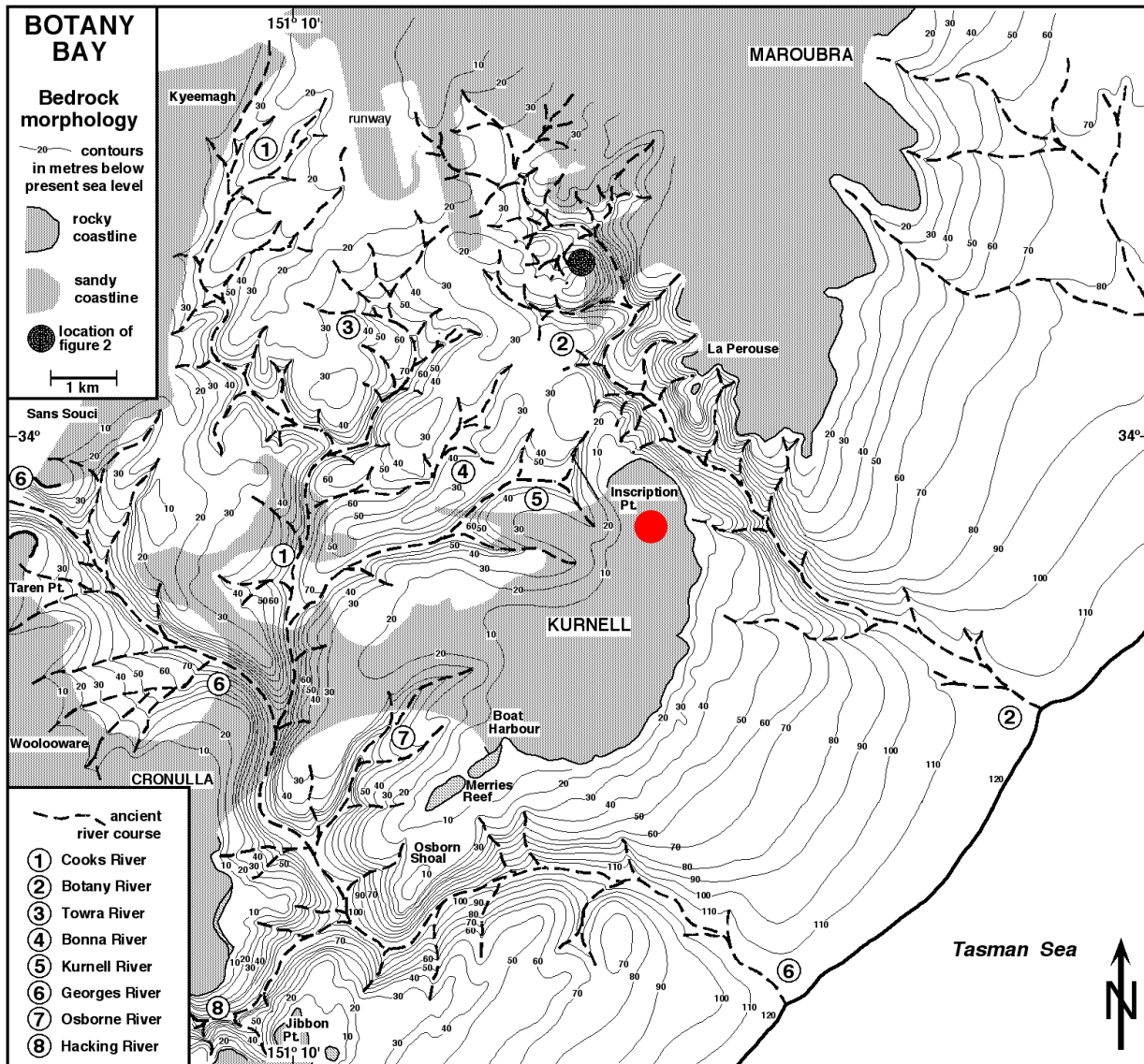


Figure 5-5 Bedrock morphology of the Botany Basin, with associated ancient river systems. Approximate location of Project Area marked in red (from Albani and Rickwood 1998, Figure 1)

5.4 Geology and geomorphology

The Kurnell Peninsula forms the southern arm of the Botany Basin, a large tectonically formed bedrock depression filled with unconsolidated sediments known collectively as the 'Botany Sands.' The basin includes two large tidal bays, Botany Bay in the north and Bate Bay in the south, with these bays separated by the Kurnell Peninsula. Bedrock valleys associated with several palaeo river systems, including the palaeo-Cooks and George Rivers, have been identified within the boundaries of these bays, with that closest to the Project Area referred to as the 'Kurnell River' (Figure 5-5).

The late Quaternary evolution of the Botany Bay-Kurnell Peninsula region has been the subject of considerable research (e.g., Albani, 1981; Roy and Crawford, 1981; Hann 1985) and is generally well understood. The peninsula comprises a sandy isthmus that links the Kurnell Headland, an elevated Hawkesbury Sandstone bedrock 'island,' to the mainland. The underlying geology of the peninsula as a whole is Hawkesbury Sandstone, which can be found at varying depths (up to 100 m) below the ground surface with the bedrock morphology resulting from repeated episodes of fluvial and marine erosion during the past 40 to 60 million years. Where sandstone bedrock isn't exposed on the surface of the peninsula, such as on the headland, surficial sediments include beach, dune, spit, bay, tidal deltaic, and mud basin sediments, often of Holocene antiquity. These sediments are described as being composed of three primary components: detrital sand, mud, and biogenic material (Roy & Crawford, 1981: 171-172). Sediments of Pleistocene age, consisting mainly of sand but also including layers of clay and peat, can underlie Holocene deposits up to 10-20 meters below the surface. All these sediments are associated with fluctuations in sea level, particularly as part of the Last Interglacial Transgression (c. 120-140,000 years ago) and the Postglacial Transgression which resulted in the current high sea levels (c. 10,000 years ago) (Roy and Crawford, 1981). Importantly, Roy et al (1980) suggest that following the Postglacial Transgression, about 10,000 years ago, a phase of rapid deposition of marine sand in the coastal valleys occurred, followed by a phase of sediment reworking.

Roy & Crawford (1981:178) identified and described three major and one minor depositional environment for the Kurnell Peninsula including (Figure 5-6):

Transgressive headland dunes, these predate the beach ridges (major)

1. Kurnell beach ridges, frontal dunes, Bate Bay beach and foredune (major)
2. Transgressive barrier dunes. These are younger than the beach ridges over which they transgress (major)
3. Terrestrial freshwater swamps (minor).

Figure 5-6 indicates that the Project Area falls within areas mapped as transgressive headland dune and Pleistocene terrestrial dunes. The headland dunes mantle bedrock and are up to 40 m thick on the western side of the headland. The younger surface dunes are parabolic with a general north-south orientation due to the northward direction of aeolian transport. Surface soils are deeply podsolised suggesting the dunes development ceased long ago. Radiocarbon dating of the lowermost soil on the transgressive headland dune indicated an age of $8,530 \pm 115$ years before present (BP) for the dunes which suggest that their early development began before the current sea levels. In places, these main north-west orientated dunes overlie older east-west orientated terrestrial dunes of Pleistocene age (Figure 5-6). Terrestrial dunes are suggested to have formed on the Pleistocene sand plain as a result of deflation of its surface and have been reworked or buried beneath younger deposits (Roy and Crawford, 1981:135). Marsh and swampland occupy depressions between the terrestrial dunes and the main body of transgressive headland dunes (Roy and Crawford, 1981:187).

Evolutionary models of particular value to the Kurnell Peninsula include those prepared by Hahn (1985) and Roy and Crawford (1981) with the latter focused on the Holocene. These complimentary models are summarised in Table 5-1 and Table 5 respectively, with Roy and Crawford's model illustrated graphically in Figure 5-7, Figure 5-8 and Figure 5-9.

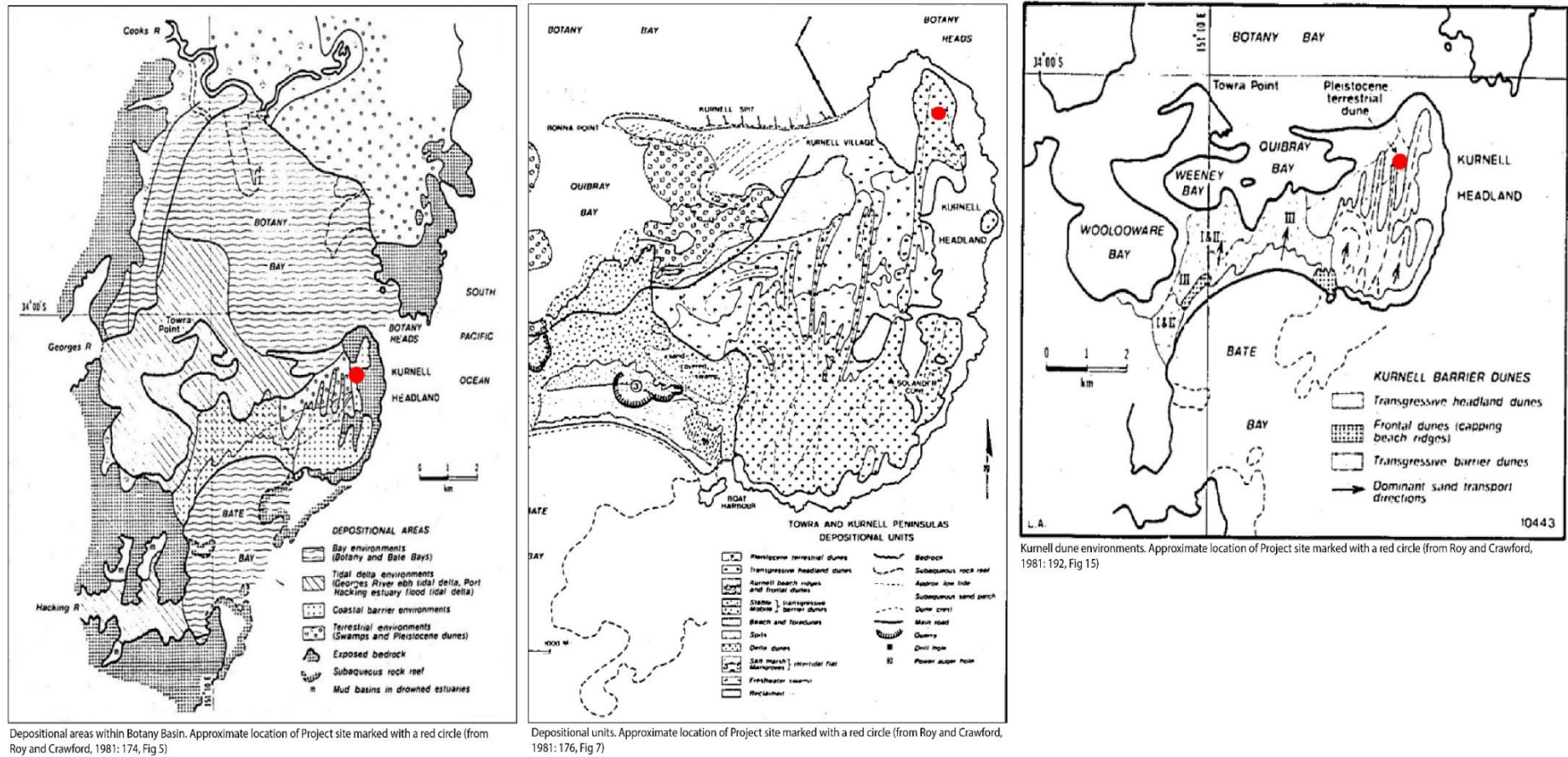


Figure 5-6 Roy and Crawford (1981) geomorphological context of the Kurnell Peninsula. Project Area marked with red circle

Table 5-1 Summary of Hann's (1985) model for the late Quaternary evolution of Botany Bay

Stage	Sea Level	Deposits / Features	Key features / developments	Antiquity
1	Pleistocene high sea level	Estuarine deposits	Marine flooding of embayment. Sands, muds, and clays at least 50 m thick deposited in an estuarine environment, interspersed with periods of exposure to subaerial weathering.	Pleistocene. Likely pre 100,000 yr BP
2	Pleistocene low sea level	Estuarine deposits Dune deposits (Pleistocene)	Period of vigorous dune building, with large-scale northerly dune migration across Botany Bay. Accumulation of massive quantities of sand through northerly longshore transport associated with a low sea-level barrier coast. Northward transport of sand blocked by bedrock ridge extending seawards from Kurnell Headland. Extensive barrier development on southern side of this bedrock feature, with barrier comprising a source of sand for large-scale northerly dune migration across Botany Bay. Inland dune movement buried existing estuarine tidal delta and mud basin deposits. Prolonged exposure of resulting dunes facilitated the development of vegetation, organic swamp deposits in dune swales and podzol soils. Dune field traversed by a sinuous fluvial system draining through Bate Bay.	Pleistocene
3	Holocene rising sea level and early stillstand	Dune deposits (Pleistocene) Headland dunes (Holocene) Barrier deposits Biogenic deposits Beach ridges	Extensive barrier dune system offshore of present coast transgressed and reworked by landward moving coastline. Dunes blocking the entrance to Botany Bay likely breached around 8,000 yr BP. Dune sands at the entrance to, and within the bay reworked by waves and currents. Present position of sea level reached by 6,200 yr BP, producing a large bay environment. Associated bay bed very shallow (likely <3 m) and primarily made up of reworked Pleistocene dunes. Disequilibrium between shallow bay bed and waves/current conditions in newly formed bay environment ultimately resulted in destruction of Hahn's (1985) Unit 3 (see Table 5) in the central portion of bay and the accretion of thick sediment deposits in western bay area (including beach ridges, which formed prior to 4,000 yr BP). By c.4,000 yr BP, the Georges River tide channel had migrated north, creating a mud basin. On the Kurnell Peninsula, transgressive dunes migrated northwards from Bate Bay proto-barrier (destroyed immediately after the onset of the stillstand) onto the Kurnell Headland.	Holocene
4	High sea level	Dune deposits (Pleistocene) Headland dunes (Holocene) Barrier deposits Biogenic deposits Beach ridges	Thin surficial depositional unit formed over much of the bay via disturbance of the bay bed by waves. Contraction and westward migration of Georges River tidal delta to current position, with relict channel infilled by sediments likely derived from continued erosion of central bay bed.	Late Holocene to modern

Table 5-2 Summary of Roy and Crawford's (1981) model for the Holocene evolution of the Botany Bay-Kurnell area

Phase	Sea Level	Key features / developments	Antiquity
1	-20 m Standard Deviation (SD)	Beginning of Holocene, characterised by a vegetated, low relief swampy sand plain incised by river channels draining south-eastwards beneath Bate Bay (Cooks, Georges, and Hacking rivers) and between Botany Heads (Figure 5-7). Terrestrial dunes of probable late Pleistocene antiquity are thought to have formed on this plain as a result of the deflation of its surface. Flooding of the inner continental shelf during the initial stages of the marine transgression drowned the lower reaches of the Bate Bay and Botany Heads river valleys and partially blocked their mouths with marine sand. Landward of the river mouths, embryonic estuaries containing a mixture of newly introduced marine sand and re-worked Pleistocene sediments formed.	Pre 9,000 years BP
2	Rising from -12 to -9 m SD	Pleistocene sand plain widely inundated forming a large shallow estuary encompassing both Botany and Bate Bays (Figure 5-7). Georges and Hacking River valleys now deep, narrow re-entrants extending well inland. Early Bate Bay estuary blocked at its mouth by a coastal sand barrier designated as a "proto-barrier." Exposed rock reefs in the mouth of Bate Bay provided a natural barrier for the accumulation of landward migrating marine sand. Under the influence of dominant southerly winds, dunes formed on the barrier surface and migrated northwards onto the Kurnell Headland. Bate Bay estuary was blocked on its southern side by the proto-barrier but open to the ocean at Botany Heads. Presence of proto-barrier in this location is believed to have facilitated the transportation (via a net northward littoral drift) of marine sand around Kurnell headland into Botany Bay and the deposition of shell-rich, silty sands in the southern end of the Bate Bay estuary. Within Botany Bay, newly introduced marine sand, as well as existing Pleistocene sediments in Botany Bay, were actively reworked by waves and tidal currents. Tidal levees at the mouth of the Georges River began prograding south-eastwards along the channel margin, resulting in the deposition of estuarine sands 10-12 m thick at the river mouth and in its marginal shoals.	7,000-9,000 years BP
3	Rising from -9 m to present position	Proto-barrier destroyed through a combination of wind deflation and littoral drift, with sand loss potentially exacerbated by a reduction in the supply of marine sand from the shelf. Formation of beach ridges on the Kurnell isthmus, and on the western side of Botany Bay, likely occurred at the end of the marine transgression. Bayward progradation of Kurnell spit from the inner side of the Kurnell Headland occurred concurrently with beach ridge development, constricting the mouth and ultimately resulting in the formation of a new distributary channel, which breached the levee further upstream.	4,000-7,000 years BP
4	Sea level at present position (± 1 m)	Two sets of overlapping, parabolic dunes emplaced on the Kurnell isthmus via the northward migration of sands derived from the Bate Bay frontal dunes and beach face. Dunes subsequently stabilised by vegetation. First phase of dune development assigned a maximum age of $3,680 \pm 111$ years BP. Present configuration of Woolooware Bay and Quibray Bay mud basins established during this phase. Freshwater swamps on Kurnell Peninsula slowly infilled with organic mud and peat. In Botany Bay, key developments included the evolution of the Georges River delta to its Stage IV configuration (Figure 5-8) and the continued westward growth of Kurnell spit.	1,000-4,000 years BP

Phase	Sea Level	Key features / developments	Antiquity
5 (Botany Bay Bed and Kurnell Peninsula only)	Sea level at present position	<p>Botany Bay Bed: Historically-documented trend towards deepening of bay (i.e., by up to 1m) likely commenced much earlier, once the bay had established equilibrium configuration with normal wave climate. Seaward movement of bay sand to deep water inferred. Changing distribution of sea grasses linked to increased occurrence of storm events (aggravated in more recent times by dredging activities), as well as a natural, long-term erosion of the bay.</p> <p>Kurnell Peninsula: Renewed erosion of barrier surface prompted a third phase of dune migration which is still ongoing (Figure 5-9). Majority of sand in current mobile sand sheet reworked from earlier transgressive dunes, with some also supplied through erosion of Bate Bay beach and foredune.</p>	1,000 years BP to present

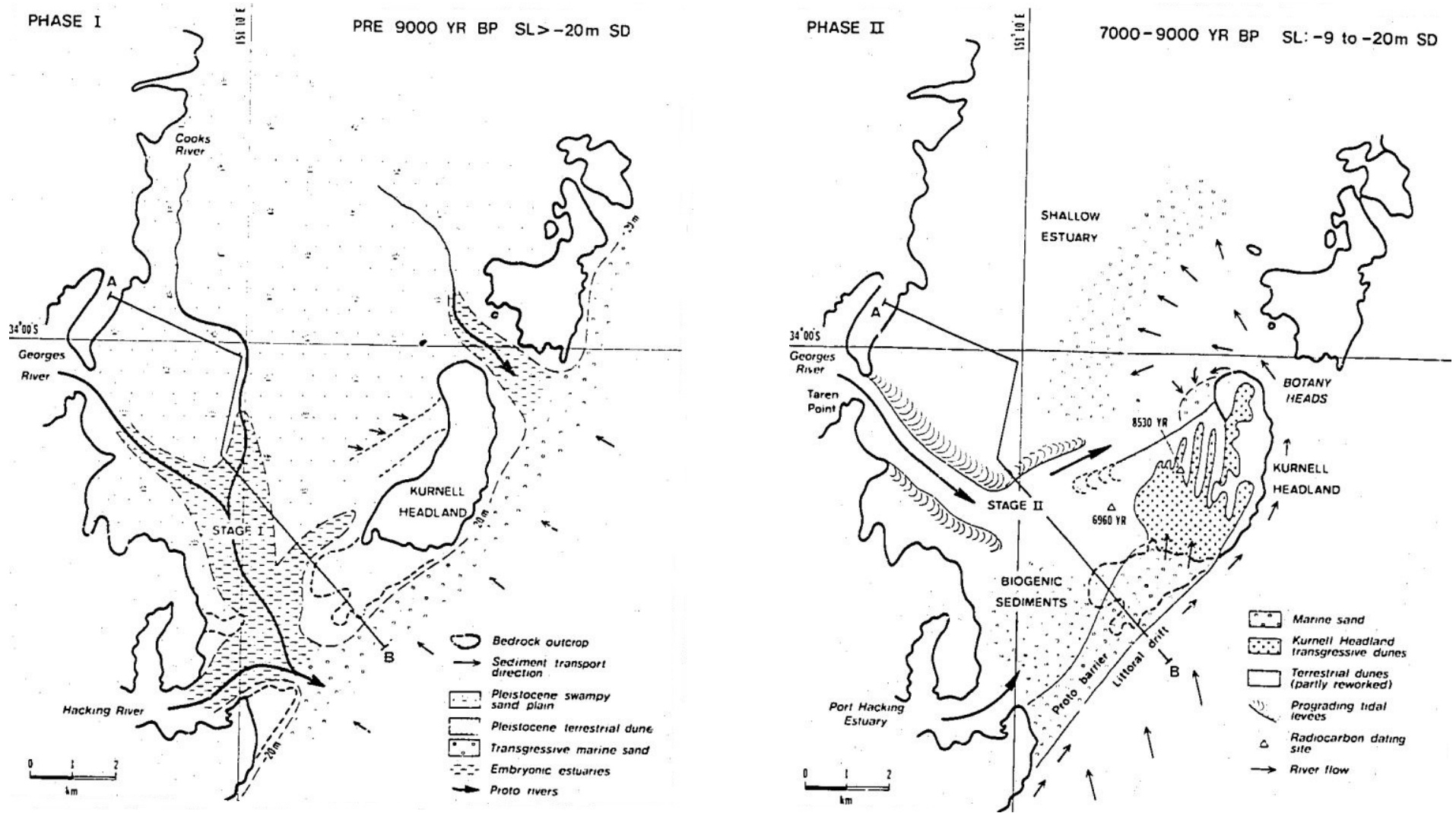


Figure 5-7 Phase 1 and 2 of Roy and Crawford's (1981) evolutionary model for the Botany Bay-Kurnell area (from Roy and Crawford, 1981: 197, 199)

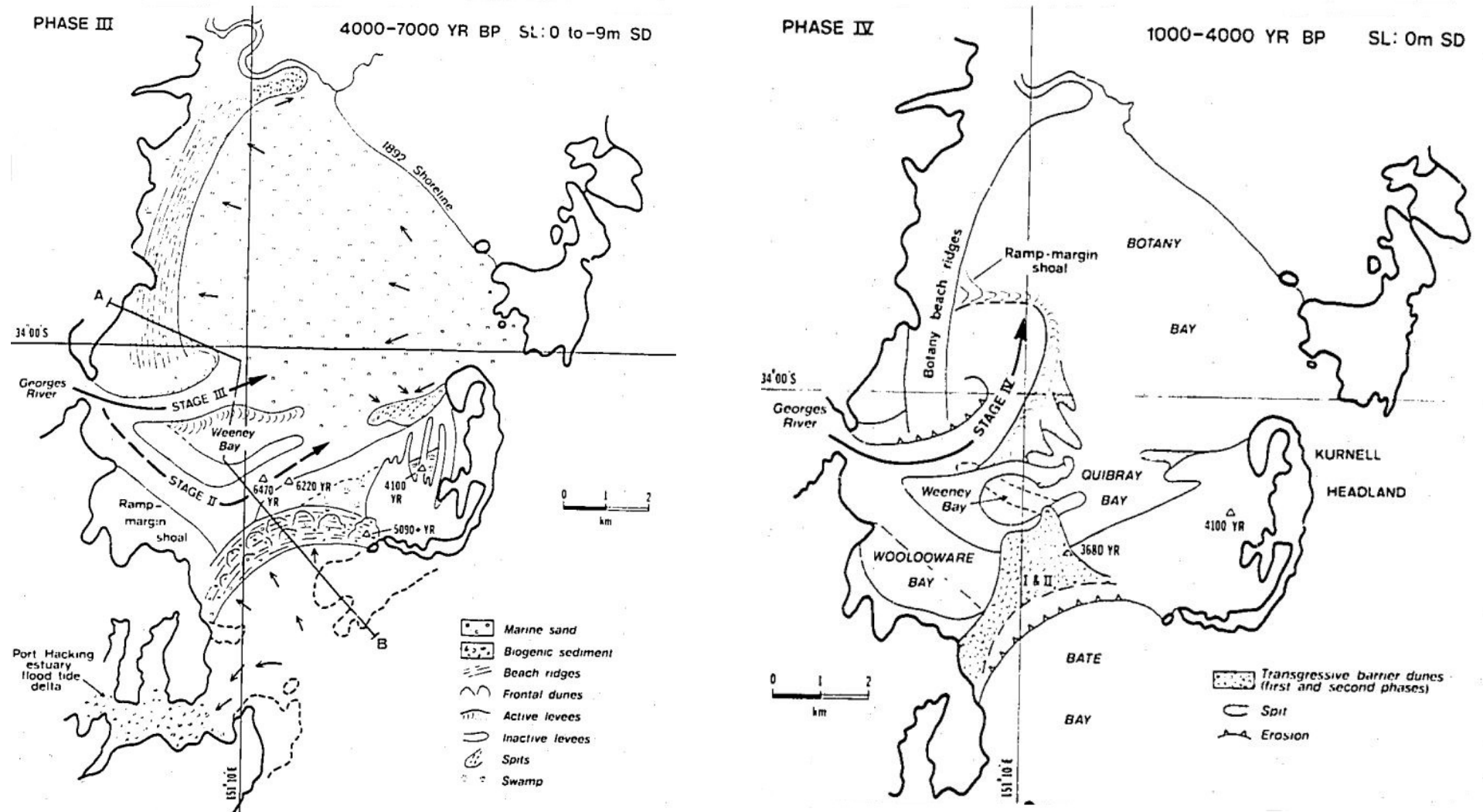


Figure 5-8 Phase 3 and 4 of Roy and Crawford’s (1981) evolutionary model for the Botany Bay-Kurnell area (from Roy and Crawford, 1981: 201, 205)

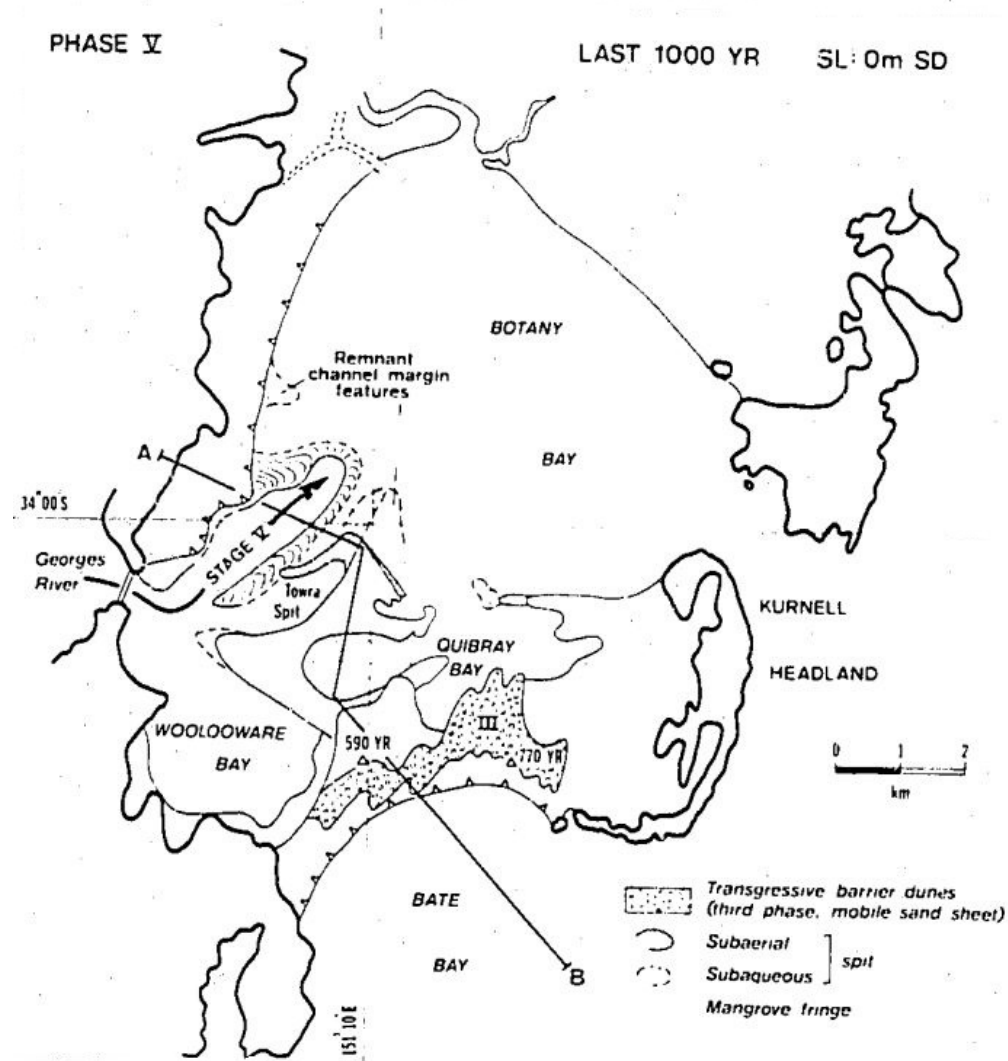


Figure 5-9 Phase 5 of Roy and Crawford's (1981) evolutionary model for the Botany Bay-Kurnell area (from Roy and Crawford, 1981: 209)

5.5 Soils

Soils within and immediately surrounding the Project Area have been mapped by Hazelton and Tille (1993) as belonging to the Disturbed Terrain (labelled as 'xx') soil landscape. Soils within this landscape are described as having been disturbed to a depth of at least 100 cm below ground level (bgl), with original soils either removed, buried, or otherwise severely disturbed (Hazelton and Tille, 1993:104). Existing soil mapping notwithstanding, available reference materials, including WSP's (2024) geotechnical investigation report for the Site (see below), suggest that the pre- and early post-European settlement aeolian landforms of the Project Area would have contained soils generally consistent with those described for the nearby Kurnell (kn) soil landscape, which is characterised as an aeolian landscape (e.g., deep (>200 cm) *Podzols* on dunes and *Podzols/Humus Podzol intergrades* in swales) (Hazelton and Tille, 1993: 86).

Geotechnical investigations of the parts of the Site were completed by WSP Australia (2024). These investigations included a multistage field program comprising the drilling of 21 geotechnical boreholes and 22 Cone Penetration Tests (CPTs) to assess soil properties and their condition. Boreholes were excavated between 0.5 to 21.02 below the ground surface and CPTs until refusal. The results of the investigation are presented in Table 5-3 and shown on Figure 5-10 and Figure 5-11. These broadly indicate that soils across the Project Area consist of a surface capping of imported aggregate material comprising sandy gravel with cobbles (Unit 1a) overlying imported sandy fill with traces of gravel associated with ground levelling during construction of the refinery (Unit 1b). As shown in Table 5-3, fill lies between 0 m and extends to a depth of approximately 2.5 m bgl WSP's Zone 2a, to 1.35 m in Zone 2b 1.4 m bgl in Zone 3. Below these fill layers, two sand units were identified, with Unit 2a comprising a fine to medium marine sand, generally of medium density, and Unit 2b comprising a texturally comparable, but much denser, marine sand with minor interbeds of peaty sand. Below this, sandstone bedrock, Unit 3, was encountered.

