

Greenwich Hospital

Archaeological Assessment and Impact Statement

Report prepared for HammondCare

March 2018



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Report Register

The following report register documents the development and issue of the report entitled Greenwich Hospital Masterplan—Archaeological Assessment and Impact Assessment, undertaken by GML Heritage Pty Ltd in accordance with its quality management system.

Job No.	Issue No.	Notes/Description	Issue Date
17-0491	1	Draft Report	18 December 2017
17-0491	2	Final Report	16 February 2018
17-0491	3	Final Report – reissued to include updated proposal plans and address minor client comments.	12 March 2018
17-0491	4	Final Report – reissued to include re-issued proposal plans.	14 March 2018
17-0491	5	Final Report – reissued without photo montage	15 March 2018

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1.0 Introduction

1.1 Project Initiation

GML Heritage Pty Ltd (GML) has been engaged by HammondCare to prepare an Archaeological Assessment and Impact Statement (AAIS) for Greenwich Hospital (the study area).

The report has been prepared as part of an Environmental Impact Statement to support an application (Application No. SSD 17_8699) for a State Significant Development (SSD) Approval under Part 4 (Division 1) of the *Environmental Planning and Assessment Act 1979* (NSW) (EPA Act). The Secretary's Environmental Assessment Requirements (SEARs) were issued on 14 September 2017. The relevant requirements for archaeology are as follows:

10. Heritage

Address any archaeological potential and significance on the site and the impacts the development may have on this significance.

11. Aboriginal Heritage

Where relevant, address Aboriginal Cultural Heritage in accordance with the Guide to investigating, assessing and reporting on Aboriginal Cultural Heritage in NSW (OEH, 2011) and Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010.

This report has been prepared as a stand-alone document in response to the above requirements.

The purpose of this report is to identify whether the study area possesses the potential to contain Aboriginal and historical (European) archaeological resource and identify potential impacts arising from the proposed development that may harm the archaeological resource. The report also provides recommendations to manage and mitigate these impacts, where appropriate.

1.2 Site Location

The study area is a residential rehabilitative and palliative care facility located at 97–115 River Road in Greenwich, a suburb of Northern Sydney. The study area is comprised of Lots 3 and 4, Deposited Plan (DP) 584287. It is bounded by River Road to the north and St Vincents Road to the east with residential buildings to the south and west.

The location and extent of the study area are shown in Figures 1.1 and 1.2.

1.3 Development Description

The proposed development entails demolition of the existing hospital facilities, modification to current landscaping and parking facilities. New hospital, senior living and residential care facilities will replace the existing hospital buildings constructed after 1960.

The proposed development plans are included in Appendix B of this report.

1.4 Aims

The aims of this archaeological assessment are to:

- enhance readily available historical research to create a site history;

- identify whether the study area has Aboriginal and/or historical archaeological potential;
- assess the significance of identified potential historical archaeological resources;
- identify potential development impacts on the site's archaeological resource;
- identify appropriate mitigation measures for the management of the development impacts; and
- prepare a stand-alone report suitable for submission to relevant statutory authorities.

1.5 Statutory Context

1.5.1 Environmental Planning and Assessment Act 1979

As stated above, the proposed development is being submitted as a State Significant Development Application (SSD 17_8699) to the Minister for Planning and Infrastructure pursuant to Part 4 of the EPA Act.

Under Section 89J, the projects that fall within ambit of Division 4.1 of the EPA Act do not require authorisations under a number of Acts including:

1(c) an approval under part 4 or an excavation permit under section 139 of the Heritage Act 1977.

1(d) an Aboriginal heritage impact permit under section 90 of the National Parks and Wildlife Act 1974.

In accordance with Section 89E the Minister may determine a SSD application by:

a) granting consent to the application with such modifications of the proposed development or on such conditions as the Minister may determine.

Projects approved as SSD under Part 4, Division 4.1, of the EPA Act do not require approvals under the *National Parks and Wildlife Act 1974* (NSW) (NPW Act) or the *Heritage Act 1977* (NSW) (Heritage Act); however, it is expected that the management of historical archaeology and Aboriginal heritage resources be undertaken in accordance with the established guidelines issued by the Office of Environment and Heritage (NSW) (OEH) and best practice, as well as any mitigation measures or consent conditions that form part of the SSD approval. The Minister may also include conditions that include adherence to the NPW Act and the Heritage Act, in which case relevant approvals and permits would need to be obtained prior to the commencement of any ground works with potential to disturb archaeological remains—both Aboriginal and historical.

1.5.2 Registered Heritage Sites

The study area contains Pallister, a late nineteenth-century residence that is listed on the State Heritage Register (SHR) (listing 00574)—the SHR curtilage is shown on Figure 1.2. Pallister House is also included on the *Lane Cove Local Environmental Plan 2009* (LEP) as an item of state significance (Item No. I118).

1.6 Methodology and Terminology

1.6.1 Methodology

This report has been prepared in accordance with the following documents:

- *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW* (Department of Environment, Climate Change and Water [DECCW], 2010);

- *NSW Heritage Manual, 'Archaeological Assessments'* (NSW Heritage Office, 1996);
- *Assessing Significance for Historical Archaeological Sites and Relics* (NSW Heritage Branch, 2009); and
- *Australia ICOMOS Burra Charter, 2013* (the Burra Charter).

1.7 Limitations

This report provides an assessment of Aboriginal and historical archaeological resources within the study area.

The built heritage issues of the site are addressed in a separate report prepared by NBRS + Partners Pty Ltd.

This report provides overarching management recommendations regarding archaeological potential and other heritage values associated with the site. These recommendations respond to best practice approaches to managing heritage values, including intangible values. This report does not replace the need to prepare any development-specific heritage reports that may be required as part of the future development program.

As this report was prepared in accordance with OEH's Due Diligence Guidelines, it does not include an assessment of Aboriginal cultural heritage significance.

This report does not include consultation with the Aboriginal community, as this is not required by the due diligence process.

1.8 Author Identification

This report has been prepared by Melissa Moritz, Graduate Heritage Consultant, Jodi Cameron, Heritage Consultant, and Sophie Jennings, Heritage Consultant. Final review was provided by Catherine Snelgrove, Senior Associate.

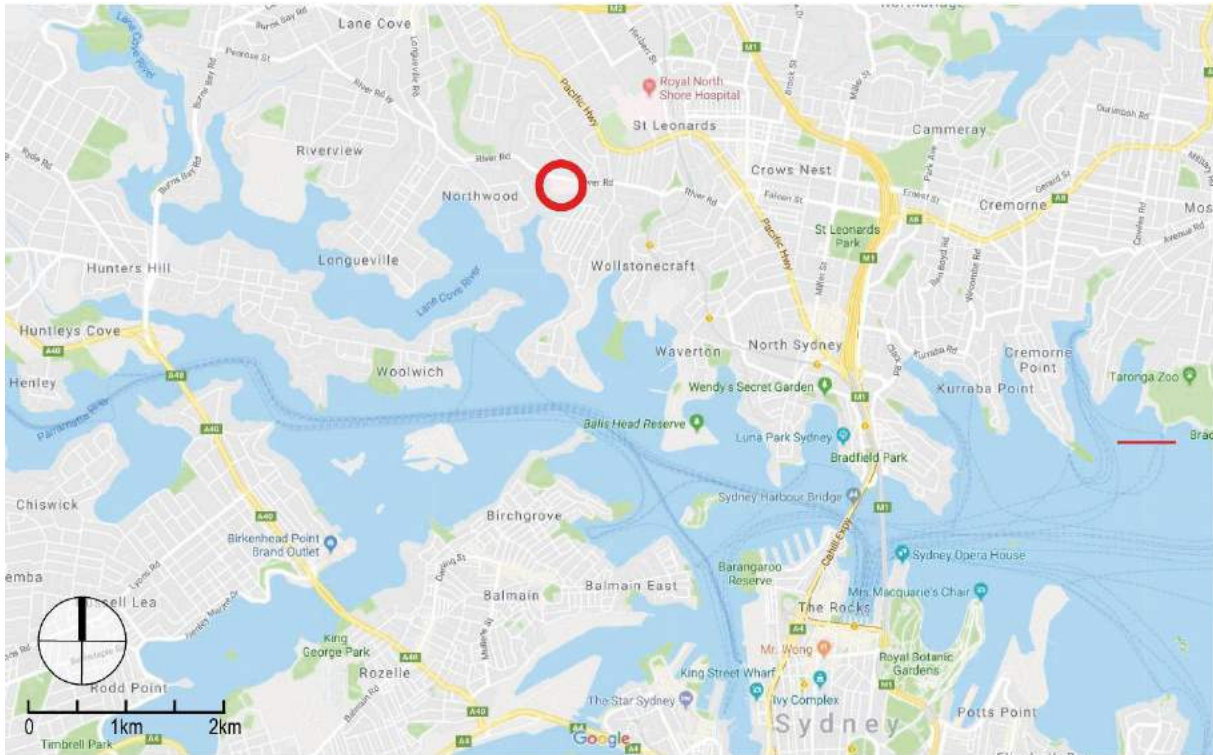


Figure 1.1 Approximate location of the study area in its regional context. (Source: Google Maps with GML additions 2018)



Figure 1.2 Location of the study area in its local context; the SHR curtilage for Pallister House is shown in blue. (Source: SIX Maps with GML additions 2018)

2.0 Historical Background

2.1 Introduction

This history of the study area is derived from previous reports prepared by GML Heritage and the Conservation Management Plan (CMP) prepared for Pallister House by NBRIS + Partners in 2004.¹ Limited additional historical research has been conducted as part of this assessment.

2.2 Aboriginal History

2.2.1 Ethnohistory

Most of the ethnohistorical information available for the Aboriginal people who lived around Sydney Cove comes from the writings of officials who travelled to New South Wales with the First Fleet, including Governor Arthur Phillip, Judge-Advocate David Collins, Captain-Lieutenant Watkin Tench and Lieutenant William Dawes.

When the First Fleet arrived in Sydney Cove, the Cammeraygal and Wallumedegal clans inhabited the North Shore of Sydney. They were part of the larger Kauringgai Tribe, with the Cammeraygal clan being recorded as more readily recognisable due to their weaponry, body decorations, songs and dance.

In February 1790, Governor Phillip wrote to the Colonial Office in London with the following comment on this tribe and their tribal boundaries:

... about the north-west part of this harbour there is a tribe which is mentioned as being very powerful... The district is called Cammerra; the head of the tribe is Cammerragal, by which name the men of that tribe are distinguished. A woman of this tribe is called a Camerragalleon ...

From the entrance of the harbour, along the south shore to the cove adjoining this settlement, the district is called Wann, and the tribe Wanngal. The opposite shore is called Wallumetta, and the tribe, Wallumedegal.

The other tribes which live near us are those of Gweagal, Norongerragal, Borogegal, Gomerrigal, and the Boromedegal.²

These groups moved through their Country according to the seasons and well-established trade routes with other clans. The landscape was also embedded with the Kauringgai nation's rich and complex ritual life, language, spirituality and system of law.

2.2.2 Subsistence Activities

The people that inhabited the coastal areas of the Port Jackson area had access to a wide range of natural resources, including terrestrial and marine flora and fauna. For coastal Aboriginal people, marine resources were a vital part of their diet. Tench suggests fishing was their primary subsistence activity:

... [they] wholly depend for food on the few fruits they gather, the roots they dig up in the swamps, and the fish they pick up along shore or contrive to strike from their canoes with spears. Fishing, indeed, seems to engross nearly the whole of their time, probably from its forming the chief part of a subsistence ...³

Other marine resources such as shellfish and crustaceans were frequently collected and eaten. Historical references and archaeological evidence indicate that beached whales were also eaten, and

may have presented an opportunity for different Aboriginal groups to gather and feast together, as suggested by this event recorded by Tench at Manly Beach in 1790:

... a dead whale in the most disgusting state of putrefaction was seen lying on the beach, and at least two hundred Indians [sic] surrounding it, broiling the flesh on different fires and feasting on it with the most extravagant of greediness and rapture.⁴

Although marine animals formed a substantial part of the diet of Aboriginal people who lived in and around the subject area, terrestrial animals such as kangaroos, possums, and various birds were also hunted and eaten regularly. The landscape was also manipulated by Aboriginal people through periodic burning of the undergrowth to encourage terrestrial animals such as kangaroos to graze, and thus facilitate hunting. Evidence of this is recorded in the vicinity of Sydney Cove and indicates that, despite the close proximity to marine resources, terrestrial animals were commonly exploited as a food source.

