



Q Station Aboriginal Heritage Due Diligence Assessment

Prepared by AMBS Ecology & Heritage
for North Head Sydney Pty Ltd

PUBLIC VERSION

FINAL

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Aboriginal site location information is considered culturally sensitive,
and has been removed from the public version of this report.

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1 Introduction

AMBS Ecology & Heritage (AMBS) has been commissioned by North Head Sydney Pty Ltd to prepare an Aboriginal cultural heritage due diligence assessment report to inform a Review of Environmental Factors (REF). The due diligence assessment is required to identify if the continuation of the Q Station's current operations until 2050 has potential to impact Aboriginal heritage items, in accordance with Heritage NSW *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* (DECCW 2010).

1.1 Study Area and Current Key Site Activities

The study area is located within Lot 100 DP1075571 at 1 North Head Scenic Drive, Manly. It is in the Northern Beaches Local Government Area (LGA) and is situated approximately 9km north east of the Sydney Central Business District (CBD). Key site activities at the Q Station currently comprise operation of a restaurant, tourist accommodation, visitor centre and museum, guided tours, an environmental and cultural study centre, and commercial functions and events.

No physical works are currently proposed at the Q station for consideration within the REF, and there will be no change of use from the current Key Site Activities or site capacity. A table detailing all current Q Station operations and management/mitigation measures is attached to this assessment as Appendix B.

The following site operations and daily activities occur on a regular basis at the Q Station:

- Visitor access;
- Visitor management;
- Accommodation;
- Conferences, functions and events;
- Food facilities and preparation; and
- Environmental management.

The continuation of the abovementioned site operations and activities is sought as part of the REF application.

These activities will continue to be undertaken in accordance with the management and mitigation measures listed within the relevant Site Wide Plan including:

- *Visitor Management Plan 2005*
- *Aboriginal Heritage Management Plan 2009*
- *Environment and Heritage Site Wide Management Plan 2023*
- *2006 Inscriptions Management Plan*

1.2 Methodology

This report has been prepared in accordance with current heritage best practice and the guidelines of Heritage NSW as specified in the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* (DECCW 2010). As such, the due diligence assessment has addressed the following requirements:

- identify any previously recorded Aboriginal sites in the study area;
- develop a predictive model for local Aboriginal archaeological sites, including any landscape features within the study area which are likely to indicate the presence of Aboriginal objects; and
- determine the potential for Aboriginal heritage objects to be present in the study area and impacted by the continuation of the current works, and outline any Aboriginal heritage

constraints and any requirements for additional Aboriginal heritage investigations or permits.

The following tasks have been undertaken to fulfil the above requirements:

- a search and review of the Heritage NSW Aboriginal Heritage Information Management System (AHIMS) database, to identify the location and type of any Aboriginal sites recorded within the study area or its vicinity;
- a review of relevant environmental information and the Aboriginal heritage context;
- a review of available relevant previous Aboriginal heritage reports, to determine the extent of past archaeological research into the local area;
- consultation with Metropolitan Local Aboriginal Land Council (LALC), local Aboriginal Traditional Custodian Dennis Foley, and the Aboriginal Heritage Office (AHO);
- An archaeological site inspection to re-locate and confirm the current condition of previously registered Aboriginal sites; and
- the preparation of a report outlining the results of the background research detailing whether continuation of the Q Station's current operations until 2050 have potential to impact on Aboriginal heritage; identifying appropriate recommendations for avoidance of impacts, and identifying triggers for additional assessments and recommendations for Aboriginal heritage management within the study area, if required.

This due diligence assessment does not include scope for the preparation of an Aboriginal Cultural Heritage Assessment (ACHA) in accordance with the Heritage NSW guidelines as specified in the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCW 2010).

1.3 Aboriginal Community Consultation

Formal consultation with representatives of the local Aboriginal community as per Heritage NSW's *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* has not been undertaken for this due diligence assessment. Such formal consultation would be undertaken as part of a subsequent ACHA, if triggered by the results of this assessment.

AMBS consulted with local Aboriginal Traditional Custodian Dennis Foley in 2021 and 2022 by phone, email and in person as part of the development of the *Q Station Aboriginal Heritage Interpretation Strategy* (2024, in draft) for the site. Mr Foley discussed the cultural significance of the Q Station and wider North Head area, and indicated his support for the continuing operation of the Q Station. More recently, North Head Sydney Pty Ltd has engaged with Mr Foley to regarding the Conservation Works Programme for the site, and received his endorsement on 4 March 2024. Mr Foley was contacted by phone on 28 March 2024 to discuss the current due diligence and a copy of the draft report was emailed to him for his review, however no feedback has been received to date.

AMBS Heritage Director Chris Langeluddecke and Ben Dalgiesh of North Head Sydney Pty Ltd met on 7 March 2024 with Karen Smith, the Cultural & Educational Officer with the Aboriginal Heritage Office (AHO). North Head Sydney have been undertaking consultation with the AHO for development of themes and stories for inclusion in the Quarantine Station Visitor Centre museum. The purpose of the due diligence and REF were outlined to Ms Smith, who stressed the cultural significance of the area, and indicated her understanding and support for the continuation of current operations at the Q Station.

AMBS has sought to consult with the Metropolitan Local Aboriginal Land Council (LALC) for this due diligence assessment, but has had no response to attempted contacts.

1.4 Authorship

This report has been prepared by AMBS Heritage Consultant Matthew Byron and AMBS Senior Heritage Consultant Tyler Beebe, and reviewed and approved by AMBS Director Heritage Christopher Langeluddecke.

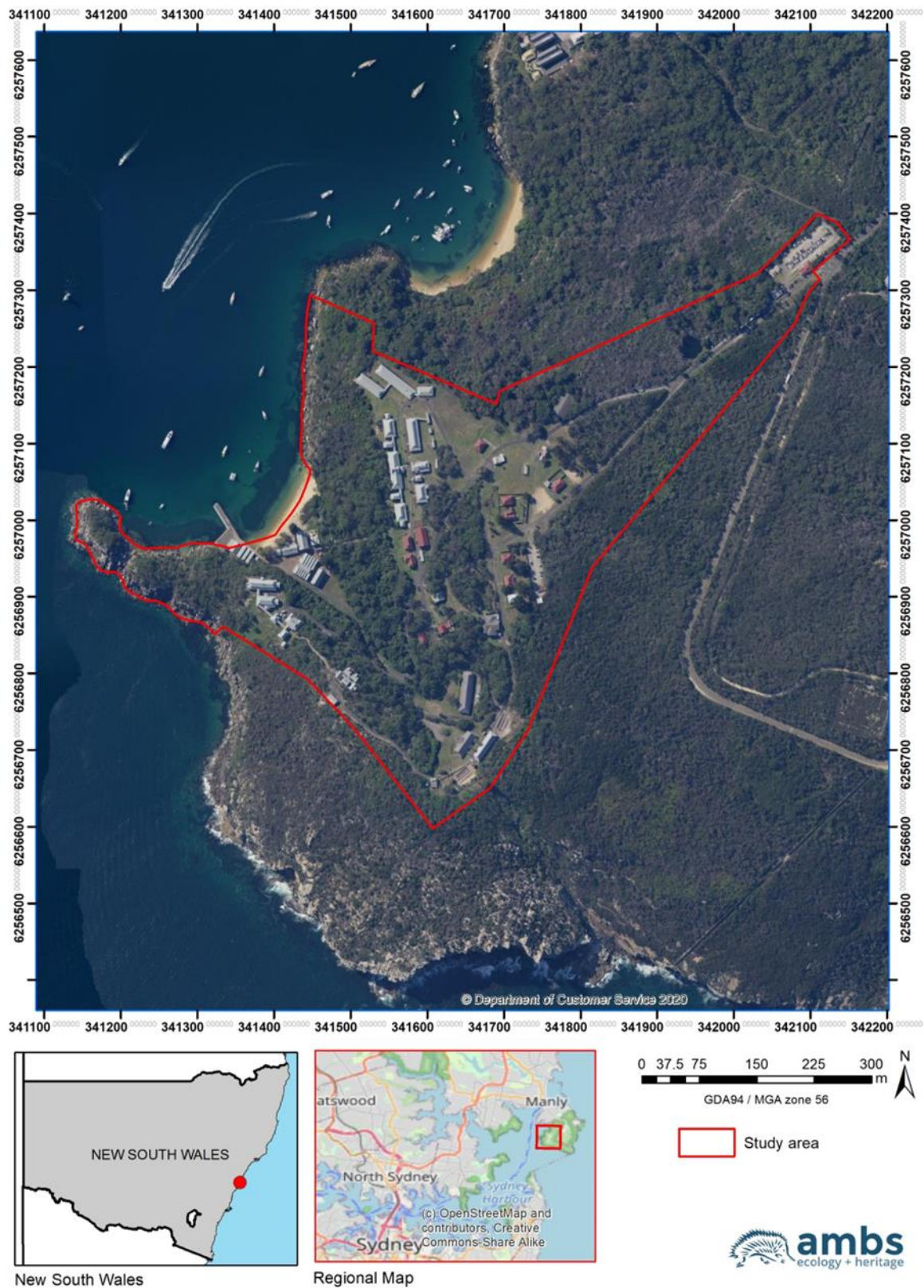


Figure 1.1 Q Station study area location.

2 Statutory Context

The conservation and management of Aboriginal heritage items is undertaken in accordance with relevant Commonwealth, State, or local government legislation. Listings relevant to the study area are summarised below.

2.1 *Environment Protection and Biodiversity Conservation Act 1999*

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) aims to protect and manage places of national environmental significance. Several heritage lists, including the National Heritage List (NHL) and the Commonwealth Heritage List (CHL), are addressed by the EPBC Act. The NHL lists places that have outstanding value to the nation, while the CHL includes items and places owned or managed by Commonwealth agencies. Ministerial approval is required for controlled actions which would have a significant impact on items and places on the NHL or CHL.

There are no Aboriginal heritage items or places listed on the NHL or CHL within the study area or its vicinity. “North Head” (Place ID 105759) is listed on the National Heritage List as a historic site. The information regarding Aboriginal heritage from the list of the *North Head* is as follows:

Evidence of Aboriginal use of North Head has been recorded in at least thirty-five separate locations across this landscape. Sites include rock engravings, rock shelters with deposit and/or art, open camp sites, middens and burials. Most sites are concentrated on the western, harbour-side of North Head, generally in association with the small coves and beaches, close to fresh water sources and more accessible areas.

The shell middens commonly occur in rock shelters, usually with shallow deposits. A range of rocky shore shell species have been recorded. Very little fish and marine bone and few stone artifacts have been recorded in these shelters. Implements include a shell possibly hafted onto the ends of spear throwers (one of three locations in Sydney) (Attenbrow, 2002:99), and there is possible evidence for skin working identified on stone and bone artifacts from earlier undated excavations in rockshelters at Collins Cove, North Head. At least two edge ground axes have been located at North Head, as well a small number of stone flakes and a possible knapping floor (Attenbrow, 2002:100).

At least one burial has been located in a rock shelter on North Head, associated with shell material, and the skeleton of a child and an adult were removed from a rockshelter in the 1960's.

Both rock engravings and painted motifs occur at North Head. Engravings occur in rock shelters and on open rock platforms, and include mundoes/footprints, a fish or whale, a wallaby, circles and a shark. A source of white and reddish/brown ochre has been located on North Head.

A range of other resources are available in the area which may have been used by Aboriginal people, including water (underground springs on the western side), plants, animals and marine resources.

Aboriginal place names have been recorded for locations on the southern side of North Head, and include Boree, and Garungal or Car-gang-gel (Attenbrow, 2002:9).

“North Head Quarantine Station & Reserve” (Place ID 2866) is listed on the Register of National Estate (Non-Statutory Archive) as a historic site and “North Head” (Place ID 105759) is also listed as a natural site.

2.2 National Parks and Wildlife Act 1974 & National Parks and Wildlife Amendment Regulation 2010

The *National Parks and Wildlife Act 1974* (NPW Act) specifies that the Director-General of the National Parks and Wildlife Service (NPWS; now Heritage NSW) is responsible for the care, control and management of various natural and cultural areas, including Aboriginal places and objects throughout NSW. Under this Act, all Aboriginal Objects are protected regardless of significance or land tenure. Such Aboriginal Objects include pre-contact features like scarred trees, middens and open camp sites, and post-contact features such as Aboriginal fringe camps. The Act also protects Aboriginal Places, which can only be declared by the Minister administering the NPW Act; these are defined as being a place that *is or was of special significance with respect to Aboriginal culture*.

There are no declared Aboriginal Places within the study area. The “Guringai Resting Place – Quarantine Station” is listed on the SHR as a culturally sensitive site, located within the Sydney Harbour National Park, adjacent to the study area. The exact location of which is restricted at the request of the Aboriginal Community. It contains the ancestral remains of Aboriginal people and evidence of past Aboriginal occupation including campsites and rock engravings. There are several AHIMS sites located in the local area, 12 previously recorded within the study area itself, see 4.2.1

Under Section 90 of the NPW Act, it is an offence to destroy, deface, damage or desecrate an Aboriginal Object or Aboriginal Place, unless an Aboriginal Heritage Impact Permit (AHIP) has been issued by the Conservation and Regional Delivery Division and Communities and Greater Sydney Division of Heritage NSW. The Act requires that reasonable precautions and due diligence be undertaken to avoid impacts on Aboriginal Objects.

The *National Parks and Wildlife Amendment Regulation 2010* excludes activities carried out in accordance with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* from the definition of harm in the NPW Act, meaning that test excavations may be carried out in accordance with this Code of Practice, without requiring an AHIP. The Regulation also outlines Aboriginal community consultation requirements (*Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010*), and a Due Diligence Code of Practice which specifies activities that are low impact, thus providing a defence to the strict liability offence of harming an Aboriginal object.

