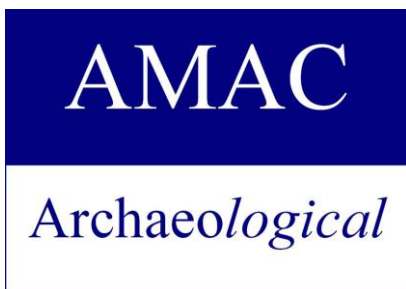


BASELINE ARCHAEOLOGICAL ASSESSMENT

**Hornby Lighthouse,
Watsons Bay**



Emma Williams

Archaeological Management & Consulting Group

for

Puch Construction and Building

March 2024

Disclaimer

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Cover Image

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EXECUTIVE SUMMARY

Documentary Research

- The study site was part of crown land. In 1877 the land was officially reserved for 'defence purposes and lighthouses'.
- This proclamation comes approximately 20 years after the construction of Hornby Lighthouse on the study site.
- No evidence has been found to suggest that the study site was developed prior to the construction of the lighthouse.
- Hornby Lighthouse was first lit in 1858. Between 1857 and 1861 adjacent stone cottages were constructed to house the lighthouse staff.
- The lighthouse was converted to electricity in 1933 and would run unmanned from this point onwards and the cottages became occupied by military personnel.
- The site came under the ownership and protection of the National Trust of Australia in 1975.
- Hornby Lighthouse is currently owned and operated by Port Authority of NSW.

Physical Evidence

- The study site is limited to the land immediately surrounding Hornby Lighthouse.
- Based on the site's history and development and the observations made during the site inspection, the study site holds nil to low potential for evidence of modified bedrock that can be linked to the construction of Hornby Lighthouse.

Significance

- The heritage value of the study site is solely vested in the standing structure of Hornby Lighthouse and not in the potential archaeological resource.
- Potential archaeological remains at the study are expected to be extremely limited and do not reach the threshold for State or local significance.

Archaeological Heritage Impact

- The proposed development requires minor excavation impacts up to 250mm for remediation works.
- No relics are known to exist within the study site boundary and as a result there will be no negative heritage impact caused by the proposed works.

Recommendations

- As no impact to known relics are expected, archaeological field works during the remediation works phase are not required.
- It is suggested that an Unexpected Finds Protocol be prepared by a qualified archaeologist in advance of development works which can be supplied to contractors as a guide to use on site detailing relevant stop work procedures in accordance with Section 146 of *Heritage Act 1977* should unexpected relics be exposed during works.

GLOSSARY AND ABBREVIATIONS

The following definition of terms have mostly derived from the glossary provided in Heritage Office Department of Urban Affairs and Planning (1996) *Archaeological Assessments*.

Term	Definition
AMAC	Archaeological Management and Consulting Group
AMP	Archaeological Management Plan
AZP	Archaeological Zoning Plan
Archaeological feature	Any physical evidence of past human activity. Archaeological features include buildings, works, relics, structures, foundations, deposits, cultural landscapes and shipwrecks. On archaeological excavations the term 'feature' may be used in a specific sense to refer to any item that is not a structure, a layer or an artefact (for example, a post hole).
Artefacts	An object produced by human activity. In historical archaeology the term usually refers to small object contained within occupation deposits. The term may encompass food or plant remains and ecological features (for example, pollen).
CMP	Conservation Management Plan
Conservation	The processes of looking after a place so as to retain its heritage significance.
Contact sites	Sites which are associated with interaction between Aboriginal and non-Aboriginal people.
DCP	Development Control Plan
DP	Deposited Plan
Heritage NSW	Formerly known as the Heritage Division, Heritage Branch. Now also governing body managing Aboriginal cultural heritage, previously known as Office of Environment and Heritage (OEH)
Historical Archaeology	The study of the human past using both material evidence and documentary sources. In Australia 'historical archaeology' excludes Aboriginal archaeology prior to non-indigenous occupation but may include 'contact' sites.
LEP	Local Environment Plan
LGA	Local Government Area
LTO	Land Titles Office
NPW Act	National Parks and Wildlife Act 1974
OEH	Now Heritage NSW (see above)
Post-contact	A term used to refer to study archaeological sites dating after European occupation in 1788.
Relic	Defined by the NSW Heritage Act (see Section 1.5.3) as: "any deposit, artefact, object or material evidence that: (a) relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement, and (b) is of State or local heritage significance"
S57	Refers to definition of Section 57 in the NSW Heritage Act 1977
S60	Refers to definition of Section 60 in the NSW Heritage Act 1977
S139	Refers to definition of Section 139 in the NSW Heritage Act 1977
S140	Refers to definition of Section 140 in the NSW Heritage Act 1977
SOHI	Statement of Heritage Impact
SHI	State Heritage Inventory
SHR	State Heritage Register

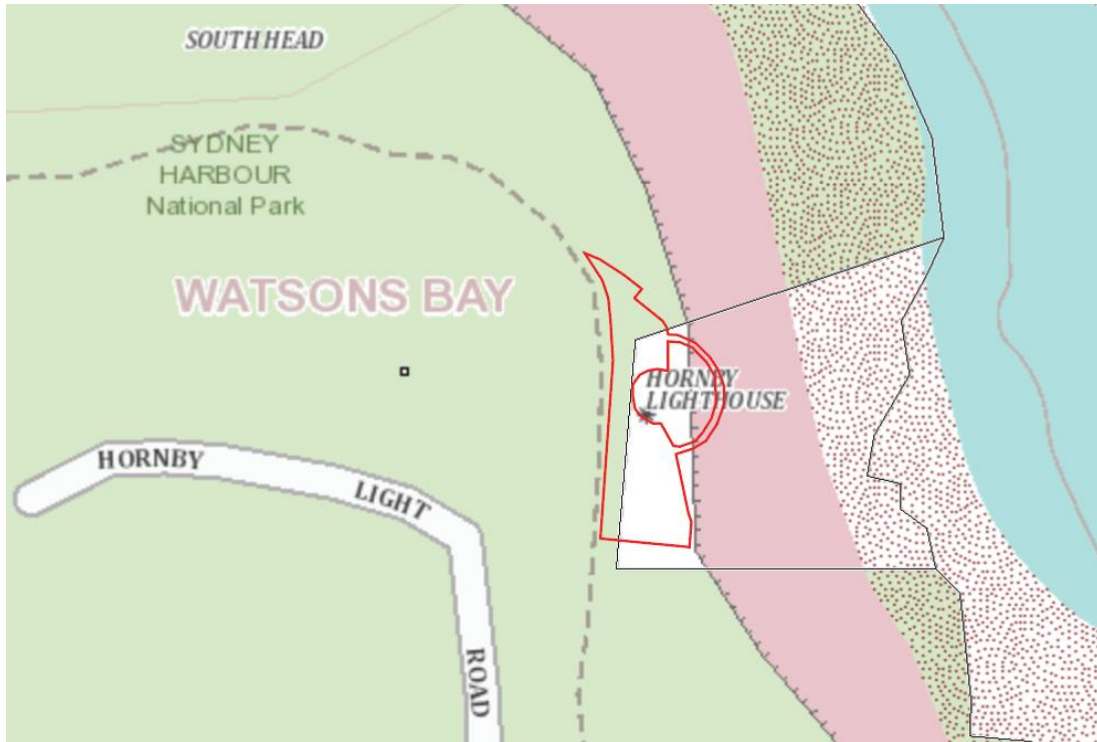


Figure 1.1 Site location, with proposed works area outlined in red.
NSW Land Registry Services, Six Maps Viewer, accessed 21/02/2024.