Written accounts describe the exploitation of a variety of edible plants in the Sydney region, including seeds, fruits, and roots. While there are over 200 edible native plant species known in the Sydney region, it is difficult to reconstruct how important each was to the subsistence diet of Aboriginal people near the study area. This is largely a result of the discrepancies in recording this information, given the widely different names and descriptions given to different native plant species in the late eighteenth and early nineteenth centuries.

2.2.3 Material Culture

The material culture of local Aboriginal groups is also recorded to some extent in early historical accounts, and reinforced by the archaeological record. Aboriginal people made and used a suite of stone tools and this is one of the most ubiquitous forms of archaeological evidence across Australia. Following contact there are common examples of glass, and sometimes ceramics, being knapped in the same way as stone form tools. Many of the tools were multipurpose and portable, allowing groups to practice subsistence activities and cultural traditions broadly across the landscape.

Many tools were made of organic materials and are underrepresented or absent from the archaeological record as they decompose over time, such as string bags or bark canoes (although some examples are found in museum and private collections). Some organic materials, such as shell and bone, survive better than others, and are well represented in the historical and archaeological records.

Fish hooks are the most commonly represented shell implement in the archaeological record of the Sydney area; however, they are unique in Australia in the area between Port Stephens and the NSW/Victorian border and all date within the last 1000 years. Some have suggested that these were introduced by Pacific Islanders in the last millennium, although this has not been proven.⁵ Historical accounts indicate that in the Port Jackson area, although both genders engaged in fishing, only women used fish hooks and only men used spears.

2.2.4 European Contact

The Aboriginal inhabitants of Greenwich would have been among the first Aboriginal people to experience the effects of physical and social dislocation as a result of the arrival and settlement of the First Fleet at Sydney Cove. Epidemics of smallpox dramatically affected the Aboriginal population in Sydney and across Australia. In 1790, Bennelong estimated that over half of Sydney's original Aboriginal population had died because of the 1789 smallpox epidemic.⁶ Other effects of European

colonisation on local Aboriginal populations included loss of access to traditional lands and resources, and starvation. The effects of such severe social dislocation may have dramatically altered some aspects of the lives of local Aboriginal people recorded by early European observers.

An excavation of a rock shelter at Balls Head provides evidence that the Aboriginal people continued living near the study area after European settlement. The excavation in 1964 identified a human skeleton and artefacts. Among the artefacts were some items of glass, and of these it was reported:

... artefacts found of European origin included some heavily patinated, thick pieces of glass, some possibly flaked, and some lumps of melted lead in conjunction with very small spherical pieces of lead. The glass occurred in the top four inches of the front undisturbed midden and may indicate that the site was inhabited by Aborigines into early colonial days. The lead comes from more disturbed areas. Some larger pieces are obviously fishing sinkers of quite modern type, however, Mr Miles (Director of 1964 excavation) suggests that the small balls and lumps may represent musket shot being manufactured within the shelter itself.⁷

There is also recorded evidence of the Cammeraygal people still living in the North Shore area in the 1820s but their presence was noted only sporadically by Europeans after this period. Aboriginal people are mentioned occasionally in the records of the North Shore up until the 1850s in terms of moving through the area in groups. By the 1860s there are fewer accounts of Aboriginal visitors to the North Shore but notes in the Local Studies Collection at Stanton Library records the memory of a Dr Agnes Barnett who stated:

At Christmas time, the 'Blackfellows', as they called the Aborigines, would come up in hordes from the country and camp in the caves in the Cremorne Reserve. There they waited to receive the annual gift of a blanket each, given by the Government. Traces of these gatherings could still, until quite recently, be seen in the heaps of half-burnt shells around the caves.⁸

An Aboriginal group is also recorded as living at Balmoral during the mid-nineteenth century. A European named James Hugget (born in 1844) learnt their language and some of their lore. Just prior to his death in 1926, he recorded one interview where he recounted a large gathering of over 500 Aboriginal people at Milsons Point for a corroboree: 'They had come from all parts of the coasts districts, and after the wild ceremonies they disappeared with almost uncanny secrecy'.⁹

In 1868, a large group of Aboriginal people were assembled to entertain the visiting Duke of Edinburgh with traditional dance and ceremony. The group camped at Careening Cove, yet are believed to have been brought to Sydney from the west.

Today some Aboriginal people living in the North Shore area can trace their ancestry to the Cammeraygal or Wallumedegal clans.

2.3 European History

2.3.1 Early Land Grants (1794–1850s)

In April 1788 Lieutenant Henry Lidgbird Ball (commander of HMS *Supply*), along with two seamen and a marine private, made the first European land exploration of the Greenwich area. After partaking in one of Governor Phillip's expeditions into the wilderness north of the harbour, Lieutenant Ball and party made their return to Sydney Cove. The track they made through the 'jumble of rocks and thick woods' back to the waterside opposite Sydney Cove brought them through Greenwich Point, then called Supply Head.

In 1794, four land grants were made on the north side of the harbour to mariners Henry Hacking, Robert Watson, Obadiah Ikin and Thomas Whittle; their land was described as being located at 'Lane Cove on the north side of the harbour of Port Jackson'.¹⁰ Further grants were made that year but much of the land left unoccupied and many of the early grantees cancelled or exchanged their land for parcels elsewhere.

Timber getting was the staple industry in Lane Cove as in other parts of Sydney. From 1805, a few milling operations were established along with some small-scale agriculture such as wheat and other grain crops. During this time the North Shore area remained sparsely settled, populated by those in marine or agricultural industries and some notable wealthier residents such as Alexander Berry and Edward Wollstonecraft.

In 1813, William Gore, Provost Marshal of NSW, was granted 150 acres (60.7 hectares) in the Lane Cove District, now Artarmon. During the 1820 to 1830s, Gore cut a bush track from Gore Hill to Gore Cove, creating the beginnings of Greenwich Road.

During the 1830s, the government subdivided large sections of the land and sold them via public auctions. Soon after the establishment of the town of St Leonards, Greenwich became a desirable location. The first record intention to buy land in the area is documented in a letter from George Green dated 30 January 1834. However, the final application was made under George's father, Amaziah Green, who bought the first freehold block in Greenwich for 28 pounds and 15 shillings, consisting of five acres (two hectares) bounded on the south by present George Street. It supported an orchard and some agriculture with commanding views of Lane Cove and Parramatta rivers.¹¹

In 1840, 'Greenwich' is referenced for the first time in real estate advertisements for Green's estate. Green advertised 20 acres in 80 building allotments but only 22 blocks sold. Green then constructed Greenwich House some time before 1853.

2.3.2 Sarah Nichol's Estate (1854–1878)

In 1854, an area of 320 acres of land related to the study area was granted to Sarah Nichol. It is likely the land was used for grazing prior to this date as there are no prior formal leases drafted. During Nichol's tenure the land was used for dairying and grazing. After her death, the land was subdivided in 1878 and auctioned by Richardson and Wrench.

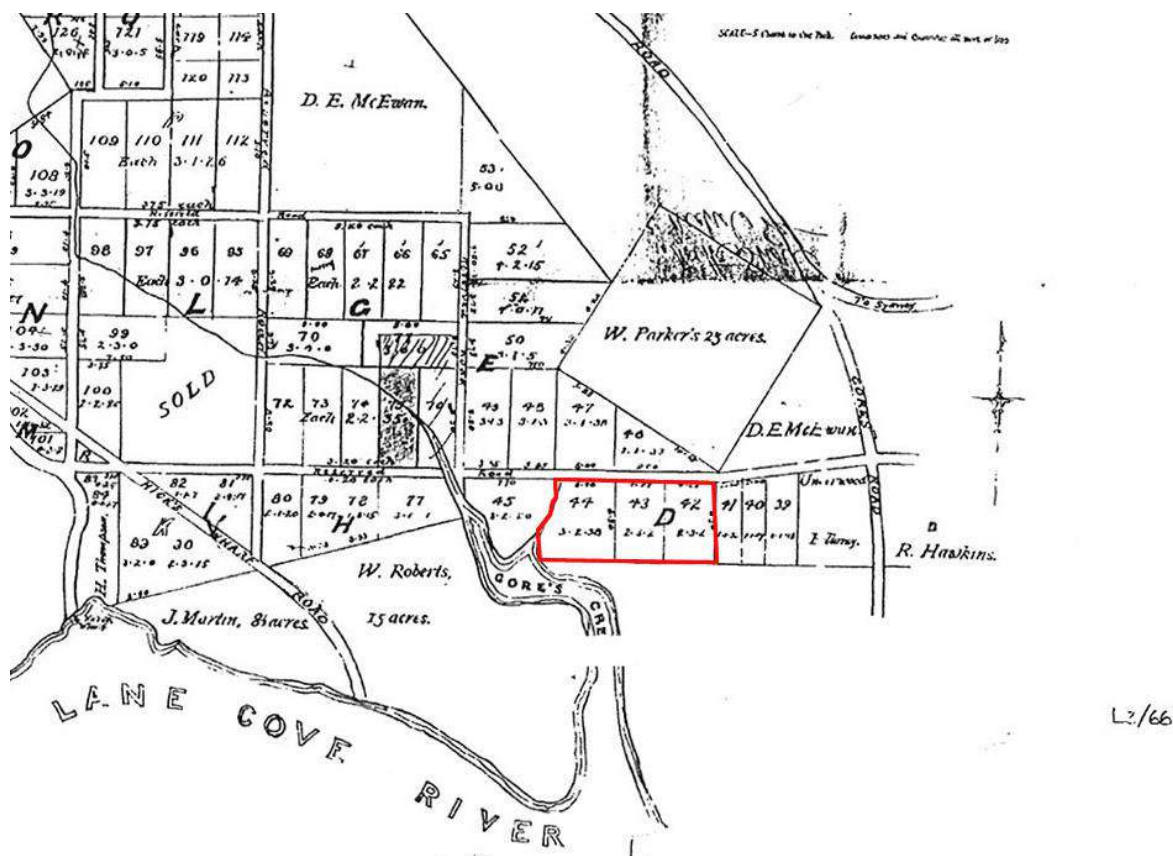


Figure 2.1 The Nichols' estate, c1879, as owned by Sarah Nichol. The allotments relating to this study are outlined in red. (Source: Mitchell Library subdivision plans, Lane Cove L3/66)

2.3.3 Standish House (Pallister) (1880–1937)

From the mid-nineteenth century, Greenwich began to transform from a village to a suburb. Larger areas of land were subdivided and grand homes or 'gentlemen's villas' were constructed, including:



- Amalfi (1881), Joseph Palmer's home on the Longueville peninsula;
- Y'berth (1883), John St Vincent Welch's first home on the corner of Greenwich Road and River Road;
- Coolabah (c1880), adjoining Y'berth, the home of Jeremiah Roberts, first mayor of Lane Cove;
- Warminster (1886), Greenwich Road;
- Airlie (1878), home of William Tullach, Greenwich Road; and
- Rothesay (1893), also on Greenwich Road.