2.2.1 Aboriginal Heritage Information Management System

The Aboriginal Heritage Information Management System (AHIMS) is part of the regulatory framework for the implementation of the NPW Act. Maintained by Heritage NSW, the AHIMS includes a database of Aboriginal heritage sites, items, places and other objects that have been reported to Heritage NSW, as well as site cards describing Aboriginal sites registered in the database and associated Aboriginal heritage assessment reports. Section 89A of the NPW Act requires individuals and corporations to notify Heritage NSW of the location of Aboriginal sites identified during field investigations, regardless of land tenure or any likely impacts to such sites. Nevertheless, the AHIMS is not a comprehensive list of all Aboriginal heritage sites in NSW; it only includes information that has been reported to Heritage NSW. The accuracy of site co-ordinates in the database therefore varies depending on the method used to record locations.

Twelve AHIMS sites have previously been within the study area, three of which are re-recordings, and more AHIMS sites are in the local area. The results of a site search for the local area are presented in Section 4.2.1.

2.3 Heritage Act 1977

The *Heritage Act 1977* protects heritage places, buildings, works, moveable objects, precincts and archaeological sites that are important to the people of NSW. Items that have particular importance to the State of NSW are listed on the State Heritage Register (SHR). Such items can include those of Aboriginal and non-Aboriginal heritage significance.

There are no Aboriginal heritage items or places listed on the SHR within the study area. The “Guringai Resting Place – Quarantine Station” is listed on the SHR as a culturally sensitive site, located within the Sydney Harbour National Park, adjacent to the study area. It contains the ancestral remains of Aboriginal people and evidence of past Aboriginal occupation including campsites and rock engravings.

North Head Quarantine Station and Reserve is listed on the SHR (SHR ID 01003) as a Landscape item. The identified heritage curtilage of the listing and the current Q Station property boundaries are the same. The statement of significance details:

The Aboriginal heritage values of the North Head area are an intrinsic part of the significance of the place. Numerous Aboriginal traditions from various parts of the continent refer to and intermesh the creation of their natural and cultural environment; Sydney Harbour can be seen as the outcome of such a creative period. Aboriginal people were demonstrably present in the Sydney Basin many thousands of years before the present coastline was formed and would have experienced the actual creation of Port Jackson and Sydney Harbour with its rich and complex environment. The North Head area along with the other areas that form Sydney Harbour National Park retain Aboriginal heritage values in a physical setting that is substantially intact although embedded in the important urban setting of Sydney.

2.4 Environmental Planning and Assessment Act 1979

The *Environmental Planning and Assessment Act 1979* (EP&A Act) regulates land use planning and development in NSW, including the making of environmental planning instruments (EPIs). The two types of EPIs are State Environment Planning Policies (SEPPs), which cover areas of State or regional environmental planning significance; and Local Environmental Plans (LEPs), which cover LGAs. SEPPs and LEPs identify and provide for the protection of local heritage items and heritage conservation areas. The study area is located within the Northern Beaches LGA and were previously within Manly LGA. The Manly LEP 2013 still applies to the study area.

2.4.1 Manly Local Environmental Plan 2013

Part 5, Clause 5.10 ‘Heritage Conservation’ of the Manly LEP is consistent with current heritage best practice guidelines. It provides for the protection of environmental heritage of Manly (now Northern Beaches) LGA, the heritage significance of heritage items and heritage conservation areas (including associated fabric, settings, and views), archaeological sites, Aboriginal objects, and Aboriginal places of heritage significance. Schedule 5 *Environmental Heritage* does not list any Aboriginal sites, objects or places of heritage significance. The following items are listed in the near vicinity:

- “Quarantine Station and reserve” (Item 179) for its state significance;
- “North Head” (Item 175) for its local significance; and
- “North Head Scenic Drive (roadway) (Item 183) for its local significance.

3 Environmental Context

Environmental factors of the local landscape can inform an understanding of past human occupation of an area. Analysing the nature of the local landscape, specifically factors which affect patterns of past human occupation including topography, geology, soils, hydrology and vegetation, contributes to predictive modelling of archaeological sites, contextualises archaeological material and enables the interpretation of past human behavioural patterns.

3.1.1 Soils and Geology

The study area is within the GyMEA, North Head and Lambert soil landscapes (Figure 3.1) The GyMEA soil landscape is characterised by shallow to moderately deep yellow earths and earthy sands on crests and inside of benches, shallow siliceous sands on leading edges of benches, localised gleyed podzolic soils and yellow podzolic soils on shale lenses, and shallow to moderately deep siliceous sands and leached sands along drainage lines. Limitations of this soil landscape include localised steep slopes, high soil erosion hazard, rock outcrop, shallow highly permeable soil and very low soil fertility. GyMEA soils are generally conducive to Aboriginal artefact survivability, however artefacts located on exposed slope surfaces may be subject to erosion disturbances. The geological formation of this soil landscape is Hawkesbury Sandstone, which comprises medium to coarse grained quartz sandstone with minor shale and laminate lenses (Chapman and Murphy 1989:64). Large Hawkesbury Sandstone outcrops and platforms if present within the study area would be conducive to be used as shelters, potentially containing pigment art, and any sandstone platforms depending on the quality of the sandstone would have the potential to contain engravings.

The Lambert soil landscape is characterised by shallow (<50 cm) discontinuous earthy sands and yellow earths on crests and insides of benches; shallow (<20 cm) siliceous sands/lithosols on leading edges; shallow to moderately deep (<150 cm) leached sands, grey earths and gleyed podzolic soils in poorly drained areas; localised yellow podzolic soils associated with shale lenses. Limitations of this soil landscape are very high soil erosion hazard, rock outcrop, seasonally perched watertables, shallow, highly permeable soil, very low soil fertility. The Lambert soil landscape is generally conducive to Aboriginal artefact survivability, however artefacts located on exposed slope surfaces may be subject to erosion disturbances. The geology underlying this soil landscape is Hawkesbury Sandstone, which consists of medium to coarse-grained quartz sandstone with minor shale and laminite lenses (Chapman and Murphy 1989:58). Large Hawkesbury Sandstone outcrops and platforms if present within the study area would be conducive to have been used as shelters, potentially containing art, and any sandstone platforms depending on the quality of the sandstone would have the potential to contain engravings

The North Head soil landscape is characterised by deep (>200 cm) podzols overlying bedrock; buried podzols; buried sandstone soils, occasional shallow (<50 cm) siliceous sands (Uc1.21) and yellow podzolic soils on the edge of this unit. Limitations of this soil landscape consist of extreme wind erosion hazard, high water erosion hazard, non-cohesive and highly permeable soil, very low soil fertility. The North Head soil landscape is generally conducive to Aboriginal artefact survivability, however artefacts located on exposed surfaces may be subject to both water and wind erosional disturbances.

The geology comprises elevated, undulating to rolling rises of aeolian reworked dunefields with local relief to of 5 m and slopes of 5–15%. It is noted rock outcropping is usually absent. Dunes and swales have often been reworked and may be difficult to distinguish. Drainage is mostly sub-surface (Chapman and Murphy 1989:113). The underlying geology makes it unlikely for Aboriginal rock shelters to be present however the underlying aeolian dunefields could potentially contain Aboriginal artefacts and other site types.

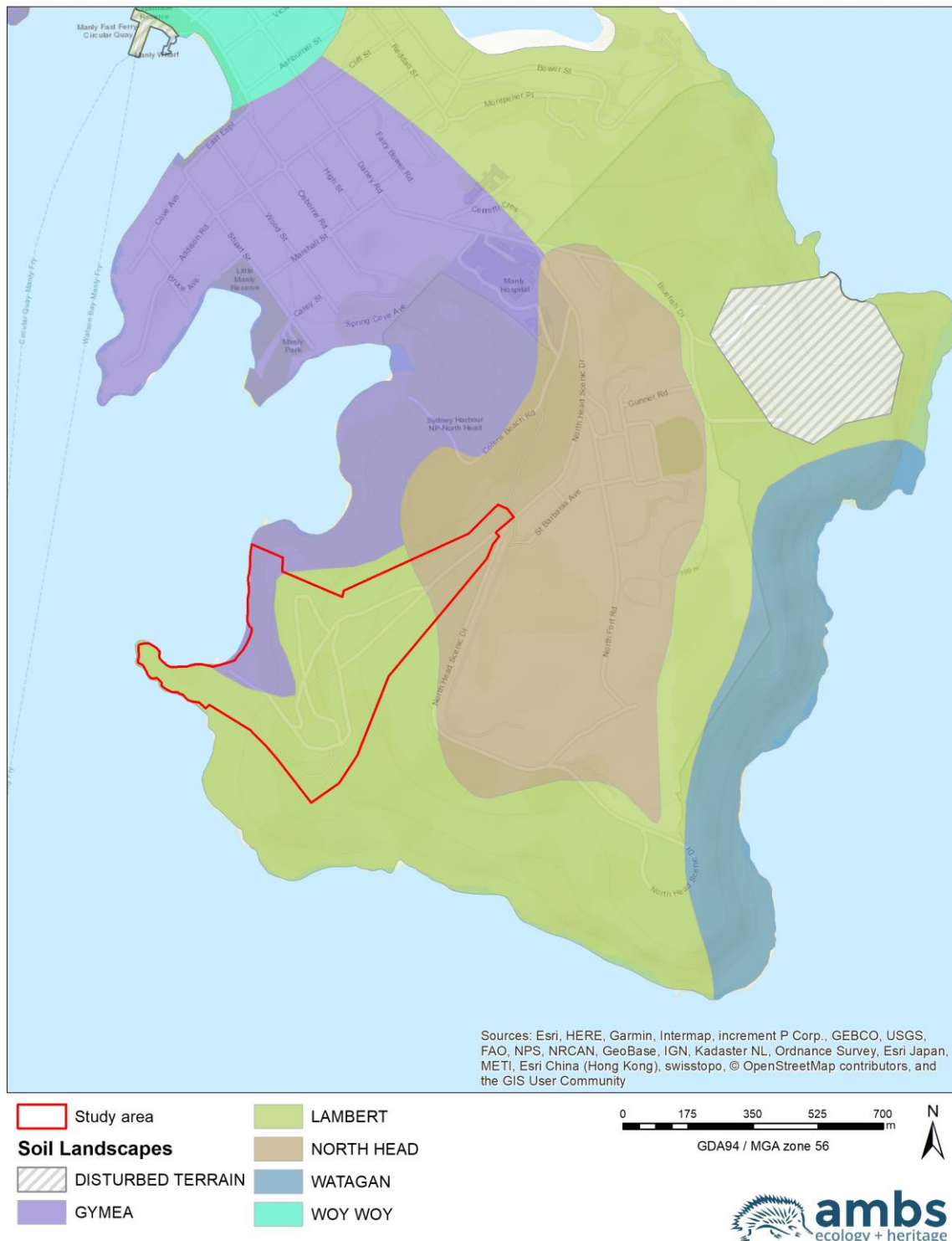


Figure 3.1 Soil landscapes of the study area and surrounds.

3.1.2 Vegetation

Prior to the implementation of European land practices, the study area is likely to have been vegetated by dry sclerophyll woodland and open forest typical of the GyMEA soil landscape. These woodlands and forests would have comprised common species such as red bloodwood (*Eucalyptus gummifera*), yellow bloodwood (*E. eximia*), scribbly gum (*E. haemastoma*), brown stringybark (*E. capitellata*) and old man banksia (*Banksia serrata*). On sheltered slopes, common species included

black ash (*E. sieberi*), Sydney peppermint (*E. piperita*) and smooth-barked apple (*Angophora costata*) (Chapman and Murphy 1989:64-65).

Vegetation of the Lambert soil landscape includes predominantly uncleared open-heathlands, closed-heathlands and scrublands, with patches of low eucalypt woodland. The heathlands and scrublands are often exposed to strong winds. Their shallow, poorly drained soils fluctuate between being saturated or dry. Bushfires are frequent. Isolated lines and patches of trees are occasionally associated with joint crevices. Shrub she-oak (*Allocasuarina distyle*) and/or heath banksia (*Banksia ericifolia*) are usually dominant. Other shrubs such as spiky hakea (*Hakea teretifolia*) may be locally dominant in areas subject to seepage or prolonged saturation. Associated shrubs include various spider flowers (*Grevillea spp.*), billy buttons (*Kunzea spp.*), eggs and bacon (*Pultenaea spp.*), teatree (*Leptospermum spp.*) and native heath (*Epacris spp.*). Isolated occurrences of low eucalypt open-woodland with dry sclerophyll shrub understorey are found at sites with deeper soils and unimpeded soil drainage. Trees often have a mallee habit. Red bloodwood (*Eucalyptus gummifera*), yellow-top ash (*E. luehmanniana*), yellow bloodwood (*E. eximia*), scribbly gum (*E. haemastoma*) and narrow-leaved apple (*Angophora bakeri*) are common mallee species. Growth of introduced species in urban areas is stunted. Native trees rarely attain a height of 10 m (Chapman and Murphy 1989:59).

The vegetation of the North Head soil landscape consists of mostly cleared heathland and scrub. Common species include Sydney golden wattle (*Acacia longifolia*), prickly moses (*A. ulicifolia*), coastal teatree (*Leptospermum laevigatum*), native rosemary (*Westringia fruticosa*), and coastal heath (*Monotoca elliptica*). Whelan and Johnston (1986) described the vegetation and soil relationships on North Head. Occasionally, eucalypt woodland is located in less exposed areas. These areas are usually dominated by old man banksia (*Banksia serrata*), smooth-barked apple (*Angophora costata*) and Sydney peppermint (*Eucalyptus piperita*) (Chapman and Murphy 1989:113-114).