Figure 1.2 Aerial photograph showing the study site and proposed works area outlined in red.
NSW Land Registry Services, Six Maps Viewer, accessed 21/02/2024.

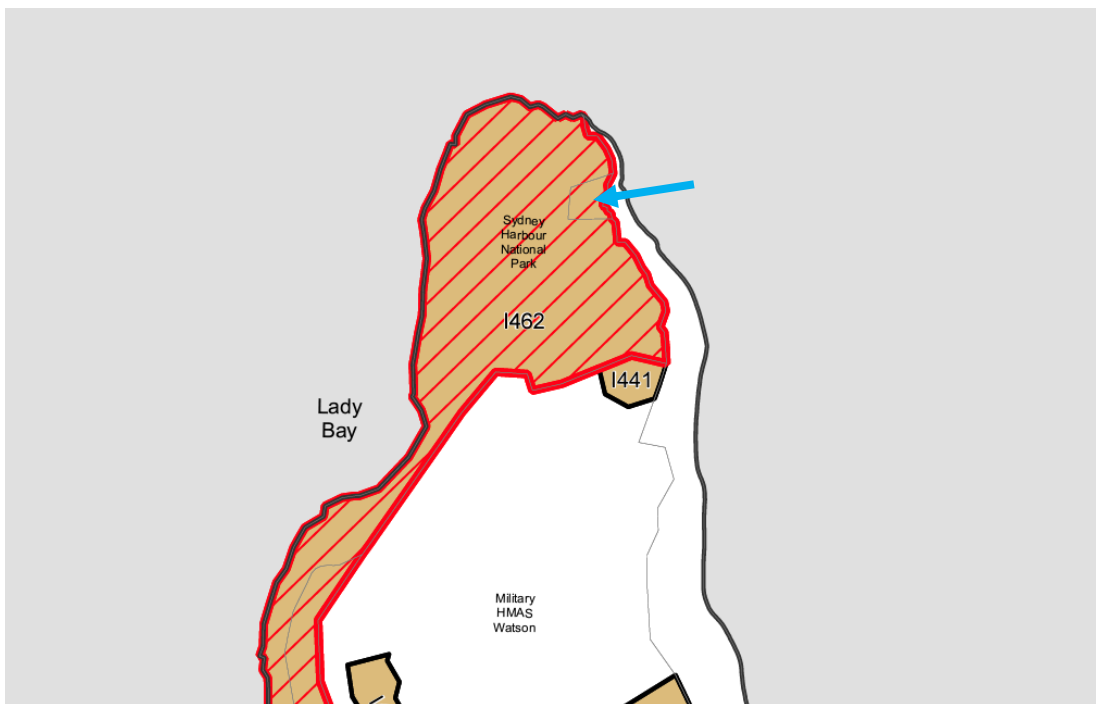


Figure 1.3 Watsons Bay Conservation Area.
Study site area indicated by blue arrow.
Woollahra LEP.

1.0 INTRODUCTION

1.1 BACKGROUND

Puch Construction and Building has commissioned the Archaeological Management and Consulting Group to prepare a Baseline Archaeological Assessment for remediation works related to Hornby Lighthouse in Watsons Bay.

1.2 STUDY AREA

The study site is that piece of land described as Lot 415 DP 752011 (the allotment containing Hornby Lighthouse) and part Lot 1 DP 605078, in the Parish of Alexandria, County of Cumberland (Figure 1.1 - Figure 1.3).

1.3 SCOPE

This report considers Historical Archaeology only. This report conforms to Heritage Office Guidelines for Archaeological Assessment.¹

This report does not consider the potential Aboriginal archaeology of the study site. However, any Aboriginal sites and objects are protected by the National Parks and Wildlife Act (see Section 1.5.2).

The heritage value of the built structures currently standing on the study site is not assessed as part of this report.

The discovery of unknown and unassessed remains will require additional assessment and may require written notification to Heritage NSW under Section 146 of the Heritage Act 1977.

1.4 AUTHOR IDENTIFICATION

This report was researched and written by archaeologist Emma Williams with review by Kelly Strickland, senior archaeologist of AMAC Group.

1.5 STATUTORY CONTROLS AND HERITAGE STUDIES

1.5.1 NSW Heritage Act 1977 (as amended)

The NSW Heritage Act 1977 affords automatic statutory protection to relics that form archaeological deposits or part thereof. The Act defines relics as:

- Relic means any deposit, artefact, object or material evidence that:
- (a) relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement, and
 - (b) is of State or local heritage significance

Sections 139 to 145 of the Act prevent the excavation or disturbance of land for the purpose of discovering, exposing or moving a relic, except by a qualified archaeologist to whom an excavation permit has been issued by the Heritage Council of NSW.

¹ Heritage Office and Department of Urban Affairs and Planning (1996).

1.5.2 National Parks and Wildlife Act (1974)

The *National Parks and Wildlife Act 1974* (as amended) affords protection to all Aboriginal objects and is governed by the NSW Office of Environment and Heritage. These objects are defined as:

any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains.²

It is an offence to destroy Aboriginal objects or places without the consent of the Director-General.³ Section 86 discusses 'Harming or desecration of Aboriginal objects and Aboriginal places':

1.5.3 State Heritage Register and State Heritage Inventory

The NSW State Heritage Register and State Heritage Inventory are lists which contain which contains places, items, and areas of heritage value to New South Wales. These places are protected under the Heritage Act 1977 (NSW).

The site is listed on the NSW State Heritage Register within the South Head Cultural Landscape (SHR#02071). It is on the NSW State Heritage Inventory item number 462. The study site is within the Watsons Bay Heritage Conservation Area.

Hornby Lighthouse is listed on the Port Authority of NSW Section 170 Heritage and Conservation Register (SHI 4560002).

1.5.4 National Heritage List

The National Heritage List is a list which contains places, items, and areas of outstanding heritage value to Australia. This can include places and areas overseas as well as items of Aboriginal significance and origin. These places are protected under the Australian Government's EPBC Act.

The study site is not listed on the National Heritage List.