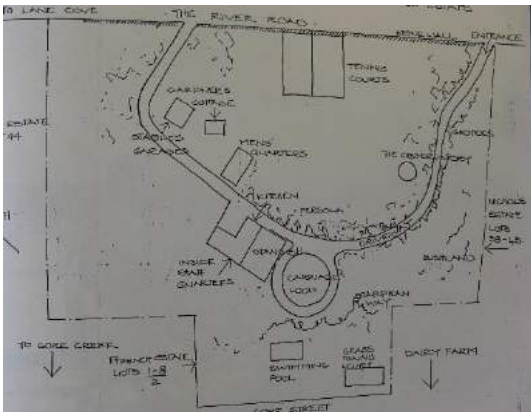
Greenwich Hospital lies on land that was originally part of a 5.5-acre site occupied by Standish, now known as Pallister. Standish was constructed in 1892 as the residence for John St Vincent Welch and his family. St Vincent Welch was a prominent businessman in Sydney, and at one time served as an alderman of the Lane Cove borough.


The property included Lots 42 and 43 Section D of a c1879 subdivision of the Nichols' estate, known as North Shore (see Figure 2.1). The house was set back from River Road facing southeast. It was

constructed atop a steep escarpment with panoramic views north to the ridge (now the Pacific Highway), west to the Blue Mountains and south across the Lane Cove and Parramatta River to Sydney Harbour. The following table records Welch's additions and expansion to the property as well as those of the subsequent owner, Sydney North Innes.

Table 2.1 John St Vincent Welch's Ownership of Standish and Changes to Property.

Year	Built Changes	Images
1892	John St Vincent Welch constructed Standish, furnishing it with fireplaces, mahogany and Bangor slates for the roof purchased from England. Standish was built on Lots 42 and 43, Section D, of a c1879 subdivision of the Nichols' estate, North Shore.	 <p>STANDISH (FROM "STANDISH") WHEN BUILT BY THE ST. VINCENT WELCH FAMILY. 1892. (Source: Lane Cove Local Studies Library)</p> <p>Standish, photographed c1896, before the verandah and balcony were partially enclosed. The small structure adjacent to the northern elevation of the house was the aviary. (Source: Lane Cove Local Studies Library)</p>
1894	<p>The land near the house looking towards Greenwich Road had been cleared and fenced and was being used as a paddock.</p> <p>The clay driveway with its entrance from River Road had a teardrop-shaped carriage loop in front of the house. The driveway continued past the northern side of the house and the kitchen wing, past the men's quarters to the stables, gardener's cottage and garage area below, before returning out again onto River Road farther west.</p>	 <p>1930 aerial photograph of the study area; the original carriageway is visible as a thin clearing through the vegetation in the eastern part of the study area. (Source: NSW Land and Property Information [LPI] with GML overlay)</p>

Year	Built Changes	Images
1900	Welch constructed an observatory to house the Alvan Clark six-inch telescope. Other observatories were built across Sydney and regional NSW during this time under the leadership of Colonial Astronomer Henry Chamberlain Russell.	 <p>Standish Observatory, n.d. (Source: Lane Cove Local Studies Library)</p>
1910	A pool, constructed sometime before 1910, was carved into the sandstone shelf and was lined with large sandstone blocks. The swimming pool situated in the southwest part of the study area is a later addition.	 <p>Reconstruction showing the layout of Pallister House and Grounds c1917. (Source: Macdonald, ST, 'Standish', unpublished B. Arch thesis submitted to the University of Sydney, 1985)</p>

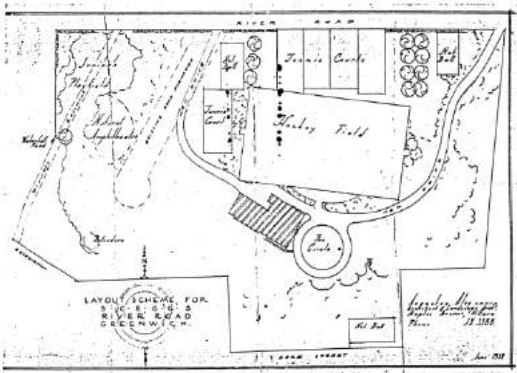

Year	Built Changes	Images
1917	A well-established garden and a driveway lined with trees had been added by this date. The northern side of the driveway was planted with large shrubs and trees.	 <p>Standish, photographed in 1917, showing the main façade of the house, the carriage loop and a well-established garden. (Source: Lane Cove Local Studies Library)</p>
1920–1937	Sydney North Innes purchased Standish and grounds in 1920. Innes enlarged the property by purchasing Lot 44, Section D, of the Nichols' subdivision, which adjoined the property to the west and contained around 3.5 acres. Few changes were undertaken in Innes's occupancy.	See Figure 2.1—Lot 44 forms the western third of the study area.

2.3.4 Sydney Church of England Girls' Grammar School (1937–c1942)

During the 15 years or so that the Innes family occupied Standish, very few changes were made to the building. The grounds were not fully maintained and by the time Sydney Church of England Girls' Grammar School (SCEGGS) purchased Standish in 1937, the observatory was in ruins. The Innes family maintained the clay tennis courts fronting River Road and they were later included in the landscape plans for the school (see Table 2.3). The Depression overlapped with the Innes family's stay at Standish, which may explain why few changes to the property occurred during this time.

The following table records changes to the property during the SCEGGS period of ownership.

Table 2.2 SCEGGS' Ownership of Standish and Changes to the Property, 1937–1938.

Year	Built Changes	Image
1937–1938	A new wing was added on the southwestern side of Pallister House. Extensive playing fields and sports grounds were part of a plan proposed by the landscape architect. ¹² However the 1943 aerial (below) shows that most of these plans had not yet been implanted and it is unclear how many of these changes occurred.	 <p>Pictured 1938 plan of proposed changes to the site by the landscape architect Augustus Alej. (Source: Conservation Management Plan, Pallister, 95 River Road, Greenwich, NSW, 2065, by NBRS + Partners, for Hope Healthcare Limited, November 2004, p 34)</p>
1938	A new driveway was completed extending from the northeast corner of the property at River Road back towards the house.	 <p>1943 aerial showing the new alignment of the driveway. (Source: NSW LPI)</p>

2.3.5 Pallister Girls' Home (1942–c1964)

SCEGGS' further plans for expansion of the property were cut short by the outbreak of World War II and the school only remained on the site until 1942. Management of the site was then transferred to the Anglican Deaconess Institution, Sydney. It opened the Pallister Girls' Home on the site a year later. This facility provided assistance for underprivileged girls aged from 6 to 15 years.



Unconfirmed reports indicate that the house was used by the Australian Women's Land Army during the Second World War. The rock swimming pool was roofed for use as an air raid shelter. Between 1960 and 1964, Lots 1–8 fronting Gore Street were sold individually for residential development.

2.3.6 Greenwich Hospital and Pallister (1966–Present)

The remaining land occupied by the Pallister Girls' Home was subdivided by the Anglican Deaconess Institute in 1963 as Lots 1 and 2. Pallister Girls' Home remained on Lot 1 while Lot 2 was used by the Anglican Deaconess Institution to establish a new venture, later absorbed by Home of Peace Hospitals. In the 1970s, Greenwich Hospital took over a greater area of the Pallister grounds and remnant sports fields from the SCEGGS era.

The following table records changes to the property during this period.

Table 2.3 Pallister Girls' Home and Greenwich Hospital Changes to the Property.

Year	Built Changes	
1966–1969	<p>The main hospital buildings were completed: the ward block, the administration and service wing and a nurses' home—Archinal House, designed by architects McPherson, Hamilton and Hassall.</p> <p>Bidwell House, a second nurses' home, was completed.</p>	 <p>Greenwich Hospital, main building. (Source: GML 2010)</p>
1976	<p>The property was subdivided as Lots 3 and 4, creating the L-shaped allotment it occupies today, with a right of way providing access for the hospital to St Vincents Road cutting through the bend of the 'L'.</p> <p>Greenwich Hospital was expanded in 1976 with extensions to the roof of the main building, creating a large rehabilitation unit.</p>	 <p>1978 aerial showing the additional hospital buildings added to the northwest of Pallister House. (Source: NSW LPI)</p>

2.4 Endnotes

- ¹ Noel Bell Ridley Smith & Partners, Conservation Management Plan, Pallister, 95 River Road, Greenwich, NSW, 2065, November 2004.
- ² Governor Phillip to the Colonial Office, February 1790, quoted in Martin, Megan, Ryde: Aboriginal Occupation, an unpublished manuscript.
- ³ Attenbrow, V 2002, *Sydney's Aboriginal Past: Investigating the archaeological and historical records*, second edition (2010), UNSW Press, Sydney, p 63.
- ⁴ Attenbrow, V 2002, *Sydney's Aboriginal Past: Investigating the archaeological and historical records*, second edition (2010), UNSW Press, Sydney, p 66.
- ⁵ Attenbrow, V 2002, *Sydney's Aboriginal Past: Investigating the archaeological and historical records*, second edition (2010), UNSW Press, Sydney, pp 98–99.
- ⁶ Attenbrow, V 2002, *Sydney's Aboriginal Past: Investigating the archaeological and historical records*, second edition (2010), UNSW Press, Sydney.
- ⁷ Bowdler, S 1971, 'Balls Head: The Excavation of a Port Jackson Rock Shelter', *Records of the Australian Museum*, vol 28, No. 7, Sydney, pp 117–128, 124–125.
- ⁸ Local Studies Collection, Stanton Library. Note on file attributed to Dr Agnes Bennett and C Manson, 1960, p 11.
- ⁹ Szpak, C 1997, *Aboriginal Occupation of the North Shore*, draft copy, North Shore Historical Society, p 29.
- ¹⁰ Noel Bell Ridley Smith & Partners, Conservation Management Plan, Pallister, 95 River Road, Greenwich, NSW, 2065, November 2004, p 10.
- ¹¹ Macleod, P 2012, 'Greenwich', *Dictionary of Sydney*, viewed 11 December 2017 <<http://dictionaryofsydney.org/entry/greenwich>>.

¹² *Sydney Morning Herald*, 19 July 1938, p 6.

3.0 Site Analysis

3.1 General Site Description

A site inspection was undertaken by Jodi Cameron on 5 December 2017, to observe current site conditions and record any evidence of former development activities that could be used to inform the assessment of the site's potential to contain archaeological remains.

All images presented in this section were taken by GML during the site inspection in December 2017.

The following observations were made:

- The study area is on the corner of River Road and St Vincents Road (Figure 3.1). The highest point of the study area is on St Vincents Road, near the intersection with River Road (Figure 3.2).
- The study area has a gradual slope east towards River Road and a steeper slope southwest towards the Lane Cove River (Figure 3.1 and Figure 3.3).
- The study area consists of Greenwich Hospital, a hospital and aged care facility spread across several buildings, including Pallister, a state heritage listed building (Figure 3.4).
- Multiple fig trees were identified within the study area (Figure 3.5 and Figure 3.6). No evidence of human modification was identified on the fig trees, nor any other trees within the study area.
- Sandstone outcrops were identified on the southern and eastern sections of the study area (Figure 3.8 and Figure 3.8). No evidence of Aboriginal occupation, art or axe grinding grooves were observed on or near these outcrops. The outcrops were largely covered in vegetation and therefore visibility was low.
- No Aboriginal artefacts were identified within the study area (Figure 3.9). However, visibility was generally low (Figure 3.10).
- The centre of the study area contains carparking and open lawns and gardens (Figure 3.11 and Figure 3.12) and does not appear to have undergone significant disturbance.
- The western portion of the study area has undergone the most development, with multiple buildings and bulk excavation for vehicle access (Figure 3.13 and Figure 3.14). The study area has been levelled in this section apparently through excavation rather than fill, capping the natural slope. This would have impacted on archaeological remains or deposits in this area.
- The southwestern section of the study area has undergone earthworks but is not heavily developed (Figure 3.3). There is also an inground pool within the study area (Figure 3.15).
- Pallister House is located on the southern border of the study area (Figure 3.4). Extensions have been added to the original house (Figure 3.5).
- The carriage way for Pallister House runs towards the corner of River Road and St Vincents Road (Figure 3.17 and Figure 3.18). It is now pedestrian only.