3.1.3 Topography and Hydrology

The topography associated with the Gynea soil landscape comprises undulating to rolling low hills with local relief 20-80m and slopes of 10-25% (Chapman and Murphy 1989:64-65).

Topography of the Lambert soil landscape is comprised of undulating to rolling low hills. Local relief 20–120 m and slopes <20%. Broad convex crests and plateau surfaces. Gently to moderately inclined side slopes, often associated with small hanging valleys. Characteristic sandstone bedrock that outcrops as wide benches (10–100 m), with broken scarps 1–4 m high. Small, poorly drained seepage areas are common (Chapman and Murphy 1989:59).

Topography of the North Head soil landscape is comprised of elevated gently undulating dunefields of wind-blown sands on coastal headlands, with local relief <5m, and slopes of <15% (Chapman and Murphy 1989:113).

The topography of the study area slopes predominantly west towards Sydney Harbour, with elevated higher ridgelines present along its southern, northern and eastern extents (Figure 3.2). The study area is on the north side of Sydney Harbour, with Cannae Point and Quarantine Beach on the western boundary of the study both on the foreshore of the Harbour. This water source would have been used extensively by Aboriginal people in the past for gathering of food resources such as fish and shellfish. No natural watercourses currently exist within the Q Station study area.



Figure 3.2 The topography of the study area.

3.1.4 Land Use and Disturbance

It should be noted all ethnographic information about Aboriginal people before European occupation has chiefly been written by European sources, most notably by early European settlers, and should be understood in that context. At the time of European settlement, the Aboriginal people of the greater Sydney region were organised into named territorial groups. It is generally accepted that the study project area was the traditional lands of the Gai-mariagal clan (also spelt Kai'yamaygal or Gayamaygal), and it has been suggested that the Gai-mariagal likely occupied land around North Head, known as Car-rang gel, Manly Cove, the northern side of Port Jackson and the North Shore (Attenbrow 2010:22). The Aboriginal people who lived in this area would have belonged to the Darug language group, speaking a coastal dialect that was in use on the Sydney Peninsula, as well as the country to the north of Port Jackson possibly as far as Broken Bay (Attenbrow 2010:34).

The Gai-mariagal people would have probably maintained a mixed food economy based predominantly on resources from the waters surrounding the harbour, in addition to hunting some terrestrial animals and collecting and processing some plant materials (Attenbrow 2010:14). The Gai-mariagal name for North Head is Car-rang gel, and cultural knowledge of this important site has been passed down for generations through area's Traditional Owners. Car-rang gel is regarded as a scared place where the Koradji (medicine men and women healers) of the Gai-mariagal Clan carried out spiritual ceremonies and rituals (Two Point Co. 2021:9).

The Quarantine Station was established in 1837 with the first phase of construction concentrated on the Third class and Hospital Precincts. This phase consisted of the construction of tents and shed, two wharves, a hospital, a doctor's house on the top of the escarpment, addition accommodation, stone cairn shaped boundary pillars, weatherboard huts above the Store Beach wharf, and numerous access paths connecting the complex. At this time the First Cemetery was established. The next phase of the construction saw the consolidation of buildings and boundaries within the Quarantine Station, between 1839-1872. More accommodation buildings were erected due to the increase of use, and a double line of fencing established around the grounds. During this phase the Quarantine Beach shoreline was utilised to store and fumigate luggage. Between 1873-1880 a further four accommodation buildings were constructed for first class, and the precinct boundary fencing was erected, as class boundaries were defined (Thompson Berrill Landscape Design Pty Ltd, 2006:10).

From 1881 to 1909 the implementation of infrastructure for the Quarantine Station commenced, and recreation facilities were added. During this phase access from Manly via land was established, a 50 foot boat ramp and shed was constructed to replace the existing jetty, the first cemetery was closed and second cemetery was founded, a reservoir was installed as main water connected, a tennis court and badminton court was installed for the first class, and the second class and third class accommodation was expanded. Widespread fence construction occurred during this phase which included an inner boundary rubble stone wall, paling fencing around the hospital to separate infected patients, paling fence around the second cemetery, and an additional paling fence to separate second class from first class. At this time extensive clearing of vegetation was also implemented, with grass planted around buildings (Thompson Berrill Landscape Design Pty Ltd, 2006:10).

The next phase of construction saw the expansion of the infrastructure of the Quarantine Station from 1910 to 1950. An isolation ward was constructed during this phase as the hospital was upgraded. The wharf was also upgraded as a new vessel was acquired for visitor transportation to the facility. The funicular railway was installed at this time, as was a wire fence to separate visitors from staff at the road entrance and a paling fence around the isolation precinct, whilst a drainage system was introduced across the site. The second cemetery was closed at this stage and the third cemetery established. Various plantings were established across the Quarantine Station at this time as vegetation clearing occurred, gardens were introduced, and palms were planted in the administration, first class and third class precincts (Thompson Berrill Landscape Design Pty Ltd, 2006:10-11).

From 1950 to 1983 aircraft passengers with influenza and dysentery occupied the Quarantine Station as the facilities were modernisation. The access shifted from arrivals by water to the land access to Manly previously cleared, which was sealed at this time, and kerb and streets formalised within the station. It was at this time the funicular stopped operation and most of the rail network was removed. Between 1984 and 2005 a conservation and adaptive reuse phase was begun, with buildings receiving urgent conservation work and bushland cleared to protect buildings. It was during this time that two buildings were destroyed by fire (Thompson Berrill Landscape Design Pty Ltd, 2006:11). Currently the Quarantine Station operates as a boutique hotel offering

accommodation, wedding venues, conference facilities and a restaurant, as well as history tours (<https://www.qstation.com.au/>).

3.1.5 Summary

The sequence of vegetation clearing, building construction, and infrastructure development discussed above would have had an impact on any Aboriginal archaeological sites if present at the time. Major development works within the Quarantine Station property had largely ceased prior to 1910. A review of available aerial imagery shows little to no change to the layout and development of the Quarantine Station from 1947 onwards.

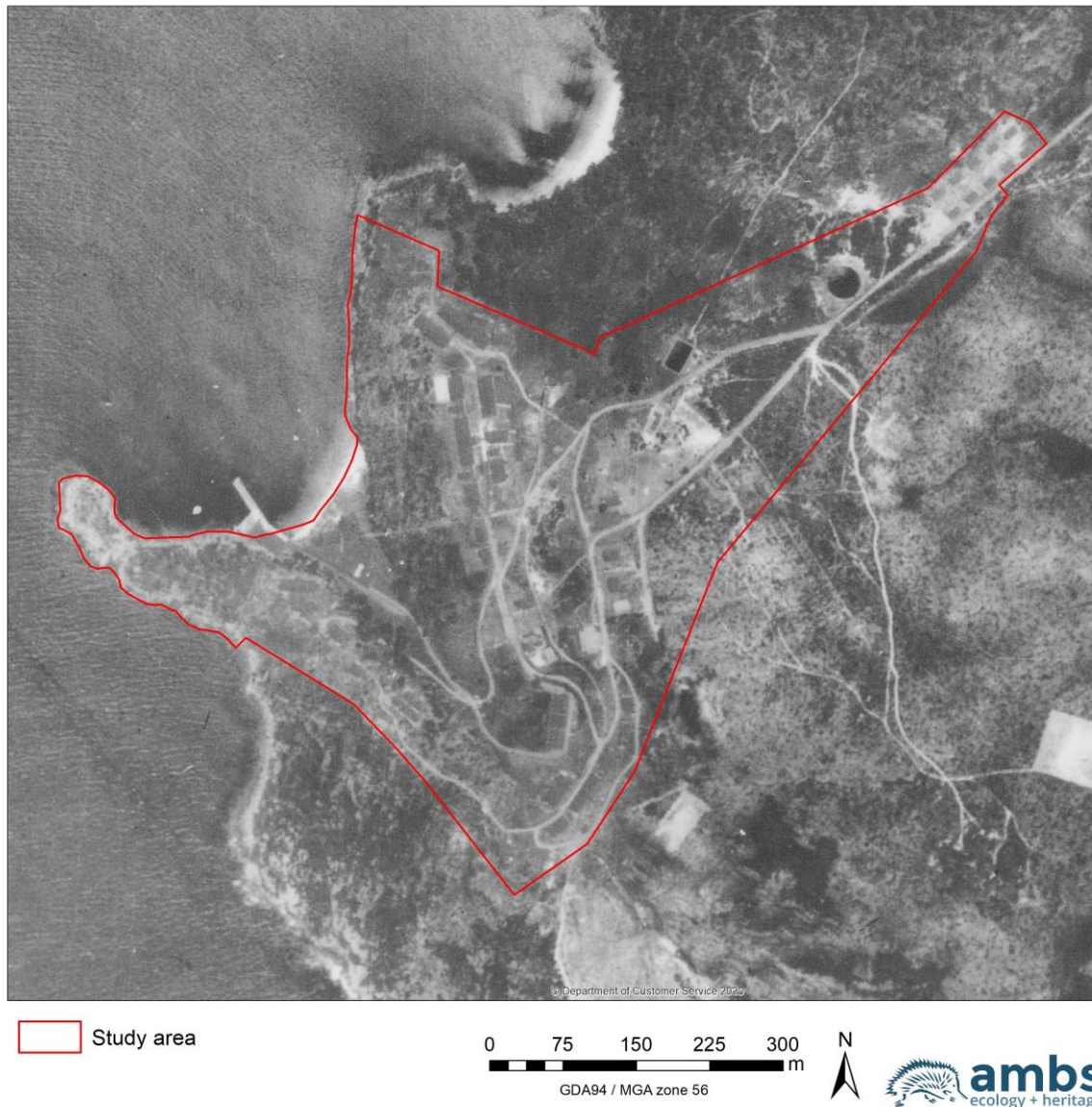


Figure 3.3 Aerial photo of the study area in 1930, showing the extent of structures at the site and associated land clearing.

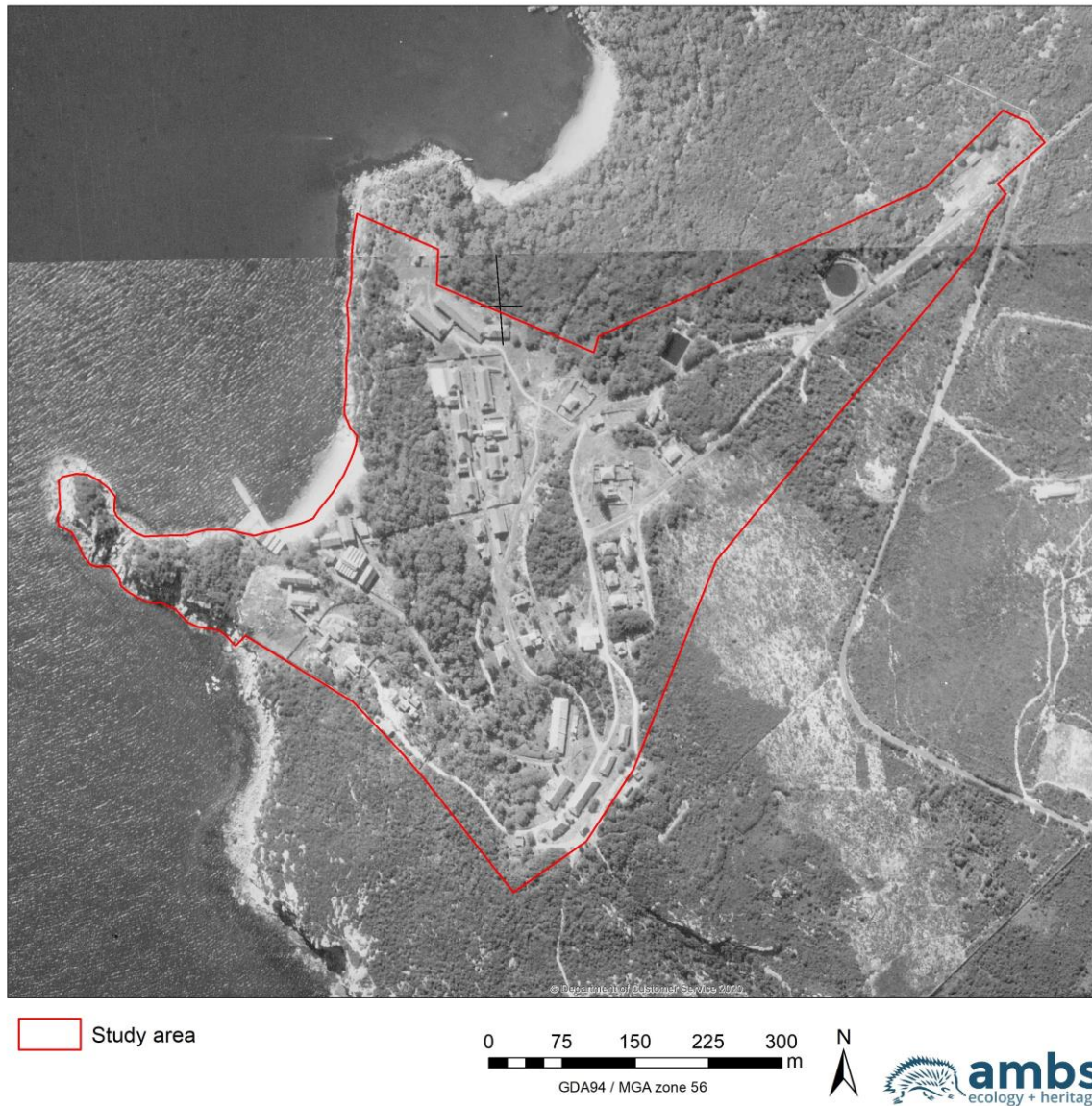


Figure 3.4 Aerial photo of the study area in 1951, showing some additional structures and vegetation regrowth around the site.