1.5.5 Commonwealth Heritage List

The Commonwealth Heritage List can include natural, Indigenous, and historic places of value to the nation. Items on this list are under Commonwealth ownership or control and as such are identified, protected, and managed by the federal government.

The study site is not listed on the Commonwealth Heritage List.

1.5.6 Woollahra Local Environment Plan (2014)

The Woollahra LEP was endorsed in 2014. Heritage Conservation is discussed in Part 5; Section 5.10.

Schedule 5 of this plan lists Items of Environmental Heritage with heritage items listed in Part 1, Heritage Conservation areas listed in Part 2, and Archaeological Sites listed in Part 3. The study site is listed as a heritage item 462, Hornby Lighthouse Group comprising: Hornby Lighthouse and interiors, 2 cottages and

² Part 1 Section 5, National Parks and Wildlife Act 1974.

³ Part 6 Section 90 (1) National Parks and Wildlife Act 1974.

interiors; gun emplacements and fortifications. The study site is also within the Watsons Bay Conservation Area.

The proposed works are development permitted without consent pursuant to clause 2.80(2)(a) and 2.80(7)(c) with Port Authority as the proponent and primary determining authority therefore development consent is not required for the proposed works.

1.6 PREVIOUS HERITAGE STUDIES AND REPORTS OF THE STUDY SITE

1.6.1 NPWS Lighthouses Conservation Management and Cultural Plan – (2001)

Hornby Lighthouse is discussed as part of this compilation report for multiple lighthouse sites within New South Wales. The section regarding Hornby Lighthouse was written in 2001 and superseded a previous report. This report concluded that the precinct should be considered as an area of high archaeological sensitivity, noting in particular the potential for a convict cobblestone access road.

1.7 ACKNOWLEDGMENTS

Hiral Thakkar and Steven Cliff of Puch Construction and Building for all their assistance during the reporting process.

2.0 SITE HISTORY

2.1 HISTORY OF WATSONS BAY

The original inhabitants of the land now known as Watsons Bay were the Cadigal people or the Birrabirragal people. Prior to European colonisation the area was known as Kutti.⁴ Both the Cadigal and the Birrabirragal clans were part of the coastal Dharug language group. There are a number of low rock shelters around the South Head peninsula that would have made an excellent base for hunting fish and shellfish.⁵ Evidence of the original occupants still exists in the form of rock art and shell middens along the coastline of Watsons Bay.⁶

Watsons Bay was the site of the first European landing in Australia in 1788. Captain Phillip and his party came ashore and camped at what is now called Camp Cove. A lookout was established at South Head in 1790 to signal incoming ships the location of the settlement.⁷ The first land grant for the area was given in 1793 to Edward Laing, it was for 28 acres of land at Watsons Bay and Camp Cove.⁸ By the end of 1794 this grant had passed to Thomas Laycock. Robert Watson, for whom Watsons Bay is named, was granted land at South Head in 1801.

Old South Head Road was established by soldiers in 1811 and passed by the 1790 signal station. Australia's first lighthouse was constructed at Watsons Bay in 1814 called Macquarie's Light.⁹ It began operation in 1818 with Robert Watson acting as the first lighthouse-keeper. This lighthouse was repaired in 1835 and eventually replaced in 1883.¹⁰

Watson Bay's first church began construction in 1839 and was completed in 1840, the same year as a water police station was established at Camp Cove. A census dating to 1841 notes 13 residences in the vicinity of Watsons Bay. Subdivision of Laing's grant was attempted in the 1850s by the Donnithorne family but ultimately failed.¹¹

During the 1850s there was fear of attack due to the impending Crimean War. As a result, emplacements for 25 guns, a barracks and store were ordered for construction at Inner South Head.¹²

Woollahra Council was incorporated in 1860 and included Watsons Bay. A council meeting in 1867 voted to construct a well and public pump at Watsons Bay. A new public school at Watsons Bay was constructed in 1877.¹³ Watsons Bay was incorporated into the Vacluse Council in 1895.

⁴ Dictionary of Sydney 'Watsons Bay'.

⁵ South Head Sydney and the Origin of Watsons Bay, 11.

⁶ Woollahra Municipal Council 'Pre-European times'

⁷ Dictionary of Sydney 'Watsons Bay'.

⁸ Woollahra Municipal Council 'Town of Watsons Bay Subdivision'

⁹ Woollahra Municipal Council '1800-1819'

¹⁰ Woollahra Municipal Council '1820-1839'

¹¹ Woollahra Municipal Council 'Town of Watsons Bay Subdivision'

¹² Woollahra Municipal Council '1850-1859'

¹³ Woollahra Municipal Council '1860-1879'

Extensions to the New South Head Road tramway began in 1901 and finally reached Watsons Bay in 1909.¹⁴ The Watsons Bay baths, constructed of timber and iron, were completed in 1905. However, they were soon declared to be too dangerous and were demolished in 1923. In 1911 a sewage scheme for the municipality of Vaucluse was approved by parliament and completed by 1918. Reticulated sewage was not available to all Watsons Bay homes until 1937. The Vaucluse Police Station was purpose built in 1928.¹⁵

The area always had a militaristic character, but this was intensified in 1940s. The Watsons Bay Wharf was extended to accommodate an increasing number of warships.¹⁶ An anti-submarine boom net was under construction when Sydney Harbour was breached by three Japanese submarines in 1942. Most of Watsons Bay's military infrastructure was demolished after WWII.¹⁷

The Municipality of Vaucluse was amalgamated with Woollahra Council in 1948 under the Local Government (Areas) Act.¹⁸

¹⁴ Woollahra Municipal Council '1900-1909'

¹⁵ Woollahra Municipal Council '1919-1929'

¹⁶ Woollahra Municipal Council '1930-1949'

¹⁷ Woollahra Municipal Council '1930-1949'

¹⁸ Woollahra Municipal Council '1930-1949'

2.2 HORNBY LIGHTHOUSE

The study site was part of crown land. A declaration from the Colonial Secretaries Office in 1843 lists several pieces of land to be reserved for public use, and item 6 describes 150 acres that includes the study site.

“About 150 acres, one hundred and fifty acres, County of Cumberland, parish of Alexandria; bounded on the east by the sea coast from the inner South Head to about 1 mile south of the Light House”¹⁹

In 1877 the land was officially reserved for ‘defence purposes and lighthouses’. This proclamation comes approximately 20 years after the construction of Hornby Lighthouse on the study site. No evidence has been found to suggest that the study site was developed prior to the construction of the lighthouse. Given the site’s proximity to the cliff edge it likely wouldn’t have been considered an ideal place for general domestic occupation.