In boreholes BH06 and BH07 (Figure 5-10), located roughly in the centre of the Project Area, shell materials were encountered at depths of 5 m and 7.5 m, respectively. BH06 contained fill to approximately 5 m, and below this, fine to coarse-grained, grey to pale brown sand was encountered that contained "trace seashells" with a strong rotten egg odour present. Likewise, BH07 contained trace seashells at 7.5 m within a fine to coarse-grained, grey-brown sand layer. While the shell is unlikely to form part of an Aboriginal shell midden, its presence at these depths suggests the possible existence of an older, intact (i.e., undisturbed by the construction of the refinery) buried landform or an earlier stage of dune formation.

Table 5-3 Results of WSP geotechnical investigations (WSP Australia, 2024: Table 4.1)

Unit	Material	Depth to the top of unit (m)			Description
		Zone 2a	Zone 2b	Zone 3	
1a	Fill (Aggregate)	0.00	0.00	0.00	Fill associated with surface remediation on site and consists of an engineering fill capping layer of crushed aggregate material, mainly described as sandy gravel with cobbles.
1b	Fill (Sand)	1.20 - 2.50	0.38 - 1.35	0.00 - 1.40	The fill consists of fine to coarse imported sand with trace of gravel. This is inferred to be associated with ground surface levelling during construction of the former refinery.
2a	Marine Sand (Loose to Medium Dense)	1.75 - 4.50	3.05 - 3.75	3.20 - 4.65	Sand, fine to medium, generally medium dense with zones of loose sands inferred from CPT data.
2b	Marine Sand (Dense to Very Dense)	0.00 - 9.75	4.02 - 19.50	1.30 – 9.40	Sand, similar to unit 2a but dense to very dense, containing minor interbeds of peaty sand (inferred from dark grey to black washbore return).
3	Bedrock ¹ (Sandstone)	0.45 - 14.59	6.47-20.70	1.39 – 10.5	Sandstone, pale grey and brown, coarse grained, moderately to slightly weathered, very low to low strength. In general, rock quality transitions towards medium strength with depth.

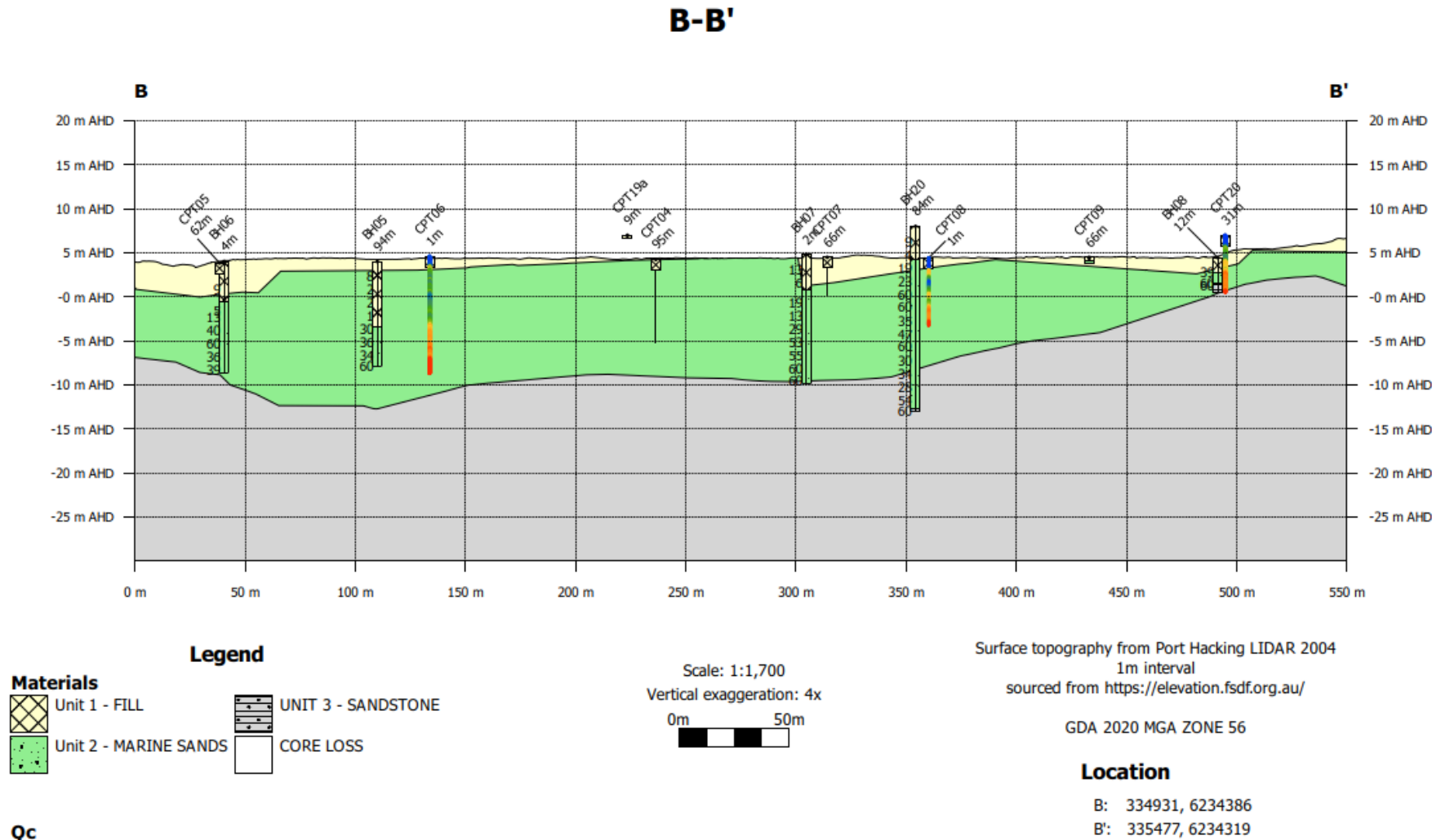


Figure 5-10 E-W cross section results of WSP's geotechnical investigations within roughly centre of Project Area (WSP Australia, 2024: Appendix A)

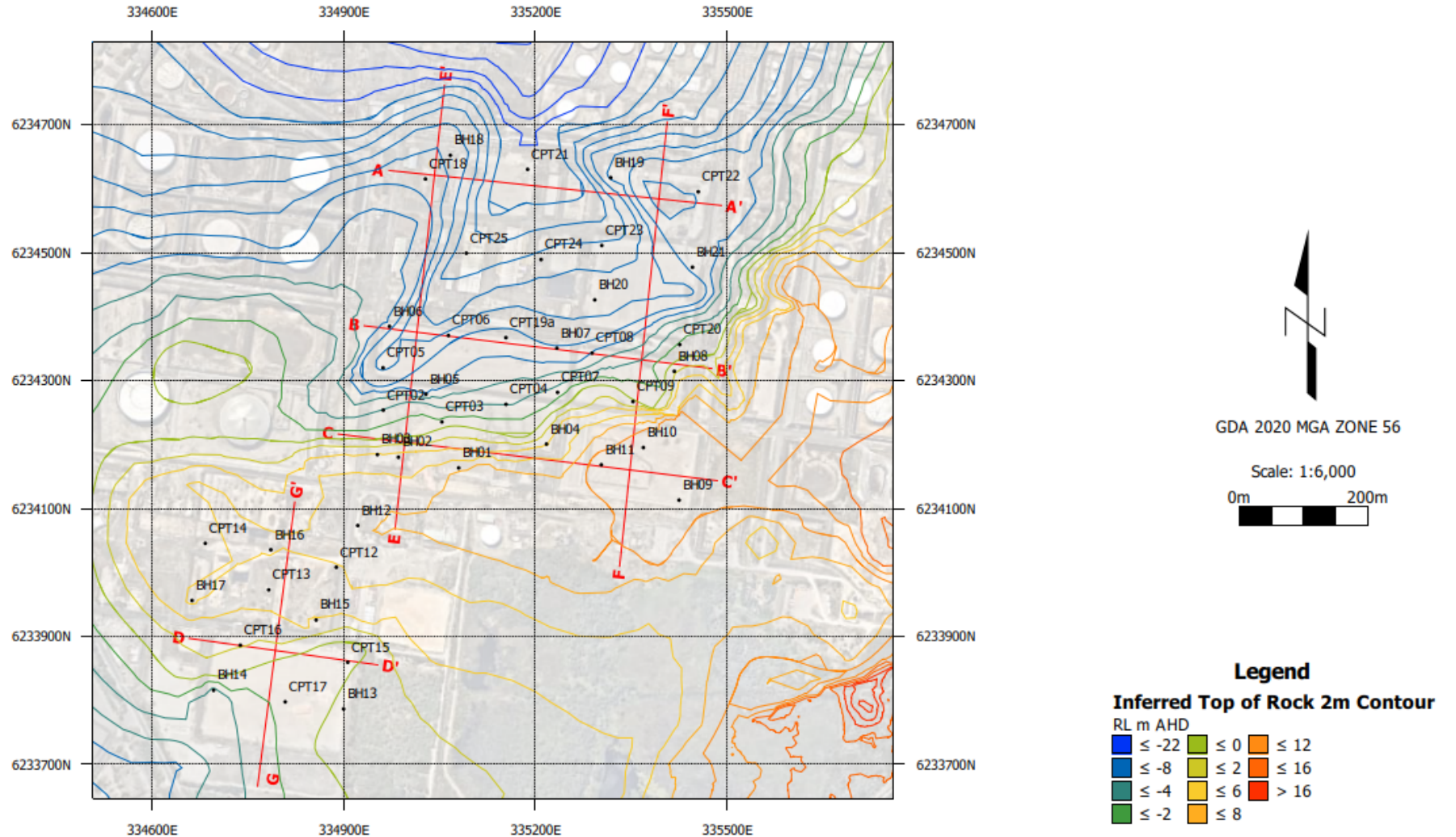


Figure 5-11 Figure showing site plan of WSP's geotechnical investigations with cross section be shown (WSP Australia, 2024: Appendix A)

5.6 Flora and fauna

Native vegetation within and surrounding the Project Area has been severely affected by historical land use activities, with available historical aerial photographs (Figure 5-13), for example, indicating complete vegetation removal during construction of the refinery in the 1950s. Historical clearance activities notwithstanding, existing topographic and vegetation datasets for the Project Area and environs suggest a pre- and early post-European settlement vegetation regime dominated by Sandstone Heaths, Woodlands, and Forests (Benson and Howell, 1994).

Swamp, marsh, and lagoon-like features shown on early parish maps (Figure 5-3), are likely to have supported a diverse suite of wetland species including a range of sedges, rushes, and aquatic herbs. Typical ground cover species in and around the freshwater lagoons and swamps of the eastern Sydney peninsula include swamp millet (*Isachne globosa*), swamp water fern (*Blechnum indicum*), tall spike rush (*Eleocharis sphacelata*), harsh ground fern (*Hypolepis muelleri*), common reed (*Phragmites australis*), cumbungi (*Typha orientalis*), *Triglochin microtuberosa*, bare twig rush (*Baumea juncea*), jointed rush (*Baumea articulata*), river bulrush (*Bolboschoenus fluviatilis*), tall sedge (*Carex appressa*), pouched coral fern (*Gleichenia dicarpa*) and spotted knotweed (*Persicaria strigosa*) (NSW Office of Environment & Heritage, 2016: 245). On the margins of standing water, red fruit saw-sedge (*Gahnia sieberiana*) can occur in high abundance, with a scatter of tall woody shrubs, such as prickly tea-tree (*Leptospermum juniperinum*), paperbark (*Melaleuca spp.*), bottlebrush (*Callistemon spp.*) and banksias, also present (NSW Office of Environment & Heritage, 2016: 255).

Although available historical records provide only limited insight into Aboriginal exploitation of plants in Sydney's coastal zone, it can be confidently asserted that the original vegetation communities of the Project Area and its environs would have supplied Aboriginal people camping within, or passing through this area with an extensive array of edible and otherwise useful plant species (see, for example, Attenbrow, 2002: 6-7). Extant native vegetation communities and locally occurring streams, swamps, and lagoons would likewise have supported a large and diverse range of economic terrestrial, aquatic and avian fauna. Historical evidence for Aboriginal peoples' use of the floral and faunal resources of Sydney's coastal zone is discussed in further detail in Section 6.0.

5.7 Historical land use

Parish maps and historical aerial photographs for the Project Area provide a framework for assessing past land uses and associated ground disturbance that have occurred within this area. Examination of Parish maps reveals that the area was initially designated as a "Reserve," intended for the allocation of mining rights or business licenses upon request from the Government. (Figure 5-12). Directly to the south of the Project Area, still on the Kurnell Peninsula, the area was proposed for noxious trades which, at the time, were being pushed to the outskirts of the city following the passing of the 1848 Slaughter House Act (Salt, 2000). Neither intensive mining or noxious trades were ultimately located on the Project Area or immediately surrounding it until the 1950s post-War period when the Australian Oil Refinery, a subsidiary of Caltex, purchased the land in order to construct a refinery that could process and distribute oil from its successful Minas Oil Fields in Sumatra, Indonesia (Hill and Knowlton Pty Ltd, 1956).

The refinery construction commenced in December 1953, starting with the clearance of native vegetation, flattening of sand dunes, and reclaiming swampland and lagoons to ready the Site. These initial tasks involved extensive earthmoving to shape and prepare the area for the installation of refinery infrastructure. Additionally, substantial quantities of dredged sands, predominantly sourced from the wharf area at Silver Beach north of the Site, Botany Bay, were imported for this purpose.

A review of historic aerials for the Project Area dated to 1943, 1947, 1956, 1979, 1994, and 2005 shown on Figure 5-13 indicate a range of activities and associated ground surface impacts within and surrounding the Project Area with almost all of these associated with the construction and operation of the Kurnell Refinery. These include:

- Construction several vehicle tracks across the area prior to 1943
- Near complete native vegetation clearance within the Project Area prior to 1956 with exception of a small section of remnant vegetation on the southern boundary

- Bulk earthworks to excavate and shape the Site to install various refinery infrastructure in 1955
- Further vegetation clearance and installation of refinery infrastructure around 1970 resulting in the complete removal of existing vegetation across the Project Area
- Ongoing development of the Site, including construction of new and removal of refinery infrastructure from the 1970s to present.

To varying degrees, all of the above-cited land use activities and associated ground surface impacts are relevant to the survival, integrity, and identification of Aboriginal archaeological evidence within the Project Area. Overall, the entire surface extent of the Project Area is considered to be highly disturbed, with no potential for Aboriginal objects/ sites to be present on the surface. With regard to subsurface potential, geotechnical investigations completed by WSP Australia (2024) indicate the presence of intact marine sands below dredged sand fill layers (i.e. below approximately 1.35 m to 2.5 m bgl; refer to Table 5-3 and Figure 5-10). These soils, as noted in Section 5.4, could be part of dunes of potential Holocene and Pleistocene antiquity.



Figure 5-12 Excerpt of undated parish map of Sutherland (Source: NSW Land Registry Services, Historical Land Records Viewer)



Plate 5-7 Aerial view of construction of the Australian Oil Refinery, 1955, with wharf in the background (Source: State Library of NSW, Australian Photographic Agency – 00036)



Figure 5-13 Aerial photographs of the Project Area (Source: Land and Property Information NSW)

5.8 Key observations

Key observations to be drawn from a review of the existing environment of the Project Area are as follows:

- Historical land use activities have resulted in radical changes to the natural topography of the Project Area. Nonetheless, available reference materials indicate that land within this area formerly comprised part of a broader aeolian landscape characterised by gently undulating to rolling coastal transgressive and relict dunes, as well as swales, lagoons, marsh and swamps with much of it covered in a relatively thick, but low lying heathland
- No watercourses are located within the Project Area. Nonetheless, early parish maps for the Project Area and environs indicate the former presence of lagoons, marshland, and swamps
- Prior to the formation of the Kurnell Peninsula tombolo, around 9,000 years ago, when the sea level was approximately 30 m below its present level and Botany Bay not submerged, a complex network of watercourse flowed across the bay into the sea which was several kilometres to the east at the time. One of these watercourses, the “Kurnell River” (after Albani and Rickwood, 1998) flowed across the southern part of the bay between the peninsula and the mainland, with its headwaters located near the Project Area
- The Project Area falls within an area mapped as Holocene-aged transgressive headland dune that overlay Pleistocene terrestrial dunes. Geotechnical investigations completed by WSP Australia (2024) indicate the presence of intact sands likely belonging to these dunes below the fill layer (i.e. below approximately 1.35 m to 2.5 m bgl; refer to Table 5-3 and Figure 5-10) and above the bedrock
- Native vegetation within the Project Area has been completely removed by historical land use activities. Historical clearance activities notwithstanding, existing topographic and vegetation datasets for the Project Area and environs suggest a pre and early post-European settlement vegetation regime dominated by one or more wetland vegetation communities
- Prior to European settlement, the floral and faunal resources of the Project Area and its environs would have been sufficient to facilitate intensive and/ or repeated occupation by Aboriginal people
- Freshwater lagoons and swamps within and surrounding Project Area would have been focal resource zones for Aboriginal people camping within or travelling through the area.

6.0 Archaeological context

This section describes the archaeological context of the Project Area on a regional and local scale. Archaeological data of relevance to this area, including the results of previous archaeological investigations within and surrounding the Project Area, are reviewed in order to contextualise the results of the current assessment.

6.1 Regional context

6.1.1 The Sydney region

Available archaeological data indicate that Aboriginal people have occupied the Sydney region¹ for at least 36,000 years (Williams *et al.*, 2014). Late Pleistocene/ early Holocene occupation of the region is evidenced by radiometric dates from both coastal and hinterland sites (see Attenbrow, 2010:18, Table 3.1). Excavated material culture assemblages from these periods have been interpreted as evidence of relatively small populations of Aboriginal people employing settlement patterns of high residential and low logistical mobility (Attenbrow 2010:152-154; McDonald, 2008: 39; Williams *et al.*, 2014). Late Pleistocene/ early Holocene chipped stone assemblages attest to a preference for silicified tuff sourced from secondary geological sources, such as the Hawkesbury-Nepean River gravels (McDonald, 2008; Williams *et al.*, 2014). However, they also indicate the exploitation of other raw material types such as silcrete, quartzite, petrified wood, and quartz. Direct freehand percussion appears to have been the dominant reduction technique employed by Late Pleistocene/ early Holocene Aboriginal knappers, with bipolar flaking comparatively poorly represented in available assemblages. Retouched ‘tools’ include unifacially-flaked pebble implements, dentated saws, burins and a variety of scrapers, with unmodified utilised flakes also well represented (Kohen *et al.*, 1984; Williams *et al.*, 2014). Stone tools such as these would have been complemented by a range of organic implements such as wooden digging sticks, spears, and boomerangs. However, these do not survive archaeologically (Attenbrow, 2010:154).

Compared with the late Pleistocene/ early Holocene, archaeological evidence for mid-to-late Holocene Aboriginal occupation of the Sydney Region abounds (Attenbrow 2010; McDonald 2008). In keeping with broader Australian developments (e.g., Allen and O’Connell, 1995; Beaton, 1985; Brumm and Moore, 2005; Attenbrow *et al.*, 2009; Lourandos, 1983, 1997; Lourandos and Ross, 1994), the social and economic systems of Aboriginal groups living in the region during this period appear to have become increasingly complex. Available archaeological data, for example, suggest a significant increase in site establishment and population densities over time, as well as a concomitant growth in the size and complexity of social aggregation (but see Attenbrow (2012) and Hiscock (2008) for cautionary notes on the interpretive significance of radiometric date graphs). Growing economic specialisation is indicated by the emergence and/ or proliferation of complex fishing and stoneworking technologies, with the latter linked variously to increased foraging risk associated with greater climatic variability as well as other variables such as redefinition of social space, reduction of resources and increased logistical pre-equipping (Attenbrow *et al.* 2009; McDonald, 2008: 40). Complex, long-distance exchange networks are also attested archaeologically (e.g., Attenbrow *et al.*, 2012; Grave *et al.*, 2012) as are important developments in artistic activities (McDonald, 2008). Higher levels of stylistic heterogeneity in pigment and engraved art across the region, for example, have been linked to increasing territoriality (McDonald, 2008: 42).

With some modification, McCarthy’s (1967) *Eastern Regional Sequence* (ERS) of stone artefact assemblages remains the dominant chronological framework for Aboriginal occupation of the region (Table 6-1). Based on appreciable changes in the composition of chipped stone artefact assemblages over time, the ERS hypothesises a three phase sequence of ‘Capertian’ (earliest), ‘Bondaian,’ and ‘Eloueran’ (most recent) assemblages and was developed on the basis of McCarthy’s (1948, 1964) pioneering analyses of stratified flaked stone assemblages from Lapstone Creek rockshelter, on the lower slopes of the Blue Mountains eastern escarpment, and Capertee 3 rockshelter in the Capertee Valley north of Lithgow. At present, the most widely cited characterisation of the ERS in the Sydney region is that of a four-phase sequence beginning with the *Pre-Bondaian* (McCarthy’s *Capertian*) and

¹ Following Attenbrow (2012a), the land bounded by the coast on the east, by the Hawkesbury-Nepean River in the north and west, and by a line running east-west through Picton and Stanwell Park in the south.

moving successively through the Early, Middle, and Late phases of the *Bondaian*, the last of which equates to McCarthy's (1967) *Eloueran* phase. The tripartite division of the Bondaian is based principally on the presence/ absence and relative abundance of backed artefacts (Attenbrow, 2010: 101). However, other factors, such as changes in the abundance of bipolar artefacts and different stone materials, as well as the presence/ absence of edge-ground hatchet-heads are also relevant.

Table 6-1 McCarthy's (1967) Eastern Regional Sequence (ESR) of stone artefact assemblages

Current phasing	McCarthy's (1967) Phasing	Approximate date range	Backed artefact frequency	Bipolar artefacts	Edge ground hatchet heads
Pre-Bondaian	Capertian	36,000-8,000 BP	Absent	Rare	Absent
Early Bondaian	Bondaian	8,000-4,000 BP	Very low	Rare	Absent
Middle Bondaian		4,000-1,000 BP	Very high	Increasingly common	Present
Late Bondaian	Eloueran	1,000 BP to European contact	Low	Very common	Present

6.1.2 Kurnell Peninsula

The Aboriginal archaeological record of the Kurnell Peninsula is well-researched, with investigations of this record having been undertaken since the early 20th century, beginning with the identification of numerous Aboriginal midden sites by Doak and Macauley-Doyle (1927). These early works were followed by a number of subsurface investigations of midden sites in the 1960s (Megaw, 1968), in the 1970s (Dickson, 1971; 1974; 1977), in the 1980s (Byrne, 1986; 1987), and more recently by Irish (2009), to name some of the larger excavations. Investigations to date have generated a large body of archaeological data concerning pre contact Aboriginal settlement and subsistence patterns across the peninsula, with numerous Aboriginal archaeological sites having been identified and investigated in varying degrees of detail. While many of these sites remain undated, based on the geomorphological formation of peninsula, most are thought to be of mid-to-late Holocene antiquity. Evidence for 'early' (i.e., Late Pleistocene/ early Holocene) Aboriginal occupation of the peninsula remains scarce, with occupation evidence of this antiquity obtained from only one site: Doughboy Head (12,190 ± 110 years BP), a hearth recorded by Smith et al (1989). However, this date has been disputed due to the associated artefacts being Bondaian or post-Bondaian in character (Brayshaw et al 1992:7), as well as inadequate documentation of collection procedures (Dallas 1996:9). Table 6-2 presents all radiocarbon dates obtained from sites within the peninsula.

Table 6-2 Radiocarbon dates from Kurnell Peninsula Aboriginal sites (modified from Dallas 2002b:Table 2.2)

Site name	Site type	Radiocarbon dates (years BP)
Captain Cook's Landing Place (#53-3-0219)	Midden & burial	360 ± 110 (ANU-722) – Upper midden 1,330 ± 100 (ANU-721) – Lower midden
Boat Harbour (#52-3-0216)	Midden	470 ± 80 (ANU-896) – Top of midden 1,950 ± 100 (ANU-895) – Base of midden
McCue Midden	Midden	470 ± 80 (ANU-896) – Top of midden 1,950 ± 100 (ANU-895) – Base of midden
Botany Cone Swamps 5; (BCS5; (#52-3-0694)	Midden	1,520 ± 90 (SUA-2857) – Hearth
Quibray Bay (#52-3-0210)	Midden & burials	2,210 ± 360 (ANU-261) – Burial 3,680 ± 110 Midden
BHW; Kurnell Peninsula (#52-3-0724)	Midden	2,402 ± 88

Site name	Site type	Radiocarbon dates (years BP)
Cronulla STPI (#52-3-1101)	Midden	3,240 ± 70 (WK-8845) – Midden 3,680 ± 110 Midden
Potter Point (#52-3-0218)	Midden	5,670 ± 70 (ANU-402) – Peat overlying pebble tool
Doughboy Head 2; DH2 (#52-3-0704)	Midden	12,900 ± 110 (Beta-36920) – Hearth (problematic date)
BB4/B	Midden	1,069 ± 120 (ANU-720) – Midden
BB4/F4	Midden	1,293 ± 120 (ANU-721) – Midden
BB4/F4	Midden	350 ± 100 (ANU-722) – Midden

Current AHIMS data for the eastern Kurnell Peninsula, presented in Table 6-3, show that shell middens and open artefact sites are the most common Aboriginal site types, with other, less common types including areas of PAD, burials, and a single example of a rock engraving. Shell midden sites include examples with multiple forms of archaeological evidence such as stone artefacts, oven mounds, resource and gathering items, and burials attest variously to activities such as food preparation and consumption, organic and non-organic tool manufacture, and the burial of the dead (Attenbrow, 2010b; McDonald, 2008; Donlan, 1995). As shown on Figure 6-1, previously identified Aboriginal sites occur across the entire peninsula.

Archaeofaunal assemblages from the Kurnell Peninsula indicate the exploitation, for food and other purposes, of wide range of terrestrial and aquatic resources, with fish and shellfish forming a particularly important part of the diet of people living along the coast and estuaries (see Attenbrow, 2002: 19-22, Tables 4-6). Excavated stone, bone, and shell artefact assemblages, meanwhile, attest to the production of a variety of implements for use in day-to-day subsistence activities such as fishing and hunting. Common excavated types include shell fishhooks and 'scrapers,' bone points and backed stone artefacts (Attenbrow, 2002: 23-25). Ground implements include edge-ground hatchet heads and ground stone files (also known as fishhook files) (Attenbrow, 2002, 2010a).

Table 6-3 AHIMS site data for the Kurnell Peninsula (as of June 2024).

Site type	Number	%
Midden	48	60
Open artefact site	22	27.5
PAD	5	6.25
Burial	4	5
Rock engraving	1	1.25
Total	80	100

A detailed review of archaeological investigations completed for the Kurnell Peninsula is provided in Section 6.2.2.



Figure 6-1 AHIMS registered Aboriginal sites across the eastern Sydney peninsula (June 2024)

6.1.3 McDonald's (2008) Behavioural Land Use Model

Drawing, in particular, on the results of several large-scale archaeological salvage projects across the northern Cumberland Plain, including those undertaken for the various stages of the Rouse Hill Infrastructure Project (e.g., Jo McDonald CHM, 2001, 2005), McDonald (2008) has proposed a behavioural model for prehistoric Aboriginal land use in the Sydney region. Developed in partnership with lithic analyst Beth White over several years, McDonald's (2008) model remains the most comprehensive model of its type for the region. The model, which differs from existing land use models for the region (i.e., Kohen, 1986, 1988; Kohen & Lampert, 1987; Ross, 1976, 1988) in its explicit, dual emphasis on stone artefact technology and rock art, is summarised below.

According to McDonald's (2008) model, Aboriginal groups occupying the Sydney region during the late Pleistocene/ early Holocene were highly mobile. Groups travelled considerable distances between base camps and camped proximate to exploited resources (McDonald, 2008:39). Group territories at this time were large and the preferred raw material for flaked stone tool manufacture was silicified tuff. This raw material was sourced principally from the Hawkesbury-Nepean River gravels (McDonald, 2008:40). Transported lithics were used in woodworking and animal butchery and comprised large cores and simple flake-based implements. Though large, transported cores and implements served as portable raw material supplies and were curated. Backed artefacts were rarely produced during these periods (McDonald, 2008:40). In the late Pleistocene, rock art served as a communicative medium for emphasising broad-scale group cohesion. Social networks at this time were more open and extensive than those recorded at contact (McDonald, 2008:41).

Rising seas associated with the Post-Glacial Marine Transgression (c.21-6.5ka) forced groups previously occupying the region's coastal plain inland. Former low lying valleys and flats were converted into bays and estuaries. Initially, population densities remained relatively low. However, over time, these increased dramatically, necessitating social mechanisms to mediate uncontrolled and potentially hostile interactions between groups (McDonald, 2008:349). Pigment and engraved art were one of several such mechanisms and was now used to assert both local group distinctiveness and larger-scale (i.e., cultural bloc) cohesion. By 4,000 BP, groups were occupying smaller territories on a more permanent basis. Groups occupying the Cumberland Plain and surrounding sandstone country now did so on a full time-basis though movement between biogeographic zones still occurred (McDonald, 2008:40). Rockshelters in the latter zone were increasingly used for artefact manufacture and discard. Mobility strategies became increasingly logistically-organised, with groups exploiting the resources of well-defined foraging ranges out of base camps located in environmentally strategic locations (i.e., in terms of resource availability) (McDonald, 2008:40).

The stone artefact technology being employed by Aboriginal people occupying the Sydney region underwent substantial change as a result of these broader changes in demography and settlement organisation. Locally available lithic raw materials were increasingly utilised and there was an overall diminution in the size of utilised toolkits (McDonald, 2008:40). On the Cumberland Plain, silcrete was the preferred raw material and was frequently heated to improve flaking quality. Stone packages were most commonly prepared at exploited stone sources before being transported to residential and other task-specific sites for further use. Blanks selected for reduction were typically reduced via freehand percussion, with bipolar reduction sometimes also utilised. Various core reduction methods were employed, with asymmetric alternating flaking frequently used. During the Middle Bondaian period (c.4,000 to 1,000 years BP), backed artefacts were manufactured in large numbers across numerous sites, with 'industrial' scale production occurring at some sites. These tools were utilised in range of craft and subsistence activities including bone-working, wood-working, plant processing, and animal butchery.

During the Late Bondaian period (c.1,000 years to European contact), there was a reduced emphasis on the occupation of rockshelters, with open camp site locations now foci for habitation. This shift away from rockshelters was a response to the increased spatial requirements of larger social groups associated with a dual social system (McDonald, 2008:349). During times of seasonal abundance, groups lived in large, semi-permanent open 'villages.' However, in times of resource stress, these larger groups dispersed into smaller family or gender-based hunting/ fishing groups who reverted to exploiting their traditional foraging ranges. An increased emphasis on bipolar flaking during this period was linked to an even more intensive use of locally available stone. In coastal areas, backed artefacts all but ceased to be produced. Edge-ground hatchets were widely made and used across the region. As in earlier periods, rock art during the Late Bondaian continued to function as an important communicative

medium for the assertion of both local group identity and broader culture area cohesion (McDonald, 2008: 350).

6.2 Local context

6.2.1 AHIMS database

The AHIMS database, administered by Heritage NSW, contains records of all Aboriginal objects in accordance with Section 89A of the *National Parks and Wildlife Act 1974*. It also contains information about Aboriginal places, which have been declared by the Minister to have special significance with respect to Aboriginal culture. Previously recorded Aboriginal objects and declared Aboriginal places are known as 'Aboriginal sites.'

A search of the AHIMS database was undertaken on 10 November 2023 for a 4 x 4 km area centred on the Project Area. A total of 70 Aboriginal archaeological sites were identified within the search area comprising 42 middens, 20 open artefact sites (i.e., artefact scatters and isolated artefacts), four areas of Potential Archaeological Deposit (PAD), three burials and one rock engraving (Figure 6-2). Consideration of the locations of previously recorded sites indicates that none are located within the Project Area, with the closest being a PAD - "Captain Cook Drive PAD 1" (AHIMS ID#52-3-2061) - located 80 m to the west of the Project Area.