 Study area



Figure 3.5 Aerial photo of the study area in 1970.

4 Aboriginal Heritage Context

This section describes the nature of the known Aboriginal archaeology of the study area, based upon a review of relevant archaeological reports and publications, and a search and review of previously recorded sites in the Heritage NSW AHIMS database. This review and discussion allow for the development of a predictive model for potential Aboriginal sites within the study area. Summary descriptions of site features are provided in Table 4.1.

Table 4.1 Description of Aboriginal heritage site features (OEH 2012:8-10).

Site Type	Description
Art	May be found in shelters, overhangs or across rock formations. Techniques may include painting, drawing, scratching, carving/engraving, pitting, conjoining or abrading. A range of binding agents or natural pigments obtained from clays, charcoal and plants may have been used.
Artefact	Object(s) such as stone tools, and associated flaked material, spears, manuports, grindstones, discarded stone flakes, modified glass or shell, which provide evidence of Aboriginal use of the area.
Burial	Pre- or post-contact burial of an Aboriginal person, which may occur outside of designated cemeteries and may or may not be marked by stone cairns/carvings/mounds, e.g. in caves or sand areas, along creek banks etc.
Earth Mound	Round or oval-shaped mounded deposit containing baked clay lumps, ash and charcoal, and often black or dark grey sediment. Deposit may be compacted or loose and ashy, and may contain various economic remains such as mussel shell, bone or stone artefacts. Occasionally may contain burials.
Grinding Groove	Groove(s) in a rock surface resulting from the manufacture of stone tools such as ground edge hatchets and spears; or rounded depressions resulting from grinding of seeds and grains.
Habitation Structure	Structures built by Aboriginal people for short- or long-term shelter. May include historic camps of contemporary significance. More temporary structures are commonly preserved away from the NSW coastline. Smaller structures may make use of natural materials such as branches, logs and bark sheets, or manufactured materials such as corrugated iron. May include archaeological remains of a former structure such as a chimney/fireplace, raised earth building platform, excavated pits, rubble mounds etc.
Modified Tree (Scarred or Carved)	Scarred trees show modification marks resulting from cutting of bark from the trunk for foot holds; for use in the production of shields, canoes, boomerangs, burials shrouds etc; or for medicinal purposes. Carved trees have had the heartwood of the tree intentionally carved to form a permanent marker, which may indicate ceremonial use/significance of a nearby area, or which may have functioned as territorial or burial markers.
Non-Human Bone and Organic Material	Object(s) found within Aboriginal cultural deposits such as fish or mammal bones, ochres, or cached objects which may otherwise have broken down such as resin, twine, dilly bags, nets etc.
Ochre Quarry	Source of ochre used for ceremonial occasions, burials, trade and artwork.
Potential Archaeological Deposit (PAD)	Area where Aboriginal objects are considered likely to occur below the ground surface.
Midden/Shell	Accumulation/deposit of shellfish from beach, estuarine, lacustrine or riverine species resulting from Aboriginal gathering and consumption, usually found in association with other objects like stone tools, fish bones, charcoal, fireplaces/hearths or burials. May vary greatly in size and components.

4.1 Regional Heritage Context

Aboriginal occupation of the Sydney region is likely to have spanned at least 20,000 years, although dates of more than 40,000 years have been claimed for artefacts found in gravels of the Cranebrook Terrace on the Nepean River (Nanson et al. 1987; Stockton 2009; Stockton & Holland

1974). Late Pleistocene occupation sites have been identified on the fringes of the Sydney basin and from rock shelter sites in adjoining areas. Dates obtained from these sites were 14,700 BP at Shaws Creek in the Blue Mountain foothills (Kohen et al. 1984), c.15,000-c.11,000 BP at on a levee near Pitt Town adjacent to the Hawkesbury River (Williams et al. 2012), c.11,000 BP at Loggers Shelter in Mangrove Creek (Attenbrow 1980, 2004), and c.20,000 BP at Burrill Lake on the South Coast (Lampert 1971). The majority of sites in the Sydney region, however, date to within the last 5,000 years, with some researchers proposing that occupation intensity increased from this period (Kohen 1986; McDonald 1994); although Williams has recently argued that this is part of a longer trend in stepwise population growth and diversification of economic activity evident in south east Australia from the Early to Mid-Holocene (Williams 2013). This increase in sites may reflect an intensity of occupation which was influenced by rising sea levels, which stabilised approximately 6,500 years ago. Older occupation sites along the now submerged coastline would have been flooded, with subsequent occupation concentrating on and utilising resources along the current coastlines and in the changing ecological systems of the hinterland (Attenbrow 2010:55-56).

A study of the Sydney region reveals that Aboriginal sites are distributed across the whole range of physiographic units and environmental zones, although certain types of sites may be more frequently associated with certain parts of the landscape (for example, shelter sites are particularly common in areas of Hawkesbury Sandstone), and different parts of the landscape contain different resources, which may be seasonally available or highly localised (Koettig 1996).

Creeks and other water resources were foci for Aboriginal occupation, providing fresh water, fish, eels, waterbirds and plant foods, in addition to terrestrial animals drawn to the water (Attenbrow 2010:70-71). In 1788, British colonists described Port Jackson as having many varieties of fish, including “Jewfish, Snapper, Mullet, Mackerel, Whiting, Dory, Rock Cod, leather jackets and various others” (Bradley cited in Attenbrow and Colley 2012:69). According to Tench, the fish ranged in size from a “whale to a gudgeon” and that there were sharks of monstrous size, skait, rock-cod, grey-mullet, bream, horse-mackerel, as well as bass, leatherjacket and snapper (Tench cited in Attenbrow and Colley 2012:69). Trees provided shade, habitat for animals and birds, and bark for shelters (huts), canoes, paddles, shields, baskets and bowls. The area which now comprises The Rocks was abundant in rocky sandstone outcrops which would have provided material with which to make tools. When overhanging they provided shelter from the elements, and flat stone surfaces and shelters were sometimes engraved or painted by Aboriginal people (Attenbrow 2010:105, 113-116, 120-122).

4.2 Local Archaeological Context

There have been a number of archaeological investigations previously undertaken in the vicinity of the study area. The information summarised below is based on reports that have been registered with the Heritage NSW AHIMS, and which are most relevant and informative to the archaeological background of the current project.

In 1974, a human skull was found on the foreshore of Reef Beach at Balgowlah, beside a wave-eroded shell midden. The skull was found by a local resident, who took it to Sydney University for examination. Dr Michael Walker from the Anthropology Department at the University of Sydney inspected the location at Reef Beach to ascertain the presence of additional human bones in the shell midden. Upon further examination of the midden, a permit was attained, and an archaeological excavation was undertaken to salvage the skeletal remains. Excavation was undertaken between July 1974 and August 1974 which identified one adult skeleton and one of an infant. No Aboriginal stone artefacts were recovered by excavation, however 72 stones of natural origin including smooth pebbles and weather angular or subangular fragments were identified. It was determined that the skeletons were probably buried there around A.D 1800:

The skeletons are Aboriginal and the association of the Ordnance Corps button with them suggests a date between the establishment of the Colony and a time when the density of European settlement around Port Jackson might have left its shores empty of Aboriginals – say about A.D 1825.

Based on the results of the excavation, it was recommended that the burial location be protected from the general public and from further marine erosion (O'Donnell and Walker 1974:1-28).

In 1978, work was undertaken to record Aboriginal rock engravings at South Head, Sydney Harbour National Park located approximately 2 kilometres southeast of the study area (Negerevich 1978). John Lough had previously recorded twelve groups of rock engravings at South Head. Negerevich as part of the 1978 study re-located and recorded seven of the 12 previously identified sites. With the remaining sites having been or likely to have been previously destroyed. The rock engraving motifs consisted of fish or marine species, and human figures. The engravings were located on exposed sandstone platforms near the cliff edge and were found to be significantly disturbed by erosion.

In 1983, Search Archaeological Enterprises was commissioned by NSW NPWS to undertake an archaeological survey at North Head Quarantine Station. A search of the NPWS Site Register (now AHIMS) revealed that ten sites had been previously recorded on North Head at that time. Survey was undertaken by two people and identified five shell middens (two in shelters and three open) and an engraving in a shelter. Four of the sites were located on the northern side of Cannae Point adjacent to the beach in the area of the Quarantine Station and the other two were at Old Mans Hat gully. Twenty-nine small scatters of shell were also identified during the survey however they were thought to not be of Aboriginal origin. Based on the results of the survey, protective measures were recommended for the sites. It was recommended that visitor access to the sites be restricted. However, if this was unable to be achieved, it was recommended that the sites be further investigated and recorded (Attenbrow and Conyers 1983:1-44).

In 1990, as part of the Port Jackson Archaeological Project, Val Attenbrow of the Australian Museum undertook an assessment of the Quarantine Station in an effort to improve upon existing literature about Aboriginal life in the area. The Port Jackson Archaeological Project consisted of Stage 1 documentary research, survey and site recording, and Stage 2 fieldwork aimed at identifying existing recorded Aboriginal sites and areas that had the potential to contain unidentified Aboriginal sites. As part of the project, a total of 112 sites with midden and deposit were relocated and recorded by Attenbrow. Based on the location and context of the sites, it was determined that the distance from the harbour mouth influenced the range and predominance of shellfish species. It was also determined that the location of the midden sites were largely dependent on freshwater, fish and shellfish species.

In 1996, Helen Brayshaw Heritage Consulting was commissioned by the Department of Defence to prepare an Aboriginal archaeological study as part of an Environmental Management Plan (EMP) for the School of Artillery at North Head, approximately 240m west of the current study area at its nearest point. The aim of the study was to provide an “overview of the known and predicted Aboriginal archaeological resource in the area in terms of management issues relating to land use and maintenance of the Artillery school site” (Brayshaw 1996:1). A review of aerial photos revealed that since the late 1950s the area had been disturbed as a result of Artillery School operations, wartime activities associated with defence, roads, pipelines and communication facilities. A search of the NPWS site register (now AHIMS) shows that 19 sites had been recorded at North Head south at that time. Archaeological survey identified one small artefact scatter in a disturbed context and two isolated artefact sites. None of the survey area was assessed as having high or potentially high archaeological significance value. Based on the results of the study it was recommended that the Metropolitan LALC continue to be involved in the management of areas of sites of Aboriginal

heritage value. An Aboriginal heritage management action plan was provided, and it was recommended that the client adopt the management strategies supplied (Helen Brayshaw Heritage Consulting 1996:1-30).

In 2021, Unearthed Archaeology and Heritage was commissioned by BJB Architects to prepare a due diligence assessment that resulted in an Aboriginal cultural heritage assessment for upgrades and amendments to the Little Manly Beach Kiosk approximately 695m north of the current study area. A background search indicated that no Aboriginal sites had previously been recorded within the study area. It was noted however, AHIMS 45-6-2973 a burial of the partial remains of an Aboriginal female was located approximately 70m to the west of the kiosk in the foreshore sand dunes, within the same landscape feature. As a result, it was recommended that an Aboriginal Cultural Heritage Assessment Report (ACHAR) be prepared, an Aboriginal Heritage Impact Permit (AHIP) be applied for to undertake test excavations of the study area, as it was considered likely that evidence of burials could be located within the study area (Unearthed Archaeology and Heritage 2021).

In 2023, Urbis was commissioned by Royal Far West to prepare an Aboriginal cultural heritage assessment of 14-18 Wentworth Street and 19-21 South Steyne, Manly NSW, for proposed works under a Local Development Application. These works included building demolition, bulk excavation and construction of a two-level basement, construction of two new buildings, and landscaping of the area. The assessment found that no Aboriginal objects or Aboriginal Places were registered within the subject area although the closest recorded AHIMS site was a burial site located approximately 350 metres to the southwest. A test excavation was carried out in 2017 by Mary Dallas Consulting Archaeologists (MDCA) after a 2011 assessment of the subject area found there was moderate potential for Aboriginal objects to be retained. The excavation did not find any Aboriginal objects but various historical artefacts, and it confirmed the presence of natural sand dune soils below the historic fill. It was concluded that the location of the subject area on the isthmus would have been the only connection between the cultural island of North Head and the mainland and as such it was likely traversed across to access the area for cultural purposes. Due to the high potential for artefact scatters, isolated finds and middens with moderate potential for burial and contact sites to occur in the subsurface archaeological deposits, the subject area was registered on AHIMS. Based on these findings it was recommended an application for an Aboriginal Heritage Impact Permit (AHIP) should be made to facilitate test excavation, and potentially salvage excavation, following the receipt of DA approval to be undertaken with the participation of nominated Aboriginal RAPs and appropriately qualified archaeologists (Urbis 2023).

Current management of Aboriginal heritage at the Quarantine Station site currently complies with the *North Head Quarantine Station Site Wide Environment and Heritage Management Plan: Appendix 3 – Aboriginal Heritage Management Sub-Plan (DRAFT)* (NPWS 2023). The draft Aboriginal heritage management Sub-Plan was prepared to support compliance with the Conditions of Planning Approval for the adaptive reuse and management of the North Head Quarantine Station. The Sub-Plan updates and replaces the North Head Management Plan prepared in 2008, and summarises fieldwork undertaken in 2007 to relocate previously recorded sites across North Head. What is of relevance to this current assessment are the results of fieldwork investigations of the Quarantine Station & Beach (identified as Area 6 in the Sub-Plan).