Hornby Lighthouse was constructed in response to two shipwrecks that occurred in 1857, the *Dunbar* in August and the *Catherine Adamson* several weeks later. The wreck of the *Dunbar* was especially tragic as there was only a single survivor. It was decided that Macquarie Light did not provide sufficient light for incoming ships and plans for the new light house were enacted very quickly. However, construction had not been completed in time to aid the *Catherine Adamson* and this second wreck only reenforced the need for additional light.

Hornby Lighthouse was first lit in 1858. It was constructed of local stone, and it was painted red and white to make it visually distinct from Macquarie Lighthouse. Between 1857 and 1861 adjacent stone cottages were constructed to house the lighthouse staff.²⁰ The arrangement included the head lightkeepers cottage, and two smaller semidetached assistant lightkeepers cottages.²¹ Both were constructed of stone. The head lightkeepers cottage included a detached kitchen and shed or stables at the rear.²² It was typical at this time for the lighthouse cottages to be attached to either side of the actual lighthouse structure, but this is not the case for the Hornby cottages. Both cottages are separate from the lighthouse with the assistant’s cottage being the closer.²³ Alterations to the cottages occurred in 1877-1878 when living and sitting rooms were added to each. This necessitated changes to the verandahs at the same time.²⁴

In 1898 the cottages are described as:

“comprised of six rooms with kitchen and storerooms; and the quarters for the two Assistant Lightkeepers as being of four rooms with kitchen and laundry. All three cottages were of dressed coursed rubble stone plastered inside, with roofing of galvanised iron, and verandahs to all principle fronts”.²⁵

¹⁹ CROWN LANDS NEAR SYDNEY, 1843, 434.

²⁰ South Head Sydney and the Origin of Watsons Bay, 52.

²¹ South Head CMP, 43

²² South Head CMP, 43

²³ South Head CMP, 44

²⁴ South Head CMP, 45

²⁵ South Head CMP, 45

A report from 1913 describes the condition of the lighthouse as being poor, noting that it would soon need to be repaired.²⁶ The lighthouse was converted to electricity in 1933 and would run unmanned from this point onwards and the cottages became occupied by military personnel.²⁷ The army came to control much of the area during and after WWII and the lighthouse keepers cottages were saved from demolition due to the high demand for accommodations at the time. Repairs to the cottages were likely carried out sometime in the 1940s.²⁸ The site came under the ownership and protection of the National Trust of Australia in 1975.²⁹ Hornby Lighthouse is currently owned and operated by Port Authority of NSW.

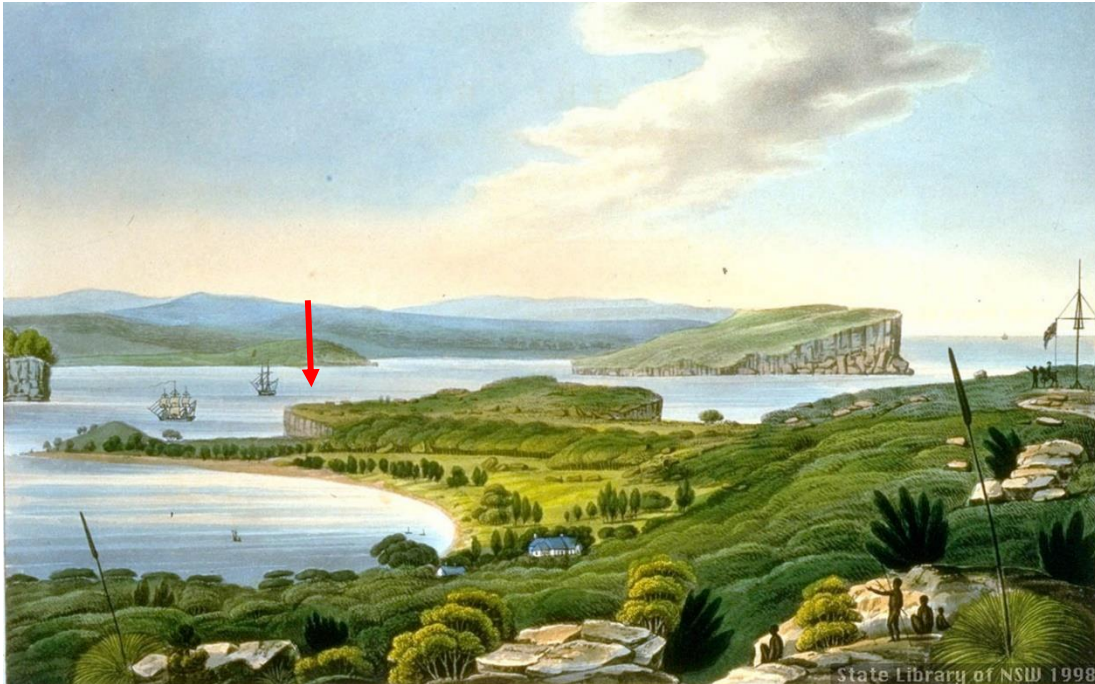


Figure 2.1 Joseph Lycett's 1824 'View of the Heads'
Approximate location of study site indicated by red arrow.
State Library of NSW, DL F82/16 pl.9.

²⁶ South Head CMP, 45.

²⁷ South Head Sydney and the Origin of Watsons Bay, 52.

²⁸ Hornby Lighthouse, 2001, 5.

²⁹ Hornby Lighthouse, 2001, 5.



Figure 2.2 1853 trigonometrical survey of Port Jackson. Showing the beginning development of the Village of Watsons Bay with the study area undeveloped. Study site indicated by red arrow. SLNSW FL3702811.



Figure 2.3 Parish map of unknown date showing boundaries of early land grants. Approximate location of study site indicated by red arrow. NSW HLRV.



Figure 2.4 c. 1885 photo of Hornby Lighthouse.
National Library of Australia.