- There were two dry stone walls identified during the site visit. The first, located behind Pallister House, is very overgrown (Figure 3.19). The second is on the pedestrian access way at the corner of River Road and St Vincents Road (Figure 3.20).
- The eastern section of the study area has the least amount of development. There are rock outcrops and mature trees in this area, with the land sloping down towards St Vincents Road (Figure 3.7, Figure 3.21 and Figure 3.22).



Figure 3.1 View north along St Vincents Road with the study area on the left.



Figure 3.2 Corner of River Road and St Vincents Road, looking at the study area.



Figure 3.3 The southwest corner of the study area, with a steep slope.



Figure 3.4 State heritage listed Pallister House.



Figure 3.5 Side view of Pallister House, with extension and mature fig tree.



Figure 3.6 Two fig trees near the study area boundary.



Figure 3.7 One of the multiple rock outcrops within the study area.

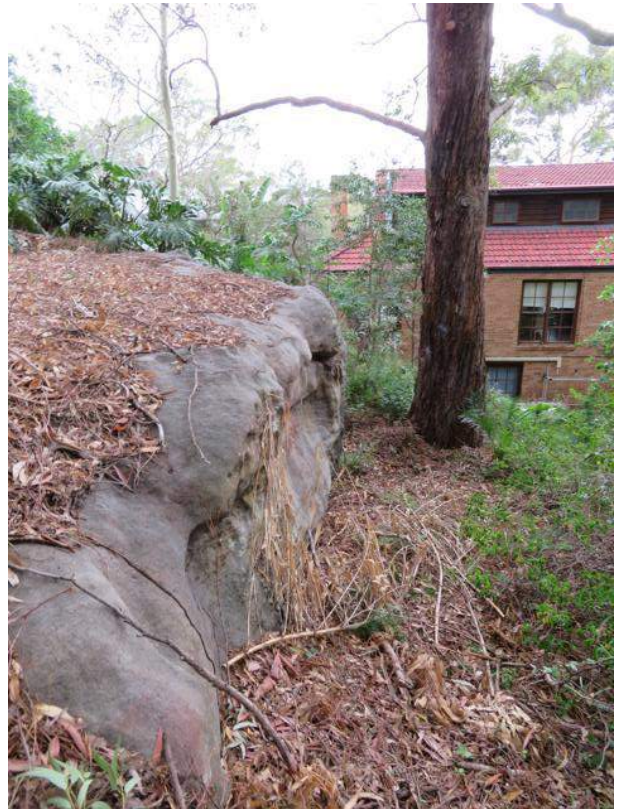


Figure 3.8 One of the multiple rock outcrops within the study area.



Figure 3.9 Patch of exposed soil within the study area.



Figure 3.10 The majority of the study area had low/no visibility.



Figure 3.11 Carparks across the centre of the study area.



Figure 3.12 Open lawns and car parks across the centre of the study area.



Figure 3.13 Buildings with evidence of bulk earthworks.



Figure 3.14 Large buildings within the study area.



Figure 3.15 The southwest section of the site, with steep slopes and an inground pool.



Figure 3.16 Extension to the back of Pallister House.



Figure 3.17 The carriage way looking towards the corner of River Road and St Vincents Road.



Figure 3.18 The carriage way looking towards Pallister House.



Figure 3.19 The very overgrown dry stone wall behind Pallister House.



Figure 3.20 Dry stone wall near the corner of River Road and St Vincents Road.



Figure 3.21 The southern section of the study area.



Figure 3.22 The southern section of the study area with St Vincents Road on the right.

4.0 Assessment of Aboriginal Archaeological Potential

4.1 Aboriginal Heritage Information Management System Search

An extensive search of the OEH AHIMS database was undertaken on 7 December 2017 (Appendix A). The search included a buffer zone of 1km around the study area. There are currently no registered sites or Aboriginal Places identified within the study area. The search identified 36 registered sites located within 1km. The location of these sites is shown on Figure 4.1 below. At many of these sites more than one site feature is registered. Table 4.1 provides an overview of the different site features identified within the bounds of the AHIMS search, and their frequency.

Table 4.1 Frequency of Site Features at Registered AHIMS Sites within 1km of Greenwich Hospital.

Site Type or Feature	Frequency	Percentage (%)
Shelter with Midden	15	41
Midden	10	27
Art Site (Rock Engraving or other)	3	9
Shelter with Art, Deposit or Burial	3	9
Potential Archaeological Deposit (PAD)	3	9
Artefact Site	2	5
Total	36	100%

The range of Aboriginal site types recorded in and around the study area provides scientific evidence that Aboriginal people occupied this area and is consistent with its location in close proximity to Sydney harbour and coastal resources. The types of sites recorded fall into three categories: those associated with resource (food) procurement, processing and discard; habitation locations (shelters); and art sites, which were associated with wider Aboriginal traditions.

This AHIMS search indicated that 25 of the 36 AHIMS sites (68 per cent) are midden sites and constitute the predominant remnants recorded in this area. A proportion of these (41 percent) are recorded as rock shelters containing middens. Other rock shelter sites, including either art engraving, burials, or potential archaeological deposit, have also been recorded within 1km of the study area, and overall rock shelters represent 50 per cent (18) of all site types.

In general, there is a pattern of landform association between recorded sites and water systems. The majority of sites in this area are within close proximity to the many creeks and rivers. Relatively few sites have been identified farther than a kilometre from a source of water.

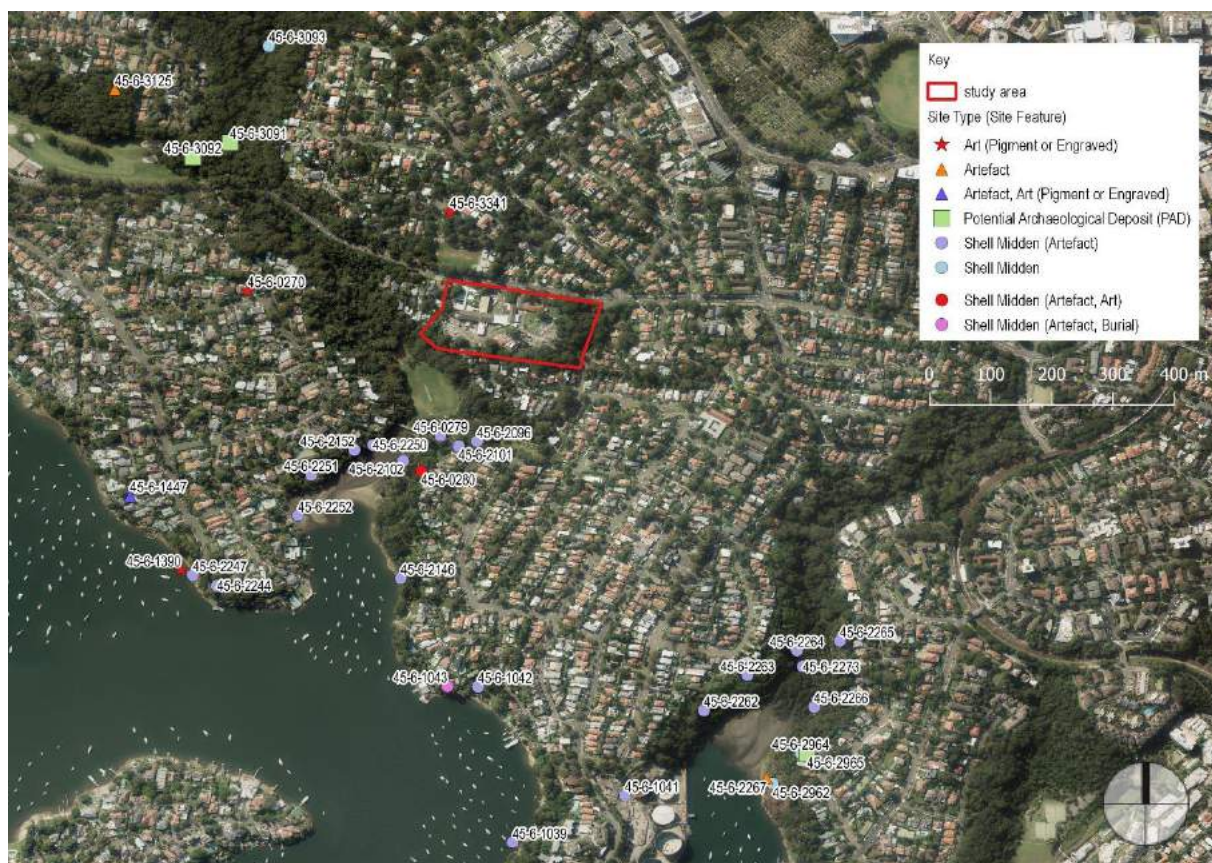


Figure 4.1 Location of AHIMS sites in relation to Greenwich Hospital (the study area). (Source: NSW LPI 2017 with GML Heritage additions)

4.2 Environmental Context

The purpose of this section is to provide environmental contextual information for use in developing a predictive model of Aboriginal site locations associated with the study area. Interactions between people and their surroundings are of integral importance in both the initial formation and the subsequent preservation of the archaeological record. The nature and availability of resources including water, flora and fauna and suitable raw materials for the manufacture of stone tools and other items had (and continues to have) a significant influence over the way in which people utilise the landscape.

Alterations to the natural environment also impact upon the preservation and integrity of any cultural materials that may have been deposited, whilst current vegetation and erosional regimes affect the visibility and detectability of Aboriginal sites and objects. For these reasons, it is essential to consider the environmental context as a component of any heritage assessment.

4.2.1 Geology and Soils

The underlying geomorphology of the study area is Hawkesbury sandstone, which is comprised of medium to coarse grained quartz sandstone with minor shale and laminate lenses. Gynea and Hawkesbury soils are the overlying soil landscapes within the study area (Figure 4.2). The Hawkesbury soil landscape is a shallow (<50cm) colluvial landscape. The Gynea soil landscape ranges from shallow to moderately deep (30–100cm) soils. It is an erosional landscape with frequent rock outcrops.¹

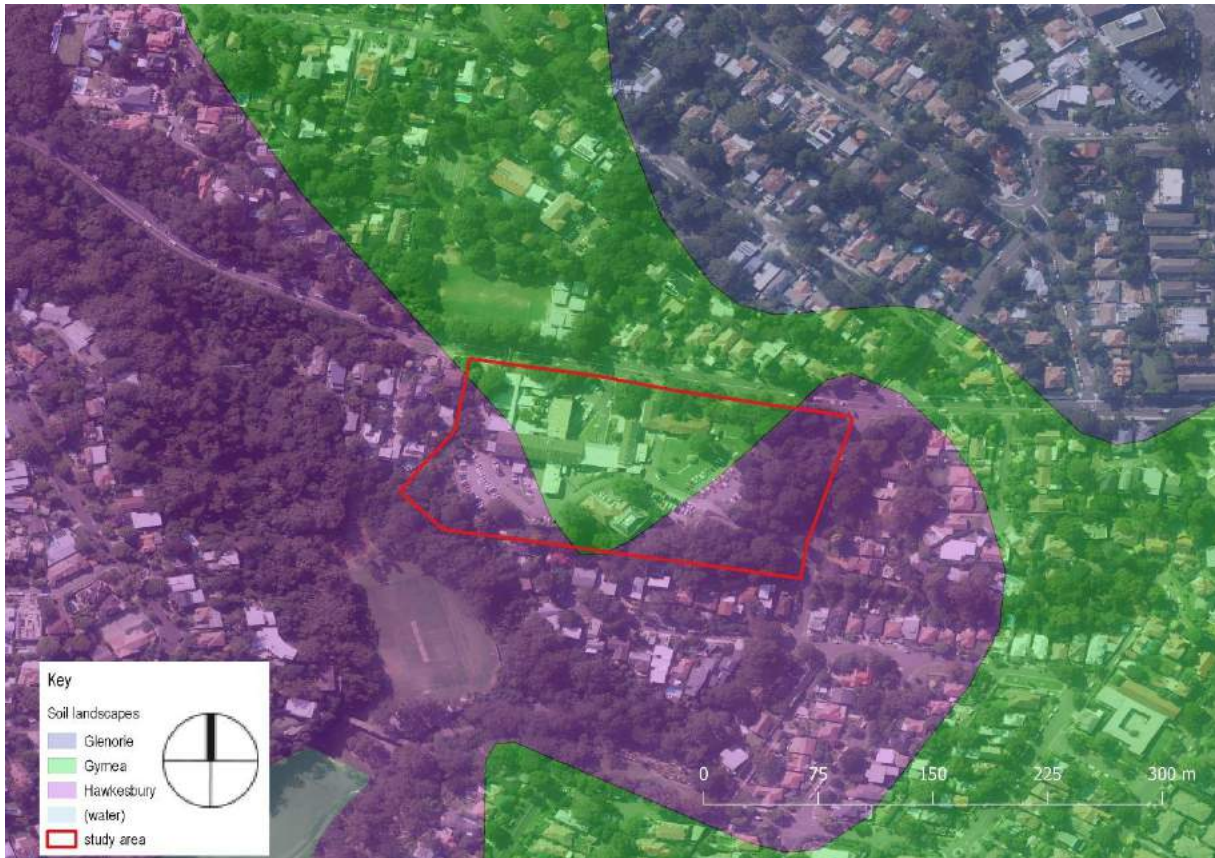


Figure 4.2 Soil landscapes within the study area. (Source: NSW LPI with GML overlay 2017)

4.2.2 Landforms and Landscape Features

The study area is situated on the eastern side of the upper half of a prominent ridge with views available across the Parramatta and Lane Cove Rivers (Figure 4.3). The study area slopes to the west to Gores Creek, to the south towards Lane Cove River, and to the east towards St Vincents Road and more generally to Berrys Bay. The landscape is comprised of rocky outcrops and grottos, with Hawkesbury sandstone bedrock visible on the mid to lower slopes of the study area.