The 2007 fieldwork investigations resulted in the relocation of nine previously identified Aboriginal sites consisting of three midden sites, one shelter & deposit/PAD, two shelter & midden, one shelter & art, one open site/isolated findspot, and one burial. Please note that as of the 2024 AHIMS search, there are no recorded Aboriginal burials within the Q Station property. The Sub-Plan (Section 10.2.3 Site management and protection) concluded with recommendations including the following:

- Ensure management and conservation of Aboriginal heritage sites and areas within the lease is informed by the NPWS Aboriginal Cultural Safety guide;
- Undertake a review of the Sun-Plan every five years after the commencement date for the duration of the activity;
- Conduct an audit of known Aboriginal objects and sites within the lease area against AHIMS records;
- The consolidation of duplicated records, and mislabelled site types, as well as adding an additional detail relevant to the effective management of Aboriginal heritage such as site extents/size. Continue monitoring of sites at regular basis (minimum 12 months or minimum 6 months for priority sites); and
- Review and if necessary update the draft Aboriginal Heritage Management Sub-Plan in the event of changing legislative requirements.

Recent monitoring of Aboriginal heritage sites at the Quarantine Station is presented in the *Annual Monitoring Report 2023: Quarantine Station – Sydney Harbour NP Integrated Monitoring Program* (NPWS 2023). The monitoring report was prepared to meet the Ministers Conditions of Planning Approval and aligns with specific monitoring indicators that NPWS was responsible for as part of the 2006 Integrated Monitoring and Adaptive Management System (IMAMS).

The condition of a previously identified midden site in the Wharf Precinct of the Quarantine Station was monitored for grass cover and signs of erosion. The observed vegetation cover remained satisfactory with no signs of erosion. The report identifies that the result has remained similar since 2018.

The NPWS report concluded with stating that they are satisfied that the midden site is protected from and undisturbed by visitors and guests associated with The Quarantine Station operations and recreational activities. The growth of vegetation around the site will be continuously monitored for potential impacts.

4.2.1 Registered Aboriginal Sites

An extensive search of the AHIMS database was undertaken on 11 March 2024 (AHIMS client service ID #871984) which identified 73 previously recorded Aboriginal sites within the following coordinates: Datum: GDA94 Zone 56, Eastings: 340000 - 343700, Northings: 6255900 - 6260000. It is important to note that this number represents only those sites that have been identified and reported to Heritage NSW, and that more are likely to be present across the landscape. Of these 73 previously recorded sites three sites were recorded as “Not a Site”, and four were duplicates of pre-existing sites. The total of actual sites previously recorded in the area after the removal of these seven anomalies was 66 sites. The search results are detailed in Table 4.2 and presented in Figure 4.1 and Figure 4.2.

Table 4.2 Aboriginal heritage sites previously recorded on AHIMS in the vicinity of the study area.

Site Type	Number of Sites Present	Percentage
Art	10	15.15%
Burial	2	3.03%
Grinding Groove	2	3.03%
Habitation Structure	1	1.52%
Habitation Structure, Earth Mound	1	1.52%
Isolated Artefact	3	4.55%
Midden	8	12.12%
Midden with Artefact, Burial, Bone	1	1.52%
Midden with Burial	1	1.52%
Midden, Open Camp Site	1	1.52%
Ochre Quarry	1	1.52%
Open Camp Site	4	6.06%
Open Camp Site - Flaked Glass	1	1.52%
PAD	3	4.55%
Restricted Site	2	3.03%
Shelter with Art	7	10.61%
Shelter with Art, Deposit	1	1.52%
Shelter with Art, Midden	1	1.52%
Shelter with Deposit	4	6.06%
Shelter with Midden	12	18.18%
Grand Total	66	100%

Aboriginal site location information is considered culturally sensitive, and has been removed from the public version of this report.

Figure 4.1 Aboriginal sites previously recorded on the Heritage NSW AHIMS database near the study area.

Aboriginal site location information is considered culturally sensitive, and has been removed from the public version of this report.

Figure 4.2 Recorded locations of AHIMS sites within and in close proximity to Q Station.

It is a common process within the AHIMS system that a site may be reassessed, and as more information comes to light or a more expert opinion provided the status of a site may be changed. Three AHIMS sites in within the vicinity of the study area have been listed as “Not a Site” AHIMS Sites #45-6-0008, #45-6-0263, and #45-6-2851. AHIMS Site #45-6-0008 was recorded as an art site, located on the corner of Parkview Road and Cecil Street Fairlight approximately 2.5km north west of the study area. AHIMS Site #45-6-2063, approximately 400m north of the Entry Precinct, was recorded in 1977 as a hoax site. This rock engraving is described as an account of the incident occurring at Spring Cove in 1790 when Governor Philip was speared by an Aboriginal Person (Willemering). The site consists of a whale with a line of 13 revellers, Governor Philip in a hat with a spear through his shoulder, a man supporting Philip, two Aboriginal People, a boat with four oars, three soldiers with muskets (one of which is in the boat). AHIMS Site #45-6-2851, approximately 220m north of the Entry Precinct, was recorded as Modified Tree Site in 2001, as a possible Aboriginal canoe tree. In 2007 it was deemed the tree was not a Scar Tree, as the tree measurement only 60cm in diameter and not large enough to have supported a canoe over 100 years ago.

Access to information regarding culturally sensitive site types recorded in the AHIMS database, such as burials or ceremonial sites, is restricted, and only information regarding the site’s approximate location is provided by Heritage NSW. Heritage NSW informed AMBS that restricted AHIMS site #45-6-2748 and #45-6-2744 are not located within the study area and will not be impacted by any works conducted in the study area.

There are 12 Aboriginal heritage sites previously recorded on AHIMS located within the study area. Of these 12 AHIMS sites three are re-recordings of previously recorded sites, outlined in Table 4.3 and presented in Table 4.2.

Table 4.3 AHIMS sites located within the Q Station study area.

AHIMS Site	Site Type	Closest Precinct
45-6-2859	Artefact	Second Class
45-6-1846	Shelter with art	Quarantine Beach
45-6-2858	PAD site	Wharf
45-6-2860	Midden	Wharf
45-6-1466, also recorded as 45-6-2462	Midden	Wharf
45-6-1465, also recorded as 45-6-2463	Shelter with midden	Wharf
45-6-1461, also recorded as 45-6-2464	Midden	Wharf
45-6-2856	Open Camp site- Flaked Glass	Hospital
45-6-2149	Open Camp site	Administration

4.2.2 AHIMS Sites within the Study Area

AHIMS site #45-6-2859 is located near the second class precinct. The single silcrete artefact was initially recorded by Attenbrow and Conyers in 1983 and recorded by Aboriginal Heritage Office in 2007. The artefact is located near the Quarantine Station lease boundary fence, north west of the current conference facilities. No further information about the artefact was provided on the site card.

AHIMS site #45-6-1846 is a shelter with art site recorded by Tessa Corkill by 1989, located on Quarantine Beach about 20m north of the sand (depending on the tide). The art within the shelter is located about 1.5m to 3m above sea level. The site card details that the shelter contains three white hand stencils, three white hand prints, one yellow/brown human figure, two black “unknowns”, two red “unknowns”, four engraved feet (mundoes) and three yellow/brown “unknowns”. Some of the art is recorded as “probably European” or that it “may not be Aboriginal”.

AHIMS site #45-6-2858 is a PAD site recorded by the Aboriginal Heritage Office in 2007 and is described as a rock overhang with a PAD, located behind the Boiler Room at the northern end of Quarantine Beach. Some shell was observed on the surface of the deposit.

AHIMS site #45-6-2860 is a midden site first recorded in 1983 by Attenbrow and Conyers a natural shell heap. It was later determined to be an Aboriginal midden through further investigation by Attenbrow in 2002. Its location is described as a shell heap behind the luggage facilities near the wharf at Quarantine Beach.

AHIMS site #45-6-1466 is a midden site recorded by Search Archaeological Enterprises in 1983. The site is described as having fewer than 50 scattered shell fragments and including oyster shell, mussel shell, latticed platter shell and green turban shell. The midden material is spread downslope over an area of approximately 0.5m wide by 3m long. No artefacts or charcoal were observed.

AHIMS site #45-6-2462 is a midden site located within the study area. The information provided on the site card replicates that of site #45-6-1466.

AHIMS site #45-6-1465 is a shelter with midden site recorded by Search Archaeological Enterprises in 1983. The shelter measures 3m-4m in length, 2m in depth and 2m height. The midden material occurs within and in front of the shelter and shell species include limpet, triton, anadara, scutus, oyster, mussel and nerite. Snapper bone was found within the shell, however no charcoal or artefacts were identified.

AHIMS site #45-6-2463 is a shelter with midden site located within the study area. The information provided on the site card replicates that of site #45-6-1465.

AHIMS site #45-6-1461 is a midden site recorded by Search Archaeological Enterprises in 1982. The site is located on level ground surrounding the flagpole a top Cannae Point. The midden is described as a scatter of shells and shell fragments over 3 small areas. The first measures approx. 2m x 1m, the second approx. 1m x 1m, and third approx. 50cm x 50cm. The total area is estimated to be approx. 5m x 4m. The shell was observed amongst sandstone rubble and blocks and is associated with broken glass. The depth of the scatter was estimated to not exceed 5cm. Several shell species were noted, listed as oyster, limpet, triton, nerita, and turban shell, with a small fish vertebra also observed. No charcoal or artifacts present. The condition of site was considered to be undisturbed although the flagpole near the scatter may have impacted the site. Some European rubbish was associated with the site.

AHIMS site #45-6-2464 is a midden site located within the study area. The information provided on the site card replicates that of site #45-6-1461.

AHIMS site #45-6-2856 is an open camp site – flaked glass, located within the study area. Although the site is recorded as an ochre quarry on AHIMS, there is no information pertaining to this on the site card. Instead, the site card details a “variety of old glass materials that appear to have been deliberately flaked rather than mere breakage. Some glass appears to be from old glass fishing net buoys. Needs further investigation by someone with glass/lithics expertise”.

AHIMS site #45-6-2149 is an open camp site recorded by Dennis Gojak in 1987 as part of an archaeological excavation of historic remains within the North Head Quarantine Station. It is noted on the site card that the site consists of several stone artefacts and that further information on the artefacts as well as other relevant information will be submitted at a later date.

4.2.3 AHIMS Sites in the Proximity of the Study Area

AHIMS site #45-6-0726 is a shelter with midden site located approximately 20m North of the Entry Precinct of the study area. The site was recorded by NPWS in 1991 with information “from a report, unsigned, but seems certain it is information from Eugene Stockton”. The site is small and contains a midden which would have once extended from the floor of the shelter out to the front and down to the beach. The coordinates of the site are most likely incorrect as they place the site 257m west of Store Beach however the site card describes it located at the “southern end of a small beach below Quarantine Station” and “above the level of the beach”.

AHIMS site #45-6-2857 is a shelter with midden site located approximately 45m south west of the study area. The site was recorded by Aboriginal Heritage Office in 2007. The site is described as a sandstone rockshelter with midden and is located 12m above the high water mark between Cannae Point and Quarantine Head. The shelter measures 3m by 2m and has a maximum height of 1.5m. The midden material comprises about 30% rocky-shore shell species in a light grey, sandy matrix.

AHIMS site #45-6-2852 is a shelter with midden site located approximately 70m north east of the study area. The site was recorded by Aboriginal Heritage Office in 2007 and is located at the south western end of Store Beach. It is 5m above the beach, behind a massive boulder that extends easterly to the beach. The deposit measures approximately 3.8m by 2.4m with a maximum depth of 0.9m. There are fragments of burnt bone eroding out of the midden deposit. The midden is described as relatively undisturbed, however some erosion has occurred from a track that passes in front of the shelter.

AHIMS site #45-6-2855 is an ochre quarry site located approximately 95m south east of the study area. The site was recorded by Aboriginal Heritage Office in 2007 and is described as a naturally occurring source of fine clay. The deposit contains “two strata of silty clay, one dark reddish brown, the other light greyish white. Both are sticky in their texture and would be well suited as body paint”. At the time of recording, the site had been littered in rubbish and had been quarried for its sandstone, leaving a hollow depression measuring approximately 15m in depth from the top of the gully side.

AHIMS site #45-6-1460 is a shelter with art site located approximately 140m south east of the third class precinct. The site was recorded by Search Archaeological Enterprise in December 1982. The shelter is described as 20m in length, 3m deep, and 5-6m in length with a southern aspect. The floor is bedrock, absent of deposit, level with rock fall. Weathered boulders were noted on the back wall.

AHIMS site #45-6-2039 is a shelter with midden site located approximately 175m north west of the study area. The site was recorded by Val Attenbrow and Tessa Corkill in 1989. The site is recorded as a small area of midden exposed in an eroded bank at the back of Store beach. The shell is visible among roots of a large flame tree and directly behind the bank is a small rock shelter. The floor of the shelter contains a few shells along with a bone fragment, suggesting that the shell may extend from the bank into the shelter. It was determined that additional shells may be buried in the floor of the shelter.

AHIMS site #45-6-0530 is an art site located approximately 250m south east of the third class precinct. The site was recorded by R.Jehre in October 1984. The engraving depicts a large fish. The site card notes that peck marks are visible. The fish approximately 45cm length pecked into flat rock platform. It is noted that the engraving is surrounded by Aboriginal engravings although they are difficult to decipher, possibly covered by European engravings in close proximity to the engraving.

AHIMS site #45-6-1262 is a shelter with art site located approximately 300m north east of the Second Class Precinct. The site was initially recorded by Michael Guider in 1980 and rerecorded by Aboriginal Heritage Office in 2007. The shelter faces west and contains three very faint red ochre kangaroos in a line, each measuring approximately 4ft in length. Above the leading kangaroo was a life sized shield infilled with red ochre, however this has since been destroyed. Three footprints engraved into the rock were recorded in 1980 however by 2007, these engravings could not be seen. The site is being impacted by erosion due to salt spray and splash from tidal zone.