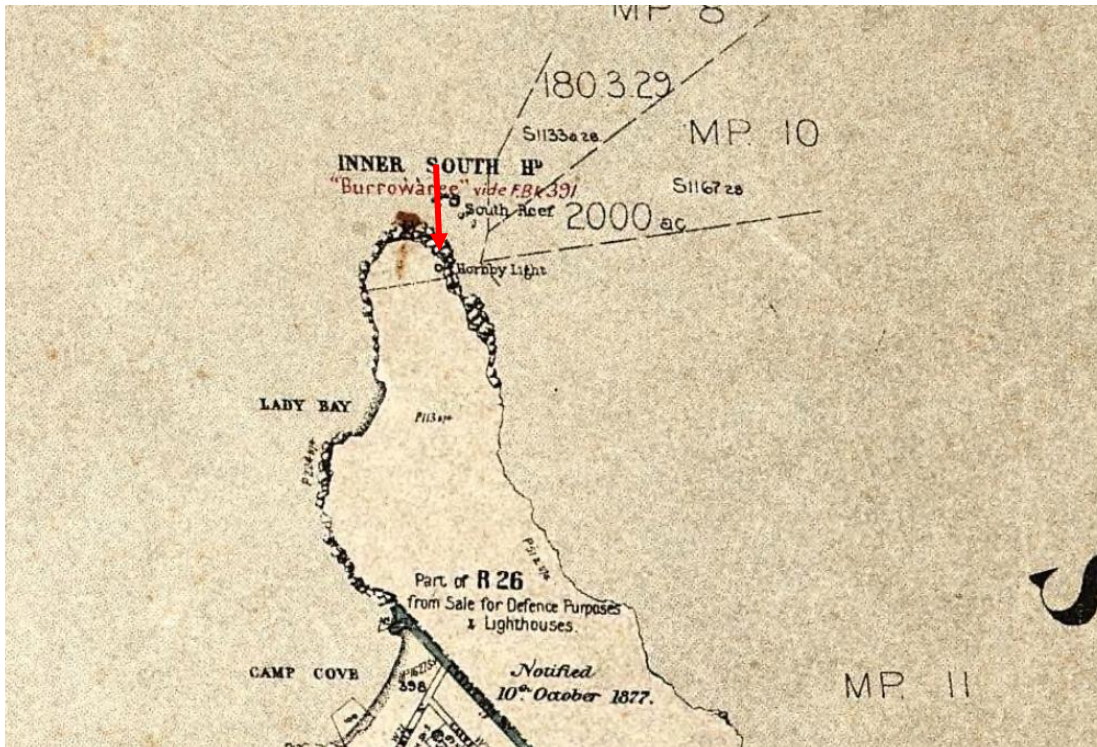


Figure 2.5 c.1900 Parish map.
Hornby Lighthouse labelled and indicated by red arrow. NSW HLRV.

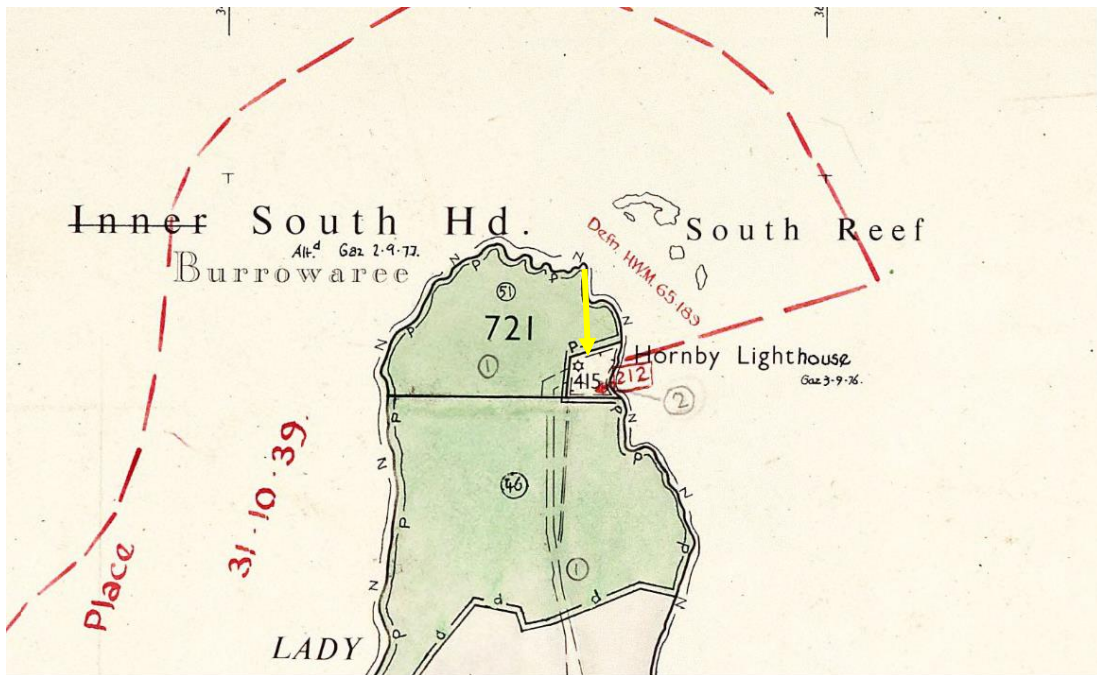


Figure 2.6 1967 parish map showing current DP boundaries. Hornby Lighthouse labelled and indicated by yellow arrow. NSW HLRV.

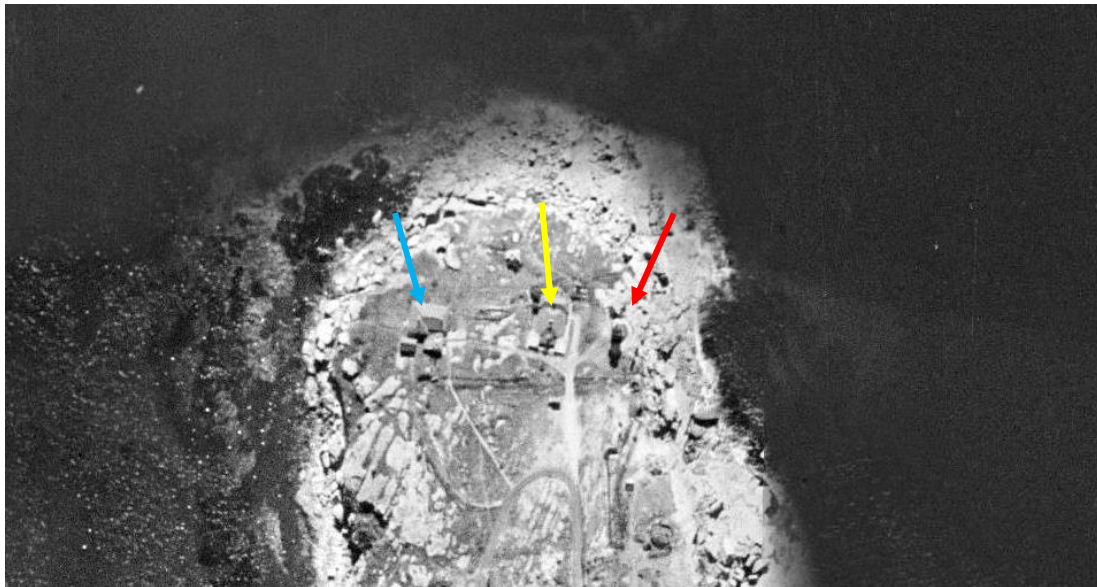


Figure 2.7 1943 aerial. Red arrow = Hornby Lighthouse
Yellow arrow = Assistant Lighthouse Keeper Cottage
Blue arrow = Head Lighthouse Keeper Cottage
NSW Historic Imagery.