6.2.2 Previous Aboriginal archaeological investigations

Previous archaeological investigations within the Project Area have been limited to a surface survey conducted by Australian Museum Business Services (AMBS) (2013) for the Kurnell Refinery Conversion Project. This limited investigation is a consequence of the refinery's construction in 1950, prior to the implementation of the NPW Act (1974), as well as its continuous use since that time. Nonetheless, the Kurnell Peninsula is well researched having been the focus of multiple investigations incorporating both archaeological survey and test excavation since the 1920s. For contextual purposes, the results of several relevant investigations carried out in the general vicinity of the project area are summarised below.

In 1968 and 1971, Megaw completed trial excavations on the foreshore of Botany Bay, in the vicinity of the 'Watering Place' marked by Cook on his 1770 chart, which identified a large Aboriginal shell midden containing various artefacts. Following this, more extensive excavations were completed at the site between December 1970 and January 1971. Two bore holes were excavated in the midden to its maximum depth of c. 2 m bgl, resulting in the identification of a number of shell types and flaked stone artefacts including a large number of ground-edge axes, hammerstones, and anvils. Alongside these, a great number of bone points, fish hooks (from shell), and files (sandstone) were also recovered. Faunal remains included wallaby, kangaroo, dingo, and a large number of fish bones of a variety of species.

In 1971, Dickson completed preliminary excavations of a midden (BH1) at Boat Harbour, Kurnell. Three large middens were identified on the eastern side of the harbour. While badly eroded, all three contained undisturbed sections. The eroding talus of the middens included shell and bone materials as well as stone artefacts in small numbers. One of these middens (BH1) was selected for excavation, which included a horizontal trench 1 m wide, and 2 m back was cut into the face of the midden. Three principal layers were observed by Dickson in the midden deposit:

- a. Top layer of overburden capped with grass and consisting of yellow sand with grass roots, approximately 1 m thick
- b. Midden layer of black sand with shell layers of varying texture and thickness
- c. Black sand layer, apparently without shell, progressively lightening in colour downwards over approximately 80 cm.

Recovered materials included shell material, fish hooks, hook files (sandstone), and blanks, as well as bone points and various stone tools. Dickson suggests that changes in shell materials throughout the deposit—for example, larger shellfish present in the upper layer but not in the lower layers—are due to dune movements restricting or allowing access to various species over time. Two radiocarbon dates were obtained from the excavation: ANU-895 1930 ± 70 years BP for the base layer and ANU-896 470 ± 80 years BP for the top layer.

In 1974, Dickson completed an archaeological excavation of midden BH2, located in close proximity to previously excavated site BH1. Excavation at BH2 followed some preliminary ground surveying and testing with auger holes. The midden, which was half destroyed by natural erosion and vandalism, lay on a dune/ hillock of wind-blown sand. A small trench measuring approximately 2 x 1 m, was excavated within the centre portion of the midden and taken to a depth of 100 cm b.g.l. Materials recovered from the excavation included various shells, crab claws, bones (mainly fish but also small birds and mammals), shaped bone points, and stone tools. Multiple ash lenses, as well as hearthstones, were found throughout the deposit indicating the former presence of hearths. BH1 and BH2 contained the same species of shellfish and fish, with a general resemblance. However, BH1 had shellfish hooks in the upper layers and bone points in the lower layers, whereas BH2 had no hooks but bone points throughout, along with differences in the presence of fish hook files and blanks.

In 1977, Dickson completed an archaeological survey at Boat Harbour Reserve. The purpose of the survey was to identify shell midden sites in the area. During the survey, surface artefacts were identified in various locations, as well as several midden sites. Alongside the two middens previously excavated by Dickson (BH1 and BH2), he noted three other middens—BH3, BH4, and BH5—in various conditions.

In 1986, Denis Byrne completed an Aboriginal heritage assessment for a proposed sand quarry at the Lindum Road Reserve in Kurnell, which contained remnants of an original east-west oriented dune that had been subjected to quarrying. The assessment included an archaeological survey that noted the presence of previously recorded midden sites (Quibray Bay #1) and identified one new artefact scatter site over an area of 50 m² (Quibray Bay #2). Artefacts included a silcrete backed blade, chert cores, and several retouched and unretouched flaked pieces.

In 1987, Byrne completed archaeological test excavations in a midden site (Quibray Bay #1). Two mounded midden deposits were subject to test excavation, with one 0.25 m² test pit excavated into each mound. At Deposit #5, excavations revealed a midden layer approximately 10 cm thick, overlain by a surface covering of loose, light-coloured sand. Below these, two stone artefacts were recovered from 25-30 cm. At Deposit #7, the midden material was also about 10 cm thick and overlain with light-coloured sand. Materials recovered from the test pits included shell (Pyrazus, Andara, and Ostrea), fish bone, and charcoal fragments. Only two stone artefacts were recovered from the excavation. Byrne interprets the site as representing a number of discrete events associated with resource gathering from the nearby estuarine mudflat/ mangrove environment.

In 1987, Byrne completed archaeological test excavations at an artefact scatter site (Quibray Bay #2) he identified the year earlier. Two 1 m² test pits were excavated within the boundary of the site. At square P13, one stone artefact was recovered from around 10 cm. At square P41, two stone artefacts were recovered from about 5 cm depth. Alongside the small number of stone artefacts recovered, fragments of shell were also found; however, the site was not classified as a midden. Surface material previously identified was collected, comprising about 400 items of silcrete (58%), quartz (15%), petrified wood (12%), mudstone (1%), and chert (9%). Artefacts comprised primarily unmodified flakes (91%) as well as backed blades, retouched flakes, and cores.

In 1989, Smith et al. completed a management study for the Kurnell Peninsula consisting of two volumes. The first volume provides a detailed background of the known sites on the Kurnell Peninsula, as well as geomorphological background and a survey plan. The second volume includes the results of a nine-day archaeological survey across the area. Thirty sites were recorded during the survey, including an engraving site, middens, hearths, and artefact scatters. Smith undertook dating of charcoal from one of the identified hearths, which returned the oldest date for the peninsula: Beta-36920, 12,190 ± 110 years BP. However, this date has been disputed due to the associated artefacts being Bondaian or post-Bondaian in character (Brayshaw et al 1992:7) and inadequate documentation of collection procedures (Dallas 1996:9).

In 1992, Brayshaw McDonald Pty Ltd was engaged to complete an excavation at midden site BHW, previously identified by Dickson the year earlier. Two field programs, comprising five days in total, were spent excavating the midden, which included trenching, controlled excavation, and bulk removal. A total of 881 stone artefacts were recovered, comprising flakes, cores, backed blades, as well as hammerstones, sandstone slabs (files), and anvils. Raw materials included silcrete, Fine Grained Siliceous (FGS), petrified wood, quartz, quartzite, and sandstone with silcrete being the dominant material. Faunal materials included bones from fish, mammals, and birds. Shell material included at

least 15 different species, including cockle, mussel, abalone, pippa, and oyster. Overall, the small size of the midden is assessed as not representing a repeatedly occupied base camp.

In 1994, Mary Dallas undertook an archaeological survey of a large parcel of land consisting of dunes located behind Cronulla Beach on the Kurnell Peninsula for the Towrah Lakes Project. During the survey, no Aboriginal sites were identified in the dunes, which was suggested to be a result of mining and the transgressive nature of the dunes. Nonetheless, some undisturbed sections of the dunes were noted as having archaeological potential, but testing was not deemed possible due to their unconsolidated nature.

In 2003, Jo McDonald CHM undertook archaeological test excavations across an approximate 20 ha plot of land for a proposed industrial complex located directly to the west of the Kurnell Refinery. The test excavations comprised 22 'bobcat' test pits of various sizes and depths, with a maximum depth of 2.4 meters excavated. The excavations explored what were likely beach sand dune ridges, as reflected by the sandy soil material encountered in many pits. In test pits excavated to sandstone bedrock, a clay layer was found sitting above the bedrock, suggested to be a result of sandstone bedrock weathering. Numerous pits contained artificial fill in the upper layers, reflecting significant historical disturbances. No Aboriginal objects or cultural materials were recovered during the test excavation program. However, one surface scatter was identified on the edge of a sandy track.

In 2003, Jo McDonald CHM undertook test excavations at Serenity Cove Business Park, a 16-hectare parcel of land located 600 meters west of the Kurnell Refinery and immediately to the west of the area tested for the industrial complex. Twenty-eight backhoe trenches were excavated across the area, with only one (BHT-27), located in the southwest corner of the site, intercepting archaeological material, including shell and bone associated with a midden site. The midden material was identified below a fill layer that ceased above a dark black sand layer, indicating the start of the midden at a depth of 2.4 m bgl. Four strata were observed including:

1. Fill
2. Yellow/brown coarse sand
3. Black organically rich sand
4. Light grey sand (midden deposit).

The results suggested that the midden material encountered was an extension of a previously recorded midden site 52-3-1110 that extended to the west outside their study area.

In 2004, Susan McIntyre-Tamwoy completed archaeological test excavations for proposed upgrades to existing roads and the car park within the Kurnell Meeting Place. A total of seven backhoe excavations were completed within the area. No stone artefacts or materials associated with a midden were identified during the excavations. In all but one test pit, the materials encountered were artificial fill. In Test Pit 2, located in the existing car park, natural sand associated with a dune was encountered below a fill layer to a depth of greater than 2.9 m.

In 2007, Navin Officer completed an Aboriginal heritage assessment for a proposed Sydney Water pipeline that passed along the western side of the refinery following Caption Cook Drive. While no Aboriginal archaeological sites were identified during the survey, an area of PAD was noted along the alignment – Kurnell Pipeline PAD. The PAD, which was not registered on AHIMS, was assigned moderate potential with a small part of it potentially occurring with the refinery. This area was later inspected by AMBS (2013) and determined to be highly disturbed and having no Aboriginal archaeological potential.

In 2009, Paul Irish completed monitoring and salvage excavations within the Meeting Place Precinct of the Botany Bay foreshore. The works were undertaken to fulfil the recommendations from earlier Aboriginal and European archaeological test excavations for the 2008/ 2009 Meeting Place Project, which included new walking tracks with interpretive signage, native vegetation replanting, ferry wharf upgrades, reopening Cooks Stream, burying overhead powerlines, and installing visitor facilities. Excavations in the area began with an initial small mechanical trench, 0.5 m in width, that was excavated in 5-10 cm spits and then enlarged to a broader open area. Recovered material was wet sieved, with disturbed or redeposited midden material encountered across much of the area. In addition, human bones (left tibia, patella, and phalanges) were recovered in the disturbed midden

deposit and were assessed as older than 100 years and of probable Aboriginal origin. The midden contained both stone artefacts and faunal materials (shell and bone). Stone artefacts included 78 items comprising flakes and flake debitage, retouched flakes, heat shatter, bipolar cores, hammerstones, ochre, and manuports. Raw materials were predominantly quartz, FGS, and petrified wood. Bone artefacts included 26 bone points as well as multiple bone pieces that may have been utilised in some fashion. Shell artefacts included 14 fishhooks, shell cores, shell blanks, and shell scrapers. A charcoal sample from the northern end of Trench B was dated to between 780 and 1240 years ago. Additionally, two charcoal samples from Trench F, one from the middle of the deposit and the other from near the bottom, were dated to between 200 and 590 years ago and 985 and 1,415 years ago, respectively.

In 2014, Mary Dallas Consulting completed archaeological test excavations to subdivide the site of the former Abbotts Pharmaceuticals Factory. It was known that prior to the development of the site, approximately 1 m of sand was spread across the area to make it level, and that below this layer, original sand that might contain cultural materials could be present. A total of 29 mechanical trenches were excavated across areas of identified high archaeological sensitivity, with mechanical excavation ceasing when natural A1 soil profiles were encountered. Where these soils were encountered, manual excavation was undertaken. Small numbers of stone artefacts (~40), ochre pieces, and shell materials (oyster, whelk, and cockle) were recovered during the excavation, with the majority of these found in the southwestern corner of the site. Alongside these materials, the old Quibray Bay shoreline dune was encountered intact. Soil profiles with cultural material generally comprised a darker sand topsoil within which the material was present, overlaying a lighter sand. Overall, it was concluded that much of the shoreline dune was still intact below the fill in the area.

In 2013, AMBS completed a Heritage Impact Assessment (HIA) for the Kurnell Refinery Conversion project which focused on historical heritage assessment but also included an assessment of impacts to Aboriginal heritage. The assessment included survey and an inspection of two geotechnical test pits excavated by Caltex into fill layers that are located within the current modification area. No Aboriginal heritage sites, objects, places or areas of archaeological potential were identified during the survey or in the pits. Moreover, AMBS (2013) inspected the PAD area identified by Navin Officer in 2007 (Kurnell Pipeline PAD) and assessed the portion located within the refinery as disturbed and having no archaeological potential. Accordingly, AMBS (2013) recommended no further Aboriginal assessment was required,

In 2014, AMBS completed an Aboriginal heritage assessment for the Caltex Kurnell Refinery Modification 1, for proposed demolition works onsite. No archaeological survey or test excavations were conducted as part of the assessment as the assessment concluded, on the basis of previous surveys and consideration of historical disturbances, that there were unlikely to be any areas of intact archaeological deposits within the area.

In 2017, AMBS completed an archaeological survey within a parcel of land located adjacent to Captain Cook Drive for the proposed development of a distribution centre and warehouse. While no Aboriginal objects or cultural material were identified during the archaeological survey, shell material was noted in several places. Significant ground surface disturbances were observed across the area, including levelling and construction of a concrete hardstand area; however, it was concluded that there was some potential for archaeological deposits below the disturbance layers. Accordingly, archaeological test excavation was recommended prior to any impacts.

In 2021, Coast History and Heritage completed an archaeological survey of a 68 ha parcel of land proposed for the construction of a resource management facility in the western part of the Kurnell Peninsula, which was formerly mined for sand and is slated for development. No Aboriginal sites were identified during the archaeological survey. Nonetheless, areas of subsurface archaeological potential were noted in the eastern part of the area, which may contain buried intact landscapes. Recommendations were made to avoid impacts on these sensitive areas.

In 2023, Coast History and Heritage completed an archaeological survey within the Kamay Bay National Park to guide planned upgrades to the park. No new archaeological sites were identified, rather previously recorded sites and areas of archaeological sensitivity were noted that would require conservation, test excavation, or monitoring.



Legend

- Project Area
- Roads
- Watercourses
- AHIMS Sites
- Midden
- Midden;Open artefact site
- Open artefact site
- PAD
- Site Boundaries

AHIMS Sites
Aboriginal Cultural Heritage Assessment Report
AECOM

0 250 500 m

Figure 6-2 AHIMS sites – Vicinity of the Project Area

6.3 Key observations

Key observations to be drawn from a review of the archaeological context of the Project Area are as follows:

- Available radiometric dates indicate that Aboriginal people have occupied the Sydney region for *at least* 36,000 years. However, few ‘early’ (i.e., late Pleistocene/ early Holocene) sites are known, with the overwhelming majority of sites recorded to date likely of mid-to-late Holocene antiquity (0-6,000 years BP)
- Available radiometric dates indicate that Aboriginal people have occupied the Kurnell Peninsula since the mid-to-late Holocene and possibly the late Pleistocene/ early Holocene
- Shell middens and open artefact sites dominate the Aboriginal archaeological record of the Kurnell Peninsula
- Existing archaeological datasets for the Kurnell Peninsula indicate a strong trend for the presence of Aboriginal sites in foreshore and swamp/lagoon margin contexts, with sand dunes comprising the areas of highest Aboriginal archaeological sensitivity
- Deep archaeological deposits associated with sand/ dunes have been identified at depths below layers of contemporary disturbance in several locations on the Kurnell Peninsula.
- Excavated archaeofaunal assemblages from the Kurnell Peninsula attest to a mixed or generalised economy, albeit one with a strong marine/ estuarine focus
- Excavated and surface recorded flaked stone artefact assemblages from the Kurnell Peninsula indicate an emphasis on the procurement and reduction of silcrete
- Searches of the AHIMS database indicate that there are no previously recorded Aboriginal sites located within the Project Area.

6.4 Archaeological predictions

Considering the environmental and archaeological context of the Project Area, the following predictions are made regarding its Aboriginal archaeological record:

1. The Project Area is situated on land that, prior to being disturbed, historically comprised part of an aeolian landscape characterised by gently undulating to rolling coastal transgressive and relict dunes, as well as swales, lagoons, marsh, and swamps. Below layers of fill/ disturbance and above bedrock exists intact sand profiles that may contain Aboriginal archaeological deposits
2. If present, Aboriginal archaeological deposits within the Project Area would consist of shell midden and/ or open artefact deposits, with hearths potentially also present
3. There remains some, albeit limited, potential for Aboriginal burials to be present within intact sand profiles below fill and above bedrock within the Project Area
4. Remnant sand profiles, if preserved in full or part, may contain evidence of ‘early’ (i.e., Late Pleistocene/ early Holocene) Aboriginal occupation activity
5. Shell midden deposits, if present, would be dominated by shellfish species and would also include materials such as fish and mammal bone
6. Silcrete would be the dominant raw material for stone artefact manufacture within the Project Area.

7.0 Ethnohistoric context

7.1 Introduction

Section 6.0 summarised the archaeological context of the Project Area on both a regional and local scale. This section builds on this foundation by summarising relevant ethnohistoric information for this area. As in other parts of New South Wales and Australia more broadly, non-Aboriginal people occupying the Sydney region began to document Aboriginal culture from first contact, with explorers, missionaries, settlers and the like recording their observations of Aboriginal people and/ or their material culture in letters, journals, and official reports. Many of these accounts are overtly Eurocentric in tone and the content and veracity of some is, at best, questionable. Nonetheless, taken together, they form an important source of information on Aboriginal lifeways at the time of British colonisation and can, in conjunction with available archaeological data, be used to generate working predictive models of prehistoric Aboriginal land use.

Key sources, both primary and secondary, for the languages and lifeways of the Aboriginal people occupying the Sydney region at and following British colonisation include: Attenbrow (2010b); Barrallier (1802 [1975]); Bradley (1792 [1961]); Brook & Kohen (1991); Collins (1798 [1975], 1802 [1971]); Dawes (1790a, 1790b); Flynn (1994, 1995a, 1995b); Hunter (1793 [1968]); Irish (2017); Kohen (1985, 1986, 1988, 1993); Kohen and Lampert (1987); Kohen et al. (1999); Matthews (1903); McDonald (2008); Phillip (1789 [1970], 1791[1963]); Tench (1793 [1979]); Troy (1994); White (1790 [1962]) and Worgan (1788). While a detailed review of these sources is beyond the scope of this report, salient information is summarised in the sections below.

7.2 The Gweagal and the Dharawal language

Available sources indicate that Project Area is located within the traditional country of the Gweagal clan, who spoke the Dharawal, or Tharawal, language (also spelt Darawal, Carawal, Turawal, Thurawal, Thurrawal, Thurrawal, Turu-wal, Turuwul, Turrubul, and Turuwull). At the time of contact, the Gweagal are believed to have occupied the southern portion of Botany Bay and the Kurnell Peninsula (Collins, 1798[1975:453]). This group is said to have occupied the area from the south side of Botany Bay, extending south as far as the Shoalhaven River; from the coast to the Georges River and possibly as far west as Camden (Attenbrow 2010:34). Meanwhile, north and west of the Tharawal, the Darug language is believed to have been spoken from the Hawkesbury River in the north, to Appin in the south, and from the coast west across the Cumberland Plain into the Blue Mountains. Historical reference materials indicate that two distinct dialects of Darug were spoken at the time of European contact, a coastal dialect, spoken on the Sydney peninsula and the country to the north of Port Jackson, and a hinterland dialect, spoken on the Cumberland Plain from Appin in the south to the Hawkesbury River in the north (Attenbrow 2010: 34). The Gandangara (also spelt Gandangara and Gundungurra) are recorded as occupying *'the coastal district ...from the Hawkesbury River to Cape Howe, extending inland to the Blue Mountains, and thence southerly'*(Matthews & Everitt, 1900:262).

Notwithstanding the description above, Attenbrow (2010:30,34) makes two critical observations regarding Aboriginal linguistic groups within the region. Firstly, it was only after the 1870s that the names Darug, Gandangara, and Tharawal were used and that none of the late 18th and early 19th century documents refer to the languages or dialects by name. Secondly, any boundaries mapped today can only be indicative at best due to a lack of detail in historical reference materials, and also the fact that boundaries between language groups are not always precise lines.

Some idea of population size for the coastal Aboriginal groups at contact is provided by Attenbrow (2010), who suggests that the area around Port Jackson likely supported a minimum population density of 0.75 persons/ 1 sq. km (i.e., 1 person/1.3 sq. km). Attenbrow's estimate is based Governor Phillip's own estimate of the Aboriginal population of this area, made in 1788. Phillip, reporting to Lord Sydney on 15 May 1788, estimated a total population of not "*less than one thousand five hundred*" (Phillip 1788 in Attenbrow, 2010b: 17). Attenbrow (2010b:17), citing Hunter (1793 [1968]: 62), notes that "*population densities for the hinterland (west of Parramatta) were initially assessed by the colonists as being less than those along the coast*" but urges interpretive caution given the deleterious effects of 1789 smallpox epidemic, which "*had killed many people living to the west of Rose Hill before Phillip's 1791 expedition crossed the Cumberland Plain to the Hawkesbury-Nepean River.*". More recently, Kohen (1995) has estimated a minimum overall density of around 0.5 persons per sq. km for the hinterland zone.

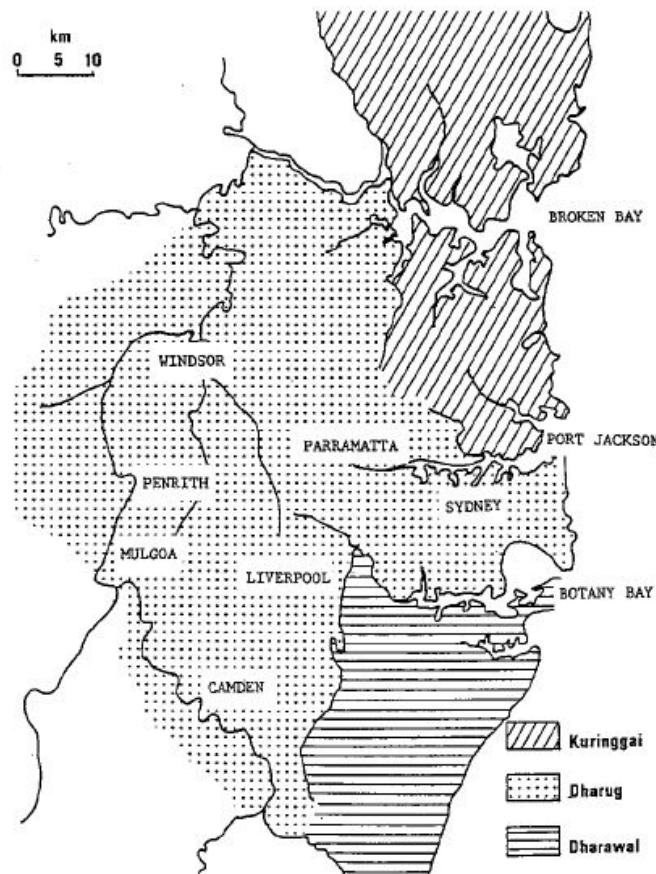


Figure 7-1 Aboriginal language group boundaries in the Sydney Region (from Kohen 1993: 241, Fig. 1)

In common with other regions of New South Wales (e.g., Attenbrow, 2010b) and Australia more broadly (Peterson, 1976), available historical records suggest that the primary units of social organisation amongst the Dharawal were the clan and band. Kohen and Lampert (1987) equate the term 'clan' with 'band.' However, Attenbrow (2010) draws a distinction between the two, with clans identified as local descent groups and bands, land-using groups who, though not necessarily all of the same clan², camped together and cooperated daily in hunting, fishing, and gathering activities. Individual bands would have habitually occupied and exploited the resources of particular tracts of land. However, the territorial boundaries of each band would have been permeable or elastic in the sense of complex kinship ties facilitating inter-band territorial movements and the reciprocal use and/ or exchange of resources. Early accounts (e.g., Collins 1798 [1975:453]; Tench 1793 [1979:292]) indicate that clan names were derived from the country on which the members of the clan lived.

² Some individuals may have been related through marriage.

The size of the individual bands occupying the coastal and hinterland zones of the Sydney region at contact was no doubt activity and season dependent. However, an upper limit of around 50 individuals, consisting of several nuclear families, has been suggested (Kohen, 1988: 239). Individual band sizes notwithstanding, much larger groups of Aboriginal people, numbering in the hundreds, are known to have come together for events such as corroborees, ritual combats, and feasts (Attenbrow 2010b; Kohen et al. 1999). Unlike many Australian Aboriginal groups, social organisation amongst the Darug did not comprise a class system based on moieties or sections but rather was based on clan membership attained through patrilineal descent (Attenbrow, 2010b: 57; Kohen, 1993: 35). Totemic affiliations were inherited from a person's father and, along with clan membership, were the basis upon which marriages were arranged and initiations carried out.

Available historical records indicate that a wide range of marine and freshwater fauna were exploited by Dharawal-speaking peoples for food and other resources (for a detailed discussion see Attenbrow, 2010: 62-84). Along the coast, an emphasis on the exploitation of marine resources, principally fish and shellfish, is attested in the writings of several early observers (e.g., Bradley, 1792 [1969: 133]; Collins, 1798 [1975:456, 461, 495]; Phillip 1788 in Attenbrow, 2010b: 63; Tench, 1793: 125, 195 [1979]: 233, 287). Further inland, historical records suggest an emphasis on the hunting of land mammals (e.g., Barrallier, 1802 [1975:2 n4]; Collins 1798 [1975:456]; Tench 1793: 121 [1979:230]), with kangaroos, wallabies, possums, gliders, fruit bats (i.e., flying foxes), dingos, koalas, and wombats variously reported as having been either hunted and/or eaten (Attenbrow, 2010b: 71). Possums, in particular, appear to have been major food source in the hinterland, with a number of early observers remarking on the tree climbing skills of the 'woods people' and detailing procurement techniques (e.g. Hunter, 1793 [1968]; Tench, 1793 [1979]; Collins, 1798 [1975]; Barrallier, 1802 [1975]). Freshwater fish, shellfish, and eels, as well as platypus, are also known to have been exploited by hinterland groups (e.g., Barrallier, 1802 [1975: 2]; Collins, 1798 [1975: 461-63], 1802 [1971: 321-22]; Phillip in Hunter, 1793 [1968: 523]; Tench, 1793 [1979: 230]), as are various types of birds.

Compared with their faunal counterparts, the plant food resources of coastal Aboriginal peoples are poorly represented in the writings of early colonial observers. Nonetheless, available descriptions do suggest that plants formed a regular part of the diets of both coastal and hinterland groups (see Attenbrow, 2010b: 77-78). Along the coast, a "vegetable catalogue" consisting of "*a few berries, the yam and fern root, the flowers of the different Banksia, and at times some honey*" is reported by Collins (1798 [1975:462-63]). Further inland, along the Hawkesbury-Nepean River, yams appear to have been particularly important food item (see, for example, Hunter 1793 [1968: 153]).

A wide range of hunting and gathering 'gear' was employed by Dharawal speaking peoples, with distinctive repertoires for men and women (McDonald, 2008: 24). Men's gear included several different forms of spears (variously barbed), spear throwers, clubs, 'swords', boomerangs, shields, and hafted stone hatchets known as mogo. Women's toolkits, in contrast, included fishing hooks, lines and sinkers, digging sticks, and various containers (shell and wood). Net bags made from plaited wood fibre appear to have been used both men and women (see Attenbrow, 2010b: 91). Bark canoes were also widely used (Attenbrow, 2010b: 87).

Two principal forms of shelter appear to have been utilised by Dharawal speaking peoples at the time of European contact: rockshelters and small huts built from sheets of bark, branches and bushes with such huts "*formed of pieces of bark from several trees put together in the form of an oven with an entrance, and large enough to hold six or eight people*" (Collins, 1798 [1975: 460]). Regarding settlement duration, as Attenbrow (2010b) has observed, "*there is little direct historical evidence for the length of time people stayed at any one campsite (be it a rockshelter or bark hut), how often they moved, or what motivated them to move to another campsite.*" Kohen and Lampert (1987), for their part, have argued that "*some bands probably lived at one campsite for months of each year and regularly returned to it.*" However, this argument is not universally accepted (e.g., Attenbrow, 2010b; McDonald, 2008).

Evidence for ceremonial or ritual behaviour amongst Dharawal-speaking peoples can be found in the writings of a number of early observers, with documented 'ceremonial' activities including corroborees, male initiation ceremonies, ritual combats, and various burial, body adornment, and personal decoration practices (Attenbrow 2010b: 126-42). While available colonial records provide only scant information on the belief systems of Dharawal-speaking peoples, reference to the 19th century writings of people such as L.E Threlkeld, A.W Howitt, R.H Matthews, W. Ridley and W.J Enright, suggests that spiritual authority amongst Dharawal clans was likely vested in a number of ancestral beings, with Baiame or Daramulan – a supreme creative being – a central figure (Attenbrow 2010b: 127-128).

7.3 First and post-contact Aboriginal history

7.3.1 Earliest Observations

When Lieutenant James Cook sailed the HMS Endeavour into Botany Bay on 29 April 1770 and laid anchor opposite a “small village” on its southern shores, he and his crew observed that the land was already inhabited by Aboriginal people (Rich, 1986:43). The same day, Cook landed at Kurnell and made first contact with Aboriginal people, firing upon two armed Aboriginal men who “seemed resolved to oppose” their landing (Australian Museum Business Services, 2012:29). Cook and his crew's observations of this event and their explorations of Botany Bay over the subsequent days provide the earliest documented descriptions of the lives and economies of Aboriginal people in the Sydney region (Rich, 1986:43).

While the exact nature of pre-contact territorial boundaries is unclear, as indicated above, available reference materials place the Project Area within the traditional Country of the Gweagal clan, who are believed to have occupied the southern portion of Botany Bay and the Kurnell Peninsula, and whose Country stretched from the Georges River to the Kurnell Peninsula (Rich, 1986:42). Observations from the HMS Endeavour voyage and subsequent European explorations of the Botany Bay area, therefore, likely relate primarily to the Gweagal and the Gameygal, whose Country was the north part of Botany Bay, clans (Rich, 1986:43).

Cook and naturalist Joseph Banks made a number of observations of Aboriginal people in and around Botany Bay. At least six occupation 'sites' were observed during the pair's time in the bay and both men report collecting artefacts (e.g., spears) from encampments visited by landing parties. Observed sites included two open campsites with huts on both 'points' of the bay, two shell middens with fires (one located “near the shore”), an open campsite with six to eight huts at Kurnell, and one or more inland campsites with huts and places where people had slept on the ground without shelter (Rich, 1986:44). Cook also references the presence of scarred trees, some felled and others exhibiting scars from bark removal and/ or evidence of toeholds (Rich, 1986:44-45).

Aboriginal people were observed sitting at camps, cooking, collecting firewood, collecting, and eating shellfish and fishing. Average group size was about 12 individuals, with individual observations of group size ranging from one to 22 individuals (Rich, 1986:45). According to Cook, the Aboriginal occupants of Botany Bay did not live in large groups but rather were dispersed along its shoreline.

Women fished from bark canoes with line and shell hooks, while men used wooden spears barbed with sharp fish bones. Mussels, cockles, and, in some cases, boiled fish were used as bait (Australian Museum Business Services, 2012:20). Fishing activities were recorded both during the day and at night, when torches were utilised as fish lures. Other observed tools included wooden shields, wooden spear throwers and wooden 'darts' (spears) (Rich, 1986:46). Division of labour by age is also alluded to, with two accounts describing groups of elderly men and women with children while other adults fished in canoes nearby (Rich, 1986:45).