AHIMS site #45-6-1351 is shelter with art site located approximately 265m north west of the study area. The site was initially recorded by Michael Guider in 1980 during a personal investigation and rerecorded by Aboriginal Heritage Office in 2007. The shelter is small and contains nine white hand stencils, all of the left hand. The shelter overlooks Store beach, and a slight occupation deposit is visible on the floor. The site card was updated to reflect that a ground edge axe was removed from the site by Eugene Stockton in 1983. The site card describes the stencils as faded with only the top two “really noticeable and relatively easy to see”.

4.3 Discussion and Aboriginal Heritage Site Prediction Modelling

12 Aboriginal heritage sites, three of which are re-recordings, have previously been recorded within the study area. These sites comprise AHIMS site #45-6-2859 an artefact site, AHIMS site #45-6-1846 a shelter with art site, AHIMS site #45-6-2858 a PAD site, AHIMS site #45-6-2860 a midden site, AHIMS site #45-6-1466 a midden site, AHIMS site #45-6-1465 a shelter with midden site, AHIMS site #45-6-1461 a midden site, AHIMS site #45-6-2856 an open camp site with flaked glass, and AHIMS site #45-6-2149 an open camp site. Sites associated with artefacts are the most frequent site types previously recorded in the local area, followed by sites associated with shelters and then midden sites.

The study area is on the headland, ridgelines, slopes, and sandy soil landscape of North Head, with the western boundary at the foreshore of the Sydney Harbour. The Sydney Harbour would have been used extensively by Aboriginal people in the past for gathering of food resources such as fish and shellfish. A review of existing information, background research, and consultation with local Aboriginal Traditional Custodian Dennis Foley and the AHO identified that Car-rang gel is regarded as a scared place, with immense cultural importance. The study area has been impacted by the establishment of Quarantine Station in 1837 which included initial and ongoing land clearing, the construction and maintenance of infrastructure, and the construction of the numerous accommodation, hospital, and associated buildings.

On the basis of the registered archaeological sites in the region, a review of previous archaeological studies, and a review of the environmental and historic context of the area, the following conclusions can be drawn regarding the potential presence and location of Aboriginal heritage sites within the landscape of the study area:

- Stone artefact sites are found in all environmental contexts but are most readily identified through surface survey in areas where vegetation is limited, and ground surface visibility is high;
- Stone artefact scatters may occur in all landform contexts throughout the local area, although water is often the defining characteristic in distribution patterns. From the body of research throughout the region and within the broader state context, it is generally accepted that people tended to camp in proximity to water, resources or vantage points, with camping occurring more frequently the more permanent the water source. The presence of Sydney Harbour may have made the study area an attractive location for Aboriginal activity;

- Excavations within the wider region indicate that high densities of artefacts can be present up to 500m from water sources (but mainly within 200m), and that intact soils can survive under areas of development with high potential for subsurface artefacts. As such, there is potential for subsurface archaeological sites to be present within the study area if natural soils remain intact under developed areas;
- The number of surviving midden sites in Sydney has most likely decreased since European contact, due to land clearing, construction and urbanisation as well as impacts from lime burning to provide building mortar. Middens, however, remain the third most common site type recorded in the local area, with four located in the study area;
- Consistent with the Gynea and Lambert soil landscapes, slopes below ridges, cliffs and scarps are present in the study area. The highpoint of these topographic landforms would have once been a commanding position, offering views of, and access to Sydney Harbour which bounds the study area, providing a wealth of resources. Two shelter sites are present in the study area, AHIMS site #45-6-1846 a shelter with art site, and AHIMS site #45-6-1465 a shelter with midden site. As such, there is potential for rock shelters with signs of occupational Aboriginal cultural materials including middens, art, and archaeological deposits to be present in the study area;
- Burial sites have previously been located in the local area and are found in caves or sand areas like those existing in the study area. As such, there is potential for burials sites to be present in the study area;
- Scarred trees are only expected within areas of native, mature vegetation, and may occur in any landform context. Although the study area has undergone extensive vegetation clearing.

5 Site Inspection

An inspection of the study area was undertaken on Wednesday 22 May 2024 by AMBS Archaeologists Tyler Beebe and Matthew Byron. The purpose of the inspection was to re-locate the previously identified AHIMS sites within the study area and to confirm their current condition. There are currently no proposed works that would threaten the status of the nine sites identified within the Quarantine Station property.

The location of seven of the nine previously identified AHIMS sites were re-located. Two of the seven relocated site locations (45-6-2858 & 45-6-1466/45-6-2462) were observed to have been protected by modern day fencing installed post 1980's. The erected fencing has been installed in a way which protects these sites from the publicly accessible areas of the Quarantine Station. An additional two sites (45-6-1465 / 45-6-2463 & 45-6-1461 / 45-6-2464) were determined to be too hazardous to access due to their locations on the rocky point west of the existing wharf. These sites were located on the southern cliff face of a rocky point that contained very dense bushland and rocks with zero surface visibility. The remaining five of the nine sites were re-located, however in the extended period of time that has passed since the original site recordings, material Aboriginal evidence of the sites have been obscured or removed. The results of the site inspection are summarised in Table 5.1, below.

Table 5.1 Condition of previously identified AHIMS sites

AHIMS Site	Site Description	Observed Condition
45-6-2859	Single silcrete artefact recorded in 1983	The area where the site was recorded was re-located however dense, overgrown bushland, with zero ground surface visibility, made identification of the site impossible. Figure 5.1
45-6-1846	Rock shelter with art recorded in 1989. The visible art included 3 white hand stencils, 3 white handprints, 1 yellow/brown human figure, 2 black unknowns, 2 red unknowns, 3 yellow/brown unknowns, and 4 engraved feet.	The rock shelter was re-located. The rock shelter was observed to contain only modern day engravings. No art originally recorded was visible. Likely weathered away. Rock shelter was open to the harbour. Figure 5.2, Figure 5.3, Figure 5.4
45-6-2858	Rock overhang with PAD. Shell was observed on the ground surface Originally recorded in 2007	The rock overhang was observed behind a fence north of an outside eating area. No shell was observed. Site is protected from disturbance by a tall chain-link fence. Figure 5.5 and Figure 5.6
45-6-2860	Recorded in 1983 as a 'shell heap' behind the Luggage Facilities	The presumed location of the midden was re-located behind the Luggage Facilities at the base of a large cliff ledge. No shell was observed. The area was disturbed by leaf litter, overgrowth, and miscellaneous debris likely having fell from the top of the cliff ledge above. Figure 5.7
45-6-1466 / 45-6-2462	Recorded in 1983 as a shell midden containing less than 50 shell/shell fragments at the base of a sandstone ledge above the water.	The presumed location of the site was located behind a modern fence. No shell was observed. Figure 5.8
45-6-1465 / 45-6-2463	Recorded in 1983 as a rock shelter containing a midden	Site was unable to be re-located due to extremely dense bush overgrowth, with large sandstone boulders, and zero surface visibility. The terrain was determined to be too hazardous to traverse. Figure 5.9, Figure 5.10,
45-6-1461 / 45-6-2464	Recorded in 1983 as a scatter of shell and shell fragments.	Site was unable to be re-located due to extremely dense bush overgrowth, with large sandstone boulders, and zero surface visibility. The terrain was determined to be too hazardous to traverse. Figure 5.9, Figure 5.10

45-6-2856	Recorded in 2008 as a small scatter of glass material that appeared to have been deliberately flaked.	The presumed location of the site was re-located. A scatter of three glass fragments were observed. The observed glass was modern in appearance and no flaking was observed on the fragments. Figure 5.11
45-6-2149	Recorded in 1987 as a scatter of stone artefacts. Lithic material type or artefact type was not recorded	The presumed location of the site was re-located. No stone artefacts were observed. Surface was obscured by leaf and tree branch litter. Figure 5.12

Aboriginal site location information is considered culturally sensitive, and has been removed from the public version of this report.

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Figure 5.1 AHIMS Site 45-6-2859 location.

Figure 5.2 AHIMS site 45-6-1846 location.

Aboriginal site location information is considered culturally sensitive, and has been removed from the public version of this report.

Aboriginal site location information is considered culturally sensitive, and has been removed from the public version of this report.

Figure 5.3 Rear wall of 45-6-1846. No art observed.

Figure 5.4 Rear wall of 45-6-1846. No art observed.

Aboriginal site location information is considered culturally sensitive, and has been removed from the public version of this report.

Aboriginal site location information is considered culturally sensitive, and has been removed from the public version of this report.

Figure 5.5 Figure 4-7 AHIMS site 45-6-2858, rock overhang with PAD.

Figure 5.6 Chain-link fence separating AHIMS site 45-6-2858 from publicly accessible area.

Aboriginal site location information is considered culturally sensitive, and has been removed from the public version of this report.

Aboriginal site location information is considered culturally sensitive, and has been removed from the public version of this report.

Figure 5.7 AHIMS site 45-6-2860 location.

Figure 5.8 AHIMS site 45-6-1466/45-6-2642 location.

Aboriginal site location information is considered culturally sensitive, and has been removed from the public version of this report.

Aboriginal site location information is considered culturally sensitive, and has been removed from the public version of this report.

Figure 5.9 Dense bush overgrowth approaching location of AHIMS site 45-6-1465/45-6-2463.

Figure 5.10 Dense bush overgrowth approaching location of AHIMS site 45-6-1461/45-6-2464.

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Aboriginal site location information is considered culturally sensitive, and has been removed from the public version of this report.

Figure 5.11 Glass fragments at AHIMS site 45-6-2856 recorded location.

Figure 5.12 AHIMS site 45-6-2149 recorded location.

6 Conclusions and Recommendations

The following is based on the statutory requirements, a review of the environmental and Aboriginal heritage context of the study area, and current heritage best practice, in accordance with the Heritage NSW *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW*. A summary of this assessment's compliance with the Code of Practice is presented in Table 6.1.

6.1 Impact Management and Mitigation Measures

Activities associated with the current daily operation of the Q Station which have potential to impact on identified Aboriginal heritage sites in the study area include:

- Maintenance of currently established roads, walkways, and existing fencing;
- Gardening and associated maintenance. Established mown areas on site are subject to ongoing grass cutting, and weeding and other regular gardening tasks are carried out in immediate garden beds adjacent to buildings or on the periphery of the mown areas.
- Visitor access. Visitor access throughout the site is predominantly by foot, with most parking at the CP1 entrance to the property, and either walking or being driven into the site via the Q Station shuttle bus. Small buses up to 22 seats with private groups with mobility issues are allowed to access the site, escorted by the Q Station shuttle bus. A small number of visitors staying in cottages drive and park in designated parking areas. Vehicle access throughout the site is limited to established hardstand access roads; and
- Staff Access. Q Station staff are permitted to drive on site to access CP5 for staff parking, and to drive Q Station vehicles, including the shuttle bus around the site. All vehicle movement is restricted to established hardstand access roads.

Current operations on site do not include establishment of any new roads or walkways, or installation of new fencing. No gardening activities are currently planned for areas of natural vegetation around the site, and will be restricted to previously established and maintained mown areas and garden beds.

To ensure the ongoing protection of the identified Aboriginal heritage sites from inadvertent impact or harm resulting from daily Q Station operations appropriate mitigation measures include:

- Ongoing maintenance of the current level of restrictive fencing that was observed associated with the heritage sites;
- In conjunction with fencing, ensure that appropriate restrictive signage is visible;
- Ensure that staff are aware of the presence of Aboriginal heritage sites prior to undertaking routine gardening activities such as mowing or weeding of established garden beds.
- Where no fencing exists, ensure that there is an appropriate buffer zone around identified Aboriginal heritage sites to prevent inadvertent impacts; and
- The consideration of implementing cultural heritage awareness training as part of routine employment inductions.

In addition, AHIMS sites 45-6-2859, 45-6-2860 and 45-6-2149 were observed to have been significantly impacted by natural erosion/disturbance to the point where there was no visible expression of cultural heritage values. As such there are no recommended mitigation measures required to protect these sites from ongoing natural erosion and disturbances. Further, for the remaining identified Aboriginal heritage sites currently protected by fencing and natural landscape barriers no additional erosion mitigation measures are required.

Visitor and Staff access to the identified Aboriginal heritage sites is currently restricted by fencing, appropriate signage, and natural landscape buffer zones. In addition, visitor movement throughout

natural scrubland around the study area is discouraged by dense vegetation. Maintaining the current level of restriction is recommended and warranted.

6.2 Recommendations

The due diligence assessment process is intended to allow initial determination of the likely presence of Aboriginal heritage objects which may be impacted by an activity. Where a due diligence assessment determines that there are, or are likely to be, Aboriginal heritage objects present in an area of activity, more detailed investigation and impact assessment is required in the form of an ACHA, regardless of their significance or context. If the subsequent ACHA determines that harm will occur to Aboriginal objects, then an application for an AHIP will be required to allow the activity.

As there are no construction or other groundbreaking works proposed for the study area and this assessment is assessing continuation of the Q Station's current operations (please refer to Section 1.1 of this report), there are no additional constraints to the current operations arising from considerations of Aboriginal cultural heritage and archaeology. The current operations may proceed with due caution, adhering to already established site management and protection measures currently in place for the study area as detailed in the *North Head Quarantine Station, Environment and Heritage Site Wide Management Plan, 2023: Appendix 3 – Aboriginal Heritage Management Sub Plan 2023*.