4.2.3 Hydrology

The availability of water has significant implications for the range of resources available and the suitability of an area for human occupation. There are no water sources located within the study area. Approximately 60m to the southwest of the study area is Gores Creek, a second order tributary of the Lane Cove River, which is located approximately 450m south of the study area (Figure 4.3).



Figure 4.3 Contour and hydrology data for the study area. (Source: NSW LPI data with GML overlay 2017)

4.2.4 Fauna and Flora

The study area has been cleared of all native vegetation. Prior to clearing in the nineteenth century, the vegetation of the study area would have been a dry sclerophyll open woodland which included red bloodwood (*Eucalyptus gummifera*), yellow bloodwood (*E. eximia*), Scribbly gum (*E. haemastoma*), brown stringybark (*E. capitellata*) and old man banksia (*Banksia serrata*).²

4.2.5 Modern Land Use and Disturbance

Much of the disturbance to potential Aboriginal archaeological deposits results from intensive European use of the site from the 1890s onwards. From circa 1890 onwards, processes such as land-clearing, construction of Pallister House and related outbuildings, introduction of municipal services (such as water and sewerage), gardening and construction of playing courts would have resulted in impacts to the condition and integrity of subsurface deposits. With the exception of excavation for constructing footings for substantial structures such as Pallister and the terracing of the slope during construction of the hospital facilities, these activities would not have resulted in the complete removal of the Aboriginal archaeological resource from the study area.

Construction, of the extant hospital facility from 1963 onwards, including terracing of the southwest of the study area, would have resulted in additional impacts to potential Aboriginal archaeological deposits within the study area. Excavation to accommodate the lower levels and footings of the hospital buildings, as well as the bulk earthworks required for the levelling of the terrain to provide parking facilities, would likely have resulted in localised removal of potential Aboriginal archaeological deposits in these areas, as would the construction of lift pits for the hospital buildings. Landscaping,

construction of roads and introduction of services across the site would have impacted on the condition and integrity of potential subsurface archaeological deposits.

For the purpose of this assessment, low, moderate and high levels of disturbance are defined as follows:

- low disturbance—minimal and/or superficial impact to the landscape which has resulted in little or no disturbance to subsurface remains, characterised by such activities as capping of areas with introduced fill or construction of roads and pathways;
- moderate disturbance—shallow or localised impacts to the landscape, characterised by excavations for shallow building footings or service trenches; and
- high disturbance—largely disturbed landscape, characterised by such land use impacts as deep building footings (piled foundations, deep slab foundations), basements or quarrying. High levels of disturbance are likely to have removed Aboriginal archaeological signatures.

4.3 Relevant Local Literature

Bowdler 1971—Balls Head: Excavation of a Port Jackson Rock Shelter

In 1971, Bowdler analysed the 1964 excavation at a Balls Head rock shelter that uncovered Aboriginal skeletal remains.³ Bowdler found that prior to the 1964 excavation, the deposit within the rock shelter was relatively undisturbed, except within the area of the burial. Apart from the skeletal remains, there was also shell and over 450 stone artefacts, of which 42 were stone tools, four were cores and the rest was debitage.

Bowdler concluded that this rock shelter would have been used as an occupational area and possibly as an area for knapping. As Bowdler could not find conclusive evidence that there was a pit made for the body, she suggests that the body was probably abandoned in the rock shelter, as this was one of the common Aboriginal burial practices within the region.

Attenbrow 1991—Port Jackson Archaeological Project

In 1991, Val Attenbrow undertook a project to relocate registered OEH sites, as many were poorly recorded. Site survey was undertaken across the Port Jackson catchment, which Attenbrow divided into eight subcatchments. Over 350 middens and archaeological deposits were relocated or newly identified. Attenbrow identified a number of patterns of site distribution associated with aquatic zones and geological formations within the catchment.

Attenbrow's study revealed that 98 per cent of middens in the entire Port Jackson catchment were located on Hawkesbury sandstone even though there was a greater area of Wianamatta shale landscapes within the project's subject site. This may be due to the project's findings that a higher density of middens occurred within rock shelters as opposed to open areas/sites. The number of middens varied drastically across the Port Jackson catchment, partly due to discrepancies in factors such as the land area of each subcatchment and intensity of residential and industrial development. However, it was clear that middens and deposits occurred in higher densities in ocean and estuarine subcatchments.⁴

The current study area is situated on Hawkesbury sandstone, within 200m of known several midden sites (AHIMS #45-6-2096, #45-6-2010 and #45-6-2250). The current study area fits within the model identified by Attenbrow for midden sites.

Jo McDonald Cultural Heritage Management 2000—Salvage Excavation of Berry Island #3 (NPWS #45-6-1512) at Berry Island, near Wollstonecraft, NSW

In June 1999, Jo McDonald undertook an archaeological excavation of a rock shelter at Berry Island, approximately 900m south of the study area, where an Aboriginal skeleton had been uncovered during a police investigation in 1991.⁵ The archaeological excavation uncovered an intact portion of shell midden deposit. The result of the investigation indicated that a range of both estuarine and rocky shore species were gathered from the area around the rock shelter, predominantly from the estuarine mudflats.

Berry Island is situated within the Hawkesbury soil landscape, the same as the southern side of the current study area. The evidence appears to suggest that the excavated remains were the result of a single episode of occupation, based on the low number of artefacts (five) and other cultural material such as hearths.⁶ In total, only five stone artefacts were recovered from the Berry Island site, none of which exhibited evidence of retouch.⁷ Single occupation deposits may also be identified within the current study area. The disturbed nature of the Berry Island deposit made determining the pattern of site usage difficult; however, McDonald suggests that the site likely was used as a daytime campsite. As the human remains had been forensically excavated for the police investigation, the report did not include any discussion regarding the nature of the burial.

GML Heritage 1994—The Big Dig Site, The Rocks

The Big Dig site in The Rocks (now the Sydney Harbour YHA) is situated on steeply sloping high ground on rocky peninsulas in Sydney harbour. The site is also located on the Gynea soil landscape. The Rocks site was subject to multiple phases of residential development over the nineteenth century including terracing and filling of the naturally sloping topography.⁸

During historical excavations in 1994, a small number of Aboriginal objects were recovered including a single silcrete flake, a sherd of worked ceramic and several possibly worked pieces of flint.⁹ These artefacts were found at the interface between the lowest historical strata and the remnant topsoils.

The Rocks site is a rare example of an extremely well preserved historical site in the Sydney CBD, predominantly due to the limited twentieth-century development on the site which did not substantially disturb the ground but rather capped it with bitumen and concrete surfaces.¹⁰ Small numbers of Aboriginal objects therefore remained within pockets of the historical site by virtue of its preservation.

Further excavations of this site between 2008 and 2010 did not recover additional Aboriginal objects.¹¹

4.4 Statement of Aboriginal Archaeological Potential

A search of the AHIMS database indicates there are no recorded sites within the study area; however, there are several located in the vicinity (within 500m). In the wider landscape, previously recorded sites, including art sites, rock shelters and middens, are strongly associated with the landforms on the lower and mid slopes adjacent to the harbour.

The study area's geological profile, in particular the presence of bedrock outcrops, could be suitable for shelters and/or rock engravings and other artwork sites, artefact deposits and/or isolated artefact scatters.

An analysis of the study area's more recent history shows however that there has been substantial impacts on the site from the development and expansion of the hospital facilities. Modern land use has altered the original landform in parts of the study area and decreased the likelihood of intact, stratified

Aboriginal archaeological deposits in some areas. . Specifically, the construction of the hospital building and associated terraced carparking would have removed any intact soil landscapes in the western portion of the study area. Depending on the method of land modification, there is the potential for some Aboriginal archaeological remains to have been displaced from one part of the study area to another, although these will remain in unstratified contexts.

In comparison, the eastern and southern portions of the study area have remained largely undisturbed by the construction of the hospital buildings, historic land use and other land modification. These areas are characterised by sloping rocky outcrops and grottos with dense vegetation and accumulation of soil in some areas.

The study area also contains a mature fig tree. Fig trees are known to have significance to Aboriginal people across NSW. The presence of a mature fig tree could have cultural significance. Further assessment, including community consultation, is required to determine the significance of the fig tree.

The proximity of the study area to the resource-rich Gore's Creek and the Lane Cove River—combined with the outcrops of Hawkesbury sandstone and prominent views across Sydney harbour, Parramatta River and Lane Cove River to the Blue Mountains—indicate that it is likely that the study area contains Aboriginal objects. Figure 4.4 illustrates the assessed levels of Aboriginal archaeological potential within the study area. Areas of particular interest include the rocky outcrops in the southern and eastern areas of the study area. Stone artefacts and shelters, with or without rock art, are likely to be the predominant site type within the study area; however, the results of the AHIMS search suggest that sites containing shell, ie middens, cannot be excluded. Therefore, a more detailed investigation will be required. The requirements for this assessment are detailed in Section 7.0.