After eight days, the HMS Endeavour left Botany Bay with large numbers of natural specimens and descriptions of the wealth and diversity of the natural environment. Upon the Endeavour's return to Britain, Cook's glowing account influenced the selection of Botany Bay as the site of the future penal colony (St George Historical Society, 1971:3). Following the arrival of the First Fleet between 18 and 20 January 1788, however, Captain Arthur Phillip found the bay unsuitable for the settlement, citing difficult access due to shallow waters, marshy conditions, lack of shelter and limited freshwater sources. Botany Bay was subsequently abandoned, and the colony was established at Sydney Cove to the north, in the deeper harbour, which would become known as Port Jackson (Australian Museum Consulting, 2014a:8).

7.3.2 Adaptation to European settlement

The prevailing image of Botany Bay as an inhospitable, marshy landscape, combined with limited access across the Cooks River, discouraged early Europeans from attempting to settle or acquire land in the area (ERM Mitchell McCotter Pty Ltd, 1999:3.5). European presence in the Botany Bay region during the early years of the colony was limited to short forays for hunting and fishing expeditions, timber getting, stock grazing, and naturalist excursions. Shell deposits, likely including some Aboriginal midden sites, were also excavated from the foreshores of the bay for the production of lime (Navin Officer Heritage Consultants, 2003:16).

Little is known about the Gweagal people in the years immediately following European settlement, a situation at least partly attributable to the 1789 smallpox epidemic, which estimated to have wiped out well over half of Sydney's Aboriginal population. Survivors of the disease subsequently regrouped from across the region, requiring the restructure of kinship systems, customs and clan boundaries (ERM Mitchell McCotter Pty Ltd, 1999:4.2). Despite the devastation wrought by smallpox, European accounts from the early 1800s indicate the presence of a relatively large population of Aboriginal people occupying the gullies north of Botany Bay, as well as the foreshores of the bay (Rich, 1986:42). The continued presence of Aboriginal people in and around the bay around this period is also indicated by early European paintings (Figure 7-2).

From 1820, land surrounding Botany Bay, including the Kurnell Peninsula began to be opened for land grants (Rich, 1986:42). As European settlement pressed closer, Aboriginal access to traditional hunting and fishing grounds was increasingly restricted. In response, many Aboriginal people adapted to the competition for land and resources – either moving to new areas, or supplementing traditional lifestyles through learning English, trading fish at Sydney markets, and utilising their knowledge of the local environment to act as guides for European hunting, fishing and tourism parties (Irish, 2017:35).

In 1830, land along the northern shores of Botany Bay and La Perouse was designated as a Government Reserve (Heritage NSW Department of Premier & Cabinet, 2024). While small pioneer European fishing villages developed in the region in the succeeding years, greater numbers of Aboriginal people moved onto the Reserve from surrounding areas, and by 1850, La Perouse was known as a 'Blacks' camp (Heritage NSW Department of Premier & Cabinet, 2024).



Figure 7-2 Excerpt of 'View of across Botany Bay from the mouth of the Cooks River in 1825', by J Lycett, 1825 (Source: National Library of Australia/nla.obj-135701715)

7.3.3 Aboriginal La Perouse: 1870s to 1930s

By the 1870s, La Perouse was increasingly known as an Aboriginal community. Individuals who had left following the early years of European settlement, returned with their families, and others from the South Coast came to settle in the area – many seeking access to Sydney for rations and employment after being forced off their lands by the emergent dairy farming industry (Heritage NSW Department of Premier & Cabinet, 2020).

By the 1880s, 50 Aboriginal people reportedly lived in the area – 35 living in the reserve at La Perouse and 15 further west, at Botany Bay (Heritage NSW Department of Premier & Cabinet, 2020). A small Anglican mission was established at La Perouse, providing food, shelter, basic education, and religious instruction to the community.

In 1882, pressure was mounting for the government to take on Aboriginal affairs, and Sir Henry Parkes appointed George Thornton 'Protector of Aborigines.' Thornton organised for a census of Aboriginal people and sought the removal of Aboriginal people from urban areas across Sydney; however, he lobbied for the La Perouse community to remain as they were seen as 'economically viable.' The camp at La Perouse, reportedly comprising five men and their families, was provided with additional huts by the government (Heritage NSW Department of Premier & Cabinet, 2020).

As the 'Aborigines Protection Board' replaced the 'Protector' role in 1883, government policies on Aboriginal people took on more isolationist and protectionist measures. 'Reserves for Aborigines' were established to enforce segregation of Aboriginal and 'white' societies (Heritage NSW Department of Premier & Cabinet, 2020). In 1885, 2.5 hectares were set aside at La Perouse for this purpose. From 1886, multiple attempts were made to evict Aboriginal people from camps such as at Rushcutters Bay and send them to La Perouse. However, many of these attempts failed as Aboriginal people instead local inhabited public parks and reserves.

By 1895, the La Perouse reserve was enclosed by a fence and permission was required for people to enter or leave the site up until the 1940s (Heritage NSW Department of Premier & Cabinet, 2020). In 1897, the Aborigines Protection Board tried relocating the La Perouse reserve to Wallaga Lake but met with opposition from missionaries and the NSW Department of Lands.

With the construction of the tram line to La Perouse in 1902, increasing numbers of Sydney tourists began to visit the area and the Aboriginal camp. La Perouse residents made and sold souvenirs for the day-trippers, including popular shell artwork and boomerangs (Heritage NSW Department of Premier & Cabinet, 2020).

Further attempts were made by Randwick Council to close the reserve in 1920s; however, the La Perouse residents petitioned for their right to stay. The petition, signed by 53 residents was published in the *Sydney Morning Herald*, and stated,

"We, the undersigned aborigines (sic) of the La Perouse reserve, emphatically protest against our removal to any place. This is our heritage bestowed upon us: in these circumstances we feel justified in refusing to leave." ('La Perouse Aborigines protest against removal', *Sydney Morning Herald*, 1928 in Heritage NSW Department of Premier & Cabinet, 2020b).

From the early years of the Great Depression up until the 1950s, a number of shanty towns were established in the area: a European camp at Botany Bay called 'Hill 60,' another at La Perouse called 'Happy Valley' and an Aboriginal camp at La Perouse called 'Frog Hollow.' Shelters were constructed of corrugated iron and white-washed hessian, with earth floors. Shanty town residents intermingled and intermarried with La Perouse reserve residents and their children attended local missionary.

7.3.4 Some notable Aboriginal identities

7.3.4.1 Biddy Giles (c.1810-1888)

Biddy Giles was a Gweagal woman and well-known tour guide from the 1860s. Originally from Botany, Biddy (born 'Bi-yar-rung') married young to Gweagal man, Comman/ 'King Kooma', before moving to Five Islands (Illawarra) Country, marrying Paddy Burragalang (Paddy Davis) and having two daughters (Goodall and Cadzow, 2014).

After Paddy died in the 1850s, Bidy moved to Mill Creek on the Georges River, with Englishman, Billy Giles. When a local 120-acre farming estate was abandoned by James Cuthill, Bidy and Billy Giles took over the farm and the two roomed, slab farmhouse, sustaining themselves with a small herd of goats and an orchard of quinces (Irish, 2017:77).

During this time, Bidy and Billy Giles ran guided tours, hunting and fishing parties for tourists through the bushland south of the Georges River. Bidy's detailed knowledge of the landscape and the Dharawal and English names for all the plants and animals they encountered earned rave reviews from her clients. "*Some of these travellers wrote accounts of their trips with Bidy, marvelling at her unfailing ability to find fish, her control of her hunting dogs and the skill with which she could rustle up a delicious meal from local produce*" (Goodall and Cadzow, 2014). Irish (Irish, 2017:78) notes that these trips enabled Bidy to continue traditional practices and disseminate cultural knowledge. Her clientele also included key figures in Aboriginal affairs, including George Hill of the Sydney Aborigines Committee and James Oatley, a Sydney-born Aboriginal sympathiser (Irish, 2017:77). Bidy maintained links with Aboriginal groups across Sydney and visited camps at Botany Bay and Kogarah Bay (Goodall and Cadzow, 2014).

7.3.4.2 Johnny Malone (c.1820-1880)

Johnny (Johnnie) Malone was a descendent of the Botany Bay Aboriginal community from the Cooks River, and resident tour guide at the Sir Joseph Banks Hotel following the death of Boatswain Maroot (Irish, 2017:76). His parents were a Botany Bay woman (potentially the sister of Boatswain Maroot) and ex-convict James (Jemmy) Malone, who owned a 30-acre plot of land on the southern side of Weeney Bay.

Growing up around Botany Bay, Johnny had intimate knowledge of the area and may have assisted Boatswain Maroot, on one of his many guided tours (Irish, 2017:75). In 1858, Johnny was employed by Austrian scientist, Karl Scherzer and Australian Museum ethnographer, Edward Smith Hill to help them locate an Aboriginal burial site. Following this, he was contacted by the new proprietors of the Sir Joseph Banks Hotel to serve as their local tour guide (Irish, 2017:76).

Johnny and his Illawarra wife, Lizzie, built and occupied a hut in the Botany Bay Reserve and ran guided tours with their growing family. Their tours gained such popularity that clients actively sought their services when visiting the area, whether affiliated with the Sir Joseph Banks Hotel or not (Irish, 2017:76).

7.3.4.3 Emma 'Queen' / 'Granny' Timbery (1842-1916)

Emma 'Queen' / 'Granny' Timbery (Timbury) was a notable member of the La Perouse reserve, Christian advocate, and popular shellwork artist. She was born in Liverpool, NSW to farmer Hubert Walden and Dharawal mother, Betsy. In 1864, she married Illawarra man, George ('Trimmer') Timbery, and had eleven children (Nugent, 2005).

George was a fisherman who frequented Botany Bay and the Illawarra. By 1882, the family lived at the La Perouse reserve, and Emma earned additional income through selling shell artwork. Her talents at the craft were recognised, and her artwork was sold at the Sydney Royal Easter Show and in 1910, was included in an Australian manufacturers' exhibition in London (Nugent, 2005).

Emma worked closely with the missionaries at the La Perouse reserve and learned to read a small amount of English. She became vice-president of the La Perouse Aborigine's Christian Endeavour Society in 1895. As community matriarch of the La Perouse reserve, Emma became known as 'Queen' or 'Granny' Timbery (Heritage NSW Department of Premier & Cabinet, 2020).

Emma died on 26 November 1916 and was buried in the Botany cemetery during a ceremony attended by a large crowd of mourners. In 1986, three fig trees planted at the La Perouse reserve were dedicated in her memory. Members of the Timbery family still live at La Perouse and can trace their ancestry back to pre-colonial times (Heritage NSW Department of Premier & Cabinet, 2020).

8.0 Visual inspections

Visual inspections of the Project Area were conducted on 6 June 2024 and 5 December 2024 by AECOM Principal Heritage Specialists Dr. Darran Jordan and Dr. Andrew McLaren, along with Steven Ella, a site officer from the La Perouse Local Aboriginal Land Council (LALC). No Aboriginal objects or sites were identified during the inspections, nor were any specific cultural values communicated to AECOM during the process. However, Steven Ella suggested the possibility of sites located beneath the disturbed soil layers.

Undertaken by vehicle and foot, and under the escort by Ampol personnel, the objectives the inspection were to:

- To identify any surface evidence of past Aboriginal occupation within the Project Area
- To ground truth, as far as feasible, levels of past ground disturbance within the Project Area (as evidenced by historical aerial photography)
- To assist in the identification of areas of subsurface Aboriginal archaeological sensitivity within the Project Area
- To provide an ‘on Country’ forum for the LALC to discuss the proposed modification and to share cultural values, as appropriate.

Taking into consideration the highly modified nature of the Project Area, as well as work, health, and safety (WH&S) issues, the visual inspection was restricted to “open areas” with access not available directly within infrastructure, such as storage tank bunds, as well as restricted zones. During the inspection, notes were taken regarding Ground Surface Visibility (GSV), Ground Integrity (GI, i.e. land condition), Aboriginal archaeological sensitivity, and impact risk. Representative and otherwise notable elements of the Site were photographed throughout.

Consistent with available historical aerial imagery, the visual inspection confirmed that the land surface within the Project Area has been severely disturbed as a result of historical land use activities, with the entire area almost fully capped with concrete (Plates 8-1 to 8-4). Only one area of vegetated land was present in the Project Area, consisting of an approximate 3 ha section of the Site located on its southern boundary (Zone 3). Reference to historical aerials for this part of the Project Area (Figure 5-13) indicates that this area has been significantly disturbed and only recently revegetated. Moreover, AECOM was notified that this area was not accessible due to asbestos fill and contamination.

No evidence of past Aboriginal occupation was observed during the visual inspection. Nonetheless, taking into consideration the pre- and early post-European settlement landscape context of the Project Area (Section 5.0), as well as available geotechnical data and in-field discussions with Steven Ella, the majority of land within the Project Area was assessed in the field as retaining moderate potential for the presence of subsurface Aboriginal archaeological deposits associated with remnant sand profiles located below existing disturbance. Subsurface deposits could occur in any part of the Project Area below areas of fill.



Plate 8-1 View of existing infrastructure (Source: AECOM, 2024).



Plate 8-2 View east of site infrastructure (Source: AECOM, 2024).



Plate 8-3 View south of the Project Area (Source: AECOM, 2024).



Plate 8-4 View east of the Project Area (Source: AECOM, 2024).

9.0 Significance assessment

9.1 Principles of assessment

Heritage sites hold value for different communities in a variety of different ways. All sites are not equally significant and thus not equally worthy of conservation and management (Pearson & Sullivan, 1995: 17). One of the primary responsibilities of cultural heritage practitioners, therefore, is to determine which sites are worthy of preservation and management (and why) and, conversely, which are not (and why) (Smith & Burke, 2007: 227). This process is known as the assessment of cultural significance and, as highlighted by Pearson and Sullivan (1995: 127), incorporates two interrelated and interdependent components. The first involves identifying, through documentary, physical, or oral evidence, the elements that make a heritage site significant, as well as the type(s) of significance it manifests. The second involves determining the degree of value that the site holds for society (i.e. its cultural significance) (Pearson & Sullivan, 1995: 126).

In Australia, the primary guide to the assessment of cultural significance is the Australian ICOMOS Charter for Places of Cultural Significance (2013), informally known as The Burra Charter. This defines cultural significance as the “*aesthetic, historic, scientific, social or spiritual value for past, present or future generations*” of a site or place (ICOMOS Australia, 2013: 2). Under the Burra Charter model, the cultural significance of a heritage site or place is assessed in terms of its aesthetic, historic, scientific, social, and spiritual values, none of which are mutually exclusive (Table 9-1). Establishing cultural significance under the Burra Charter model involves assessing all information relevant to an understanding of the site and its fabric (i.e., its physical make-up). The assessment of cultural significance and the preparation of a statement of cultural significance are critical prerequisites to making decisions about the management of any heritage site or place.

Table 9-1 Values relevant to determining cultural significance, as defined by The Burra Charter

Value	Definition
Aesthetic	“Aesthetic value refers to the sensory and perceptual experience of a place—that is, how we respond to visual and non-visual aspects such as sounds, smells and other factors having a strong impact on human thoughts, feelings and attitudes. Aesthetic qualities may include the concept of beauty and formal aesthetic ideals” (Australia ICOMOS, 2013: 3)
Historic	“Historic value is intended to encompass all aspects of history. A place may have historic value because it has influenced, or has been influenced by, an historic event, phase, movement or activity, person or group of people. It may be the site of an important event. For any place the significance will be greater where the evidence of the association or event survives at the place, or where the setting is substantially intact, than where it has been changed or evidence does not survive. However, some events or associations may be so important that the place retains significance regardless of such change or absence of evidence” (Australia ICOMOS, 2013: 3)
Scientific	“Scientific value refers to the information content of a place and its ability to reveal more about an aspect of the past through examination or investigation of the place, including the use of archaeological techniques. The relative scientific value of a place is likely to depend on the importance of the information or data involved, on its rarity, quality or representativeness, and its potential to contribute further important information about the place itself or a type or class of place or to address important research questions” (Australia ICOMOS, 2013: 4)
Social	“Social value refers to the associations that a place has for a particular community or cultural group and the social or cultural meanings that it holds for them” (Australia ICOMOS, 2013: 4)

Value	Definition
Spiritual	“Spiritual value refers to the intangible values and meanings embodied in or evoked by a place which give it importance in the spiritual identity, or the traditional knowledge, art and practices of a cultural group. Spiritual value may also be reflected in the intensity of aesthetic and emotional responses or community associations, and be expressed through cultural practices and related places” (Australia ICOMOS, 2013: 4)

9.2 Scientific values

Scientific value or significance refers to the importance of a place in terms of its rarity, representativeness, and the extent to which it may contribute further information (i.e. its research potential) (OEH, 2011: 9).

9.2.1 Rarity and representativeness

Rarity and representativeness are related concepts. Rarity refers to the relative uniqueness of a site within its local and regional context. The scientific significance of a site is assessed as higher if it is unique or rare within either context. Conversely, it is of lower significance if it is common in one or both. The concept of representativeness, meanwhile, refers to the question of whether a site is “*a good example of its type, illustrating clearly the attributes of its significance*” (Burke & Smith 2004: 247). Representativeness is an important criterion, as one of the primary goals of cultural heritage management is to preserve for future generations a representative sample of all archaeological site types in their full range of environmental contexts.

9.2.2 Research potential

Research potential can be defined as the potential of an archaeological site to address what Bowdler (1981: 129) has referred to as “*timely and specific research questions.*” These questions may relate to any number of issues concerning past human lifeways and environments and, as suggested by Bowdler’s quote, will inevitably reflect current trends or problems in academic research (Burke & Smith, 2004: 249). For their part, Bowdler and Bickford (1984: 23-4) suggest that the research potential of an archaeological site can be determined by answering the following questions:

1. Can the site contribute knowledge which no other resource can?
2. Can the site contribute knowledge which no other such site can?
3. Is this knowledge relevant to general questions about human history or other substantive subjects?

Several criteria can be used to assess the research potential of an archaeological site. Particularly important in the context of Aboriginal archaeology are the intactness or integrity of the site in question, its complexity and its potential for archaeological deposit (NPWS, 1997: 7). The connectedness of the site to other sites or natural landscape features may also be relevant, as may its educational potential and aesthetic qualities.

Integrity refers to the extent to which a site has been disturbed by natural and/ or anthropogenic phenomena and includes both the state of preservation of particular remains (e.g., animal bones, plant remains) and, where applicable, stratigraphic integrity. Assessments of archaeological integrity are predicated on the notion that undisturbed or minimally disturbed sites are likely to yield higher quality archaeological and/ or environmental data than those whose integrity has been significantly compromised by natural and/ or anthropogenic phenomena. Establishing levels of preservation or integrity in the context of a surface survey is difficult. Nonetheless, useful rating schemes are available for open artefact sites (Coultts & Witter, 1977: 34) and scarred trees (Long, 2003).

The *complexity* of a site refers primarily to the nature or character of the artefactual materials or features that constitute it but also includes site structure (e.g., the physical size of the site, spatial patterning in observed cultural materials). In the case of open artefact sites, the principal criteria used to assess complexity are the site's size (i.e., number of artefacts and/ or spatial extent), the presence, range and frequency of artefact and raw material types, and the presence of features such as hearths.

Potential for archaeological deposit refers to the potential of a site to contain subsurface archaeological evidence which may, through controlled excavation and analysis, assist in answering questions that are of contemporary archaeological interest. Assessing subsurface potential in the absence of subsurface investigation is difficult. Nonetheless, consideration of a range of factors, including the integrity of the site, the complexity of extant surface evidence, local geomorphic conditions (as established through surface observations and documentary research) and the results of previous archaeological excavations in the area, help inform assessment of this criterion.

Connectedness concerns the relationship between archaeological sites within a given area and may be expressed through a combination of factors such as site location, type and contents. It may, for example, be possible to establish a connection between a stone quarry and discarded edge-ground hatchet head found nearby. Demonstrating connectedness archaeologically, however, is far from straightforward, especially when dealing with surface evidence alone. Ultimately, this difficulty rests with the need to demonstrate contemporaneity between sites that may have been created hundreds, if not thousands, of years apart. As Shiner (2008: 13) has observed with respect to surface sites, "*much of the surface archaeological record documents the accumulation of materials from multiple behavioural episodes occurring over long periods of discontinuous time.*" Contemporaneity, then, needs to be demonstrated, not assumed.

9.2.3 Identification process for the current assessment

Information on the scientific values of the Project Area (i.e., with respect to Aboriginal cultural heritage) has been obtained through a review of existing environmental (Section 5.0), archaeological (Section 6.0), and ethnohistorical data (Section 7.0) for the Site and its environs (Section 8.0).

9.2.4 Identified scientific values

In the absence of a Site-specific subsurface Aboriginal archaeological dataset, any assessment of the archaeological or scientific significance of the Project Area *must necessarily be an assessment of potential significance*.

As indicated in Section 5.2, historical land use activities have resulted in radical changes to the natural topography of the Project Area. Nonetheless, available reference materials indicate that land within the Site formerly comprised part of a broader aeolian landscape characterised by gently undulating to rolling plains, dunes and swales, as well as lagoons and swamps (Chapman & Murphy, 1989: 94). Consideration of the pre- and early-post European settlement landscape context of the Project Area suggests that the area would have represented a prime location for Aboriginal occupation over a long period of time, with several contributing factors identifiable:

- Ready access to drinking water in the form of a number of lagoons
- Proximity to Botany Bay to the north of the peninsula and several harbours in the south and the abundant marine resources that would have been available from these areas
- Ready access to surrounding freshwater lagoon systems and the associated food resources
- Soft, sandy soils suitable for camping.

Soils within and immediately surrounding the Project Area have been mapped by Chapman and Murphy (1989) as belonging to the Disturbed Terrain (xx) soil landscape. Soils within this landscape are described as having been disturbed to a depth of at least 1 m bgl, with original soils either removed, buried or otherwise severely disturbed (Chapman & Murphy, 1989: 151). Existing soil mapping notwithstanding, available reference materials, including WSP's (2024) geotechnical investigation report for the project, suggest that the upper parts, to various depths, of soils within the Project Area are fill, but below these are intact sand units. Moreover, as noted in Section 5.5, two boreholes (BH06 and BH07), located in the centre of the Project Area, encountered shell material in undisturbed sand profiles at 5 m and 7.5 m below the ground surface.

Historical land use activities within the Project Area are expected to have disturbed the upper portions of any Aboriginal archaeological deposits that may have been present prior to the development of the refinery. Nonetheless, the majority of the land within the Project Area is assessed as retaining moderate (i.e., possible but uncertain) potential for the preservation of subsurface Aboriginal archaeological deposits below fill layers, which may be associated with buried sand profiles. If present, such deposits may include midden material, stone artefacts, and hearths with burials considered a possibility.

If preserved relatively intact, subsurface Aboriginal archaeological deposits within the Project Area are expected to be of moderate to high scientific significance, with early occupation deposits (i.e., those of Late Pleistocene to early Holocene antiquity) potentially present.

9.3 Cultural values

Social or cultural value refers to the spiritual, traditional, historic, and contemporary associations and attachments a place or area has for Aboriginal people and can only be identified through consultation with Aboriginal people (OEH, 2011: 8). RAPs consulted for the current assessment have identified the following social or cultural values for the Project Area:

- In pre- and early-post European settlement times, sand dunes within and surrounding the Project Area would have been prime locations for campsites, with locally occurring freshwater swamps and lagoons, as well as Botany Bay, offering a rich suite of economic resources and facilitating intensive occupation over thousands of years
- Though highly disturbed on the surface, archaeological evidence from other parts of the greater Kurnell area suggest that cultural deposits may be present within the intact sands, occurring at depth below the fill layer (i.e. below approximately 1.35 m to 2.5 m bgl; refer to Table 5-3 and Figure 5-10) and above bedrock.

9.4 Historical values

Historic value refers to the associations that a place has with a historically important person, event, phase or activity in an Aboriginal community (OEH, 2011: 9). Historic values can but would not necessarily be represented by physical evidence. An understanding of the historic values of the Project Area has been established through a combination of documentary research and consultation with RAPs.

Together with verbal advice from RAPs, available historical reference materials indicate that the historical values of the broader Project Area rest with its association with Captain Cook's landing near Silver Beach on the Kurnell Peninsula in 1770 aboard HMS Endeavour, approximately 400 m from the Project Area. He observed that the land was inhabited by Aboriginal people and made first contact with them firing upon two armed Aboriginal men.

While associated with this broader historical value, the Project Area itself is assessed as of low historical value as no heritage values have been identified in the Site, as well as historical disturbances.

9.5 Aesthetic values

Aesthetic value refers to the sensory, scenic, architectural and creative aspects of a place and is manifested through a range of physical and non-physical attributes (OEH, 2011: 9). Aesthetic values are not inherent in places but rather rest with peoples' sensory and emotional responses to them. Accordingly, radical variation in responses, both within and between social and cultural groups, is to be expected (NSW NPWS, 1997: 29). *Protecting Local Heritage Places: A National Guide for Local Government and Communities* (2009:43) provides the following questions to assist individuals and groups in determining the aesthetic values of heritage places:

- *Does the place have natural or cultural features which are inspirational or evoke strong feelings or special meanings?*
- *What are those features, and to what extent are they evocative?*
- *Is the place a distinctive feature that is a prominent visual landmark?*

- *Does the place evoke awe from its grandeur of scale? To what extent is this important?*
- *Does the place evoke a strong sense of age, history or time depth? How does it do this, and to what extent?*
- *Is the place symbolic for its aesthetic qualities? Has it been represented in art, poetry, photography, literature, folk-art, folklore mythology or other imagery?*
- *Does the place have outstanding composition qualities involving any combinations of colour, form, texture, detail, movement, unity, sounds, scents, spatial definition and so on? To what extent is this important?*

As described in Section 5.0 and referenced above, historical land use activities have resulted in radical changes to the natural environment of the Project Area, which currently bears little, if any, resemblance to its pre- and early post-European settlement form. Accordingly, it is assessed as retaining low aesthetic value.

9.6 Consolidated statement of significance

The Kurnell Peninsula as a whole is considered highly significant to Aboriginal people for cultural and archaeological reasons. Archaeological data and cultural information indicate that Aboriginal people have occupied the Kurnell Peninsula for thousands of years prior to European contact making it important to contemporary Aboriginal people. The northeastern part of the peninsula, approximately 400 m from the Project Area within the Kamay Botany Bay National Park, is the place where the Gweagal people first encountered Europeans in 1770. As such, it is a highly significant cultural landmark.

Historical land use activities have resulted in radical changes to the natural topography of the Project Area. Nonetheless, available reference materials indicate that land within the Site formerly comprised part of a broader aeolian landscape characterised by gently undulating to rolling plains, dunes, and swales, as well as lagoons, marshland, and swamp. Consideration of the pre- and early-post European settlement landscape context of the Project Area suggests that this area would have represented a prime location for Aboriginal occupation over a long period of time, with several contributing factors identifiable:

- Ready access to drinking water in the form of a number of lagoons
- Proximity to Botany Bay to the north of the peninsula and several harbours in the south and the abundant marine resources that would have been available from these areas
- Ready access to surrounding freshwater lagoon systems and the associated food resources
- Soft, sandy soils suitable for camping.

Historical land use activities within the Project Area are expected to have disturbed the upper portions of any Aboriginal archaeological deposits that may have been present prior to the development of the refinery. Nonetheless, the majority of the land within the Project Area is assessed as retaining moderate potential for the preservation of subsurface Aboriginal archaeological deposits below fill layers, associated with buried sand profiles. If present, such deposits may include midden material, stone artefacts, and hearths with burials considered a possibility. If preserved relatively intact, subsurface Aboriginal archaeological deposits within the Project Area are expected to be of moderate to high scientific significance, with early occupation deposits (i.e., those of Late Pleistocene to early Holocene antiquity) potentially present.

The Project Area itself is assessed as having low historical significance, but the local area holds high historical significance due to its association with Captain Cook's landing near Silver Beach on the Kurnell Peninsula in 1770. Aesthetically, the Project Area is considered to be low significance, bearing little, if any, resemblance to its pre- and early post-European settlement form.

10.0 Impact assessment

10.1 Subsurface impacts

The key elements of the proposed modification are discussed in Section 1.3. Subsurface impacts are anticipated as a result of the following activities:

- Removal of the OWS from Zones 2 and 3. These works would require excavation up to 3 mbgl for the removal of below-ground pipework and pits
- Augmentation and/or disconnection and removal of the FWS infrastructure in Zones 2 and 3. These works would require the excavation of up to 1 mbgl
- If required, construction of the relocated firewater tank and pumphouse into the FWS Relocation Area, including excavation and remediation, where required
- Removal of buildings and structures from Zones 2 and 3. These works would excavation works up to 2 mbgl or deeper depending on the depth of footings (generally focused within 1 mbgl)
- Construction of new warehouse and new oil spill equipment storeroom in Zone 1, and new storage shed in Zone 1A. Excavation of up to 1 mbgl would be required for installation of foundations
- Soil remediation works across Zones 2 and 3 (and targeted areas in Zone 1; refer to Figure 4-2 of the Modification Report). These works would include intrusive works up to 4 mbgl but would be focused within soils up to 1 mbgl
- Installation of new pump adjacent to the ACS Containment Cell. Excavations of approximately 4.5 mbgl would be required
- Grading works:
 - In Zones 2 and 3 to allow stormwater flows to be directed to the existing SWS at the Site, and for flows in Zone 1 to be managed by either the SWS or the OWS
 - In Zone 2 to facilitate future land uses.

10.2 Potential Aboriginal heritage impacts

This assessment has determined that the entire surface landscape of the Project Area has been significantly modified due to the construction of the refinery, which involved leveling and the importation of fill layers. However, it has been further assessed that majority of land within the Project Area retains a moderate potential for the preservation of subsurface Aboriginal archaeological deposits in association with intact sands located below fill layers and above bedrock at the Site. If present, such deposits may include shell midden and/ or open artefact deposits, with hearths potentially also present. In addition, there also remains some, albeit limited, potential for Aboriginal burials to be present. If preserved relatively intact, subsurface Aboriginal archaeological deposits within the Project Area are expected to be of moderate to high scientific significance, with early occupation deposits (i.e., those of Late Pleistocene to early Holocene antiquity) potentially present. Available archaeological data from excavation completed nearby suggest that archaeological materials may occur up to a depth of around 3 mbgl. However, the presence of archaeological materials at greater depths cannot be excluded.

Notwithstanding the above, it is noted that the majority of works would be completed within the upper, disturbed/ fill layers of the Site, which are assessed as having low archaeological potential. Consideration of the proposed construction activities outlined above suggests that impacts to Aboriginal archaeological deposits and/or objects within the Project Area could occur during the intrusive works planned for Stages 2, 3, and 4. Accordingly, a strategy has been proposed in Section 12.0 to manage these potential impacts.

11.0 Avoiding and mitigating harm

This assessment finds that the Aboriginal heritage values of the Project Area lie with its forming part of the broader Kurnell Peninsula cultural landscape, which is culturally significant for its association with the first meeting between the Gweagal people and Europeans in 1770. While no specific cultural values or archaeological sites have been identified directly within the Project Area, there is potential for subsurface archaeological deposits to be present below fill layers and above bedrock, in intact sands. As noted in Section 10.2 such deposits, if present, might be impacted by works associated with the proposed modification. However, it is noted that the majority of works would occur within the upper, disturbed fill layers of the site, which have low archaeological potential. Nonetheless, due to uncertainties regarding the exact location, extent, and content of any potential archaeological deposits within the Project Area, management measures have been proposed in Section 12.0 of this ACHAR.