Recommendation 1

Current operations at the Q Station will not impact on Aboriginal heritage sites, objects and places, and there are no further Aboriginal cultural heritage constraints on the current operations. No further Aboriginal cultural heritage assessment is required for the current operations of the Q Station to continue in this form. Preexisting Aboriginal cultural site management and protections must still be followed in accordance with the North Head Quarantine Station Environment and Heritage Site Wide Management Plan, 2023: Appendix 3 – Aboriginal Heritage Management Sub-Plan (DRAFT) (DPE, 2023).

Q Station staff and external subcontractors who undertake external maintenance works around the study area, including gardening, mowing, repair and maintenance of roads, tracks and fences, should be informed about the Aboriginal heritage sensitivity of the area. Aboriginal cultural heritage awareness should be included in site inductions to ensure that those staff are aware of any potential impacts to site, any necessary measures to avoid impacts, and have a protocol for managing potential unexpected Aboriginal heritage finds.

Recommendation 2

Site inductions for Q Station staff and external subcontractors who undertake external maintenance works should include Aboriginal cultural heritage awareness, outlining the nature of the Aboriginal heritage sensitivity of the area, the importance of avoidance of impacts, and protocols for unexpected Aboriginal heritage finds.

As per the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW* (DECCW 2010:12) areas within 200m of waters, located on crest/ridge line landforms, or a sand dune soil landscape which are considered sensitive landscape features with the potential to retain Aboriginal objects. The study area is located at North Head on the headland, ridgelines, slopes, and sandy soil landscape, with the western boundary at the foreshore of the Sydney Harbour. Previously, 12 Aboriginal heritage sites, three of which are re-recordings, have been recorded within the study area. Any future development or groundbreaking works which may impact on the identified Aboriginal archaeological potential landscape or existing AHIMS sites will require further Aboriginal

heritage assessment to determine the potential for Aboriginal heritage objects to be present and impacted by the works.

Recommendation 3

Registered Aboriginal sites and areas having potential to retain Aboriginal heritage objects have been identified in the project area. If future development works are proposed for within the study area further Aboriginal heritage assessment should be prepared in accordance with the Heritage NSW Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (DECCW 2011).

The review of existing background information, and previous and current consultation with Metropolitan LALC, local Aboriginal Traditional Custodian Dennis Foley, and the AHO has confirmed that Car-rang gel and the study area is a sacred place to the local Aboriginal community, with immense cultural importance. Due to the high cultural significance of the study area consultation with the Aboriginal community and traditional custodians should continue, and they should be engaged with and consulted regarding any future development and ongoing site management.

Recommendation 4

Future new development and works, and ongoing management of the Q Station site should continue to include consultation and engagement with the local Aboriginal community and traditional custodians.

Table 6.1 Due diligence process and results summary (after DECCW 2010:10-13).

Due Diligence Assessment Process	Response
Step 1. Will the activity disturb the ground surface or any culturally modified trees?	The current works will not disturb the ground surface (see Section 1.1). Proceed to Step 2a.
Step 2a. Are there any relevant confirmed site records or other associated landscape feature information on the AHIMS database?	12 Aboriginal heritage sites, three of which are re-recordings, have previously been recorded within the study area. (AHIMS site #45-6-2859, #45-6-1846, #45-6-2858, #45-6-2860, #45-6-1466, #45-6-1465, #45-6-1461, #45-6-2856, and #45-6-2149). Proceed to Step 2b.
Step 2b. Are there any other sources of information of which a person is already aware? Other sources of information can include previous studies, reports or surveys which you have commissioned or are otherwise aware of.	A number of archaeological assessments have been undertaken in the local area (see Section 4.2). Proceed to Step 2c.
Step 2c. Are there landscape features present likely to indicate presence of Aboriginal objects?	The study area is located within 200m of water on the foreshore of Sydney Harbour, on an elevated crest/ridge line landform, with a sand dune soil landscape present. The landform has been impacted by levels of disturbance from land clearing, and development of the Quarantine Station. There is potential for Aboriginal objects to be present within the study area in an archaeological context (see Section 3 and 4). Proceed to Step 3.
Step 3. Can harm to Aboriginal objects listed on AHIMS or identified by other sources of information be avoided, and/or can the carrying out of the activity at the relevant landscape features be avoided?	No harm to Aboriginal objects listed on AHIMS or identified by other sources of information will occur as the proposed development will not disturb the ground surface (see Section 1.1). 12 Aboriginal heritage sites, three of which are re-recordings, have previously been recorded within the study area. (AHIMS site #45-6-2859, #45-6-1846, #45-6-2858, #45-6-2860, #45-6-1466, #45-6-1465, #45-6-1461, #45-6-2856, and #45-6-2149). (see Sections 4 and 6). These sites should be avoided and/or protected from any future works that have the potential to impact them. Any future groundbreaking works in the study area have potential to impact the identified Aboriginal sites, Aboriginal objects, and areas of potential archaeological deposit will require further assessment. Proceed to Step 4.
Step 4: Does a desktop assessment and visual inspection confirm that there are Aboriginal objects or that they are likely?	<p>12 Aboriginal heritage sites, three of which are re-recordings, have previously been recorded within the study area. (AHIMS site #45-6-2859, #45-6-1846, #45-6-2858, #45-6-2860, #45-6-1466, #45-6-1465, #45-6-1461, #45-6-2856, and #45-6-2149). The study area is in proximity to a watercourse, on a crest/ridgeline landform, and a sand dune soil landscape which are landscape features likely to indicate presence of Aboriginal objects.</p> <p>A visual inspection of the study area conducted on 22 May 2024 was able to re-locate the identified locations of seven of the nine previously identified sites. The sites were observed to be in poor state with no observable expression of archaeological material. No additional sites were identified during the visual inspection.</p>

Bibliography

AMBS Ecology & Heritage (2023) *Q Station Aboriginal Heritage Interpretation Strategy*, Consultancy report to North Head Sydney Pty Ltd (in draft).

Attenbrow V and Conyers B (1983) *North Head Quarantine Station Archaeological Survey for Aboriginal Sites*. Consultancy report prepared by Search Archaeological Enterprises for NSW National Parks and Wildlife Service.

Attenbrow V (1990) *The Port Jackson Archaeological Project: Report on Stage 1*. Australian Museum.

Attenbrow V (2002) *Pre-colonial Aboriginal land and resource use in Centennial, Moore and Queens Parks – assessment of historical and archaeological evidence for Centennial Parklands Conservation Management Plan*, Consultancy report prepared for Conybeare Morrison & Partners.

Attenbrow V (1981) *Mangrove Creek Dam – Salvage Excavation Project*. Report to NSW National Parks and Wildlife Service for the Department of Public Works.

Attenbrow V (2004) *What's Changing: Population size or land-use patterns? The Archaeology of Upper Mangrove Creek, Sydney Basin*. Pandanus Books, Australian National University, Canberra.

Attenbrow V (2010) *Sydney's Aboriginal Past, 2nd edition*. Sydney, University of New South Wales Press Ltd.

Chapman G.A and Murphy C.L (1989) *Soil Landscapes of the Sydney 1:100 000 sheet*. Soil Conservation Service of NSW, Sydney.

Department of Environment, Climate Change, and Water (DECCW) (2010) *Aboriginal cultural heritage consultation requirements for proponents 2010*. DECCW, Sydney

Department of Planning and Environment (DPE) (2023) *North Head Quarantine Station Environment and Heritage Site Wide Management Plan, 2023: Appendix 3 – Aboriginal Heritage Management Sub-Plan (DRAFT)*. DPE, Sydney.

Helen Brayshaw Heritage Consultants (1996) *Environmental Management Plan: School of Artillery North Head Aboriginal Heritage*. Consultancy report prepared for Department of Defence.

Koettig M (1996) *Hornsby Shire Aboriginal Heritage Study*. Consultancy report prepared by Margrit Koettig Archaeological Services for NSW National Parks and Wildlife Service

Kohen J (1986) *Prehistoric Settlement in the Western Cumberland Plain: Resources, Environment and Technology*. Unpublished PhD Thesis, School of Earth Sciences, Macquarie University, Sydney

Kohen JL, ED Stockton MA & Williams (1984) "Shaws Creek KII rockshelter, a prehistoric occupation site in the Blue Mountains piedmont, eastern New South Wales". *Archaeology in Oceania* 19(2):57-72.

Lampert R (1971) *Burrill Lake and Currarong; Coastal Sites in Southern New South Wales. Terra Australis. Vol. 1*. Department of Prehistory, Research School of Pacific Studies, Australian National University, Canberra.

McDonald J (1994) *Dreamtime Superhighway: An Analysis of Sydney Rock Art and Prehistoric Information Exchange*. Unpublished PhD thesis, Department of Prehistory and Anthropology, Australian National University, Canberra.

Nanson G, Young, R & Stockton E (1987) "Chronology and Paleoenvironment of the Cranebrook Terrace [near Sydney] Containing Artefacts more than 40,000 Years Old". *Archaeology in Oceania* 22(2):72-78.

National Parks and Wildlife Service (2023a) *North Head Quarantine Station, Environment and Heritage Site Wide Management Plan, 2023: Appendix 3 – Aboriginal Heritage Management Sub Plan*.

National Parks and Wildlife Service (2023b) *Annual Monitoring Report 2023, Quarantine Station – Sydney Harbour NP Integrated Monitoring Program*.

Negerevich T, (1978) *Aboriginal Rock Engravings – South Head, Sydney Harbour. Report prepared for the Australian Department of Housing and Construction*.

O'Donnell G and M.J Walker (1974) *Archaeological Excavations at Reef Beach, Balgowlah, N.S.W.*

<https://www.qstation.com.au/> (2019) Website accessed 12 March 2024.

Stockton E (2009) "Archaeology of the Blue Mountains". In E Stockton & J Merriman (Eds), *Blue Mountains Dreaming: The Aboriginal Heritage*, 2nd edition, pp41-72. Blue Mountains Education and Research Trust, Lawson.

Stockton E & W Holland (1974) "Cultural sites and their environment in the Blue Mountains". *Archaeology and Physical Anthropology in Oceania* 9(1):36-65.

Williams A (2013) "A new population curve for prehistoric Australia". *Proceedings of the Royal Society* 280:20130486. <http://dx.doi.org/10.1098/rspb.2013.0486>

Williams AN, P Mitchell, RVS Wright & PS Toms (2012) "A terminal Pleistocene open site on the Hawkesbury River, Pitt Town, New South Wales". *Australian Archaeology* 74:85-97

Thompson Berrill Landscape Design Pty Ltd (2006) *Heritage Landscape Management*. Consultancy report prepared for Mawland Quarantine Station Pty Ltd.

Two Point Co. (2021) *North Head (Car-rang-gel); First Nations Community Consultation*. Consultancy report prepared for The Harbour Trust.

Unearthed Archaeology and Heritage (2021) *Little Manly Beach Kiosk Aboriginal Cultural Heritage Assessment Report*. Consultancy report prepared for BJB Architects.

Urbis (2023) *Aboriginal Cultural Heritage Assessment Royal Far West, 14-18 Wentworth Street and 19-21 South Steyne, Manly, NSW*. Consultancy report prepared for Royal Far West.

Appendix A – AHIMS search results

Aboriginal site location information is considered culturally sensitive, and has been removed from the public version of this report.

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Appendix B – Q Station Ongoing Operations

Q Station – Ongoing Operations

Operation	Management and mitigation measures	
	Site wide plans	Additional/recommended measures
Visitor access		
<ul style="list-style-type: none"> • There are 2 car parks at Q Station: <ul style="list-style-type: none"> ○ CP1 at reception/entrance with 120 spaces for all visitors and hotel guests ○ CP5 within the site with 56 spaces for Q Station vehicles, staff and guests • For most arriving visitors parking is in CP1. Access into the site is then either walking or use of the Q Station shuttle bus. • There is a boom gate at reception (A26), to manage vehicle access into the site. • Staff are permitted to drive on site to access CP5 for staff parking and drive Q Station vehicles as necessary to their position. • Contractors are permitted to drive on site when necessary. • Guests staying in cottages can drive and park in designated parking areas adjacent to their cottage. • If a driver is permitted to drive on site (i.e. staff, contractor or cottage guest) a site induction must be completed prior to entering. • The Q Station shuttle provides a free transport in and out of Manly. This is timetabled and details are found on the Q Station website. • Arrival to the site via ferry is not currently possible. • Groups are encouraged to visit Q Station via private coach or bus. Small buses up to 22 seats with private groups attending a Q Station event or tour are permitted to drive into the site where the group has limited mobility. These small buses are escorted by a Q Station shuttle into the site. 	<p>Endorsed:</p> <p>Visitor Management Plan, March 2005.</p> <p>Draft:</p> <ul style="list-style-type: none"> • Refer mitigation measures in the Environment and Heritage Site Wide Management 2023: Appendix 10 Access Strategy Sub Plan (draft). 	<ul style="list-style-type: none"> • No additional heritage management measures recommended. Maintain current mitigation measures and current fences to restrict visitor access where previously installed.