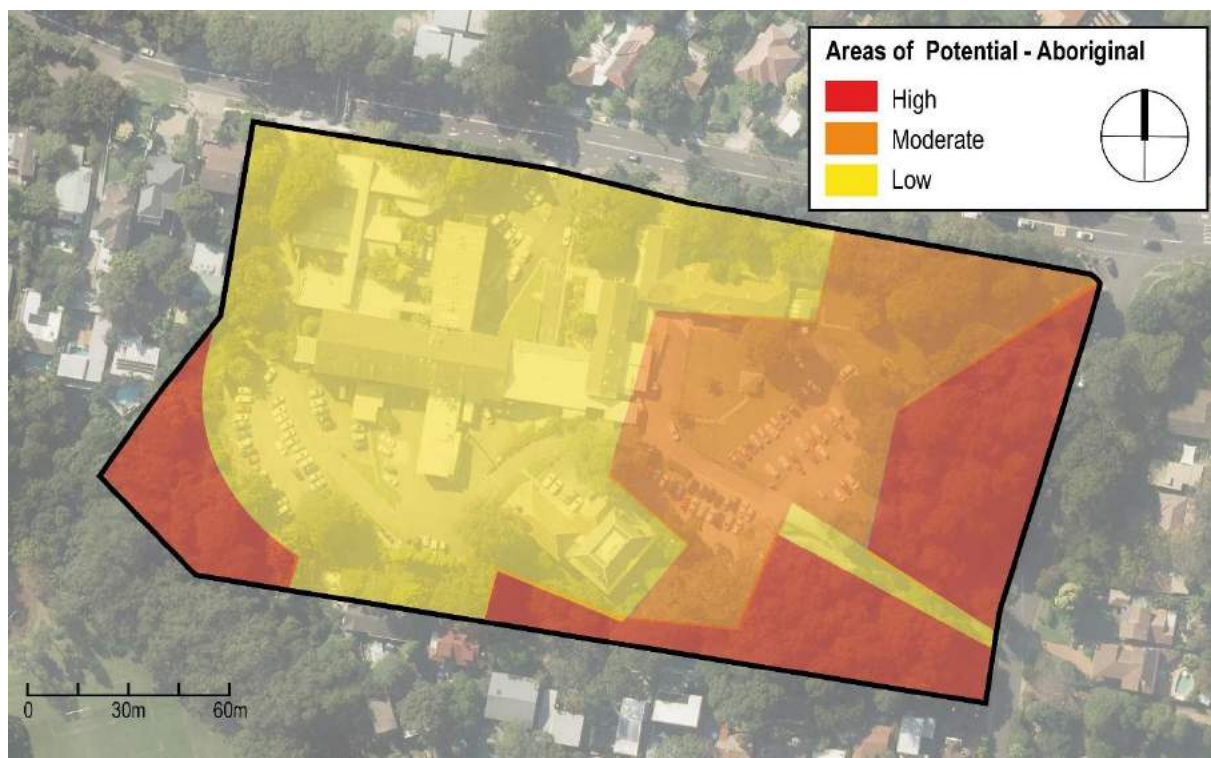


Figure 4.4 Map of the study area showing areas of Aboriginal archaeological potential. (Source: SIX Maps with GML additions 2017)

4.5 Endnotes

- ¹ Chapman, GA and Murphy, CL 1989, *Soil Landscapes of the Sydney 1:100 000 Sheet*, Soil Conservation Services of NSW, Sydney, pp 64–65.
- ² NSW Office of Environment and Heritage 'Dry Scerophull Forests (shrubby sub formation)', viewed 11 December 2017
<[http://www.environment.nsw.gov.au/threatenedSpeciesApp/VegFormation.aspx?formationName=Dry+sclerophyll+forests+\(shrubby+sub-formation\)>](http://www.environment.nsw.gov.au/threatenedSpeciesApp/VegFormation.aspx?formationName=Dry+sclerophyll+forests+(shrubby+sub-formation)>).
- ³ Bowdler, S 1971, 'Balls Head: the Excavation of a Port Jackson Rock Shelter', *Records of the Australian Museum*, 28 (7), pp 117–128.
- ⁴ Bowdler, S 1971, 'Balls Head: The Excavation of a Port Jackson Rock Shelter', *Records of the Australian Museum*, vol 28, No. 7, Sydney, pp 50–53.
- ⁵ Jo McDonald Cultural Heritage Management, Salvage Excavation of Berry Island #3 (NPWS # 45-5-1512) at Berry Island, near Wollstonecraft, NSW, report prepared for the National Parks and Wildlife Service (NSW) and the NSW Police Department, March 2000.
- ⁶ Jo McDonald Cultural Heritage Management, Salvage Excavation of Berry Island #3 (NPWS # 45-5-1512) at Berry Island, near Wollstonecraft, NSW, report prepared for the National Parks and Wildlife Service (NSW) and the NSW Police Department, March 2000, p 28.
- ⁷ Jo McDonald Cultural Heritage Management, Salvage Excavation of Berry Island #3 (NPWS # 45-5-1512) at Berry Island, near Wollstonecraft, NSW, report prepared for the National Parks and Wildlife Service (NSW) and the NSW Police Department, March 2000, p 29.
- ⁸ Karskens, G 1999, *Inside the Rocks: the archaeology of a neighbourhood*, Hale & Iremonger Pty Ltd, Alexandria.
- ⁹ Lacono, N, Trench E, in Godden Mackay Heritage Consultants, Cumberland and Gloucester Streets Site—Archaeological Investigation Report, report prepared for the Sydney Cove Authority, 2005; Steele, D, Trench F, in Godden Mackay Heritage Consultants, Cumberland and Gloucester Streets Site—Archaeological Investigation Report, report prepared for the Sydney Cove Authority, 2005; Karskens, G 1999, *Inside the Rocks: the archaeology of a neighbourhood*, Hale & Iremonger Pty Ltd, Alexandria.
- ¹⁰ Godden Mackay Heritage Consultants, Cumberland and Gloucester Streets Site—Archaeological Investigation Report, report prepared for the Sydney Cove Authority, 2005.
- ¹¹ Godden Mackay Logan Pty Ltd, Sydney Harbour YHA and The Big Dig Archaeology Education Centre—Historical Archaeological Excavation Report, report prepared for the Sydney Harbour YHA, June 2014.

5.0 Historical Archaeological Potential and Significance

5.1 Overview

This section discusses the site's potential to contain archaeological resources. This assessment is based on consideration of the current site conditions and examination of historical information related to the development and occupation of the site. This includes evidence of demolition and construction activities that may have disturbed archaeological remains associated with former site features and activities, both Aboriginal and non-Aboriginal.

'Archaeological potential' is the likelihood that a site may contain physical evidence related to an earlier phase of occupation, activity or development. This term is different from 'archaeological significance' and 'archaeological research potential', which are more subjective statements related to the value of the archaeological resource in terms of levels of significance. This is discussed in more detail in Section 6.0 of this report.

5.2 Assessment of Historical Archaeological Potential

5.2.1 Previous Archaeological Investigations

To date, there have not been any archaeological investigations undertaken within the study area. Previous archaeological investigations within the surrounding area have primarily focused on the industrial and maritime heritage of the area. There is no archaeological evidence related to similar estates on the northern shore of Sydney Harbour.

Gentlemen's estates more broadly across NSW (and wider Australia) show consistencies in layout and use as dictated by British colonial constructs of public versus private spaces. From these studies we can predict that there is potential for formal gardens at the approach to the house, with more functional elements, including outbuildings, rubbish pits and kitchen gardens, directed away from public views of the property. Archaeological assessments and excavations at other rural or semi-rural estates in the greater Sydney region have provided evidence that an estate house forms only one part of a homestead complex, and a range of outbuildings, gardens, pathways and services can be expected in its proximity.¹

5.2.2 Phases of Site Development

The following discussion focuses on the potential subsurface archaeological remains, such as structural elements, occupational deposits, yards and paths, in relation to the historic phases of development within the study area.

The following four main phases of historical development have been identified:

- Phase 1—Early Land Grants and Land Ownership (1788–1882);
- Phase 2—Gentleman's Estate, Pallister House (Standish) (c1883–1937);
- Phase 3—Girls' Grammar School (1937–1946); and
- Phase 4—Pallister Girls' Home and Greenwich Hospital and Pallister (1946–Present).

Phase 1— Early Land Grants and Land Ownership (1788–1882)

There is limited evidence for development of the study area during this phase, with any archaeological remains likely to have resulted from ephemeral use such as land clearing and agricultural activities.

Phase 2—Gentleman's Estate, Pallister House (Standish) (c1883–1937)

Welch's Estate (c1883–1920)

The following developments were identified within the study area during this phase:

- establishment of landscape elements, including carriage drives, paths, drains and gardens;
- construction of timber fences and gates associated with the carriage drive;
- construction of Pallister house and outbuildings, including:
 - stables and garage;
 - gardener's cottage;
 - men's quarters;
 - cisterns and wells;
 - observatory;
 - pergola;
 - bird aviary; and
 - tennis courts.

Occupation and use of the study area could have resulted in the creation of sealed artefact deposits, including the creation of rubbish pits in the rear or side yard spaces, the accumulation of underfloor deposits in the secondary buildings/outbuildings, or the loss or discard of artefacts within cesspits and wells.

The Innes Family (1920–1937)

No changes or development were identified within the study area during this phase.

Phase 3—Girls' Grammar School (1937–1946)

The following developments were identified within the study area during this phase:

- construction of a new wing to the main house and a new teaching space to the west of the main house;
- construction of a new driveway to River Road;
- demolition of the observatory; and
- landscaping for new sports grounds.

Construction of the wing building to the west of Pallister House is likely to have removed any earlier remains within its footprint, such as the kitchen and servant's quarters that may have existed in this area (see Section 2.0, Table 2.3). Construction of the access road off St Vincents Road and the new driveway have resulted in localised impacts in these areas. Although the observatory was demolished during this phase, there is potential for remains of the building footings to survive within the hospital grounds.

Phase 4—Pallister Girls' Home and Greenwich Hospital and Pallister (1946–Present)

Pallister Girls' Home (1946–1975)

No development was identified within the study area during this phase.

Greenwich Hospital and Pallister (1963–Present)

Construction of the first hospital building was completed by 1963, on the western section of the site, while Pallister Girls' Home continued to operate. Other developments which occurred within the study area during this phase include:

- removal of playing fields;
- construction of new hospital facilities, which includes all extant buildings on the property;
- modification to Pallister, including partial demolition of the c1938 wing; and
- landscaping including new driveway to St Vincents Road and River Road, new parking areas and construction of footpaths and ramps.

Construction of the existing Hospital, Riverglen and Bluegum buildings, along with the access roads and parking areas in the western half of the study area, will have had a major impact on the survival of archaeological remains within this part of the site. The basement and lower ground floor levels of the hospital building have been terraced into the slope of the site and will have removed any remains of outbuildings associated with Pallister House that are thought to have existed in this area. The parking lot and open grassed areas between Pallister House and Bluegum in the eastern part of the site do not appear to have been impacted by recent development and there is potential for these areas to contain archaeological remains.

5.2.3 Summary

Overall, the study area is likely to contain localised areas of potential historical archaeological remains. Construction of the 1938 addition to Pallister House, the existing hospital facilities and associated landscaping is likely to have partially or completely removed any archaeological remains within the northwestern half of the site. Within the eastern and southern parts of the site there are areas of moderate to high archaeological potential associated with Pallister House as illustrated in Figure 5.1.

5.3 Historical Archaeological Significance

Archaeological significance refers to the heritage significance of known or potential archaeological remains. In NSW, archaeological remains are managed in accordance with their assessed levels of significance in line with *Assessing Significance for Historical Archaeological Sites and 'Relics'*, published by the NSW Heritage Branch (now Heritage Division, OEH) in 2009.

This significance assessment specifically considers the historical archaeological resource of the site.

5.3.1 NSW Heritage Criteria

The Heritage Council of NSW established seven criteria for assessing heritage significance.² The potential historical archaeological resource of the Greenwich Hospital property has been assessed against these criteria and our findings are presented in Table 5.1.

Table 5.1 Assessment of Potential Archaeological Remains at Greenwich Hospital (the Study Area) against the NSW Heritage Criteria.