12.0 Management strategy

Management recommendations for the identified Aboriginal heritage values of the Project Area have been made based on:

- The results of previous archaeological investigations across the Kurnell Peninsula described in Section 6.0
- The results of the visual inspection described in Section 8.0
- The significance and impact assessments detailed in Sections 9.0 and 10.0
- Consultation with RAPs
- Ampol's legal responsibilities under the NPW Act 1974.

It is recommended that the measures outlined below be detailed in an Aboriginal Cultural Heritage Management Plan (ACHMP) prepared for the proposed modification. This would be prepared in consultation with RAPs, Heritage NSW and DPHI. Subject to its approval by DPHI, this document would guide the management of Aboriginal cultural heritage within the Project Area throughout the life of the proposed modification. Key components of the ACHMP are outlined below.

12.1 Management recommendations

This ACHAR has determined that land within the Project Area retains a moderate potential for the presence of subsurface Aboriginal archaeological deposits associated with sand profiles located below fill layers. As shown in Table 5-3, fill lies between 0 m and extends to a depth of approximately 2.5 m bgl WSP's Zone 2a, to 1.35 m in Zone 2b 1.4 m bgl in Zone 3. Subsurface Aboriginal archaeological deposits within the Project Area, if present, are anticipated to consist of shell midden and/or open artefact deposits, with hearths potentially also present. There also remains some, albeit limited, potential for Aboriginal burials to be present.

Intrusive subsurface works in intact sands below fill layers and above bedrock associated with the proposed modification have been assessed as carrying a risk of impacting Aboriginal objects located in buried soil profiles. In order to mitigate this risk, the following management strategy is proposed:

- Following the development of a detailed subsurface intrusive works program, a map outlining where intact sands would be disturbed would be prepared (i.e. areas where excavations extend below fill layers). Where impacts to Aboriginal archaeological deposits are identified, a RAP representative would be engaged to monitor these works
- If Aboriginal archaeological deposits are identified during intrusive subsurface works, the following procedure would be followed:
 - All works would cease immediately in the area to prevent further impacts to the object(s)
 - Notify the Project Manager
 - Engage a suitably qualified archaeologist and RAP representative to determine the nature, extent and significance of the object(s) and provide appropriate management advice. Management action(s) would vary according to the type of evidence identified, its significance (both scientific and cultural) and the nature of potential impacts. Management would include the following:
 - Objects/ sites assessed as of low significance would be subject to collection and appropriate analysis by a qualified archaeologist and RAP representative. Outside of this, no further mitigation would be required

- Objects/ sites assessed as of moderate significance would be subject to collection and appropriate analysis by a qualified archaeologist and RAP representative. Other forms of mitigation (i.e., detailed recording, test or open area excavation) may be implemented if considered appropriate/ feasible, taking into account WHS considerations and the nature of proposed impacts. The extent of other forms of mitigation would be determined through consultation between Ampol, RAPs and an appropriately qualified archaeologist
 - Management of objects/sites assessed of high scientific significance would be determined through consultation between Ampol, RAPs and an appropriately qualified archaeologist. Such mitigation measures may include archaeological excavations or conservation
- Prepare and submit an AHIMS site card for the site.

12.1.1 Management of human skeletal remains

In the event that potential human skeletal remains are identified during the life of the proposed modification, the following standard procedure (NSW Police Force 2015; NSW Health 2013) would be followed:

1. All work in the vicinity of the remains would cease immediately
2. The location would be cordoned off – work can continue outside of this area as long as there is no risk of interference to the remains or the assessment of the remains
3. Where it is reasonably obvious from the remains that they are human, the Project Manager (or a delegate) would inform the NSW Police by telephone (prior to seeking advice from a forensic specialist)
4. Where uncertainty over the origin (i.e., human or non-human) of the remains exists, a physical or forensic anthropologist would be commissioned to inspect the exposed remains in situ and make a determination of origin, ancestry (Aboriginal or non-Aboriginal) and antiquity (pre-contact, historic or modern)
5. If the remains are identified as modern and human, notify NSW Police
6. If the remains are identified as pre-contact or historic Aboriginal, notify Heritage NSW using their Environment Line (131 555)
7. If the remains are identified as historic (non-Aboriginal), notify the NSW Heritage Division.

An Aboriginal community representative would be present where it is reasonably suspected burials, or human remains may be encountered. If human remains are unexpectedly encountered and they are thought to be Aboriginal, the Aboriginal community would be notified immediately.

Recording of Aboriginal ancestral remains would be undertaken by, or be conducted under the direct supervision of, a specialist physical anthropologist or other suitably qualified person.

Archaeological reporting of Aboriginal ancestral remains would be undertaken by, or reviewed by, a specialist physical anthropologist or other suitably qualified person, with the intent of using respectful and appropriate language and treating the ancestral remains as the remains of Aboriginal people rather than as scientific specimens.

12.1.2 Aboriginal cultural heritage awareness

Ampol would ensure that the proposed modification's standard environmental site induction includes an Aboriginal heritage component. At a minimum, this would outline current protocols and responsibilities for the management of Aboriginal cultural heritage within the Project Area and provide an overview of the diagnostic features of potential Aboriginal site types/objects.

12.1.3 Consultation protocols

Provisions regarding appropriate consultation protocols with RAPs would be incorporated into the ACHMP. Contact details and preferred contact methods for each RAP, as well other relevant stakeholders, would be specified.

12.1.4 Reporting under the ACHMP

Where Aboriginal archaeological works are required to be carried out under the ACHMP for the proposed modification they would be prepared to a standard comparable to that required by the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW*. Printed and/or digital copies of any associated reports would be made available to RAPs upon request.

12.1.5 Periodic Review of ACHMP

The ACHMP for the proposed modification would be subject to periodic review to ensure that all management measures are being adhered to and are working effectively. Periodic reviews would also provide an opportunity to make modifications to existing measures and to add, where appropriate, new measures.

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Appendix A

RAP consultation log

Appendix A RAP consultation log

Date	Stakeholder Group	Stakeholder Representative	Correspondence/Comments	AECOM Response
14/03/2024	Agency Letters Sent Out			
15/03/2024	Office of Registrar	Rachel Rwiri	Responded that there were no Aboriginal Owners in the Project Area. Also suggested contacting the La Perouse LALC	None required
26/03/2024	Heritage NSW	Barry Gunther	Provided a list of Stakeholders	None required
28/03/2024	Sutherland Shire Council	Yuwen Wang	Provided a list of Stakeholders	None required
15/04/2024	ROI request sent to stakeholders			
15/04/2024	Wailwan Aboriginal Group	Phil Boney	Registered interest by email	None required
15/04/2024	Butucarbin Aboriginal Corporation	Jenny Beale	Registered interest by email	None required
15/04/2024	Didge Ngunawal Clan	Paul Boyd	Registered interest by email	None required
15/04/2024	Yarrawalk PTY Limited	Scott Franks	Registered interest by email	None required
15/04/2024	Yerrowah	Teyarah Henry	Registered interest by email	None required
16/04/2024	Ninum	Kevin Campbell, Marnya Donovan	Registered interest by email	None required
16/04/2024	Kamilaroi Yankuntjatjara Working Group	Phil Kahn	Registered interest by email	None required
16/04/2024	Burroo Burroo	n/a	Registered interest by email	None required
16/04/2024	Nerrigundah	n/a	Registered interest by email	None required
18/04/2024	Yulay Cultural Services	Arika Jalomaki	Registered interest by email	None required
22/04/2024		Thomas Dahlstrom	Registered interest by email	None required
22/04/2024	Waawaar Awaab Aboriginal Corporation	Rodney Gunther	Registered interest by email	None required
24/04/2024	Ngambaa Cultural Connections	Kaarina Slater	Registered interest by email	None required
25/04/2024	Guntawang Aboriginal Resources Incorporated	Wendy Morgan	Registered interest by email	None required

Date	Stakeholder Group	Stakeholder Representative	Correspondence/Comments	AECOM Response
25/10/2023	Newspaper advertisement			
3/05/2024	Methodology sent to RAPs			
3/05/2024	Yarrowalk PTY Limited	Scott Franks	"Can you please register our interest in this please"	None required
6/05/2024		Thomas Dahlstrom	"Thank you for your email. I have attached a couple documents about Sydney Aborigines and some of the language etc. Enjoy"	None required
6/05/2024	Guntawang Aboriginal Resources Incorporated	Wendy Morgan	"Guntawang Aboriginal Resources Inc has nothing else to add to this report"	None required
14/05/2024	Gandangara LALC	Melissa Williams	"Dear Geordie, Do you have us registered?"	GO responded stating that La Perouse LALC was registered.
7/06/2024	Kamilaroi Yankuntjatjara Working Group	Phil Kahn	"Thank you for your ACHAR for Kurnell Terminal, the study area is highly significant and sensitive to our people & requires further investigation, we agree and support your methodology. We look forward to working alongside you on this project."	None required
6/06/2024	Site inspection completed			
17/06/2024	ACHAR sent to RAPs			
9/08/2024	Guntawang Aboriginal Resources Incorporated	Wendy Morgan	"Guntawang has no other information to add to this report. We agree and support all of the Draft ACHAR."	None required
15/08/2024	Kamilaroi Yankuntjatjara Working Group	Phil Kahn	"we have reviewed your report and would like to agree and support your management recommendations"	None required
3/02/2025	Didge Ngunawal Clan	Paul Boyd	"We're happy with the minor change that has been made to this project and it's happy to move on"	None required

Date	Stakeholder Group	Stakeholder Representative	Correspondence/Comments	AECOM Response
4/02/2025	Guntawang Aboriginal Resources Incorporated	Wendy Morgan	Guntawang Aboriginal Resources Incorporated supports the recommendations in the Draft ACHAR made that No Aboriginal objects or sites were identified during the inspections, nor were any specific cultural values communicated to AECOM during the process. We also support Steven Ella suggestion that there is a possibility of sites located beneath the disturbed soil layers	None required
4/03/2025	Kamilaroi Yankuntjatjara Working Group	Phil Kahn	Thank you for your Draft ACHAR for Kurnell Terminal SSD554 MOD-7, we would like to agree and support your management recommendations"	None required

Appendix B

Agency letters and
responses

Appendix B Agency letters and responses

AECOM

AECOM Australia Pty Ltd +61 2 8008 1700 tel
Gadigal Country
Level 21, 420 George Street ABN 20 093 846 925
Sydney NSW 2000
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QVB Post Office NSW 1230
Australia
www.aecom.com

14 March 2024

Heritage NSW
NSW Department of Climate Change, Energy, the Environment and Water
Locked Bag 5020, Parramatta NSW, 2124
Email: heritagemailbox@environment.nsw.gov.au

Dear Sir/Madam,

Request for relevant Aboriginal stakeholder Information for the Kurnell Terminal SSD5544 Modification 7 Project located in Kurnell, NSW – Sutherland Shire Council Local Government Area (LGA)

I am writing to inform you that AECOM Australia Pty Ltd (AECOM) was commissioned by Ampol Energy Pty Ltd (Ampol) to prepare an Aboriginal Cultural Heritage Assessment Report (ACHAR) for the Kurnell Terminal SSD5544 modification 7 (the 'modification') at Ampol's Kurnell Terminal site at 2 Solander Street, Kurnell, New South Wales (the 'Site', Figure 1). The modification will include the relocation of operational terminal infrastructure from Zone 2 and Zone 3 to Zone 1, removal or demolition of redundant infrastructure and buildings and completion of remediation activities in Zone 2 and 3 and civil activities in Zone 2 to support future land uses in this area.

The Proponent for the Project is Ampol (2 Solander Street, Kurnell NSW 2231). The Project contact at Ampol is Keiran Fleming (email: keiran.fleming@ampol.com.au).

The purpose of this letter is to request from you, in accordance with cl 80C(2)(a) of the *National Parks and Wildlife Regulation 2009* and Section 4.1.2 of Heritage NSW's *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW 2010), the name and contact details of Aboriginal individuals and/or organisations whom you consider may hold cultural knowledge relevant to determining the cultural significance of Aboriginal objects/places in the Area of Interest, and who may be interested in being consulted.

Should you have information regarding the above or have any questions, please don't hesitate to contact:

Geordie Oakes
c/- AECOM Australia Pty Ltd
PO Box Q410, QVB Post Office,
Sydney, NSW 1230
Ph: 0410 513 509
Fax: +61 2 8934 0001
Email: Geordie.Oakes@aecom.com

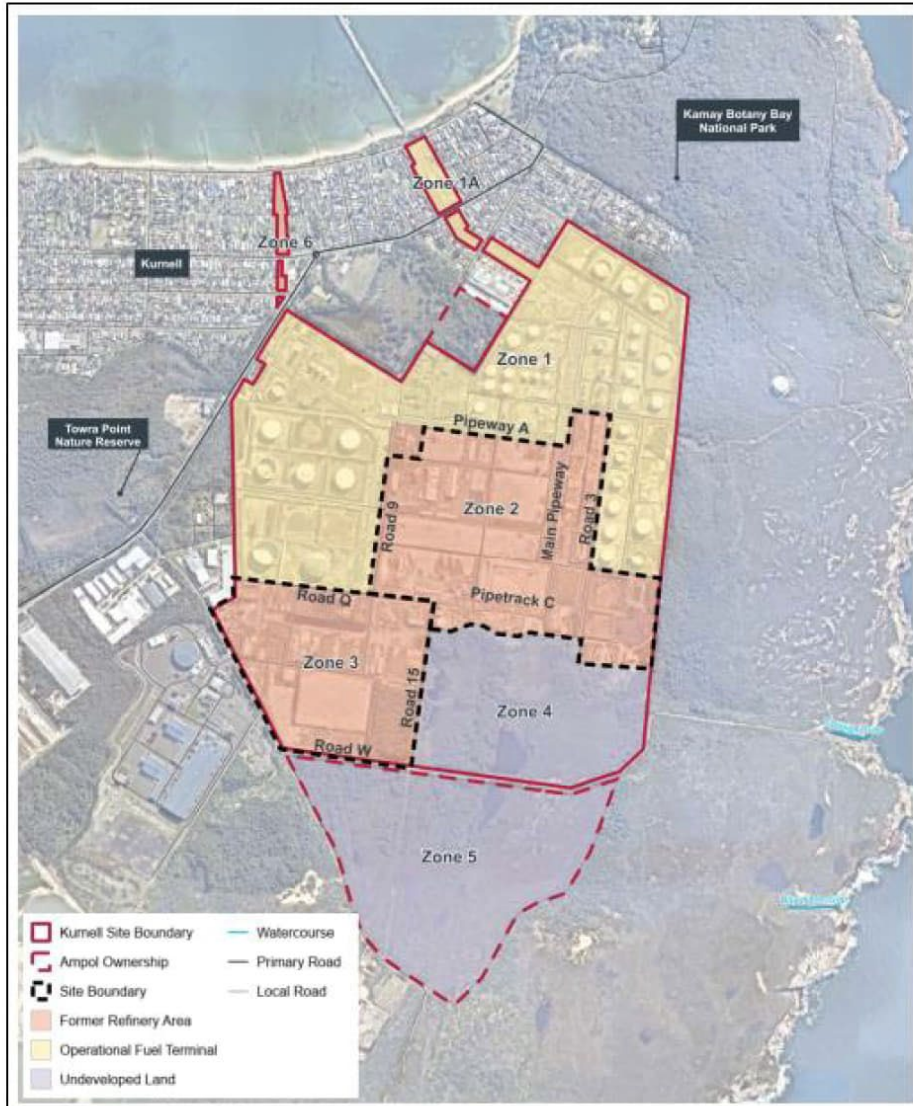
Kind regards,



Geordie Oakes
Archaeologist
Geordie.Oakes@aecom.com
Direct Dial: 0410513509



Figure 1 The site



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www.aecom.com

14 March 2024

Greater Sydney Local Land Service
PO Box 4515
Westfield Penrith NSW 2750
Email: gs.service@lls.nsw.gov.au

Dear Sir/Madam,

Request for relevant Aboriginal stakeholder information for the Kurnell Terminal SSD5544 Modification 7 Project located in Kurnell, NSW – Sutherland Shire Council Local Government Area (LGA)

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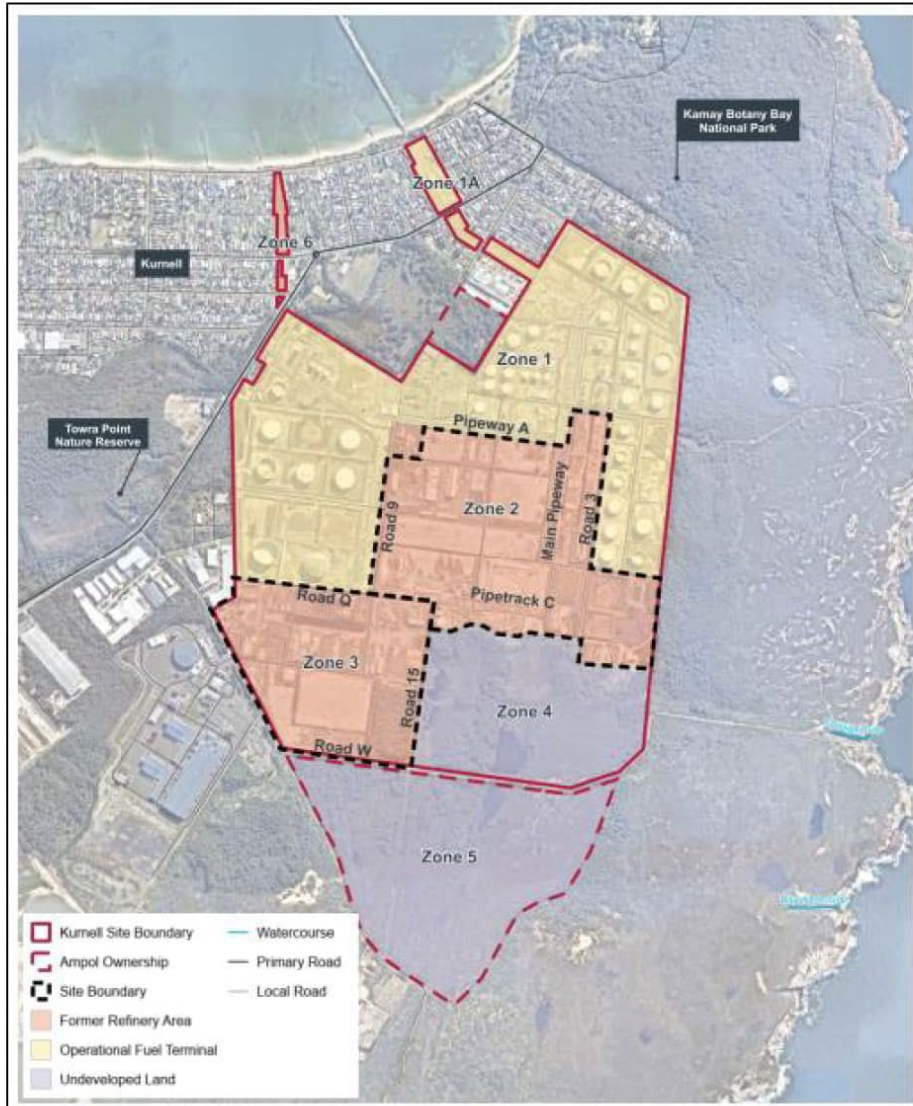
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14 March 2024

Heritage Advisor
Sutherland Shire Council
4-20 Eton Street
Sutherland NSW 2232

Dear Sir/Madam,

Request for relevant Aboriginal stakeholder Information for the Kurnell Terminal SSD5544 Modification 7 Project located in Kurnell, NSW – Sutherland Shire Council Local Government Area (LGA)

I am writing to inform you that AECOM Australia Pty Ltd (AECOM) was commissioned by Ampol Energy Pty Ltd (Ampol) to prepare an Aboriginal Cultural Heritage Assessment Report (ACHAR) for the Kurnell Terminal SSD5544 modification 7 (the 'modification') at Ampol's Kurnell Terminal site at 2 Solander Street, Kurnell, New South Wales (the 'Site', Figure 1). The modification will include the relocation of operational terminal infrastructure from Zone 2 and Zone 3 to Zone 1, removal or demolition of redundant infrastructure and buildings and completion of remediation activities in Zone 2 and 3 and civil activities in Zone 2 to support future land uses in this area.

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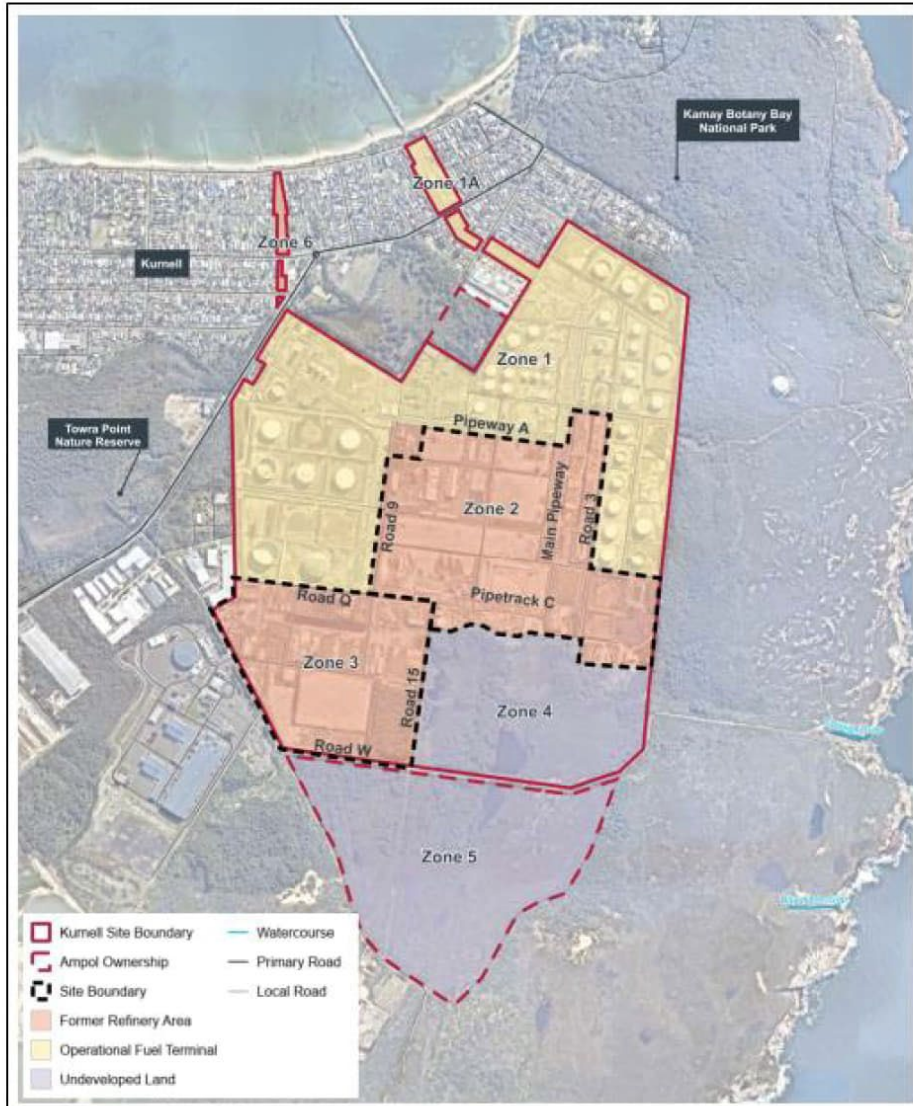
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14 March 2024

La Perouse Local Aboriginal Land Council
1 Elaroo Ave
Phillip Bay NSW 2036

Dear Sir/Madam,

Request for relevant Aboriginal stakeholder Information for the Kurnell Terminal SSD5544 Modification 7 Project located in Kurnell, NSW – Sutherland Shire Council Local Government Area (LGA)

I am writing to inform you that AECOM Australia Pty Ltd (AECOM) was commissioned by Ampol Energy Pty Ltd (Ampol) to prepare an Aboriginal Cultural Heritage Assessment Report (ACHAR) for the Kurnell Terminal SSD5544 modification 7 (the 'modification') at Ampol's Kurnell Terminal site at 2 Solander Street, Kurnell, New South Wales (the 'Site', Figure 1). The modification will include the relocation of operational terminal infrastructure from Zone 2 and Zone 3 to Zone 1, removal or demolition of redundant infrastructure and buildings and completion of remediation activities in Zone 2 and 3 and civil activities in Zone 2 to support future land uses in this area.

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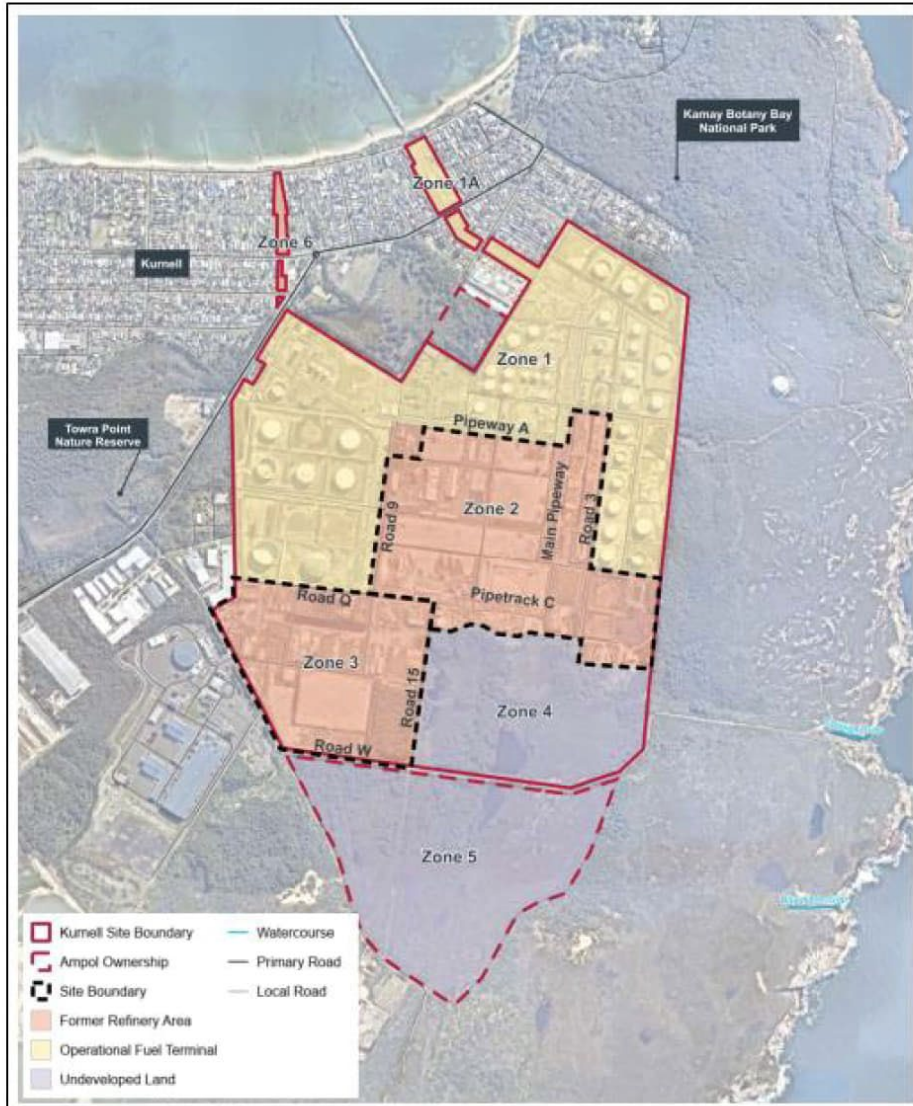
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14 March 2024

The Registrar
Office of the Registrar, Aboriginal Land Rights Act 1983
PO Box 787
Parramatta NSW 2124
Email: adminofficer@oralra.nsw.gov.au

Dear Sir/Madam,

Request for relevant Aboriginal stakeholder Information for the Kurnell Terminal SSD5544 Modification 7 Project located in Kurnell, NSW – Sutherland Shire Council Local Government Area (LGA)

I am writing to inform you that AECOM Australia Pty Ltd (AECOM) was commissioned by Ampol Energy Pty Ltd (Ampol) to prepare an Aboriginal Cultural Heritage Assessment Report (ACHAR) for the Kurnell Terminal SSD5544 modification 7 (the 'modification') at Ampol's Kurnell Terminal site at 2 Solander Street, Kurnell, New South Wales (the 'Site', Figure 1). The modification will include the relocation of operational terminal infrastructure from Zone 2 and Zone 3 to Zone 1, removal or demolition of redundant infrastructure and buildings and completion of remediation activities in Zone 2 and 3 and civil activities in Zone 2 to support future land uses in this area.

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The purpose of this letter is to request from you, in accordance with cl 80C(2)(a) of the *National Parks and Wildlife Regulation 2009* and Section 4.1.2 of Heritage NSW's *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW 2010), a list of Aboriginal owners relevant to the Site and the name and contact details of Aboriginal individuals and/or organisations whom you consider may hold cultural knowledge relevant to determining the cultural significance of Aboriginal objects/places in the Site, and who may be interested in being consulted.

Should you have information regarding the above or have any questions, please don't hesitate to contact:

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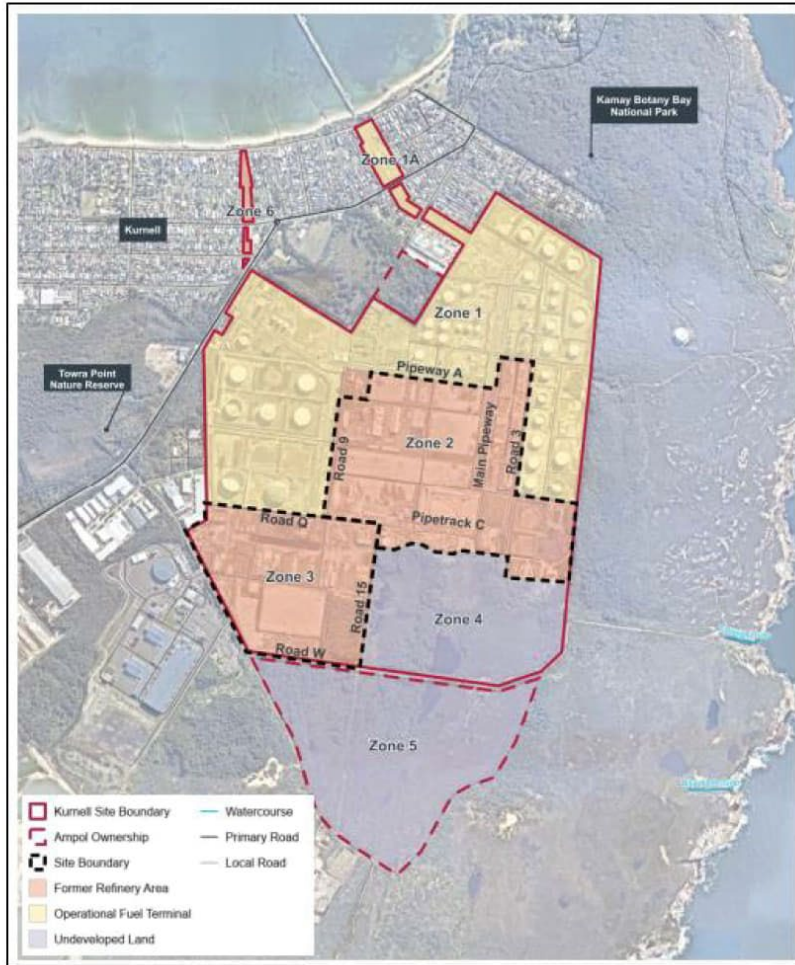
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14 March 2024

Native Title Services Corporation Limited (NTSCorp Ltd)
PO Box 2105
Strawberry Hills NSW 2012

Email: information@ntscorp.com.au

Dear Sir/Madam,

Request for relevant Aboriginal stakeholder Information for the Kurnell Terminal SSD5544 Modification 7 Project located in Kurnell, NSW – Sutherland Shire Council Local Government Area (LGA)

I am writing to inform you that AECOM Australia Pty Ltd (AECOM) was commissioned by Ampol Energy Pty Ltd (Ampol) to prepare an Aboriginal Cultural Heritage Assessment Report (ACHAR) for the Kurnell Terminal SSD5544 modification 7 (the 'modification') at Ampol's Kurnell Terminal site at 2 Solander Street, Kurnell, New South Wales (the 'Site', Figure 1). The modification will include the relocation of operational terminal infrastructure from Zone 2 and Zone 3 to Zone 1, removal or demolition of redundant infrastructure and buildings and completion of remediation activities in Zone 2 and 3 and civil activities in Zone 2 to support future land uses in this area.