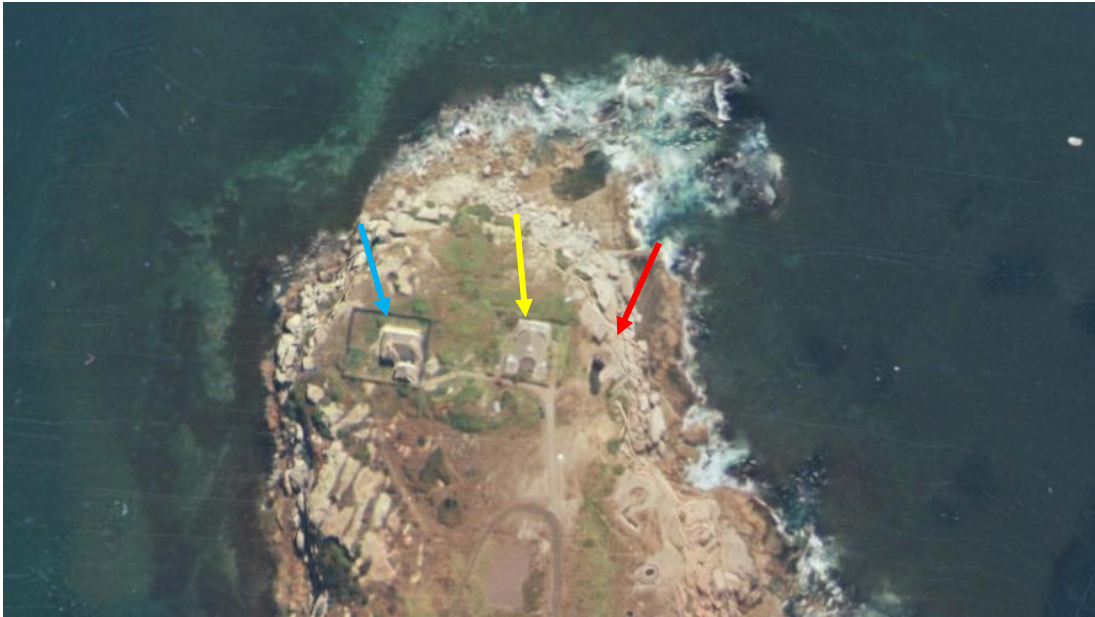


Figure 2.8 1982 aerial.
Red arrow = Hornby Lighthouse
Yellow arrow = Assistant Lighthouse Keeper Cottage
Blue arrow = Head Lighthouse Keeper Cottage
NSW Historic Imagery.

2.5 CONCLUSIONS OF HISTORIC RESEARCH

- The study site was part of crown land, and it was reserved for 'defence purposes and lighthouses' in 1877.
- The study site is on a cliff edge and so remained undeveloped until the construction of Hornby Lighthouse in 1857.
- It is constructed of local stone and was painted red and white.
- Hornby Lighthouse was run by lighthouse keepers housed in two nearby cottages, also constructed of stone.
- A report from 1913 noted that the lighthouse was in poor condition and would soon require repairs.
- The lighthouse was converted to electricity in 1933 and was unmanned from then on, the cottages now housed military personnel.
- The site came under the ownership and protection of the National Trust of Australia in 1975.
- Hornby Lighthouse is currently owned and operated by Port Authority of NSW. Hornby Lighthouse is currently owned and operated by Port Authority of NSW.

3.0 PHYSICAL EVIDENCE

3.1 SITE INSPECTION

Emma Williams and Kelly Strickland of AMAC Group inspected the study site on the 4th of March 2024.

The study site is limited to the land immediately surrounding Hornby Lighthouse. The small area is dominated by the 1858 lighthouse which sits directly on the exposed bedrock. In some places the bedrock has been cut down to create a level surface for the construction of the lighthouse. Hornby Lighthouse is currently undergoing restoration works and is surrounded by scaffolding.

The land generally slopes down from the southwest towards the cliff. Proximity to the cliff has likely prevented the accumulation of fills around the lighthouse both historically and more recently. On the eastern side of the lighthouse there is evidence for the cutting of the bedrock that occurred in order to make the ground level for the construction of the lighthouse.



Figure 3.1 Section of study site north of Hornby Lighthouse, showing small amounts of fill on bedrock. Facing south.
AMAC Group, IMG_7885, 04/03/24.



Figure 3.2 Section of study site south of Hornby Lighthouse. Facing north.
AMAC Group, IMG_7889, 04/03/24.



Figure 3.3 Exposed bedrock south of Hornby Lighthouse. Facing east.
AMAC Group, IMG_7902, 04/03/24.



Figure 3.4 Hornby Lighthouse currently surrounded by scaffolding. Facing north.
AMAC Group, IMG_7891, 04/03/24.



Figure 3.5 Section of study site south of Hornby Lighthouse. Facing south.
AMAC Group, IMG_7898, 04/03/24.

3.2 ARCHAEOLOGICAL POTENTIAL

‘Archaeological potential’ describes the likelihood for archaeological remains to survive at a particular site.³⁰ This discussion considers the range of possible archaeological features and deposits at the study site, the factors that affect their creation or survival and provides concluding statements.

3.3.1 Discussion

This discussion is organised thematically, firstly the main development phases and their typical remains are identified then several tables below identify the main factors that can affect the site’s potential for those remains, this includes: historic development and typical archaeological features, topography, landscape, modern disturbance, and results from related investigations.

The study site has one phase of historical development, archaeological features, and deposits typical to these site types are summarised below (Table 3.1).

Table 3.1 Historic Development and Typical Archaeological Remains.

Development Phase	Site Type	Expected archaeological features
Mid to late 19 th century Hornby Lighthouse and associated cottages.	Maritime	<ul style="list-style-type: none"> - Yard deposits/ rubbish pits/ artefact scatters - Postholes for fencing - Evidence of construction of lighthouse (construction fill, cuts for leveling) - Landscaping (garden beds, surfaces) - Former services

The current study site boundary was compared to historical maps. Table 3.2 below provides a summary of observations based on those results.

Table 3.2 Historical Development Factors.

Development Factors	Study Site Response
Has later development impacted earlier remains?	No, the study site is limited to the extant 1858 Hornby lighthouse and a small part of the surrounding ground.
Potential for undocumented or unlocated archaeological remains?	<p>Unlikely. It is unlikely that the study site was developed prior to the construction of Hornby Lighthouse given its proximity to the cliff.</p> <p>The site’s proximity to the cliff likely would have also prevented the accumulation of artefact scatters and rubbish as it is a highly windy area. Very low amounts of fill were identified on the site during the site inspection.</p>
Potential for occupation deposits?	No. The study site does not include the footprint of either of the lighthouse keeper cottages or their yards, and no domestic development is known to have occurred within the study site footprint.