Criteria	Response
<i>(a) an item is important in the course, or pattern, of NSW's cultural or natural history (or the local area)</i>	<p>Development in the study area appears to have commenced around 1854 when part of the area was given in trust to Sarah Nichol. The land was utilised for grazing and dairying. Any archaeological remains associated with this phase of development could be significant at a local level, depending on their integrity.</p> <p>No further development was identified in the study area until 1892 when the land was purchased by John St Vincent Welch. The study area has undergone multiple phases of subdivision and amalgamation which reflects the patterns of land ownership and development of the northern Sydney suburbs. Land use in the area has reflected a similar pattern, with a gradual transition from gentleman's estate and farming or orcharding through to use for aged care facilities, residences and schools.</p> <p>Archaeological remains from the study area have the potential to contribute to an understanding of these patterns and could be significant at a local level, depending on integrity and intactness.</p> <p>Archaeological remains associated with the c1900 observatory constructed by Welch may provide insight into the development of amateur astronomy in NSW and are likely to be significant at a local level, depending on their integrity and intactness.</p>
<i>(b) an item has a strong or special association with the life or works of a person, or group of persons, of importance in NSW's cultural or natural history (or the local area)</i>	<p>Greenwich Hospital contains Pallister and a remnant garden setting associated with John St Vincent Welch, who was a prominent businessman, one of the first aldermen for the borough of Lane Cove, and served the community of Sydney in a variety of ways.</p> <p>His son, Dr Kenyon St Vincent Welch, is also associated with the property and was the first doctor appointed to the Flying Doctor Service.</p> <p>John St Vincent Welch is reported to have designed Pallister, and his family resided on the property after his death until 1937. Archaeological remains which could be directly associated with John St Vincent Welch and his family may be significant at a local level.</p>
<i>(c) an item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area)</i>	<p>The construction and details of the c1900 observatory are largely undocumented. Archaeological remains of the structure could demonstrate a high degree of technical achievement as an amateur observatory. Evidence of such achievements would be significant at a local level.</p> <p>The aesthetic characteristics of the archaeological remains at Greenwich Hospital are unknown, given that they have not been excavated. There is some potential that archaeological remains from the study area would provide tangible physical evidence of past lifeways. They may be of significance at a local level; however, this would depend on their condition and integrity.</p>
<i>(d) an item has strong or special association with a particular community or cultural group in NSW for social, spiritual or cultural reasons (or the local area)</i>	<p>Elements of the study area have strong spiritual and community connections with the Church of England and the wide range of welfare and community services provided at the site during its use as a school and home for underprivileged girls. These elements are largely extant and archaeological remains within the study area are unlikely to demonstrate these associations.</p>

Criteria	Response
<i>(e) an item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the local area)</i>	<p>The study area has the potential for archaeological remains associated with the construction and use of the Pallister estate (1892–1920), including structural remains and sealed deposits. Descriptions of the site from c1917 indicate there were several outbuildings associated with the main house, including stables, men's quarters, a gardener's cottage and an observatory. Decorative gardens, landscape features and playing courts are visible on aerial photographs from 1943 to the front (north) of the house.</p> <p>Archaeological evidence associated with the construction and use of Pallister would have the potential to provide insight into late nineteenth and early twentieth-century life in what was then a semi-rural area of the North Shore of Sydney. There is also potential to provide insight into changes which occurred in Greenwich as the town became more suburban. These changes may relate to rubbish disposal patterns, water availability and changes in artefact deposition patterns over time.</p> <p>There may be some archaeological evidence associated with the use of the site as a school in the interwar period and its transition from private residence to educational institution. This would most likely be represented by changes in the artefact assemblage; however, changes to the use of the site are most likely to be visible in the structural changes made to the main house, Pallister, rather than in the archaeological record.</p> <p>Archaeological deposits and features from the Greenwich Hospital site have the potential to provide data relevant to the examination of class, gender, ethnicity, diet, consumer patterns and modification of the environment to create formal gardens. Comparative analysis of archaeological remains from the study area with assemblages from both rural and urban sites in NSW would most likely provide new insight into the study of late nineteenth-century estates in NSW. The research potential of archaeological remains from the study area could be of significance at a local level, depending on their nature and extent.</p>
<i>(f) an item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (or the local area)</i>	<p>While ongoing subdivision and redevelopment of the greater Sydney area renders archaeological evidence associated with early land use increasingly uncommon, anticipated archaeological remains from the study area would not be considered rare or endangered within the local area.</p> <p>Extant examples of private observatories constructed are not widely documented in NSW and it is likely that early examples from the late nineteenth and twentieth centuries are uncommon. The potential archaeological remains associated with the former observatory at the study area are uncommon within the local area, and possibly the wider NSW context, and could be significant at a local level or state level depending on their intactness and integrity. The archaeological remains associated with the development and use of Pallister, however, are not likely to meet this criterion.</p>
<i>(g) an item is important in demonstrating the principal characteristics of a class of NSW's cultural or natural places or cultural or natural environments (or the local area)</i>	<p>Much like other gentlemen's estates on the North Shore of Sydney, the study area has the potential to provide insight into the life of the site's owner and other occupants.</p> <p>Archaeological remains from the study area have the potential to provide data relevant to the NSW historical themes of 'Environment—Cultural Landscape', 'Domestic Life' and 'Economy—Developing Local, Regional and National Economies'. Depending on their integrity and intactness, they could be significant at a local level.</p>

5.3.2 Statement of Historical Archaeological Significance

The study area has the potential to contain archaeological remains associated with the construction and use of the site from c1895 as a gentleman's estate until 1937 when it was purchased by the Church of England and converted for use as a school. Substantial or intact archaeological remains resulting from this phase of use, including associated artefacts, would be of local heritage significance for their historical and research values. Archaeological remains of the c1900 observatory that was constructed in the study area would be of local significance for its historical, technical and research values.

Archaeological remains that could clearly be associated with John St Vincent Welch (1847–1918), the businessman and politician who established Standish (now Pallister House) and reportedly designed the house, would be of local heritage significance for their associative value.

Areas of potential to contain historical archaeological remains are shown in Figure 5.1. Table 5.2 provides a summary of the types of archaeological remains expected to survive from each phase of site development and their level of significance.

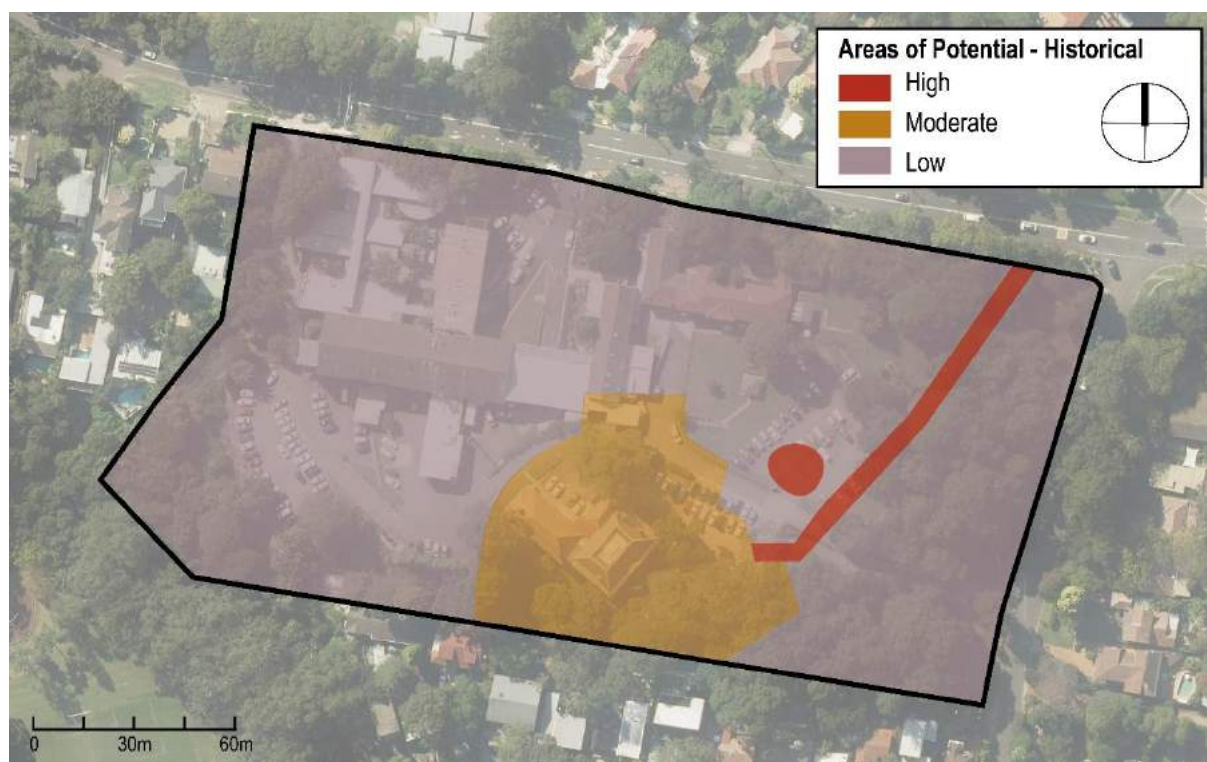


Figure 5.1 Plan of the study area showing assessed historical archaeological potential. (Source: SIX Maps with GML additions 2017)

Table 5.2 Summary of Archaeological Potential and Significance within the Greenwich Hospital Masterplan Study Area.

Phase	Types of Archaeological Evidence	Location	Likelihood of Survival	Significance
Phase 1 (1788–1882)	Evidence of land clearing and farming such as: <ul style="list-style-type: none"> • burnt tree boles; and • fenceposts. 	Eastern half of study area	Low	None
Phase 2 (1883–1937)	Former structures and outbuildings associated with management of Standish Estate including stables and garage, men's quarters, gardener's cottage, and aviary. Potential remains might include: <ul style="list-style-type: none"> • postholes; • wall footings; • floor surfaces; and • artefact deposits. There is low potential for sealed artefact deposits such as rubbish pits or underfloor deposits.	North and west of Pallister House	Low	Local

Phase	Types of Archaeological Evidence	Location	Likelihood of Survival	Significance
Phase 2b (1900–1937)	Remains of the observatory could include building footings, demolition material and associated artefacts.	Potentially beneath the carpark between Pallister House and Bluegum	High	Local or potentially state, depending on nature and extent of any remains
Phase 2 (1883–1937)	Landscape elements would include: <ul style="list-style-type: none"> • ephemeral evidence associated with garden beds (such as introduced soils) and defunct footpaths; and • more substantial evidence (postholes, garden kerbing and gravel, clay, stone or brick surfaces) associated with trellises, pergolas, walkways and the carriage way. 	Eastern half of the study area—in particular in open areas such as the carpark and gardens between Pallister House and Bluegum	Moderate–high	Local, depending on the nature and extent of any remains

5.4 Endnotes

- ¹ Birmingham, J and Wilson, A, Regentville Archaeological Project 1985–1993, Final Report to the National Estate Grant Program, prepared February 1994; GML Heritage, Gledswood—Conservation Management Plan, report prepared for Caldla Pty Ltd, September 2011; Edward Higginbotham and Associates Pty Ltd, Nineteenth Century Rural Homestead Complexes in the Hunter Region, Historical Archaeological Survey, report prepared for Clive Lucas Stapleton & Partners, September 2012.
- ² Heritage Branch Department of Planning, 2009, *Assessing Significance for Historical Archaeological Sites and 'Relics'*, State of NSW, Heritage Branch, Department of Planning, p 3.

6.0 Archaeological Impact Assessment

6.1 Summary of Proposed Works

The proposed Greenwich Hospital masterplan development includes the following:

- demolition of the existing twentieth-century hospital buildings;
- retention of the state heritage listed Pallister House;
- construction of two senior living blocks, a residential care and hospital unit and two 'eco-villages' including two basement levels, a café and landscaped communal spaces;
- construction of new roads within the site, including extension of the current access routes from St Vincents Road and River Road;
- creation of new loading zones and parking areas within the site; and
- trenching for the introduction of new services or service trenches (if required; locations not indicated).

Proposal plans for these works are included as Appendix B.

6.2 Potential Impacts to the Archaeological Resource

The eastern half and a small section of the southwest corner of the study area have been assessed as having a moderate or high potential to contain either Aboriginal and/or historical (European) archaeological remains. A review of the proposed development plans has identified the following activities that are considered to have the potential to impact the archaeological resources within the study area.

- demolition of existing buildings;
- bulk earthworks to prepare the site for the new construction, including excavation for basement/s and site levelling to accommodate the new building footprints; and
- landscaping, new roads, services and other localised impacts.

6.2.1 Demolition and Initial Site Set-up

Demolition of the existing hospital buildings, removal and temporary diversion of existing services, and initial site set-up would have localised impacts to archaeological remains within the eastern half of the site. This could include remains of the original carriageway surface, and ephemeral features relating to the garden (post holes, garden soils, planter beds). As the potential for archaeological remains is expected to be low in the northern and western parts of the site, demolition works in these areas is unlikely to have any further impacts.