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Kind regards,



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PO Box Q410
QVB Post Office NSW 1230
Australia
www.aecom.com

14 March 2024

National Native Title Tribunal
New South Wales – Sydney Office
GPO Box 9973
Sydney NSW 2000

Email: NTservice@nntt.gov.au

Dear Sir/Madam,

Request for relevant Aboriginal stakeholder Information for the Kurnell Terminal SSD5544 Modification 7 Project located in Kurnell, NSW – Sutherland Shire Council Local Government Area (LGA)

I am writing to inform you that AECOM Australia Pty Ltd (AECOM) was commissioned by Ampol Energy Pty Ltd (Ampol) to prepare an Aboriginal Cultural Heritage Assessment Report (ACHAR) for the Kurnell Terminal SSD5544 modification 7 (the 'modification') at Ampol's Kurnell Terminal site at 2 Solander Street, Kurnell, New South Wales (the 'Site', Figure 1). The modification will include the relocation of operational terminal infrastructure from Zone 2 and Zone 3 to Zone 1, removal or demolition of redundant infrastructure and buildings and completion of remediation activities in Zone 2 and 3 and civil activities in Zone 2 to support future land uses in this area.

The Proponent for the Project is Ampol (2 Solander Street, Kurnell NSW 2231). The Project contact at Ampol is Keiran Fleming (email: keiran.fleming@ampol.com.au).

The purpose of this letter is to request from you, in accordance with cl 80C(2)(a) of the *National Parks and Wildlife Regulation 2009* and Section 4.1.2 of Heritage NSW's *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW 2010), for a list of registered native title claimants, native title holders and registered Indigenous Land Use Agreements for the Area of Interest.

Should you have information regarding the above or have any questions, please don't hesitate to contact:

Geordie Oakes
c/- AECOM Australia Pty Ltd
PO Box Q410, QVB Post Office,
Sydney, NSW 1230
Ph: 0410 513 509
Fax: +61 2 8934 0001
Email: Geordie.Oakes@aecom.com

Kind regards,



Geordie Oakes
Archaeologist
Geordie.Oakes@aecom.com
Direct Dial: 0410513509



Figure 1 The site



Oakes, Georgie

From: Barry Gunther <Barry.Gunther@environment.nsw.gov.au>
Sent: Tuesday, 26 March 2024 10:48 AM
To: Oakes, Georgie
Subject: Heritage NSW Aboriginal stakeholder list for Kurnell Terminal SSD5544 Modification 7 Project.
Attachments: SSD5544 HNSW.pdf; Heritage NSW Aboriginal stakeholder list for Sutherland LGA.docx

This Message Is From an External Sender

This message came from outside your organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Report Suspicious

Hi Georgie,

Please find attached the Heritage NSW Aboriginal stakeholder list for Kurnell Terminal SSD5544 Modification 7 Project.

regards

[Barry Gunther](#)
Aboriginal Senior Assessment Officer
Heritage NSW
Department of Climate Change,
Energy, the Environment and Water

www.environment.nsw.gov.au/topics/heritage

Locked bag 5020
Parramatta NSW 2124

Working days Monday to Friday, 9:00am - 5:00pm

I acknowledge the traditional custodians of the land and pay respects to Elders past and present. I also acknowledge all the Aboriginal and Torres Strait Islander staff working with NSW Government at this time.

Please consider the environment before printing this email.

This email is intended for the addressee(s) named and may contain confidential and/or privileged information.

If you are not the intended recipient, please notify the sender and then delete it immediately. Any views expressed in this email are those of the individual sender except where the sender expressly and with authority states them to be the views of the NSW Office of Environment, Energy and Science.

Our reference: Doc24/211837

Kurnell Terminal SSD5544 Modification 7 Project, Kurnell

Aboriginal Stakeholders – Sutherland Local Government Area.

A1 Indigenous Services	Carolyn Hickey	cazadirect@live.com	-	0411 650 057	-	10 Marie Pitt Place, Glenmore Park, NSW, 2745	-
Aragung Aboriginal Cultural Heritage Site Assessments	Jamie Eastwood	James.eastwood@y7mail.com	(02) 9832 3732	0427 793 334	-	33 Bulolo Drive, Whalan, NSW, 2770	-
B.H. Heritage Consultants	Ralph Hampton ; Nola Hampton	hamptonralph46@gmail.com kinghampton77@gmail.com	-	RH: 0435 785 138 NH: 0401 662 531	-	184 Captain Cook Drive, Willmot, 2770, NSW 95 Mount Ettalong Road, Umina Beach, 2257, NSW	Nola and Ralph would BOTH like to be notified of all projects
Badu (Murrin Clan/Peoples)	Karia Lea Bond	baduchts@gmail.com	-	0476 381 207	-	11 Jeffery Place, Moruya, NSW, 2537	-
Barking Owl Aboriginal Corporation	Mrs Jody Kulakowski (Director)	barkingowicorp@gmail.com	-	0426 242 015	-	2-65/69 Wehlow St. Mt Druitt	-
Barraby Cultural Services	Lee Field (Manager)	barrabyculturalservices@gmail.com	-	0431 314 892	-	334 Argyle Street, Picton NSW 2571	-
Biamanga (Murrin Clan/Peoples)	Seli Storer	biamangachts@gmail.com	-	-	-	-	-
Bilinga (Murrin Clan/Peoples)	Simalene Carriage	bilingachts@gmail.com	-	-	-	-	-
Butucarbin Aboriginal Corporation	Jennifer Beale	butuheritage@gmail.com	(02)98 32 7167	-	-	PO Box E18, Emerton, NSW 2770	Preferred contact via email

Clive Freeman	Clive Freeman	clive.freeman@y7mail.com	(02) 4442 1117	0437 721 481	-	6 Dhugan Close Wreck Bay Aboriginal Community JBT 2540	-
Cullendulla (Murrin Clan/Peoples)	Corey Smith	cullendullachts@gmail.com	-	-	-	-	-
Darug Boorooberongal Elders Aboriginal Corporation	Paul Hand (chairperson)	paulhand1967@gmail.com	-	0456 786 738	-	PO.Box 14 Doonside NSW 2767	-
Darug Land Observations	Jamie Workman; Anna Workman; Anna O'Hara	daruglandobservations@gmail.com	-	0418 494 951 0413 687 279	-	PO Box 173, Ulladulla, NSW 2539 PO Box 2006 Bendelong NSW 2539	-
Dharug (Murrin Clan/Peoples)	Andrew Bond	dhargchts@gmail.com	-	-	-	-	-
Dharug Ngurra Aboriginal Corporation	Dirk Schmitt	archaeology@dhargngurra.org.au	(02) 9622 4081	-	-	PO Box 441, Blacktown NSW 2148	-
Didge Ngunawal Clan	Lillie Carroll ; Paul Boyd	didgengunawalclan@yahoo.com.au	-	0426 823 944 ; 0450 616 404	-	33 Carlyle Crescent Cambridge Gardens NSW 2747	-
Galamaay Cultural Consultants (GCC)	Robert Slater	galamaay@hotmail.com	-	0401 871 526	-	121 Roberts Street, Tamworth NSW 2340	-
Gandangara Local Aboriginal Land Council	Melissa Williams CEO	mwilliams@glalc.org.au	(02) 9602 5280	-	-	PO Box 1038 Liverpool NSW 2170	-
Garrara Aboriginal Corporation	Raymond Ingrey	raymond@bariyu.org.au	-	-	-	-	-

Gilay Consultants	Carol Slater	cal.slater61@gmail.com	-	0478 583 565	-	6 MacGibbon Parade, Old Erawal Bay NSW 2540	-
Ginninderra Aboriginal Corporation	Steven Johnson; Krystle Carroll	Ginninderra.corp@gmail.com	-	0406 991 221	-	PO BOX 3143 Grose Vale NSW 2754	-
Goobah Development PTY LTD (Murrin Clan/Peoples)	Basil Smith	goobahchts@gmail.com bunjil.smith@gmail.com	-	0405 995 725	-	66 Grantham Road, Batehaven NSW, 2536	confirm email
Goodradigbee Cultural & Heritage Aboriginal Corporation	Caine Carroll	goodradigbee1@outlook.com	-	0410 974 236	-	Error! Hyperlink reference not valid.	-
Gulaga	Wendy Smith	gulagachts@gmail.com	-	-	-	-	-
Gunjeewong Cultural Heritage Aboriginal Corporation	Shayne Dickson	gunjeewongculturalheritage21@hotmail.com	-	0421 636 474	-	2 Rutherford street Blacktown 2148	-
Guntawang Aboriginal Resources Incorporated	Wendy Morgan	wenlissa01@hotmail.com	(02) 9601 7183	0414 964 657	-	113 Reservoir Road Mt Pritchard NSW 2170	-
Gunyu (Murrin Clan/Peoples)	Kylie Ann Bell	gunyuchts@gmail.com	-	-	-	-	-
James Davis	James Davis	jvdcorp@hotmail.com	-	0423 715 395	-	2 Poplar Ave, Unanderra NSW 2526	-
Jerringong (Murrin Clan/Peoples)	Joanne Anne Stewart	jerringong@gmail.com	-	0422 800 184	-	2/10 Burnett Avenue Gerringong NSW 2534	-
Kamilaroi Yankuntjatjara Working Group	Phil Khan	philipkhan.acn@live.com.au	-	0434 545 982	-	78 Forbes Street, Emu Plains, NSW 2750	-

Ken Foster	Ken Foster	-	-	0411 818 091	-	68 Australia St Matraville	-
Konanggo Aboriginal Cultural Heritage Services	Robert Young	konanggo_consultancy@hotmail.com	-	0450 497 270	-	2/42 Crawford Road, Brighton Le Sands 2216 NSW	-
La Perouse Botany Bay Corporation	Yvonne Simms	-	-	0466 094 491	(02) 9311 3440	10 Murrong Place, La Perouse NSW 2036	-
La Perouse Local Aboriginal Land Council	Chris Ingrey	admin@laperouse.org.au	(02) 9311 4282	-	-	PO Box 365 Matraville NSW 2036	-
Matthew and Andrew Coe	Matthew Coe; Andrew Coe	-	(08)83 44 2196	-	-	37 Derlanger Avenue, Collingswood, South Australia 5081	-
Minnamunnung	Aaron Broad	-	-	0402 526 888	-	1 Waratah Avenue, Albion Park Rail NSW 2527	-
Munyinga (Murrin Clan/Peoples)	Kaya Dawn Bell	munyingachts@gmail.com	-	-	-	-	-
Mura Indigenous Corporation (icn:8991)	Phillip Carroll	mura.culturereservices@gmail.com	-	0447512397	-	Error! Hyperlink reference not valid.	-
Murramarang (Murrin Clan/Peoples)	Roxanne Smith	murramarangchts@gmail.com	-	-	-	-	-
Murrumbul (Murrin Clan/Peoples)	Mark Henry	murrumbul@gmail.com	-	-	-	-	-
Ngambaa Cultural Connections	Kaarina Slater	ngambaa.culturalconnections@gmail.com	-	0421 077 521	-	Unit 29,11 Phillip Street St Marys NSW 2760	-

Norma Simms	Norma Simms	-	-	0466 094 491	-	10 Murrong Place, La Perouse NSW 2036	-
Nundagurri (Murrin Clan/Peoples)	Newton Carriage	nundagurri@gmail.com	-	-	-	-	-
Pemulwuy (Murrin Clan/Peoples)	Pemulwuy Johnson	pemulwuyd@gmail.com	-	0425 066 100	-	14 Top Place, Mt Annan	-
Tharawal Local Aboriginal Land Council	Robyn Straub (CEO)	ceo@tharawal.com.au reception@tharawal.com.au	(02) 4681 0059	-	-	PO Box 245 Thirlmere NSW 2572	-
Thauaira	Shane Carriage	thauairachts@gmail.com	-	-	-	-	-
Thomas Dahlstrom Offers ACH value by using 3D Laser and Drone technology	Thomas Dahlstrom	gamila_roj@yahoo.com.au	-	0403 529 119 Offers ACH value by using 3D Laser and Drone technology	-	1-122 Glebe Point Road Glebe NSW 2037	-

Thoorga Nura	John Carriage (Chief Executive Officer)	thoorganura@gmail.com	-	0401 641 299	-	50B Hilltop Crescent, Surf Beach, 2536, NSW	-
Scott Franks on the behalf od the Wonnarua PBC Yarrowalk Pty Ltd	Scott Franks	scott@tocomwall.com.au scott@yarrowalk.com.au	-	0404 171 544	-	Po box 145, Miranda NSW 1490	-
Waawaar Awaab Aboriginal Corporation	Rodney Gunther Barry Gunther	Waawaar.awaab@gmail.com	-	RG: 0410580962 BG: 0451 176 473	-	15 Bungonia Street Prestons NSW 2170	-
Wailwan Aboriginal Group	Philip Boney	waarlan12@outlook.com	-	0436 483 210	-	-	-
Walbunja (Murrin Clan/Peoples)	Hika Te Kowhai	walbunja@gmail.com	-	0402 730 612	-	15 Renee Crescent MORUYA HEADS NSW 2537	-
Walgalu (Murrin Clan/Peoples)	Ronald Stewart	walgaluchts@gmail.com	-	-	-	-	-
Wingikara (Murrin Clan/Peoples)	Hayley Bell	wingikarachts@gmail.com	-	-	-	-	-
Wori Woilywa	Daniel Chalker	woriwoilywa@gmail.com	-	0409 006 216	-	261 Mockingbird Rd Pheasants Nest NSW 2574	-
Wullung (Murrin Clan/Peoples)	Lee-Roy James Boota	wullunglb@gmail.com	-	0403 703 942	-	54 Blackwood Street, Gerringong, NSW, 2534	-
Wurrumay Pty Ltd	Kerrie Slater; Vicky Slater	wurrumay31@outlook.com	-	0421 077 521	-	89 Pyramid Street, Emu Plains NSW 2750	-
Yerramurra (Murrin Clan/Peoples) and Taste of	Robert Parson	yerramurra@gmail.com	-	-	-	-	-

Tradition Native Aboriginal Corporation							
Yulay Cultural Services	Arika Jalomaki (Manager)	yulayculturalservices@gmail.com	-	0481 251 385 0411 048 794	-	28 Poplar Street North St Mary's NSW 2760 15 Rowley Place, Airds NSW 2560	-
Yurrandaali	Bo Field (Manager)	yurrandaali_cs@hotmail.com	-	0403 048 263	-	6 MacGibbon Parade, Old Erowal Bay NSW 2540	-
RAW Cultural Healing	Raymond Weatherall	RAW.CulturalHealing@hotmail.com		0411 962 602		8 Rosslyn Dr, Claymore NSW 2559 PO Box N74, Campbelltown North NSW 2560	
Ninum	Kevin Campbell, Marnya Donovan	ninum_group@outlook.com		Marnya Donovan 0434574466 Kevin Campbell 0403421264		19 Corkwood St Albion Park Rail 2527	
Gaduchts	Colin Walker – Chairperson	gaduchts@gmail.com		0401313978			
Nattai Aboriginal Culture & Heritage Consultation Service	Alan Medhurst	ngunduwaa@live.com.au		0452106830			
Yerrowah	Teyarah Henry	Yerrowah-@outlook.com		0421358480			

OFFICIAL



15 March 2024

By email: Geordie.Oakes@aecom.com

Geordie Oakes
AECOM Australia Pty Ltd
PO Box Q410, QVB Post Office
SYDNEY NSW 2000

Dear Geordie,

Aboriginal Cultural Heritage Assessment – Aboriginal Community Consultation for the Kurnell Terminal SSD5544 Modification 7 Project located in Kurnell, NSW – Sutherland Shire Council Local Government Area (LGA)

We refer to your email and letter to this Office, dated 14 March 2024 requesting contact information for Aboriginal organisations, stakeholders and/or people who may have cultural knowledge relevant for the proposed Kurnell Terminal SSD5544 modification 7 (the 'modification') at Ampol's Kurnell Terminal site at 2 Solander Street, Kurnell, NSW.

Under Section 170 of the Aboriginal Land Rights Act 1983 (NSW), the Office of the Registrar is required to maintain the Register of Aboriginal Owners (RAO) for New South Wales. The location of the modification to the Kurnell Terminal SSD5544 is in proximity to an area for which there may soon be Registered Aboriginal Owners: Kamay Botany Bay National Park and Towra Nature Reserve.

On 22 September 2023 the former interim Registrar opened the Register of Aboriginal Owners for Kamay Botany Bay National Park and Towra Nature Reserve and is now seeking applications from Aboriginal people for registration as Aboriginal Owners for this area. As at today's date, there are not yet any Registered Aboriginal Owners for this area.

Please note that there may be an Aboriginal Owner representative body or group in place in the future to which we would refer requests such as this one. However, the establishment of any such body or group has not yet been determined.

We also suggest you contact La Perouse Local Aboriginal Land Council on the details provided below, as they may wish to participate.

Yours sincerely

Rachel Rewiri
Project Officer
Office of the Registrar, Aboriginal Land Rights Act 1983

La Perouse Local Aboriginal Land Council
PO Box 365
MATRIVILLE NSW 2036
(02) 9311 4282

Address: Level 3, 2 – 10 Wentworth Street, PARRAMATTA NSW
2150
Post: P.O Box 5068, PARRAMATTA NSW 2124
Phone: 02 8633 1266

OFFICIAL

Oakes, Georgie

From: NTService <NTService@nntt.gov.au>
Sent: Tuesday, 9 April 2024 1:32 PM
To: Oakes, Georgie
Subject: RE: Request for Stakeholders - Kurnell Terminal SSD5544 [SEC=OFFICIAL]

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OFFICIAL

Dear Mr. Oakes,

Thank you for your enquiry regarding Register Searches. To enable us to complete the search appropriately and adequately, please forward your request, along with a Geospatial Search Form, to the following email address: GeospatialSearch@NNTT.gov.au

A Geospatial Search Form must accompany your request. Search request forms are available for download from our website at: http://www.nntt.gov.au/assistance/Geospatial/Pages/Geospatial_Searches.aspx
Further information on searching our Registers is available at: <http://www.nntt.gov.au/assistance/Pages/Searches-and-providing-Register-information.aspx>

Please note:

Cultural Heritage - The existence or otherwise of native title is quite separate to any matters relating to Aboriginal cultural heritage. In NSW, the National Native Title Tribunal has undertaken steps to remove itself from the formal list of sources for information about indigenous groups in development areas.

Kind regards,

Emma McKenzie
National Native Title Tribunal | Brisbane
Level 5, Harry Gibbs Commonwealth Law Courts, 119 North Quay, Brisbane QLD 4000
p. (07) 3052 4040 | e. enquiries@nntt.gov.au
www.nntt.gov.au



I acknowledge the traditional custodians of the lands where we live, learn and work.



Oakes, Geordie

From: Yuwen Wang <YWang@ssc.nsw.gov.au>
Sent: Thursday, 28 March 2024 4:13 PM
To: Oakes, Geordie
Subject: RE - RN2024-033246 - Request for relevant Aboriginal stakeholder information for the Kurnell Terminal SSD5544

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 This message came from outside your organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

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Hello Geordie,

Thank you for your enquiry.

I have enquired with a number of individuals within Council and here is a list of individuals and groups that could further assist you relating to the contacts you are seeking for the consultation. The list may not be exhaustive(it includes some that may or may not have interest or knowledge of the site and surrounds) and these individuals and groups may have other suggestions as well for input.

- La Perouse Local Aboriginal Land Council
- Gamay Rangers rangers@laperouse.org.au
- Kurranulla Aboriginal Corporation manager@kurranulla.org.au
- Koori Interagency Meeting members shanelle@kurranulla.org.au
skisouthernsydneykooiinteragency@kurranulla.org.au
- Gandangara Local Aboriginal Land Council Reception@glalc.org.au
- Native Title Corporation (Redfern) information@ntscorp.com.au
- Office of the Registrar Aboriginal Land Rights Act 1983 adminofficer@oralra.nsw.gov.au (Aboriginal owners)

We would also recommend consulting with Council's Aboriginal and Torres Strait Islander Advisory Sub-Committee. Please feel free to reach out again if you require further assistance.

Yuwen Wang
 Strategic Planner | Strategic Planning Unit
 T 02 9710 0683

sutherlandshire.nsw.gov.au

SUTHERLANDSHIRE



We acknowledge the Dharawal people as the Traditional Custodians of the land within Sutherland Shire. We pay respect to the Elders and their families, past, present and emerging, and through them, to all Aboriginal and Torres Strait Islander peoples.

Appendix C

Newspaper
advertisement

Appendix C Newspaper advertisement

17/04/2024 - public notices

Aboriginal Stakeholder Consultation
 Aboriginal Stakeholder Consultation
 SSD5544 Modification 7 Kurnell Terminal
 Ampol Australia Petroleum Pty Ltd, 2 Solander Street, Kurnell NSW 2231

Notice given under cl 60(2)(c) of the National Parks and Wildlife Regulation 2019 and Section 4.1.3 of the Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010

AECOM, on behalf of Ampol Australia Petroleum Pty Ltd, is seeking Aboriginal persons or organisations who wish to be consulted about an Aboriginal heritage assessment being prepared for proposed changes to the Kurnell Terminal site that will include relocation, removal, and demolition of selected site infrastructure, in addition to completion of remediation activities and civil works in specific areas within the site.

The purpose of community consultation with Aboriginal people is to assist the Proponent in the modification of an existing State Significant Development consent and to assist the determining authority in their consideration and determination of the application.

Interested Aboriginal persons or stakeholders who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the development area and wish to participate in the community consultation process are requested to register their interest in writing to:

Geordie Oakes
 c/- AECOM Australia Pty Ltd
 PO Box Q410, QVB Post Office,
 Sydney, NSW 1230
 Ph: 0410513509
 Email: Geordie.Oakes@aecom.com

Please be advised that if you register an interest in consultation, your details will be forwarded to Heritage NSW and the La Perouse Local Aboriginal Land Council, unless you specify that you do not want your details released. The closing date for registration is 2 May 2024.

17/04/2024 - public notices

Expression of Interest -42025970 (May 2024)
 Expression of interest is sought from parties interested in buying old computer equipment including LCDs, CPUs, Laptops, Printers and other miscellaneous items. Detailed lists can be obtained by ringing 02 9289 5145 or by emailing: Jasvinder.Oberai@dcj.nsw.gov.au

Your offer must be submitted by 4 pm on Tuesday, 7 May 2024 to Manager of Industries, Dawn De Louis Correctional Centre, Hoker Street, Silverwater, NSW by e-mails to: William.baddad@dcj.nsw.gov.au

17/04/2024 - public notices

ILLAWARRA SUBURBS LAWN TENNIS ASSOCIATION

The Annual General Meeting of the ISLTA will be held on Monday, 6th May 2024 at 7.30 pm at Rockdale Tennis Club, 71 Chapel St, Rockdale 2216.

For more information refer to www.islta.com.au.

10/04/2024 - public notices

Appendix D

Expression of interest
letter and responses

Appendix D Expression of interest letter and responses

Registration of Interest - Kurnell Terminal SSD5544 Modification 7 Project

Oakes, Georgie
 To Oakes, Georgie
 Bcc 'rangers@laperouse.org.au'; 'manager@kurranulla.org.au'; 'shanelle@kurranulla.org.au'; 'sskisouthernsydneykoooriinteragency@kurranulla.org.au'; 'cazadirect@live.com'; 'James.eastwood@y7mail.com'; 'hamptonralph46@gmail.com'; 'kinghampton77@gmail.com'; 'baduchts@gmail.com'; 'barkingowcorp@gmail.com'; 'barrabyculturalservices@gmail.com';

Mon 15/04/2024 11:38 AM

Kurnell SSD 5544 ROI_2024_04_15.pdf
 178 KB

Dear Stakeholder,

Please find attached a Registration of Interest (ROI) request for the Kurnell Terminal SSD5544 Modification 7 Project. You have been identified as an Aboriginal person or organisation with the potential to hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places within the Site.


Accordingly, if you wish to participate in the consultation process for this Project, please contact Georgie Oakes via the details below. To be involved in the consultation process, registrations must be received by Thursday 2 May 2024.

All the best,
 Georgie

Georgie Oakes
 Principal Heritage Specialist, AECOM
 M 0410513509
geordie.oakes@aecom.com

AECOM
 Level 21, 420 George Street,
 Gadigal Land, Sydney 2000
 Q410, QVB Post Office, Sydney 2000
 T 8934 0000
aecom.com

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Registration of Interest - Kurnell Terminal SSD5544 Modification 7 Project

Oakes, Georgie
 To Oakes, Georgie
 Bcc 'rangers@laperouse.org.au'; 'manager@kurranulla.org.au'; 'shanelle@kurranulla.org.au'; 'sskisouthernsydneykoooriinteragency@kurranulla.org.au'; 'cazadirect@live.com'; 'James.eastwood@y7mail.com'; 'hamptonralph46@gmail.com'; 'kinghampton77@gmail.com'; 'baduchts@gmail.com'; 'barkingowcorp@gmail.com'; 'barrabyculturalservices@gmail.com'; 'biangachts@gmail.com'; 'bituhheritage@gmail.com'; 'olivefreeman@y7mail.com'; 'cullendulachs@gmail.com'; 'pauhand196@gmail.com'; 'danglendeobservations@gmail.com'; 'dhanachts@gmail.com'; 'archaeology@thanggurra.org.au'; 'didgeguravakid@yahoocom.au'; 'glemay@hotmail.com'; 'mwilliams@qldc.org.au'; 'reymond@baip.org.au'; 'galisterf@gmail.com'; 'Gwendolyn.corp@gmail.com'; 'goobachts@gmail.com'; 'burjil.smith@gmail.com'; 'goodradigbee1@outlook.com'; 'gulachts@gmail.com'; 'gunjeovongculturalheritage21@hotmail.com'; 'wenissa01@hotmail.com'; 'gunyuachts@gmail.com'; 'jvdcorp@hotmail.com'; 'jeringong@gmail.com';

Mon 15/04/2024 11:38 AM

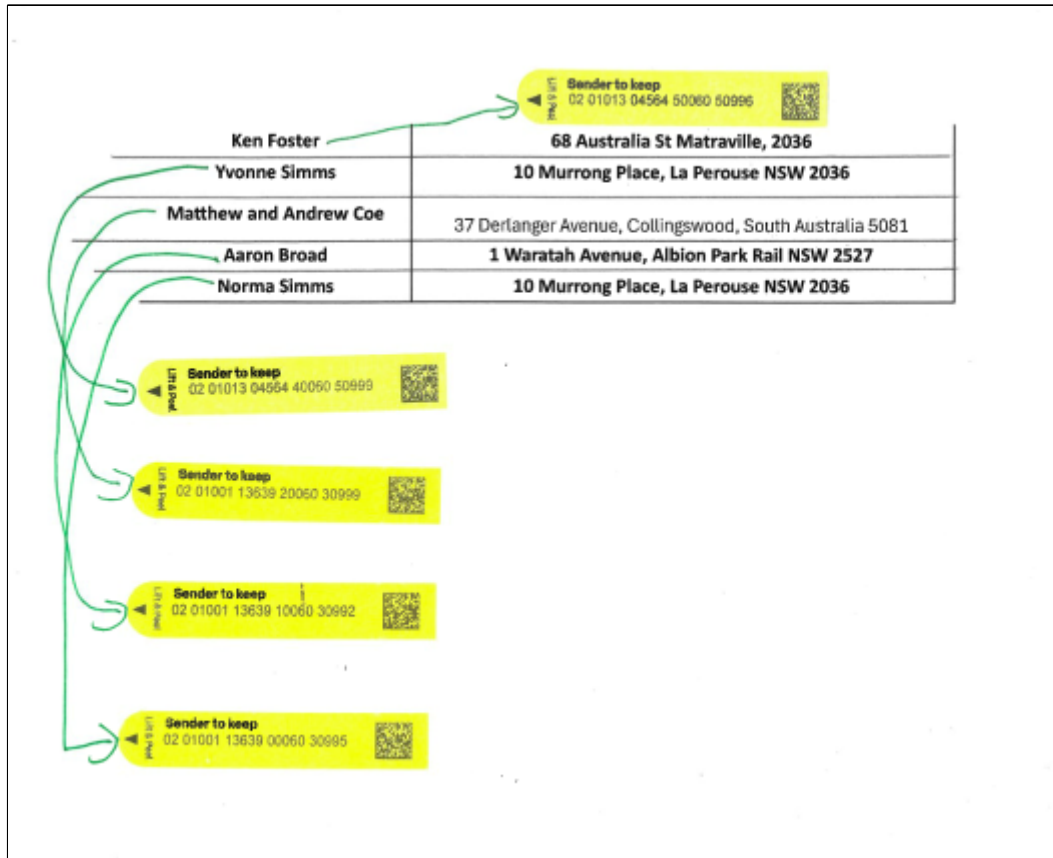
Kurnell SSD 5544 ROI_2024_04_15.pdf
 178 KB

Registration of Interest - Kurnell Terminal SSD5544 Modification 7 Project

Oakes, Georgie
 To Oakes, Georgie
 Bcc 'phillipshah.avn@live.com.au'; 'konango_consultancy@hotmail.com'; 'admin@laperouse.org.au'; 'muryagadts@gmail.com'; 'mura.cultureservice@gmail.com'; 'muranarangitds@gmail.com'; 'muranbul@gmail.com'; 'ngambaa.culturalconnections@gmail.com'; 'baduchts@gmail.com'; 'pennulwyd@gmail.com'; 'seo@tharawal.com.au'; 'reception@tharawal.com.au'; 'thasarachts@gmail.com'; 'gamila.roi@yahoo.com.au'; 'thoorganura@gmail.com'; 'scott@socomwall.com.au'; 'scott@strawalk.com.au'; 'Waanaravaa@gmail.com'; 'waan12@outlook.com'; 'walburja@gmail.com'; 'walgaluchts@gmail.com'; 'wingkarachts@gmail.com'; 'worwoolywa@gmail.com'; 'wullungbi@gmail.com'; 'wurumay31@outlook.com'; 'yernamurra@gmail.com'; 'yubyculturalconnections@gmail.com'; 'yumandasi_c@hotmail.com'; 'BAW.CulturalHealing@hotmail.com'; 'tinnum_group@outlook.com'; 'geduchts@gmail.com'; 'ngunduwaa@live.com.au'; 'Yemowah@outlook.com';

Mon 15/04/2024 11:38 AM

Kurnell SSD 5544 ROI_2024_04_15.pdf
 178 KB



AECOM

AECOM Australia Pty Ltd +61 2 8008 1700 tel
Gadigal Country
Level 21, 420 George Street ABN 20 093 846 925
Sydney NSW 2000
PO Box Q410
QVB Post Office NSW 1230
Australia
www.aecom.com

15 April 2024

Dear Stakeholder,

RE: Aboriginal community consultation for the Kurnell Terminal SSD5544 Modification 7 Project located in Kurnell, NSW – Sutherland Shire Council Local Government Area (LGA)

I am writing to inform you that AECOM Australia Pty Ltd (AECOM) was commissioned by Ampol Australia Petroleum Pty Ltd (Ampol) to prepare an Aboriginal Cultural Heritage Assessment Report (ACHAR) for the Kurnell Terminal SSD5544 modification 7 at Ampol's Kurnell Terminal site at 2 Solander Street, Kurnell, New South Wales (the 'Site', Figure 1). The modification will include the relocation of operational terminal infrastructure from Zone 2 and Zone 3 to Zone 1, removal or demolition of redundant infrastructure and buildings and completion of remediation activities in Zone 2 and 3 and civil activities in Zone 2 to support future land uses in this area.