Operation	Management and mitigation measures	
	Site wide plans	Additional/recommended measures
Visitor management		
<p>Site capacity</p> <ul style="list-style-type: none"> The current capacity limit for the site has been set by the current CoPA to be optimally 315pax with a maximum of 600 pax at any one time. This includes staff and guests. Two community open days are held each year. On each day a program of free tours, talks and activities is available for the community to book and attend. The QSCCC meets at Q Station 4 time a year. It consists of an independent chair, representatives from NHS, NPWS and local community stakeholder groups. <p>Visitor Centre and Museum</p> <ul style="list-style-type: none"> Building A14-17 within Wharf precinct houses a free Quarantine Exhibition, Tours Desk, café and public toilets. The Tours desk is staffed 10am-4pm every day for visitor information & enquiries , assistance and tour booking. The café is open from 8am every day serving coffee, light meals and snacks. <p>Tours</p> <ul style="list-style-type: none"> The current tours on offer at Q Station can be divided into history, ghost and education programs. All education, public and private tour information can be found on the Q Station website. Bookings for public tours can be made through the website. Changes to specific tour schedules and content are based on demand and seasonality, however in general the tours run as follows: <ul style="list-style-type: none"> Quarantine Wander History Tour – 11am daily Disease and Burial History Tour – after dark Ghostly Encounters Tour – 2.5 hours Wednesdays Ghost trackers Family Tour – 2 hours Friday & Saturday Paranormal Investigation – 3.5 hours Thursday evening 	<p>Endorsed:</p> <p>Visitor Management Plan, March 2005.</p> <p>Draft:</p> <ul style="list-style-type: none"> Refer to the Environment and Heritage Site Wide Management 2023: Appendix 10 Access Strategy Sub Plan (draft). 	<ul style="list-style-type: none"> No additional heritage management measures recommended. Maintain current mitigation measures and maintain current fences to restrict visitor access

Operation	Management and mitigation measures	
	Site wide plans	Additional/recommended measures
<ul style="list-style-type: none"> Private tours for in house conferences and other external social or corporate groups are also available. Booking requests managed individually. The site held 19000 tour guests in 2023. <p>Education programs</p> <ul style="list-style-type: none"> The site holds educational programs for primary and secondary students. These programs involve exploring the natural and built environment, handling artefacts, following paths of migration on large maps, experiencing past technologies, interacting with primary sources, playing games and hearing stories. The Environment and Cultural Centre (A9 & A11) is also used as part of educational programs offered at the site. Groups are able to stay in the hotel accommodation. Buildings commonly used are P21, P22 or P23 or cottages, however this depends on the numbers, gender, staff to student ratio and other requirements of the school. 		
Accommodation		
<p>Q Station currently provides 105 rooms and 9 cottages as guest accommodation. Accommodation can be booked directly with Q Station, through Accor Hotels website and a range of third party providers. Rates vary dependent on season, demand and duration of stay. Q Station regularly offers packages to guests which include accommodation and a range of other on site benefits or activities.</p> <p>All guests have access to the following guest lounges: A28 Carpenters Lounge, P5 Former First Class Dining Room and P6 Former First Class Kitchen Room. The Isolation Guest Lounge is available only to guests staying in the Isolation Precinct.</p> <p>In the period Dec 2022 to Nov 2023, 43712 people stayed at Q Station. Average room occupancy was 71%.</p>	<p>Endorsed:</p> <p>Visitor Management Plan, March 2005.</p> <p>Infrastructure Control Plan Part 1, 2008.</p> <p>Interpretation Plan, 2005.</p> <p>Draft:</p> <p>Refer to the Environment and Heritage Site Wide Management 2023: Appendix 10 Access Strategy Sub Plan (draft).</p>	<ul style="list-style-type: none"> No additional heritage management measures recommended. Maintain current mitigation measures

Operation	Management and mitigation measures	
	Site wide plans	Additional/recommended measures
	<p>Refer to the Environment and Heritage Site Wide Management 2023: Appendix 17 Emergency and Evacuation Plan (draft).</p> <p>Refer to the Environment and Heritage Site Wide Management 2023: Appendix 16 Security Management Plan (draft).</p> <p>Refer to the Environment and Heritage Site Wide Management 2023: Appendix 6 Infrastructure Control Sub Plan (draft).</p> <ul style="list-style-type: none"> Refer to the Environment and Heritage Site Wide Management 2023: Appendix 7 Interpretation Sub Plan (draft). 	
Conferences, functions and events		
<p>Q Station hosts a range of conferences, functions and events over the year, with the potential of up to 45% of total revenue being generated in this way. The follow 11 buildings are available for meetings and functions: P3, P7, P10, P12, P15, P16, P27, A2 & H1A.</p>	<p>Endorsed:</p> <p>Visitor Management Plan, March 2005.</p> <p>Noise Management Plan, 2005.</p> <p>Draft:</p> <p>Refer to the Environment and Heritage Site Wide Management 2023: Appendix</p>	<p>No additional heritage management measures recommended.</p>

Operation	Management and mitigation measures	
	Site wide plans	Additional/recommended measures
	<p>10 Access Strategy Sub Plan (draft).</p> <p>Refer to the Environment and Heritage Site Wide Management 2023: Appendix 12 Noise Management Plan (draft).</p> <p>Refer to the Environment and Heritage Site Wide Management 2023: Appendix 17 Emergency and Evacuation Plan (draft).</p> <p>Refer to the Environment and Heritage Site Wide Management 2023: Appendix 16 Security Management Plan (draft).</p>	
Food facilities and preparation		
<p>A6:</p> <ul style="list-style-type: none"> The Boilerhouse Kitchen and Bar is a restaurant which operates out of building A6. Operating hours are outlined below: 	<p>Endorsed:</p> <p>Visitor Management Plan, March 2005.</p> <p>Noise Management Plan, 2005.</p> <p>Waste Management Plan, 2005.</p> <p>Infrastructure Control Plan Part 1, 2008.</p> <p>Predator and Pest Animal Plan, 2008.</p> <p>Draft:</p>	<p>No additional heritage management measures recommended.</p>

Operation		Management and mitigation measures	
		Site wide plans	Additional/recommended measures
<p>Opening Times</p> <p>Mon: Closed Tues: Closed Weds: 4:00pm – 9pm Thurs: 4:00pm – 9pm Fri: 4:00pm – 9pm Sat: 12pm – 9pm Sun: 12pm – 5pm</p>	<p>Lunch</p> <p>12pm – 3pm Saturday and Sunday</p> <p>Dinner</p> <p>5:30pm – 9pm Wednesday to Saturday</p>	<p>Refer to the Environment and Heritage Site Wide Management 2023: Appendix 10 Access Strategy Sub Plan (draft).</p> <p>Refer to the Environment and Heritage Site Wide Management 2023: Appendix 12 Noise Management Plan (draft).</p> <p>Refer to the Environment and Heritage Site Wide Management 2023: Appendix 17 Emergency and Evacuation Plan (draft).</p> <p>Refer to the Environment and Heritage Site Wide Management 2023: Appendix 13 Waste Management Plan (draft).</p> <p>Refer to the Environment and Heritage Site Wide Management 2023: Appendix 6 Infrastructure Control Sub Plan (draft).</p> <p>Refer to the Environment and Heritage Site Wide Management 2023: Appendix 9 Predator and Pest Control Sub Plan (draft).</p>	
<ul style="list-style-type: none"> The Engine Room bar at the beachside end of A6 offers a casual dining option for lunch, dinner or refreshments. Opening hours are as follows: <ul style="list-style-type: none"> Friday 4pm-9pm Saturday & Sunday 11am -5:30pm The kitchen for the Boiler house and Engine Room bar is located within A6. 			
<p>P12 & P13</p> <ul style="list-style-type: none"> A restaurant is located in building P12. Food preparation is conducted in neighbouring building P13. This restaurant/food prep provided buffet breakfast for guests every morning from 7am. 			
<p>A14 & A17</p> <ul style="list-style-type: none"> A café (known as the ‘Wharf Café’) is located inside A14-17 and forms part of the Visitor Centre complex in the Wharf precinct. Opening hours are Sunday-Tuesday 8am-5pm and Wednesday-Saturday 8am-4pm. Food preparation for this café is completed in P13 and then delivered to the café each day. 			

Operation	Management and mitigation measures	
	Site wide plans	Additional/recommended measures
<p>A20</p> <ul style="list-style-type: none"> ○ A kitchen is located within A20. This kitchen is used on demand only for events and functions. <p>Q Station vehicles are used to transport food to all locations outside of immediate venues.</p>		
Staff and training		
<p>There are currently 140 staff employed at the site. This includes a mix of permanent full time and part or casual roles.</p>	<p>Endorsed:</p> <p>2006 Inscriptions Management Plan (IMP) prepared by Simon MacArthur</p> <p>Visitor Management Plan, March 2005.</p> <p>Noise Management Plan, 2005.</p> <p>Waste Management Plan, 2005.</p> <p>Infrastructure Control Plan Part 1, 2008.</p> <p>Aboriginal Heritage Management Plan, 2009.</p> <p>Predator and Pest Animal Plan, 2008.</p> <p>Movable Heritage and Resource Collection Plan, 2007.</p> <p>Draft:</p> <p>Refer to the Environment and Heritage Site Wide Management 2023: Appendix</p>	<ul style="list-style-type: none"> • At the beginning of employment all staff must complete an induction training session and driver induction if driving on site. Additional training available throughout the year • Specific role skill based training • Emergency and evacuation training • First aid training • Respectful workplace training • Aboriginal Cultural Heritage Awareness Training in site inductions for staff and subcontractors

Operation	Management and mitigation measures	
	Site wide plans	Additional/recommended measures
	<p>10 Access Strategy Sub Plan (draft).</p> <p>Refer to the Environment and Heritage Site Wide Management 2023: Appendix 5 Inscription Management Sub Plan (draft).</p> <p>Refer to the Environment and Heritage Site Wide Management 2023: Appendix 12 Noise Management Plan (draft).</p> <p>Refer to the Environment and Heritage Site Wide Management 2023: Appendix 17 Emergency and Evacuation Plan (draft).</p> <p>Refer to the Environment and Heritage Site Wide Management 2023: Appendix 13 Waste Management Plan (draft).</p> <p>Refer to the Environment and Heritage Site Wide Management 2023: Appendix 16 Security Management Plan (draft).</p> <p>Refer to the Environment and Heritage Site Wide Management 2023: Appendix 6</p>	

Operation	Management and mitigation measures	
	Site wide plans	Additional/recommended measures
	<p>Infrastructure Control Sub Plan (draft).</p> <p>Refer to the Environment and Heritage Site Wide Management 2023: Appendix 3 Aboriginal Heritage Management Sub Plan (draft).</p> <p>Refer to the Environment and Heritage Site Wide Management 2023: Appendix 8 Moveable Heritage Collection Sub Plan (draft).</p> <p>Refer to the Environment and Heritage Site Wide Management 2023: Appendix 9 Predator and Pest Control Sub Plan (draft).</p>	
Environmental		
<p>Waste management</p> <ul style="list-style-type: none"> Waste and recycling bin storage is located at the end of CP5. On site bin collection and replacement is completed by housekeeping team. Contractor's empty full bins accumulated in CP5. <p>Maintenance/conservation</p> <ul style="list-style-type: none"> Specific maintenance tasks on site are logged through the inhouse Protel system. Daily report tasks are attended to by maintenance team in the first instance. 	<p>Endorsed:</p> <ul style="list-style-type: none"> 2006 Inscriptions Management Plan (IMP) prepared by Simon MacArthur. Visitor Management Plan, March 2005. Noise Management Plan, 2005. Waste Management Plan, 2005. 	<ul style="list-style-type: none"> Maintain current fences restricting access Ensure that areas identified as having cultural heritage value are not impacted by routine landscaping and gardening

Operation	Management and mitigation measures	
	Site wide plans	Additional/recommended measures
<ul style="list-style-type: none"> Specialised trades eg electrical, plumbing services are contracted when appropriate. Regular use and inspection of buildings and infrastructure also informs ongoing maintenance requirements such as painting of buildings, drain clearing, road potholes. Repairs to buildings and infrastructure are carried out in line with CWP guidelines. Mown areas are subject to ongoing grass cutting. Weeding and other gardening tasks are predominately carried out in the immediate garden beds adjacent to buildings or on the periphery of the mown areas. Pest control. 	<ul style="list-style-type: none"> Infrastructure Control Plan Part 1, 2008. Aboriginal Heritage Management Plan, 2009. Predator and Pest Animal Plan, 2008. Movable Heritage and Resource Collection Plan, 2007. Sampling and Asbestos Strategy, 2005. Erosion and sedimentation control plan, 2005. <p>Draft:</p> <ul style="list-style-type: none"> Refer to the Environment and Heritage Site Wide Management 2023: Appendix 5 Inscription Management Sub Plan (draft). Refer to the Environment and Heritage Site Wide Management 2023: Appendix 18 Outdoor Visitor Infrastructure Sub Plan (draft). Refer to the Environment and Heritage Site Wide Management 2023: Appendix 	<p>maintenance activities, i.e.mowing</p>

Operation	Management and mitigation measures	
	Site wide plans	Additional/recommended measures
	<p>12 Noise Management Plan (draft).</p> <ul style="list-style-type: none"> • Refer to the Environment and Heritage Site Wide Management 2023: Appendix 16 Security Management Plan (draft). • Refer to the Environment and Heritage Site Wide Management 2023: Appendix 13 Waste Management Plan (draft). • Refer to the Environment and Heritage Site Wide Management 2023: Appendix 14 Asbestos Sampling Management Strategy (draft). • Refer to the Environment and Heritage Site Wide Management 2023: Appendix 6 Infrastructure Control Sub Plan (draft). • Refer to the Environment and Heritage Site Wide Management 2023: Appendix 3 Aboriginal Heritage Management Sub Plan (draft). • Refer to the Environment and Heritage Site Wide Management 2023: Appendix 8 	

Operation	Management and mitigation measures	
	Site wide plans	Additional/recommended measures
	Moveable Heritage Collection Sub Plan (draft). <ul style="list-style-type: none"> • Refer to the Environment and Heritage Site Wide Management 2023: Appendix 9 Predator and Pest Control Sub Plan (draft). • Refer to the Environment and Heritage Site Wide Management 2023: Appendix 11 Erosion and Sedimentation Control Sub Plan (draft). 	