6.2.2 Construction Impacts including Basement Excavation

Excavation for the lower ground floor (basement) of the new hospital building would result in the complete removal of any archaeological remains within its footprint. This is likely to include remains associated with Pallister House such as the observatory, original driveway surface, aviary and garden

elements such as paths and garden beds, reducing their significance to none. This would also have an impact on any Aboriginal sites or objects that may exist in this area.

The western half of the site is considered to have limited potential for either Aboriginal or historical archaeological remains and construction of the senior living apartment buildings is unlikely to have any further impacts.

The senior living villas are in an area that has the potential to contain Aboriginal sites and excavation for the building footings would have an impact within the footprint of each building. There is a low potential for historical archaeological remains in this area and construction of these buildings would likely have no further impact on these remains.

6.2.3 Landscaping, Roads and Services

Landscaping, construction of new access roads and excavation for service trenches would result in localised impacts to archaeological remains in the eastern half of the study area within the footprint of these works. This may impact on areas assessed as having a moderate or high potential to contain Aboriginal objects. Within the footprint of the new hospital, excavation for the lower ground floor (basement) is likely to have completely removed any archaeological remains and any further works within the building footprint are unlikely to have an impact. Outside the building footprint, these works would have localised impacts on archaeological remains associated with Pallister House.

6.3 Mitigation Measures

6.3.1 Aboriginal Archaeology

The works associated with the proposed redevelopment of the site are likely to impact on areas of moderate to high Aboriginal archaeological potential. A program of archaeological investigations—including test excavation and, if required, salvage of all Aboriginal objects—should be undertaken in areas assessed as having moderate to high Aboriginal archaeological potential.

6.3.2 Historical Archaeology

Earthworks and construction of new roads, services and buildings could impact significant archaeological remains and relics within the study area.

To manage and mitigate the potential impacts to significant archaeological remains and relics, a program of archaeological investigation should be undertaken in conjunction with ground disturbance works in areas assessed as having historical archaeological potential. Archaeological investigations would be undertaken in accordance with an approved Archaeological Research Design (ARD) and could involve a combination of archaeological monitoring, testing and potential localised open area excavation.

It is recommended that a program of archaeological testing and salvage is undertaken prior to any ground disturbance in areas of high historical archaeological potential. Ground disturbance in areas identified as having moderate to low archaeological potential should be monitored by a suitably qualified archaeologist. The exact extent and duration of the archaeological investigations would be further refined during the preparation of an ARD for the study area.

6.3.3 Interpretation

The new hospital and aged care facility could consider including any significant findings from archaeological investigations in on-site displays or reading material for the enjoyment of residents.

Any interpretation, including the preparation of an interpretation strategy for the study area, should be inclusive of all aspects of the study area's cultural heritage. It would be beneficial for interpretation to be considered and implemented early in the design process for the site, to provide an integrated approach to design and finishes across the site.

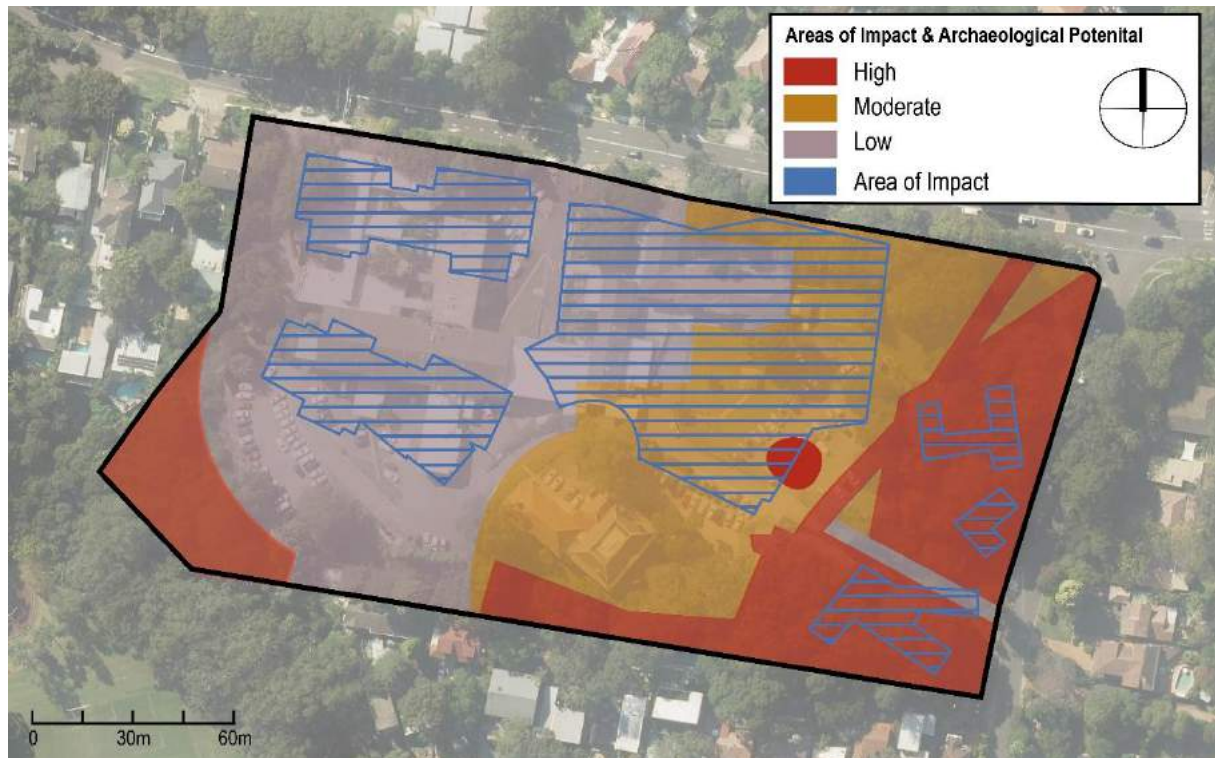


Figure 6.1 Map of the study area identifying areas of impact arising from the proposal development (blue outline) against areas of Aboriginal and historical archaeological potential. (Source: SIX Maps with GML additions 2017)

7.0 Conclusions and Recommendations

7.1 Conclusions

7.1.1 Aboriginal Archaeology

- The site inspection of the study area did not encounter artefacts or other evidence of Aboriginal sites.
- The environmental context of the study area and predictive models indicate that it is likely that Aboriginal objects could be located within the study area at Greenwich Hospital.
- The proposed demolition of existing hospital buildings and construction of a new residential care and senior living facility and hospital will impact areas with potential to contain Aboriginal objects.
- In order to proceed with the development, further assessment of the potential for Aboriginal archaeology is required.

7.1.2 Historical Archaeology

- The Greenwich Hospital site has the potential to contain significant intact archaeological remains associated with the construction of Pallister House and use of the site by John St Vincent Welch.
- Based on the generally moderate levels of disturbances, some parts of the study area have moderate to high archaeology potential.
- The archaeological remains associated with early land use as a gentleman's estate, including the remains of the observatory, would be of local significance. As such they constitute relics under the *Heritage Act 1977* (NSW) (Heritage Act).
- The potential historical archaeological resources within the study area have been assessed as having varied levels of research potential and archaeological significance depending on their date, state of preservation and ability to provide meaningful information about the site.
- Most of the proposed development would involve bulk earthworks and other ground-penetrating activities which would impact the areas of significant historical archaeological remains and relics which have been identified in this report.

7.2 Recommendations

7.2.1 Aboriginal Heritage

- Earthworks, construction of new roads, services and new buildings will impact areas with potential to contain Aboriginal archaeology. The proposed works cannot be characterised as 'low impact activities', and would not result in 'negligible or trivial harm' as defined by the Due Diligence Code. Further assessment of the study area is therefore required to ascertain whether or not Aboriginal objects exist on the Greenwich Hospital site, including in subsurface archaeological contexts. This further assessment will require the preparation of a full Aboriginal

assessment, with Aboriginal test excavation. The Aboriginal heritage assessment should be prepared prior to any other ground disturbance works taking place and would include:

- formal Aboriginal consultation, in accordance with the OEH consultation guidelines *Aboriginal cultural heritage consultation requirements for proponents*, 2010;¹
- preliminary assessment and preparation of an Archaeological Research Design (ARD) for archaeological test excavation;
- geomorphological assessment of the study area;
- formal field survey accompanied by members of the Aboriginal community;
- archaeological test excavation and reporting; and
- contextualisation of potential discovered sites within the intangible values of the cultural landscape through Aboriginal community consultation, in accordance with the Burra Charter.²

Note:

- If Aboriginal objects or features identified during the test excavation indicate that the proposed works will harm Aboriginal sites, an Aboriginal Cultural Heritage Assessment will be required that conforms to the *Aboriginal Cultural Heritage Consultation Requirements for Proponents*.³
- If no artefacts are found during the test excavation, an addendum report summarising results and Aboriginal community consultation undertaken should be completed.
- If the project is assessed as State Significant Development under Part 4, Division 4.2, of the EPA Act, an Aboriginal Heritage Impact Permit (AHIP) under the NSW *National Parks and Wildlife Act 1974* will not be required. In this case, it is recommended that archaeological work be undertaken in accordance with archaeological best practice and the archaeological Code of Practice.

7.2.2 Historical Archaeology

- A program of historical archaeological investigation should be undertaken prior to any ground disturbance works on the site.
- If the project is assessed as State Significant Development under Part 4, Division 4.2, of the EPA Act, the relic provisions of the Heritage Act would not apply. In this case, it is recommended that archaeological work be undertaken in accordance with archaeological best practice. This would involve investigation of any uncovered archaeological relics by applying established archaeological methodologies (cleaning, recording, note taking, photographing, planning, level taking) that would be outlined in an appropriate ARD specifically prepared for the study area.
- The results of archaeological test excavation and recording of the site should be presented in a succinct excavation report and used to inform future historical heritage management and interpretation measures, if appropriate, as part of the proposed development of the study area.
- If the project is not approved as State Significant Development, or if any ground disturbance works precede the determination period, the proposed works would be undertaken in

accordance with an excavation permit under Section 60 or an exception from the need for an excavation permit under Section 57 of the Heritage Act.

- Any retrieved historical artefactual material would be the responsibility of the owner of the site. This includes appropriate treatment of the artefacts, and their long-term storage in a safe and accessible place.
- In the event that intact state significant historical archaeological evidence, or unanticipated archaeological evidence was to be encountered during site works, works should cease and the NSW Heritage Division, OEH, should be notified immediately in accordance with Section 146 of the Heritage Act. Further assessment and/or approval may be required before works could recommence.
- A copy of this report and any other relevant reports subsequently prepared as part of this project should be sent to the NSW Heritage Division, OEH, for its records.

7.2.3 Interpretation

As cumulative impacts to the archaeological resource may occur during the development of the study area, there is potential to mitigate the loss of knowledge by implementing an interpretation strategy for the study area. This could include presenting the information gathered during the archaeological investigations to the residents of the residential care and hospital facility and the senior living accommodation. On-site interpretation could also be included in the landscape and other public spaces within the proposed new development.

7.2.4 General Recommendations

All contractors responsible for ground disturbance within the study area should be provided with a heritage induction conducted by a suitably qualified archaeologist prior to any works commencing. This induction would provide information regarding the nature and appearance of potential Aboriginal objects and historical archaeology within the study area. It would also advise contractors of the role of the archaeologist on site during archaeological investigations.

7.3 Endnotes

- ¹ Department of Environment, Climate Change and Water, 'Part 6—National Parks and Wildlife Act 1974', *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010*, Sydney.
- ² Australia ICOMOS Inc, *The Burra Charter: the Australia ICOMOS Charter for Places of Cultural Significance 2013*, Australia ICOMOS Inc, Burwood, VIC, pp 1–10.
- ³ Department of Environment, Climate Change and Water, 'Part 6—National Parks and Wildlife Act 1974', *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010*, Sydney.