The Proponent for the Project is Ampol (2 Solander Street, Kurnell NSW 2231). The Project contact at Ampol is Keiran Fleming (email: keiran.fleming@ampol.com.au).

You have been identified as an Aboriginal person or organisation with the potential to hold cultural knowledge relevant to determining the significance of Aboriginal objects and places within the Site. Accordingly, AECOM is inviting you to participate in community consultation for this Project.

To register your interest in consultation for this Project, please contact the following:

Geordie Oakes
c/- AECOM Australia Pty Ltd
PO Box Q410, QVB Post Office,
Sydney, NSW 1230
Ph: 0410513509

Email: geordie.oakes@aecom.com

To be involved in the consultation process, registrations must be received by 2 May 2024.

This notification is given in accordance with clause 80C (2)(b) of the *National Parks and Wildlife Regulation 2019* and section 4.1.3 of the Office of Environment and Heritage's *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW 2010). The purpose of community consultation with Aboriginal people is to assist the Proponent in the preparation of a State Significant Development Application and to assist the determining authority in their consideration and determination of the application.

Please be advised that if you register an interest in consultation, your details will be forwarded to the NSW Department of Climate Change, Energy, the Environment and Water (Environment and Heritage Group) (formerly Heritage NSW) and the La Perouse Local Aboriginal Land Council, unless you specify that you do not want your details released.

Yours faithfully



Geordie Oakes
Principal Heritage Specialist
geordie.oakes@aecom.com

Direct Dial: +64 2 89340610
Direct Fax: +64 2 89340001

c:\user\oakes\downloads\kurnell ssd 5544 rs_2024_04_15.docx



Figure 1 The Site



c:\user\oakag\downloads\kurnell ssd 5544 rsl_2024_04_15.docx
2 of 2

Oakes, Georgie

From: Arika J <yulayculturalservices@gmail.com>
Sent: Wednesday, 17 April 2024 11:06 AM
To: Oakes, Georgie
Subject: Re: Registration of Interest - Kurnell Terminal SSD5544 Modification 7 Project

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Dear Georgie,

Yulay cultural service's would like to register our interest in the above project.

Kind regards

Arika Jalomaki

On Mon, 15 Apr 2024 at 11:38 am, Oakes, Georgie <Geordie.Oakes@aecom.com> wrote:

Dear Stakeholder,

Please find attached a Registration of Interest (ROI) request for the Kurnell Terminal SSD5544 Modification 7 Project. You have been identified as an Aboriginal person or organisation with the potential to hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places within the Site.

Accordingly, if you wish to participate in the consultation process for this Project, please contact Georgie Oakes via the details below. To be involved in the consultation process, registrations must be received by Thursday 2 May 2024.

All the best,

Geordie

Geordie Oakes

Principal Heritage Specialist, AECOM
M 0410513509
geordie.oakes@aecom.com

AECOM

Level 21, [420 George Street](#),
Gadigal Land, Sydney 2000
Q410, QVB Post Office, Sydney 2000
T 8934 0000

Oakes, Georgie

From: Phil Khan <philipkhan.acn@live.com.au>
Sent: Tuesday, 16 April 2024 10:10 AM
To: Oakes, Georgie
Subject: RE: Registration of Interest - Kurnell Terminal SSD5544 Modification 7 Project
Attachments: Public Liability 2024 to 2025.pdf; lcare 2024.pdf

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Hi Georgie,

Thank you for informing us that **Aecom** will be involved in an Aboriginal Cultural Heritage Assessment at **Kurnell Terminal SSD5544 Modification 7 Project** & that you are inviting Aboriginal organisations to register, if they wish too be involved in the community consultation process.

As a senior Aboriginal person for over 50yrs, I actively participate in the protection of the Aboriginal Cultural Heritage throughout the Sydney Basin, & particularly throughout Western Sydney, on behalf of Kamilaroi Yankuntjatjara Working Group I wish to provide to you my organisation's registration of interest.

I wish to be involved & participate in all levels of consultation/project involvement. I wish to attend all meetings, participate in available field work & receive a copy of the report.

I have attached a copy of Kamilaroi Yankuntjatjara Working group's Public Liability Insurance & Workers Compensation certificate.

Our RAPS have up to 16yrs Cultural Heritage experience in - field work which involves manual excavation (digging), sieving, identifying artefacts, setting up transits, setting up equipment, packing equipment, site surveys & attending meetings (Focus groups, CwC, interpretation).

Should you wish me to provide further information, please do not hesitate to contact me on 0434545982 or Stefeanie on 0451068480.

Kind Regards
Phil Khan – Director
P 0434545982
E philipkhan.acn@live.com.au
ABN 26 637 314 384

Oakes, Georgie

From: Nerrigundah Nerrigundah <nerrigundahach@gmail.com>
Sent: Tuesday, 16 April 2024 5:05 PM
To: Oakes, Georgie
Subject: Registration of Interest - Kurnell Terminal SSD5544 Modification 7 Project

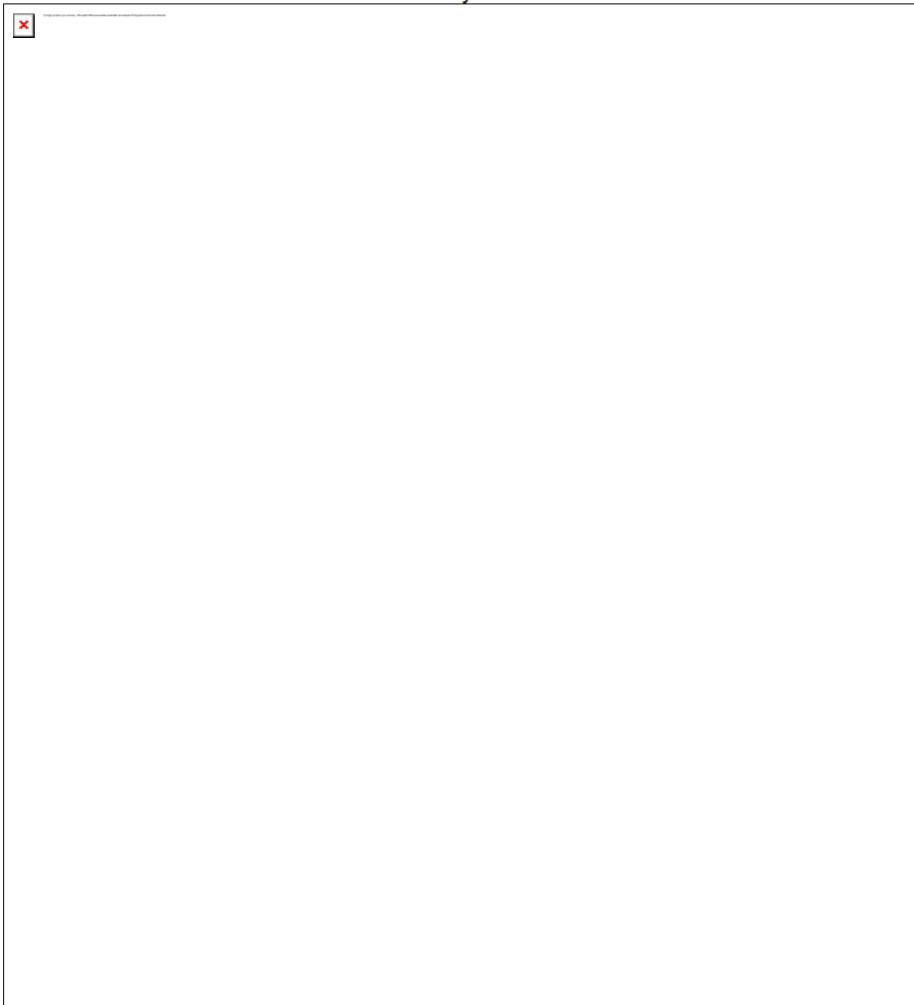
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Nerrigundah registers an interest for consultation as a “Registered Aboriginal Party (RAP)” and for the preparation of an Aboriginal Cultural Heritage Assessment Report (ACHAR) for the proposed NBN upgrade works in Lilli Pilli and Guerilla Bay.

Please find below our contacts details should you wish to contact me.



--

**Yours Truly,
Cain Bollard
Heritage NSW, Registered
Aboriginal Cultural
Heritage Knowledge
Holder
NERRIGUNDAH**

CONTACT DETAILS

Email: nerrigundahach@gmail.com

Mobile: 0461 288 802

Oakes, Geordie

From: Kaarina Slater <ngambaa.culturalconnections@gmail.com>
Sent: Tuesday, 23 April 2024 10:03 PM
To: Oakes, Geordie
Subject: Re: Registration of Interest - Kurnell Terminal SSD5544 Modification 7 Project

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On behalf of ngambaa cultural connections
I would like to register my expression of interest for the Kurnell terminal project

Kind Regards
Kaarina Slater
Manager
0450 283 998 or 0432 828 182
ngambaa.culturalconnections@gmail.com
Aboriginal owned and operated Cultural and Heritage Business

I would like to acknowledge the traditional custodians of the land where we live and work. I would like to pay my respects to our Elders past and present and to our future generation and extend our respect to all people on our land that we may meet on our journey.

On Mon, 15 Apr 2024 at 11:38 AM, Oakes, Geordie <Geordie.Oakes@aecom.com> wrote:

Dear Stakeholder,

Please find attached a Registration of Interest (ROI) request for the Kurnell Terminal SSD5544 Modification 7 Project. You have been identified as an Aboriginal person or organisation with the potential to hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places within the Site.

Accordingly, if you wish to participate in the consultation process for this Project, please contact Geordie Oakes via the details below. To be involved in the consultation process, registrations must be received by Thursday 2 May 2024.

All the best,

Geordie

Geordie Oakes

Oakes, Georgie

From: kevin campbell <ninum_group@outlook.com>
Sent: Tuesday, 16 April 2024 10:40 AM
To: Oakes, Georgie
Subject: Re: Registration of Interest - Kurnell Terminal SSD5544 Modification 7 Project

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I have reviewed and if any information as of COC or sites rate are needed please don't hesitate to contact me thank.

Warm regards
Kevin & Marnya.

From: Oakes, Georgie <Geordie.Oakes@aecom.com>
Sent: Monday, April 15, 2024 11:37 AM
To: Oakes, Georgie <Geordie.Oakes@aecom.com>
Subject: Registration of Interest - Kurnell Terminal SSD5544 Modification 7 Project

Dear Stakeholder,

Please find attached a Registration of Interest (ROI) request for the Kurnell Terminal SSD5544 Modification 7 Project. You have been identified as an Aboriginal person or organisation with the potential to hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places within the Site.

Accordingly, if you wish to participate in the consultation process for this Project, please contact Georgie Oakes via the details below. To be involved in the consultation process, registrations must be received by Thursday 2 May 2024.

All the best,

Geordie

Geordie Oakes

Principal Heritage Specialist, AECOM
M 0410513509
geordie.oakes@aecom.com

AECOM

Level 21, 420 George Street,
Gadigal Land, Sydney 2000
Q410, QVB Post Office, Sydney 2000
T 8934 0000

aecom.com

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Oakes, Georgie

From: Scott Franks <scott@yarrowalk.com.au>
Sent: Monday, 15 April 2024 11:59 AM
To: Oakes, Georgie
Subject: Re: Registration of Interest - Kurnell Terminal SSD5544 Modification 7 Project

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Geordie,

Can you please register my interest in this project

Regards
Scott Franks
Registered native title claimant PCWP
Yarrowalk PTY Limited
Scott@yarrowalk.com.au
Ph: 0404171544

Breach of Confidentiality

This email and any files transmitted with it are confidential and intended solely for the use of the individual to whom they are addressed. If you have received this email in error please notify the sender. This message contains confidential information and is intended only for the individual named. If you are not the named addressee you should not disseminate, distribute or copy this e-mail. Please notify the sender immediately by e-mail if you have received this e-mail by mistake and delete this e-mail from your system. If you are not the intended recipient you are notified that disclosing, copying, distributing or taking any action in reliance on the contents of this information is strictly prohibited. *Although the company has taken reasonable precautions to ensure no viruses are present in this email, the company cannot accept responsibility for any loss or damage arising from the use of this email or attachments.*

On 15 Apr 2024, at 11:38 AM, Oakes, Georgie <Geordie.Oakes@aecom.com> wrote:

Dear Stakeholder,

Please find attached a Registration of Interest (ROI) request for the Kurnell Terminal SSD5544 Modification 7 Project. You have been identified as an Aboriginal person or organisation with the potential to hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places within the Site.

Accordingly, if you wish to participate in the consultation process for this Project, please contact Georgie Oakes via the details below. To be involved in the consultation process, registrations must be received by Thursday 2 May 2024.

All the best,

Geordie

Geordie Oakes

Principal Heritage Specialist, AECOM
M 0410513509
geordie.oakes@aecom.com

AECOM

Level 21, 420 George Street,
Gadigal Land, Sydney 2000

Oakes, Georgie

From: Thomas Dahlstrom <gamila_roi@yahoo.com.au>
Sent: Saturday, 20 April 2024 7:07 PM
To: Oakes, Georgie
Subject: Re: Registration of Interest - Kurnell Terminal SSD5544 Modification 7 Project

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Hi Georgie

Thank you for your email.

Can you please regime as a RAP for this project.

Regards

Thomas

On 15 Apr 2024, at 11:38 am, Oakes, Georgie <Geordie.Oakes@aecom.com> wrote:

Dear Stakeholder,

Please find attached a Registration of Interest (ROI) request for the Kurnell Terminal SSD5544 Modification 7 Project. You have been identified as an Aboriginal person or organisation with the potential to hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places within the Site.

Accordingly, if you wish to participate in the consultation process for this Project, please contact Georgie Oakes via the details below. To be involved in the consultation process, registrations must be received by Thursday 2 May 2024.

All the best,

Geordie

Geordie Oakes

Principal Heritage Specialist, AECOM
M 0410513509
geordie.oakes@aecom.com

AECOM

Level 21, 420 George Street,
Gadigal Land, Sydney 2000
Q410, QVB Post Office, Sydney 2000
T 8934 0000
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<image001.png>

<Kurnell SSD 5544 ROI_2024_04_15.pdf>

Oakes, Georgie

From: Rodney Gunther <waawaar.awaa@gmail.com>
Sent: Monday, 22 April 2024 10:33 AM
To: Oakes, Georgie
Subject: Re: Registration of Interest - Kurnell Terminal SSD5544 Modification 7 Project
Attachments: 29-2-2024 to 28-2-2025.pdf; Public liability 2023 to 2024.pdf

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Hi Georgie,

Please register Waawaar Awaar Aboriginal Corporation for the Aboriginal Cultural Heritage Assessment for Kurnell Terminal SSD5544 Modification 7 Project.

In order for our members to provide professional cultural responses to the Methodology and ACHAR, **we would like to be involved in all aspects of fieldwork, survey and excavations to assist our understanding of the cultural values for the project area.**

Relevant insurances attached for future reference.

Your understanding is appreciated.

regards

Rodney Gunther
0410 580 962

On Mon, Apr 15, 2024 at 11:38 AM Oakes, Georgie <Geordie.Oakes@aecom.com> wrote:

Dear Stakeholder,

Please find attached a Registration of Interest (ROI) request for the Kurnell Terminal SSD5544 Modification 7 Project. You have been identified as an Aboriginal person or organisation with the potential to hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places within the Site.

Accordingly, if you wish to participate in the consultation process for this Project, please contact Georgie Oakes via the details below. To be involved in the consultation process, registrations must be received by Thursday 2 May 2024.

All the best,

Geordie

Geordie Oakes

Oakes, Geordie

From: Phillip Boney <Waarlan12@outlook.com>
Sent: Monday, 15 April 2024 12:44 PM
To: Oakes, Geordie
Subject: Re: Registration of Interest - Kurnell Terminal SSD5544 Modification 7 Project

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Hey Geordie Phil Boney here thank you for your email I would like to register for this project please sir
Thank you.
Regards Phil.
Wailwan Aboriginal Group

Sent from my iPhone

On 15 Apr 2024, at 11:38 am, Oakes, Geordie <Geordie.Oakes@aecom.com> wrote:

Dear Stakeholder,

Please find attached a Registration of Interest (ROI) request for the Kurnell Terminal SSD5544 Modification 7 Project. You have been identified as an Aboriginal person or organisation with the potential to hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places within the Site.

Accordingly, if you wish to participate in the consultation process for this Project, please contact Geordie Oakes via the details below. To be involved in the consultation process, registrations must be received by Thursday 2 May 2024.

All the best,
Geordie

Geordie Oakes

Principal Heritage Specialist, AECOM
M 0410513509
geordie.oakes@aecom.com

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Q410, QVB Post Office, Sydney 2000
T 8934 0000
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<image001.png>

Oakes, Geordie

From: Teyarah henry <Yerrowah-@outlook.com>
Sent: Monday, 15 April 2024 12:50 PM
To: Oakes, Geordie
Subject: Re: Registration of Interest - Kurnell Terminal SSD5544 Modification 7 Project

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Hi,

I would like to express my interest in the proposed project.

Contact details-
0421258480
Yerrowah / Teyarah Henry
Yerrowah-@outlook.com
Rates - \$150 ph
2/1 candlebark street Albion Park Rail Nsw.

Thankyou,

Teyarah Henry

From: Oakes, Geordie <Geordie.Oakes@aecom.com>
Sent: Monday, 15 April 2024 11:37 AM
To: Oakes, Geordie <Geordie.Oakes@aecom.com>
Subject: Registration of Interest - Kurnell Terminal SSD5544 Modification 7 Project

Dear Stakeholder,

Please find attached a Registration of Interest (ROI) request for the Kurnell Terminal SSD5544 Modification 7 Project. You have been identified as an Aboriginal person or organisation with the potential to hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places within the Site.

Accordingly, if you wish to participate in the consultation process for this Project, please contact Geordie Oakes via the details below. To be involved in the consultation process, registrations must be received by Thursday 2 May 2024.

All the best,

Geordie

Geordie Oakes

Principal Heritage Specialist, AECOM
M 0410513509
geordie.oakes@aecom.com

AECOM

Level 21, 420 George Street,
Gadigal Land, Sydney 2000
Q410, QVB Post Office, Sydney 2000
T 8934 0000
aecom.com

Oakes, Georgdie

From: burroo burroo <burrooach@gmail.com>
Sent: Tuesday, 16 April 2024 7:31 PM
To: Oakes, Georgdie
Subject: Registration of Interest - Kurnell Terminal SSD5544 Modification 7 Project

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Burroo registers an interest for consultation as a “Registered Aboriginal Party (RAP)” and for the preparation of an Aboriginal Cultural Heritage Assessment Report (ACHAR) for proposed NBN upgrade works in Lilli Pilli and Guerilla Bay.

Please find below our contacts details should you wish to contact me.



Oakes, Geordie

From: Butucarbin Heritage <butuheritage@gmail.com>
Sent: Monday, 15 April 2024 11:25 PM
To: Oakes, Geordie
Subject: Re: Registration of Interest - Kurnell Terminal SSD5544 Modification 7 Project

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Good evening,

On behalf of Butucarbin, I would like to register for this project.

Kind regards,
Jenny.

On Mon, Apr 15, 2024 at 11:38 AM Oakes, Geordie <Geordie.Oakes@aecom.com> wrote:

Dear Stakeholder,

Please find attached a Registration of Interest (ROI) request for the Kurnell Terminal SSD5544 Modification 7 Project. You have been identified as an Aboriginal person or organisation with the potential to hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places within the Site.

Accordingly, if you wish to participate in the consultation process for this Project, please contact Geordie Oakes via the details below. To be involved in the consultation process, registrations must be received by Thursday 2 May 2024.

All the best,

Geordie

Geordie Oakes

Principal Heritage Specialist, AECOM
M 0410513509
geordie.oakes@aecom.com

AECOM

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Gadigal Land, Sydney 2000
Q410, QVB Post Office, Sydney 2000
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Oakes, Geordie

From: lilly carroll <didgengunawalclan@yahoo.com.au>
Sent: Monday, 15 April 2024 4:13 PM
To: Oakes, Geordie
Subject: Re: Registration of Interest - Kurnell Terminal SSD5544 Modification 7 Project

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Hi Geordie

DNC would like to register an interest into the Kurnell terminal project

Kind regards
Paul boyd and Lilly Carroll
Directors DNC
0426 823 944

[Sent from Yahoo Mail for iPhone](#)

On Monday, April 15, 2024, 11:38 AM, Oakes, Geordie <Geordie.Oakes@aecom.com> wrote:

Dear Stakeholder,

Please find attached a Registration of Interest (ROI) request for the Kurnell Terminal SSD5544 Modification 7 Project. You have been identified as an Aboriginal person or organisation with the potential to hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places within the Site.

Accordingly, if you wish to participate in the consultation process for this Project, please contact Geordie Oakes via the details below. To be involved in the consultation process, registrations must be received by Thursday 2 May 2024.

All the best,

Geordie

Geordie Oakes

Principal Heritage Specialist, AECOM
M 0410513509
geordie.oakes@aecom.com

Oakes, Geordie

From: Wendy Morgan <Wenlissa01@hotmail.com>
Sent: Wednesday, 24 April 2024 5:31 PM
To: Oakes, Geordie
Subject: RE: Registration of Interest - Kurnell Terminal SSD5544 Modification 7 Project

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Hi Geordie,

Guntawang Aboriginal Resources Inc (GARI) would like to express an interest in the ACHA for Kurnell Terminal SSD5544 Modification 7 Project. Guntawang has an experience cultural and heritage officer who has worked with Sydney University to identify the differences between Indigenous Australian's bone structure to Non-Indigenous People. He has participated and co-ordinated a repatriation of Aboriginal skeletal remains to the land from which it belonged. He has years of experience in identifying Aboriginal artefacts. He has worked with numerous Archaeologist on similar projects. Guntawang would like to be included in any field work or excavation involved with this project.

We look forward to working with you.

Kind regards

Wendy Morgan
CEO GARI
0414 964 657
Guntawang

From: Oakes, Geordie <Geordie.Oakes@aecom.com>
Sent: Monday, April 15, 2024 11:38 AM
To: Oakes, Geordie <Geordie.Oakes@aecom.com>
Subject: Registration of Interest - Kurnell Terminal SSD5544 Modification 7 Project

Dear Stakeholder,

Please find attached a Registration of Interest (ROI) request for the Kurnell Terminal SSD5544 Modification 7 Project. You have been identified as an Aboriginal person or organisation with the potential to hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places within the Site.

Accordingly, if you wish to participate in the consultation process for this Project, please contact Geordie Oakes via the details below. To be involved in the consultation process, registrations must be received by Thursday 2 May 2024.

All the best,

Geordie

Geordie Oakes

Appendix E

Methodology and
responses

Appendix E Methodology and responses

The screenshot shows an Outlook email window. The title bar includes 'File', 'Message', 'Help', 'PDF-XChange', and a search bar. The ribbon contains various icons for actions like 'Delete', 'Archive', 'Respond', 'Share to Teams', 'All Apps', 'Quick Steps', 'Move', 'Tags', 'Editing', 'Immersive', 'Translate', 'Zoom', 'Reply with Scheduling Poll', 'Smartway2 Reservation', and 'Viva Insights'. The email subject is 'Kurnell Terminal SSD5544 Modification 7 - Proposed ACHAR Methodology'. The sender is 'Oakes, Georgie' with a profile picture. The 'To' field lists 'Oakes, Georgie'. The 'Bcc' field lists several email addresses. An attachment is shown as a PDF file named 'Kurnell SSD5544 Mod 7_Cover letter+Methodology.pdf' (1 MB). The email body contains the following text:

Dear Stakeholder,

AECOM has been commissioned to prepare an Aboriginal Cultural Heritage Assessment Report (ACHAR) for the Kurnell Terminal SSD5544 Modification 7 Project and you have registered your interest in consultation for the project.

In accordance with Section 4.3.1 of the *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (DECCW 2010), please find attached for your review the proposed Aboriginal cultural heritage assessment methodology for the project.


If you have any comments on the draft methodology these can be provided in writing (email and mail) or by phone. Please note that the closing date for comments is 1 June 2024.

All the best,
Geordie

Geordie Oakes
Principal Heritage Specialist, AECOM
M 0410513509
geordie.oakes@aecom.com

AECOM
Level 21, 420 George Street,
Gadigal Land, Sydney 2000
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AMPOL CORPORATE OFFICE
LEVEL 24
2 MARKET STREET
SYDNEY NSW 2000
T 61 2 9250 5000

3 MAY 2024

Dear Stakeholder

RE: Proposed Aboriginal cultural heritage assessment methodology for the Kurnell Terminal SSD5544 Modification 7 Project located in Kurnell, NSW – Sutherland Shire LGA

Thank you for registering to participate in the consultation process for the Aboriginal Cultural Heritage Assessment Report (ACHAR) being prepared for the Kurnell Terminal SSD5544 Modification 7 at Ampol's Kurnell Terminal site at 2 Solander Street, Kurnell, New South Wales (the 'Site', Figure 1).

As a Registered Aboriginal Party (RAP) for Kurnell Terminal SSD5544 Modification 7 (the proposed modification) we are providing you with the proposed assessment methodology for the ACHAR being prepared by AECOM. This proposed assessment methodology provides an overview of the proposed modification, a brief review of existing environmental and archaeological data for the Project Area and details the proposed approach to the assessment. This proposed assessment methodology is being provided to all RAPs for review and comment in accordance with sections 4.3.1 and 4.3.2 of the *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (DECCW, 2010).

We would welcome an opportunity to discuss the project and received your initial feedback on the cultural values of the Project Area, before submission of your comments on the proposed methodology in writing or by phone by 1 June 2024.

Request for briefing and comments are to be provided to AECOM Principal Heritage Specialist Geordie Oakes (Email: Geordie.oakes@aecom.com, Phone: +61 410 513 509).

We look forward to your participation in the assessment of the proposed modification.

Yours faithfully

A handwritten signature in black ink that reads 'G. Bourgarel' with a small dash below the name.

Geradine Bourgarel
Head of Property Development and Communication Engagement, Infrastructure
M: 0419 135 424
E: geraldine.bourgarel@ampol.com.au



Kurnell SSD5544 Modification 7: Aboriginal Heritage Assessment Proposed Methodology

1.0 Introduction

Ampol Australia Petroleum Pty Ltd (Ampol) currently operates the Site on the southern side of Botany Bay, in Kurnell, NSW (Figure 1). Between 1956 and 2014, the Site was used as both an oil refinery and a fuel terminal. In July 2012, Ampol announced that it would progress with converting the refinery to a finished product terminal (the 'approved project'); refining ceased in 2014 and now the main purpose of the Site is as a fuel import terminal, although other ancillary and related operations also occur.

The approved project was divided into two phases:

1. Converting infrastructure to allow the Site to operate as a terminal and shutdown the refinery (the conversion works); and
2. Demolition and removal of redundant infrastructure (the demolition works).

Ampol received development consent to complete the conversion works under State Significant Development (SSD) application reference 5544 (SSD-5544). Ampol has modified SSD-5544 six times to complete the various demolition and conversion works.

Today, the existing and operational bulk liquid fuel terminal is located predominantly in the northern part of the Site (Zone 1, as shown in Figure 1) and has a layout influenced by its legacy as a refinery. Other parts of Ampol's landholdings at Kurnell include largely vacant areas of previously developed land (Zones 2 and 3) and areas of undeveloped land containing extensive native vegetation (Zones 4 to 6)

Following a review of their landholdings at Kurnell to understand future use opportunities, Ampol intend to consolidate operational infrastructure into Zone 1 to ensure the safe and sustained operation of the Kurnell Terminal, and facilitate future land uses and potential divestment of land within the largely vacant areas (Zone 2 and 3) of the terminal. This will primarily involve the relocation of operational infrastructure within the boundaries of the Site, and the removal of any non-operational infrastructure. Remediation and grading works would also be undertaken. All of the proposed modification works will be confined to Zone 1, Zone 2 and Zone 3. No works are proposed in Zone 4 or Zone 5. Completion of these works would help prepare the Site for future uses whilst maintaining the operation of the Kurnell Terminal.

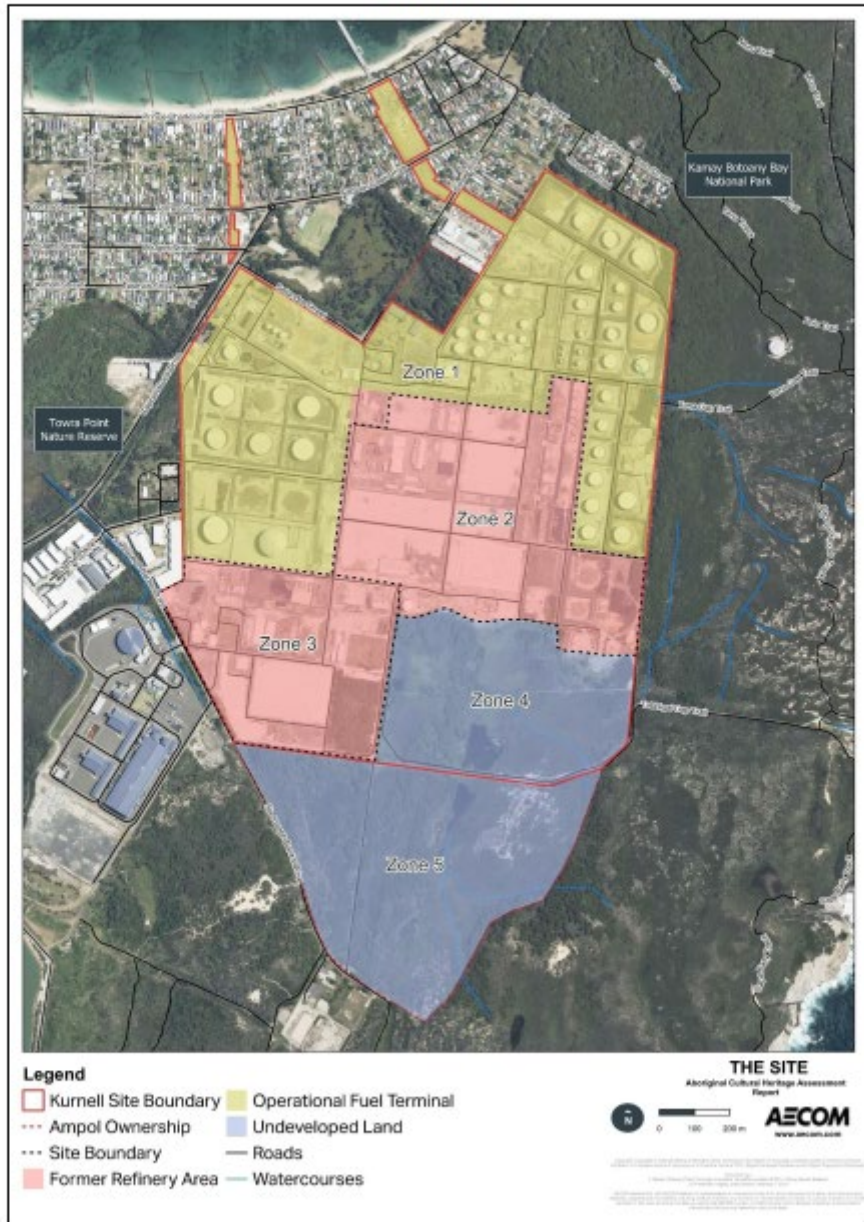
A Modification Report is being prepared to support the application for the changes to SSD-5544 noted above. The ACHAR supports the Modification Report. The objectives of the ACHAR are to identify the Aboriginal heritage values, both archaeological and cultural, of the Site and to determine appropriate mitigation and/or management measures. The assessment will involve background research, Aboriginal community consultation, a site inspection, and the production of an ACHAR.