Whilst the historic maps illustrate the spatial layout of the archaeological site, landscape factors provide a 3-dimensional understanding of the natural and

³⁰ Heritage Office, Department of Urban Affairs and Planning (1996), p. 15.

modified site conditions that affect the creation and retention of archaeological sites, Table 3.3 below provides a summary. In general, sites associated with low points in the landscape such as downslopes, side slopes, hollows, depressions, or former watercourses, can tend to be ‘filled in’ and ‘levelled up’ by historical development, this may increase the chance that archaeological sites survive. Whereas sites that develop on high points in the landscape, such as hills, crests or ridges, may decrease the chance of survival by instances of truncation or ‘cutting down’ or erosion.

Table 3.3 Landscape Factors.

Landscape Factors	Study Site Response
Natural surrounding topography?	The study site is on a rocky outcrop, the South Head headland. Much of the study area is exposed bedrock with small amounts of accumulated sandy fill and grass.
Current site topography?	The site generally slopes down from the southwest towards to cliff edge.
Former or current watercourses?	No
Land reclamation?	No
Historic cut/fill events?	The bedrock was cut down to allow for the construction of Hornby Lighthouse, no other cutting or filling events are known. There is potential for more evidence of cutting to exist under the limited amount of fill on site.
Summary/Additional Notes: The study site is located very close to a cliff.	

3.3.2 Statement of Archaeological Potential

Based on the site’s history and development and the observations made during the site inspection, the study site holds nil to low potential for evidence of modified bedrock that can be linked to the construction of Hornby Lighthouse.

3.4 CONCLUSIONS OF PHYSICAL EVIDENCE

- The study site is limited to the land immediately surrounding Hornby Lighthouse.
- The small area is dominated by the 1858 lighthouse which sits directly on the exposed bedrock.
- There is nil to low potential for evidence of the construction of Hornby Lighthouse among the bedrock.
- It is highly unlikely that any kind of occupation deposit or artefact scatter would have been able to accumulate within the study site.

4.0 ASSESSMENT OF SIGNIFICANCE

4.1 METHODOLOGY

The current standard for assessment of significance of heritage items in NSW is the publication ‘Assessing Significance for Historical Archaeological Sites and ‘Relics’ produced by the Heritage Branch of the NSW Department of Planning (December 2009). This production is an update to the NSW Heritage Manual (1996), and the criteria detailed therein are a revised version of those of the Australia ICOMOS Burra Charter, formulated in 1979, which was based largely on the Venice Charter (for International Heritage) of 1966.

Archaeological heritage significance can also be viewed in light of the framework set out by Bickford and Sullivan in 1984.³¹ Bickford and Sullivan, taking into consideration the “archaeological, scientific or research significance” of a site posed three questions in order to identify significance:

1. Can the site contribute knowledge which no other resource can?
2. Can the site contribute knowledge which no other site can?
3. Is this knowledge relevant to general questions about human history or other substantive problems relating to Australian history, or does it contribute to other major research questions?³²

These questions have been broadly used to shape the response to the heritage significance criteria as described in Section 4.2 and 4.3.

The criteria and the definitions provided by ‘Assessing Significance for Historical Archaeological Sites and ‘Relics’ have been adhered to in assessing the cultural significance of the potential archaeological site at Hornby Lighthouse, Watsons Bay. An assessment of significance, under each of the criteria, is made possible by an analysis of the broad body of archaeological sites previously excavated both locally and elsewhere, in conjunction with the historical overview of the study site in particular.

The Criteria used to assess Heritage Significance in NSW are the following:

Table 4.1 Criteria for Assessing Heritage in NSW

Criterion	Description
A - Historical	An item is important in the course, or pattern, of NSW's or the local area's cultural or natural history
B - Associative	An item has strong or special association with the life or works of a person, or group of persons, of importance in NSW's or a local area's cultural or natural history
C - Aesthetic or Technical	An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW or the local area
D - Social	An item has strong or special association with a particular community or cultural group in NSW or a local area for social, cultural or spiritual reasons

³¹ Bickford and Sullivan (1984)

³² Bickford and Sullivan (1984), p.23-4

E - Research	An item has potential to yield information that will contribute to an understanding of NSW's or a local area's cultural or natural history
F - Rarity	An item possesses uncommon, rare or endangered aspects of NSW's or a local area's cultural or natural history
G - Representativeness	An item is important in demonstrating the principal characteristics of a class of NSW's or a local area's <ul style="list-style-type: none"> - cultural or natural places; or - cultural or natural environments

The following assessment deals only with sub-surface archaeological features and deposits. The built environment is not considered in this study.

4.2 IDENTIFICATION OF SIGNIFICANCE

Criterion A - Historical

An item is important in the course, or pattern, of cultural or natural history of NSW or a local area?

Does not meet the threshold for significance.

Reason

Watsons Bay is the site of the first colonial landing in Australia. The suburb represents very early European development in Sydney. Due to its location, a cliff face is not ideal for most development or occupation types, the study site was not developed until the 1850s with the construction of Hornby Lighthouse. In this instance a site close to a cliff was ideal for a lighthouse. While the suburb of Watsons Bay represents early colonial history in NSW, this will not be reflected in the archaeological record of the study site.

Hornby Lighthouse is still a functioning lighthouse and has been since 1858. The site therefore represents over 150 years of continuous single use as maritime infrastructure. Given the limited size of the study site, this long-term use of the site will not be represented in the archaeological record.

The study site is not of State or local significance according to this criterion.

Criterion B - Associative

An item has strong or special association with the life or works of a person, or group of persons, of importance to the cultural or natural history of NSW or a local area?

Does not meet the threshold for significance.

Reason

During its early years of operation, Hornby Lighthouse was manned by several lighthouse keepers. These keepers lived adjacent to the site and worked to keep the lighthouse operational in order to prevent further tragedies like the *Dunbar* shipwreck. While the work carried out by these men was significant, their work and occupation of the site is not anticipated to be reflected in the archaeological record.

The study site is not of State or local significance according to this criterion.

Criterion C – Aesthetic or Technical

An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW or a local area?

Does not meet the threshold for significance.

Reason

The study site is not considered of State or local significance according to this criterion.

Criterion D - Social

An item has strong or special association with a particular community or cultural group, in NSW or a local area, for social, cultural or spiritual reasons?

Does not meet the threshold for significance.

Reason

Hornby Lighthouse is one of the earliest extant lighthouses in Australia. The significance of the study site is vested purely in the built structure that is the lighthouse. There is no doubt local community placed high value on Hornby Lighthouse and its surrounds, however this value is not expected to be reflected in the archaeological record.

The study site is not considered of State or local significance according to this criterion.

Criterion E - Research

An item has potential to yield information that will contribute to an understanding of the cultural or natural history of NSW or a local area?

Does not meet the threshold for significance.

Reason

The study site holds nil to low potential for evidence of the bedrock cutting that was necessary in order to construct Hornby Lighthouse on a flat surface. This evidence would not be considered a relic under the Heritage Act.