In accordance with the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW, 2010a), AECOM is providing for your review a proposed (draft) assessment methodology for the proposed modification.

RAPs are invited to comment on this draft methodology and to provide comments regarding the Aboriginal heritage cultural values of the Project Area.



Figure 1 The Site



https://aecom.ebarpoint.com/files/ampol/australia-projectcolumbus/shared_documents/project_columbus/project490_technical436_ssd_5544_modification_7jg_technical_specialists/aboriginal_heritage/60685086_kurnell_ssd544_mod_7_cover_letter_methodology_2024_05_02_v2.docx
3 of 9



2.0 Modification overview

To support the continued safe and reliable operation of the Site and to facilitate the future use of Zones 2 and 3, the proposed modification works are required to remove or relocate terminal infrastructure into Zone 1 and to resolve legacy refinery contamination issues within Zones 2 and 3. The proposed modification works will be confined to Zone 1, Zone 2 and Zone 3 (hereafter referred to as the "Project Area"). No works are proposed in Zone 4 or Zone 5. Completion of these works would help prepare the Site for future uses whilst maintaining the operation of the Kurnell Terminal.

The proposed modification works would include the following stages:

- Stage 1 – Preparation works
- Stage 2 – Removal and/or relocation of infrastructure
- Stage 3 – Remediation
- Stage 4 – Grading
- Stage 5 – Demobilisation.

Depending on where different works are required across the Project Area these stages may be completed sequentially or concurrently.

A summary of project elements requiring modification how they relate to the approved project is provided in Table 1. The proposed modification works would be undertaken within the Project Area shown on Figure 1.

Table 1 Proposed modification scope

Stage	Element	Modified project
Stage 1	Preparation works	<ul style="list-style-type: none"> • Prepare Project Area for modification works required under Stages 2, 3 and 4.
Stage 2	Hydrocarbon pipelines in Main Pipeway	<ul style="list-style-type: none"> • Relocate hydrocarbon pipelines from Main Pipeway (within Zone 2) to the eastern portion of Zone 1.
	Oily water sewer (OWS)	<ul style="list-style-type: none"> • Divert surface water runoff from potentially contaminated areas in Zone 2 to Zone 1 via new OWS interception pits / lines until Stage 3 remediation is complete. • Divert leachate from Asbestos Contaminated Soil (ACS) containment cell in Zone 2 to Zone 1 OWS system via new OWS interception pits / lines. • Following diversion of flows to Zone 1, all redundant OWS from Zone 2 and 3 would be removed.
	Fire water systems	<ul style="list-style-type: none"> • Augment existing fire water system in Zone 1 with a new firewater tank and pipework to allow it to service the terminal infrastructure in Zone 1. • Disconnect and remove aboveground fire water tank and lines from Zones 2 and 3.
	Electrical assets	<ul style="list-style-type: none"> • Relocate assets (where required) from Zone 2 to Zone 1. • Remove redundant aboveground electrical assets in Zones 2 and 3.
	Structures	<ul style="list-style-type: none"> • Demolish remaining structures in Zones 2 and 3. • Demolish Supply Operations Buildings (SOB) and Central Operations Buildings (COB) in Zone 1. • Construction of a new 'fit for purpose' workshop. .
Stage 3	Remediation	<ul style="list-style-type: none"> • Staged remediation of land in Zones 2 and 3 where necessary. • Remediation of land in Zone 1 where infrastructure is being relocated to (where required).

https://aecom.sharepoint.com/sites/ampolaustralia-projectcolumbus/shared%20documents/project%20columbus/project400_technical436_ssd%205544%20modification%207%20technical%20specialists/aboriginal%20heritage/60495988_kurnell%20ssd5544%20mod%207_cover%20letter%20methodology_2024_05_02_v2.docx
4 of 9



Stage	Element	Modified project
		<ul style="list-style-type: none"> Remediation will be to a commercial/industrial land use.
Stage 4	OWS	<ul style="list-style-type: none"> Disconnect and remove remaining underground OWS lines from Zones 2 and 3 once the planned Stage 3 remediation is complete
Stage 4	Grading	<ul style="list-style-type: none"> Grading of Zone 2 following Stage 2 and Stage 3 activities to prepare the land for future land uses. Grading of parts of Zones 1 and 3 where Stage 2 and Stage 3 activities have been undertaken.

3.0 AHIMS database

The AHIMS database, administered by Heritage NSW, contains records of all Aboriginal objects reported to the Director General of the Department of Premier and Cabinet in accordance with Section 89A of the *National Parks and Wildlife Act 1974*. It also contains information about Aboriginal places, which have been declared by the Minister to have special significance with respect to Aboriginal culture. Previously recorded Aboriginal objects and declared Aboriginal places are known as 'Aboriginal sites.'

A search of the AHIMS database was undertaken on 10 November 2023 for a 4 x 4 km area centred on the Project Area. A total of 70 Aboriginal archaeological sites were identified within the search area comprising 42 middens, 20 open artefact sites (artefact scatter and isolated artefacts), four areas of Potential Archaeological Deposit (PAD), three burials and one rock engraving (Table 1, Figure 2). Consideration of the locations of previously recorded sites indicates that none are located within the Project Area, with the closest being a PAD – "Captain Cook Drive PAD 1" (AHIMS ID#52-3-2081) located 80 m to the west of the Project Area.

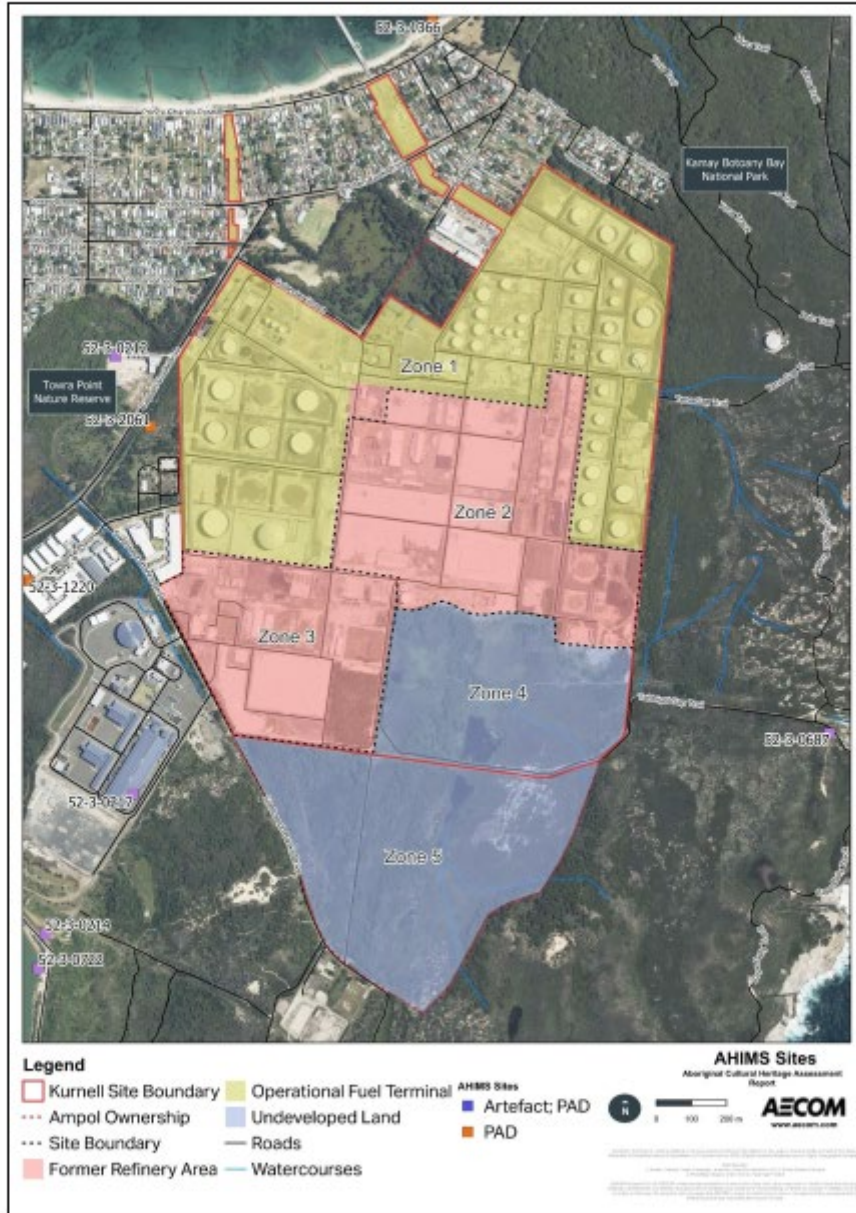
Table 2 AHIMS site search results

Site Type	Count	%*
Midden	42	60.0
Open artefact site with PAD	20	28.6
Open artefact site with PAD	4	5.7
Burials	3	4.3
Rock engraving	1	1.4
Total	70	100*

https://aecom.sharepoint.com/sites/ampolaustralia-projectcolumbus/Shared%20Documents/project%20columbus/project/400_technical/436_ssd%205544%20modification%207/technical%20specialists/aboriginal%20heritage/4365528_kurnell_ssd5544_mod_7_cover_letter+methodology_2024_05_02_v2.docx
5 of 9



Figure 2 Site and AHIMS sites



https://aecom.sharepoint.com/sites/ampolaustralia-projectcolumbus/shared%20documents/project%20columbus/project400/technical436_ssd%205544/modification%207%20technical%20specialists/aboriginal%20heritage/0066088_kurnell%20ssd5544%20mod%207_cover%20letter%20methodology_2024_05_02_v2.docx



4.0 Methodology

The approach that AECOM intends to adopt for undertaking the assessment includes the following key components:

1. Background research
2. Fieldwork (site inspection)
3. Consultation with Registered Aboriginal Parties (RAPs) to identify the Aboriginal cultural heritage values of the Project Area
4. Preparation of an ACHAR for the Project Area, detailing the results of the above. Appropriate management/ mitigation measures for the identified Aboriginal heritage values of the Project Area will be provided in this report.

The proposed methodologies for each of these components are detailed in the sections below.

4.1 Background research

The following tasks will be undertaken for the background research component of the assessment:

- Search of the AHIMS database
- Search of the Native Title Register for Native Claims or Determinations
- A review of associated site cards and reports to clarify site contents, extents, and statuses
- A review of the landscape context and history of the Project Area with a particular emphasis on its implications for the nature and distribution of Aboriginal archaeological materials
- A review of relevant archaeological and ethnohistoric information for the Project Area and environs
- Preparation of a predictive model for the Aboriginal archaeological record of the Project Area.

4.2 Fieldwork

4.2.1 Site inspection

AECOM proposes to undertake a visual inspection of the Project Area to identify any previously any previously unrecorded Aboriginal sites and areas of archaeological sensitivity (if present). The inspection will be undertaken by a combined field team of AECOM archaeologists and an appropriate number of RAP field representatives. While vehicles may be used to transport the survey team between inspection localities, the inspection will be completed on foot. Linear transects of variable length and width, depending on ground conditions and Work Health and Safety (WHS) considerations, are proposed. The location of all transects completed during the inspection, including their start and end points, will be recorded using one of two handheld differential Global Positioning System (GPS) units, with associated transect data (e.g., levels of visibility and exposure, disturbance factors) entered directly into the same unit upon the completion of each transect.

4.2.2 Archaeological test excavation

Archaeological test excavation is not currently proposed within the Project Area as part of the ACHAR. Land within the Project Area has been subject to significant historical ground disturbances from its use as a refinery and is considered unlikely to contain areas of subsurface archaeological sensitivity. However, should Aboriginal sites be identified within the Project Area and it be determined that test excavation is required to better understand the nature, extent and significance of these sites, then it would be considered as part of the ACHAR.



4.3 Consultation with RAPs

RAP representatives are in the best position to provide information on the Aboriginal social/cultural heritage values of a given area. During the assessment process, AECOM archaeologists will consult with RAPs regarding the cultural heritage values of objects and places in the Project Area. This will include:

- A request (with this draft methodology) for any initial comments regarding the Aboriginal cultural heritage values of the Project Area
- The provision of this information package, including draft assessment methodology to all RAPs for comment prior to fieldwork
- RAP participation in the site inspection
- Discussion of cultural heritage values with RAPs during the archaeological survey and generally throughout the assessment until the end of the draft ACHA review period
- Provision of the draft ACHAR to all RAPs for comment prior to finalisation.

The identification of cultural values will include places of social, spiritual and cultural value, historic places with cultural significance, and potential places/areas of historic, social, spiritual, and/or cultural significance.

As noted in the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW, 2010a), some information obtained from RAPs may be sensitive or have restricted public access. AECOM, in consultation with relevant RAPs, will develop appropriate protocols for sensitive or restricted information, potentially including:

1. Cultural restrictions on access to the material
2. Cultural restrictions on communication of the material
3. Cultural restrictions on the location of the material
4. Cultural recommendations on handling the material
5. Any other contextual information
6. The names and contact details of persons authorised within the relevant Aboriginal group to make decisions concerning the Aboriginal material and the degree of authorisation
7. Details of any consent given in accordance with customary law
8. Level of confidentiality to be afforded to the material
9. Access and use, by the RAPs, of the cultural information in the material.

4.4 Preparation of an ACHAR

AECOM will prepare an ACHAR for the proposed modification detailing the results of the archaeological survey and consultation with RAPs. The ACHAR will provide appropriate management and mitigation measures for the Project Area's Aboriginal heritage values. RAPs will have the opportunity to comment on management and mitigation options proposed in the ACHAR prior to finalisation. The ACHAR may be used to support the preparation of an Aboriginal Cultural Heritage Management Plan (ACHMP). Specifically, the ACHAR will include the following:

- A description of the Aboriginal objects and declared Aboriginal places located within the Project Area



- A description of the cultural heritage values, including the significance of the Aboriginal objects and declared Aboriginal places, which exist across the whole area that will be affected by the proposed modification and its associated activities, and the significance of these values for the Aboriginal people who have a cultural association with the land
- How the requirements for consultation with Aboriginal people have been met (as specified in clause 60 of the *National Parks and Wildlife Regulation 2019*)
- The observations of RAPs regarding the likely impact of the proposed modification and its associated activities on their cultural heritage
- Actual or likely harm posed to the Aboriginal objects or declared Aboriginal places from the proposed modification and its associated activities, with reference to the cultural heritage values identified and any practical measures that may be taken to protect and conserve those Aboriginal objects or declared Aboriginal places
- Any practical measures that may be taken to avoid or mitigate any actual or likely harm, alternatives to harm, or if this is not possible, to manage (minimise) harm.

5.0 Project timeline

Current indicative timeline for the ACHAR is:

- Collation of culturally significant information – ongoing throughout the ACHAR process until the end of the draft ACHAR review period
- Provision of comment on this draft methodology – by 1 June 2024
- Site inspection – to be confirmed
- Provision of a draft ACHAR to all RAP for review and comment – July 2024
- Period for comment on the draft ACHAR report – a minimum of 28 days following provision of the draft report to the RAPs
- Preparation of a final ACHAR in consideration of comments received from the RAPs – July 2024.

The above timelines are preliminary only and are subject to change. RAPs will be notified of dates for the visual inspection and the due date for provision of comments on the draft ACHAR Once available.

6.0 References

NSW Department of Environment Climate Change & Water. (2010). *Aboriginal Cultural Heritage Consultation Requirements for Proponents*. Department of Environment, Climate Change and Water.

Oakes, Georgie

From: Melissa Williams <MWilliams@glalc.org.au>
Sent: Wednesday, 15 May 2024 10:32 AM
To: Oakes, Georgie
Cc: GLALC Culture&Heritage
Subject: Re: Registration of Interest - Kurnell Terminal SSD5544 Modification 7 Project

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No worries Georgie

From: Oakes, Georgie <Geordie.Oakes@aecom.com>
Sent: Wednesday, May 15, 2024 10:26:15 AM
To: Melissa Williams <MWilliams@glalc.org.au>
Subject: RE: Registration of Interest - Kurnell Terminal SSD5544 Modification 7 Project

You don't often get email from geordie.oakes@aecom.com. [Learn why this is important](#)

Hi Mel,

I don't have you registered for this project. Its in the La Perouse LALC region so they have been registered.

Thanks,
Geordie**Geordie Oakes**Principal Heritage Specialist, AECOM
M 0410513509
geordie.oakes@aecom.comAECOM
Level 21, 420 George Street,
Gadigal Land, Sydney 2000
Q410, QVB Post Office, Sydney 2000
T 8934 0000
aecom.com
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From: Melissa Williams <MWilliams@glalc.org.au>
Sent: Tuesday, May 14, 2024 8:32 PM
To: Oakes, Georgie <Geordie.Oakes@aecom.com>; Bronwyn Partell <BPartell@glalc.org.au>
Cc: GLALC Culture&Heritage <culture&heritage@glalc.org.au>
Subject: RE: Registration of Interest - Kurnell Terminal SSD5544 Modification 7 Project

Dear Georgie,
Do you have us registered?

Mel

Kind regards,



GANDANGARA
Local Aboriginal Land Council

Dr Melissa Williams

Chief Executive Officer

Gandangara Local Aboriginal Land Council

64 Macquarie Street, Liverpool NSW 2170 | P.O Box 1038 Liverpool BC 1871

Ph: (02) 9602 5280 | CEO@glalc.org.au

Gandangara Local Aboriginal Land Council acknowledges the Families of the Cabragal Clan as the Traditional Custodians of the lands we span. GLALC pays respects to Elders past, present and emerging. Gandangara Local Aboriginal Land Council continues to value the generations of knowledge Aboriginal people embed within our organisation.

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From: Oakes, Geordie <Geordie.Oakes@aecom.com>
Sent: Monday, April 15, 2024 11:38 AM
To: Oakes, Geordie <Geordie.Oakes@aecom.com>
Subject: Registration of Interest - Kurnell Terminal SSD5544 Modification 7 Project

You don't often get email from geordie.oakes@aecom.com. [Learn why this is important](#)

Dear Stakeholder,

Please find attached a Registration of Interest (ROI) request for the Kurnell Terminal SSD5544 Modification 7 Project. You have been identified as an Aboriginal person or organisation with the potential to hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places within the Site.

Accordingly, if you wish to participate in the consultation process for this Project, please contact Geordie Oakes via the details below. To be involved in the consultation process, registrations must be received by Thursday 2 May 2024.

All the best,

Geordie

Geordie Oakes

Principal Heritage Specialist, AECOM
M 0410513509
geordie.oakes@aecom.com

AECOM
Level 21, 420 George Street,
Gadigal Land, Sydney 2000
Q410, QVB Post Office, Sydney 2000
T 8934 0000
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Oakes, Georgie

From: Wendy Morgan <Wenlissa01@hotmail.com>
Sent: Monday, 6 May 2024 4:23 PM
To: Oakes, Georgie
Subject: RE: Kurnell Terminal SSD5544 Modification 7 - Proposed ACHAR Methodology

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Hi Georgie,

Guntawang Aboriginal Resources Inc has nothing else to add to this report.

Kind regards

Wendy Morgan
CEO GARI
0414 964 657

From: Oakes, Georgie <Geordie.Oakes@aecom.com>
Sent: Friday, May 3, 2024 2:14 PM
To: Oakes, Georgie <Geordie.Oakes@aecom.com>
Subject: Kurnell Terminal SSD5544 Modification 7 - Proposed ACHAR Methodology

Dear Stakeholder,

AECOM has been commissioned to prepare an Aboriginal Cultural Heritage Assessment Report (ACHAR) for the Kurnell Terminal SSD5544 Modification 7 Project and you have registered your interest in consultation for the project.

In accordance with Section 4.3.1 of the *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (DECCW 2010), please find attached for your review the proposed Aboriginal cultural heritage assessment methodology for the project.

If you have any comments on the draft methodology these can be provided in writing (email and mail) or by phone. Please note that the closing date for comments is 1 June 2024.

All the best,
Geordie

Geordie Oakes

Principal Heritage Specialist, AECOM
M 0410513509
geordie.oakes@aecom.com

AECOM
Level 21, 420 George Street,
Gadigal Land, Sydney 2000
Q410, QVB Post Office, Sydney 2000
T 8934 0000
aecom.com

Oakes, Geordie

From: Phil Khan <philipkhan.acn@live.com.au>
Sent: Friday, 7 June 2024 11:17 AM
To: Oakes, Geordie
Subject: RE: Kurnell Terminal SSD5544 Modification 7 - Proposed ACHAR Methodology

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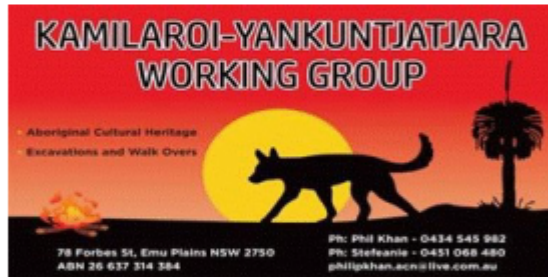
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Hi Geordie,

Thank you for your ACHAR for Kurnell Terminal, the study area is highly significant and sensitive to our people & requires further investigation, we agree and support your methodology. We look forward to working alongside you on this project.

Kind Regards
Phil Khan – Director
P 0451068480
E philipkhan.acn@live.com.au
ABN 26 637 314 384



Sent from [Mail](#) for Windows

From: Oakes, Geordie <Geordie.Oakes@aecom.com>
Sent: Friday, May 3, 2024 2:14:15 PM
To: Oakes, Geordie <Geordie.Oakes@aecom.com>
Subject: Kurnell Terminal SSD5544 Modification 7 - Proposed ACHAR Methodology

Dear Stakeholder,

AECOM has been commissioned to prepare an Aboriginal Cultural Heritage Assessment Report (ACHAR) for the Kurnell Terminal SSD5544 Modification 7 Project and you have registered your interest in consultation for the project.

Oakes, Geordie

From: Scott Franks <scott@yarrowalk.com.au>
Sent: Friday, 3 May 2024 3:14 PM
To: Oakes, Geordie
Subject: Re: Kurnell Terminal SSD5544 Modification 7 - Proposed ACHAR Methodology

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Geordie

Can you please register our interest in this please.

Regards
Scott Franks
Registered native title claimant PCWP
Yarrowalk PTY Limited
Scott@yarrowalk.com.au
Ph: 0404171544

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On 3 May 2024, at 2:15 PM, Oakes, Geordie <Geordie.Oakes@aecom.com> wrote:

Dear Stakeholder,

AECOM has been commissioned to prepare an Aboriginal Cultural Heritage Assessment Report (ACHAR) for the Kurnell Terminal SSD5544 Modification 7 Project and you have registered your interest in consultation for the project.

In accordance with Section 4.3.1 of the *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (DECCW 2010), please find attached for your review the proposed Aboriginal cultural heritage assessment methodology for the project.

If you have any comments on the draft methodology these can be provided in writing (email and mail) or by phone. Please note that the closing date for comments is 1 June 2024.

All the best,
Geordie

Oakes, Georgie

From: Thomas Dahlstrom <gamila_roi@yahoo.com.au>
Sent: Monday, 6 May 2024 1:42 PM
To: Oakes, Georgie
Subject: Re: Kurnell Terminal SSD5544 Modification 7 - Proposed ACHAR Methodology
Attachments: The Sydney Language Publication - Jakelin Troy.pdf; Gomberee Grammar and Dictionary.pdf

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Hi Georgie

Thank you for your email.

I have attached a couple documents about Sydney Aborigines and some of the language etc. Enjoy.

Regards
Thomas

On 3 May 2024, at 2:15 pm, Oakes, Georgie <Geordie.Oakes@aecom.com> wrote:

Dear Stakeholder,

AECOM has been commissioned to prepare an Aboriginal Cultural Heritage Assessment Report (ACHAR) for the Kurnell Terminal SSD5544 Modification 7 Project and you have registered your interest in consultation for the project.

In accordance with Section 4.3.1 of the *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (DECCW 2010), please find attached for your review the proposed Aboriginal cultural heritage assessment methodology for the project.

If you have any comments on the draft methodology these can be provided in writing (email and mail) or by phone. Please note that the closing date for comments is 1 June 2024.

All the best,
Geordie

Geordie Oakes

Principal Heritage Specialist, AECOM
M 0410513509
geordie.oakes@aecom.com

AECOM

Appendix F

RAP ACHAR comments

Appendix F RAP ACHAR comments


File Message Help PDF-XChange Tell me what you want to do

Delete Archive Respond Share to Teams All Apps Quick Steps Move Tags Editing Immersive Translate Zoom Reply with Scheduling Poll Smartway2 Reservation Smartway2 Viva Insights Add-in

Draft ACHAR - Kurnell SSD554 Modification 7

GO Oakes, Georgie
To Oakes, Georgie
Wed 17/07/2024 11:40 AM

Bcc 'waaran12@outlook.com'; 'admin@laperouse.org.au'; 'scott@yarrawalk.com.au'; 'Yerrowah-@outlook.com'; 'ninum_group@outlook.com'; 'philipkhan.acn@live.com.au'; 'butuheritage@gmail.com'; 'didgengunawalclan@yahoo.com.au'; 'yulayculturalservices@gmail.com'; 'burrooach@gmail.com'; 'nerrigundahach@gmail.com'; 'gamila_roi@yahoo.com.au'; 'wenlissa01@hotmail.com'; 'ngambaa.culturalconnections@gmail.com'; 'Waawaar.awaa@gmail.com'

 AECOM_Mod 7_ACHAR_RAPs issue 20240717.pdf
14 MB

Dear Stakeholder,

Please find attached the draft Aboriginal Cultural Heritage Assessment Report (ACHAR) for the Kurnell SSD 5544 Modification 7 project for your review and comment. Should you have any comments on the draft ACHAR please provide these by email, mail or over the phone to Georgie Oakes via the contact details on this email.


Please note that the closing date for comments is 15 August 2024.

All the best,
Georgie

Georgie Oakes
Principal Heritage Specialist, AECOM
M 0410513509
georgie.oakes@aecom.com

AECOM
Level 21, 420 George Street,
Gadigal Land, Sydney 2000
Q410, QVB Post Office, Sydney 2000
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RE: Draft ACHAR - Kurnell SSD554 Modification 7



Phil Khan <philipkhan.acn@live.com.au>
To: Oakes, Georgie

Reply Reply All Forward

Thu 15/08/2024 2:50 PM

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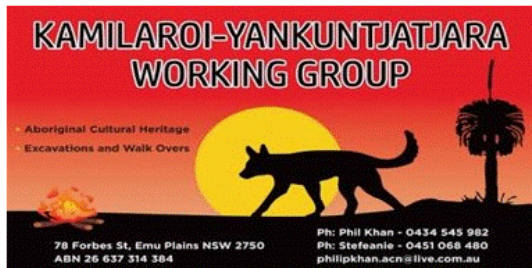
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Hi Georgie,



Thank you for your Draft ACHAR for Kurnell SSD554 Modification 7, we have reviewed your report and would like to agree and support your management recommendations. We look forward to working alongside you on this project.


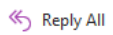


Kind Regards
Phil Khan – Director
P 0451068480
E philipkhan.acn@live.com.au
ABN 26 637 314 384




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RE: Draft ACHAR - Kurnell SSD554 Modification 7


 Wendy Morgan <Wenlissa01@hotmail.com>
 To  Oakes, Georgie

 Reply
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  ...

Fri 9/08/2024 11:28 AM

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Hi Georgie,

Guntawang has no other information to add to this report. We agree and support all of the Draft ACHAR.

Please note below information not for publication:

















Guntawang has an experience cultural and heritage officer who has worked with Sydney University to identify the differences between Indigenous Australian' s bone structure to Non- Indigenous People. He has participated and co-ordinated a repatriation of Aboriginal skeletal remains to the land from which she belonged. He has years of experience in identifying Aboriginal artefacts. He has worked with numerous Archaeologist on similar projects. Guntawang would like to be included in any field work or excavation involved with this project.

We look forward to working with you.



Kind regards







Wendy Morgan
 CEO GARI
 0414 964 657

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














 Delete
  Archive
  Report Phishing
  Respond
  Share to Teams
  All Apps
  Quick Steps
  Move
  Tags
  Editing
  Immersive
  Translate
  Zoom
  Reply with Scheduling Poll
  Connect Reservation
  Viva Insights


RE: Draft ACHAR - Kurnell SSD554 Modification 7


 Oakes, Georgie
 To  Oakes, Georgie


 Reply
  Reply All
  Forward
 
 ...

Mon 3/02/2025 3:51 PM

Bcc  waarlan12@outlook.com;  admin@laperouse.org.au;  scott@yarrowalk.com.au;  Yerrowah@outlook.com;  ninnum_group@outlook.com;  philipkhan.acn@live.com.au;  butuheritage@gmail.com;  didgengunawalclan@yahoo.com.au;  yulayculturalservices@gmail.com;  burrooach@gmail.com;  nerrigundahach@gmail.com;  gamila_roi@yahoo.com.au;  wenlissa01@hotmail.com;  ngamba.culturalconnections@gmail.com;  Waawaar.awaa@gmail.com

 Kurnell Mod 7_ACHAR_2025 02 03.pdf
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Dear Stakeholder,

Please find attached the updated draft Aboriginal Cultural Heritage Assessment Report (ACHAR) for the Kurnell SSD 5544 Modification 7 project for your review and comment. Should you have any comments on the draft ACHAR please provide these by email, mail or over the phone to Georgie Oakes via the contact details on this email.


Please note that the closing date for comments is 4 March 2025.

All the best,
 Georgie

Georgie Oakes
 Principal Heritage Specialist, AECOM
 M 0410513509
georgie.oakes@aecom.com

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Re: Draft ACHAR - Kurnell SSD554 Modification 7

 Lilly Carroll <didgengunawalclan@yahoo.com.au>
To Oakes, Georgie

Mon 3/02/2025 6:25 PM

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Hi Georgie


We're happy with the minor change that has been made to this project and it's happy to move on

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RE: Draft ACHAR - Kurnell SSD554 Modification 7

 Wendy Morgan <Wenlissa01@hotmail.com>
To Oakes, Georgie

Tue 4/02/2025 4:51 PM

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Hi Georgie,

Guntawang Aboriginal Resources Incorporated supports the recommendations in the Draft ACHAR made that No Aboriginal objects or sites were identified during the inspections, nor were any specific cultural values communicated to AECOM during the process.

We also support Steven Ella suggestion that there is a possibility of sites located beneath the disturbed soil layers.


Kind regards

Wendy Morgan
CEO GARI
0414 964 657

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Re: Draft ACHAR - Kurnell SSD554 Modification 7

 Phil Khan <philipkhan.acn@live.com.au>
To: Oakes, Georgie

Tue 4/03/2025 3:12 PM

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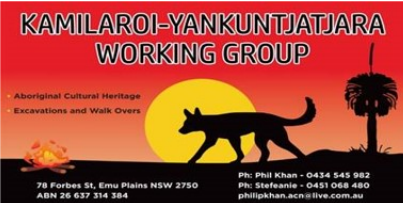
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Hi Georgie,

Thank you for your Draft ACHAR for Kurnell Terminal SSD554 MOD-7, we would like to agree and support your management recommendations.

Kind Regards
Phil Khan – Director
P 0451068480
E philipkhan.acn@live.com.au
ABN 26 637 314 384



**KAMILAROI-YANKUNTJATJARA
WORKING GROUP**

Aboriginal Cultural Heritage
Excavations and Walk Overs

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