The study site was not developed prior to the construction of Hornby Lighthouse which still occupies the site today. The site represents long term single use and lighthouse sites are rare in NSW. However, this rarity of site type is not matched or reflected in the archaeological record which is expected to be fragmentary at best.

The expected archaeological resource of the site does not reach the threshold for State or local significance according to this criterion.

Criterion F - Rarity

An item possesses uncommon, rare or endangered aspects of cultural or natural history for NSW or a local area?

Does not meet the threshold for significance.

Reason

The technological significance of the study site is vested in the built structure of the lighthouse itself and not in any potential archaeological resource at this particular site. An intact and interpretable archaeological record from a lighthouse site in NSW would be a rare site type that would enhance data for 19th century NSW, however, this is not expected at Hornby Lighthouse.

The study site is not considered of State or local significance according to this criterion.

Criterion G - Representativeness

An item is important, to NSW or a local area, for demonstrating the principal characteristics of a class of cultural or natural places or cultural or natural environments?

Does not meet the threshold for significance.

Reason

Hornby Lighthouse is a well-preserved early lighthouse that would be considered of high heritage significance as a standing structure. However, the archaeological potential of the site will not have equal heritage value. As the site has had a single purpose since the 1850s, it represents continuity of the area and its use in the maritime sphere. As the site was not developed after the construction of the lighthouse, it represents a pristine example of maritime infrastructure.

The significance of the site as a long-term single use site is not expected to be reflected in the archaeological record. The archaeology of the study site does not reach the threshold for State or local significance according to this criterion.

4.3 STATEMENT OF CULTURAL SIGNIFICANCE

The heritage value of the study site is solely vested in the standing structure of Hornby Lighthouse and not in the potential archaeological resource. Potential archaeological remains at the study are expected to be limited to cuts in bedrock for the construction of Hornby Lighthouse, some already visible in the landscape, and do not reach the threshold for State or local significance.

The peninsula that holds Hornby Lighthouse is not void of archaeological potential. It is only due to the limited scope of the study area that the archaeological potential and significance is nil. Should future works be proposed in a vicinity closer to the head lighthouse keeper's cottage or the assistant lighthouse keeper's cottage, further assessment would be necessary.

5.0 STATEMENT OF ARCHAEOLOGICAL HERITAGE IMPACT

Heritage impact statements discuss a proposed development and highlight potential impacts to the archaeological resource of a site. This section discusses the significance of the resource, what impact the proposed works will have on that significance, what measures could mitigate negative impacts or why more sympathetic solutions are not viable.³³

5.1 PROPOSED DEVELOPMENT

The proposed development seeks to remediate the soils immediately surrounding Hornby Lighthouse and to install a drainage channel and sump to the north of the lighthouse. The red and white paint that currently covers the lighthouse is lead based and over time it has eroded and contaminated the nearby soils. As a matter of public safety, the soils will be excavated between 150mm-250mm and replaced with clean topsoil and turf.

The drainage channel and sump installation is necessary to prevent water from accumulating within the lower ground level of the lighthouse structure and causing further damage. Excavation will occur to the north of the lighthouse for the installation of a pipe and a stormwater pit.

There is also an existing channel in the bedrock that is full of accumulated soil and grass that will be cleared out during remediation works. Work zones are outlined in Figure 5.1 and Figure 5.2 below.

³³ Heritage Office and Department of Urban Affairs and Planning (1996) NSW Heritage Manual: Statements of Heritage Impact.



Figure 5.1 Remediation plan showing proposed works area (yellow).
Puch Construction and Building, 2024.

5.2 STATEMENT OF ARCHAEOLOGICAL HERITAGE IMPACT

The proposed development requires minor excavation impacts up to 250mm for remediation works when soil is present to that depth. No relics are known to exist within the study site boundary and as a result there will be no negative heritage impact caused by the proposed works.

As no impact to known relics are expected, archaeological field works during the remediation works phase are not required.

It is suggested that an Unexpected Finds Protocol be prepared by a qualified archaeologist in advance of development works which can be supplied to contractors as a guide to use on site detailing relevant stop work procedures in accordance with Section 146 of *Heritage Act 1977* should unexpected relics be exposed during works.

5.3 CONCLUSIONS OF SOHI

- The proposed development seeks to remediate the soils immediately surrounding Hornby Lighthouse.
- A drainage channel and sump for stormwater will also be installed to the north of the lighthouse.
- The proposed development requires minor impacts up to 250mm.
- No relics are known to exist within the study site boundary and therefore there will be no archaeological heritage impact.

6.0 RESULTS AND RECOMMENDATIONS

6.1 RESULTS

6.1.1 Documentary Research

The study site was part of crown land. In 1877 the land was officially reserved for 'defence purposes and lighthouses'. This proclamation comes approximately 20 years after the construction of Hornby Lighthouse on the study site. No evidence has been found to suggest that the study site was developed prior to the construction of the lighthouse. Hornby Lighthouse was first lit in 1858. Between 1857 and 1861 adjacent stone cottages were constructed to house the lighthouse staff. A report from 1913 describes the condition of the lighthouse as being poor, noting that it would soon need to be repaired. The lighthouse was converted to electricity in 1933 and would run unmanned from this point onwards and the cottages became occupied by military personnel. The site came under the ownership and protection of the National Trust of Australia in 1975. Hornby Lighthouse is currently owned and operated by Port Authority of NSW.

6.1.2 Physical Evidence

The study site is limited to the land immediately surrounding Hornby Lighthouse. The small area is dominated by the 1858 lighthouse which sits directly on the exposed bedrock. The land generally slopes down from the southwest towards the cliff. Proximity to the cliff has likely prevented the accumulation of fills around the lighthouse both historically and more recently.

Based on the site's history and development and the observations made during the site inspection, the study site holds nil to low potential for evidence of modified bedrock that can be linked to the construction of Hornby Lighthouse.

6.1.3 Significance

The heritage value of the study site is solely vested in the standing structure of Hornby Lighthouse and not in the potential archaeological resource. Potential archaeological remains at the study are expected to be extremely limited and do not reach the threshold for State or local significance.

6.2 STATEMENT OF ARCHAEOLOGICAL HERITAGE IMPACT

The proposed development requires minor excavation impacts up to 250mm for remediation works. No relics are known to exist within the study site boundary and as a result there will be no negative heritage impact caused by the proposed works.

6.3 RECOMMENDATIONS

As no impact to known relics are expected, archaeological field works during the remediation works phase are not required. This report is suitable for submission as the archaeological component of the overall Section 60 application for the proposed works program.

It is suggested that an Unexpected Finds Protocol be prepared by a qualified archaeologist in advance of development works which can be supplied to contractors as a guide to use on site detailing relevant stop work procedures in

accordance with Section 146 of *Heritage Act 1977* should unexpected relics be exposed during works.

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