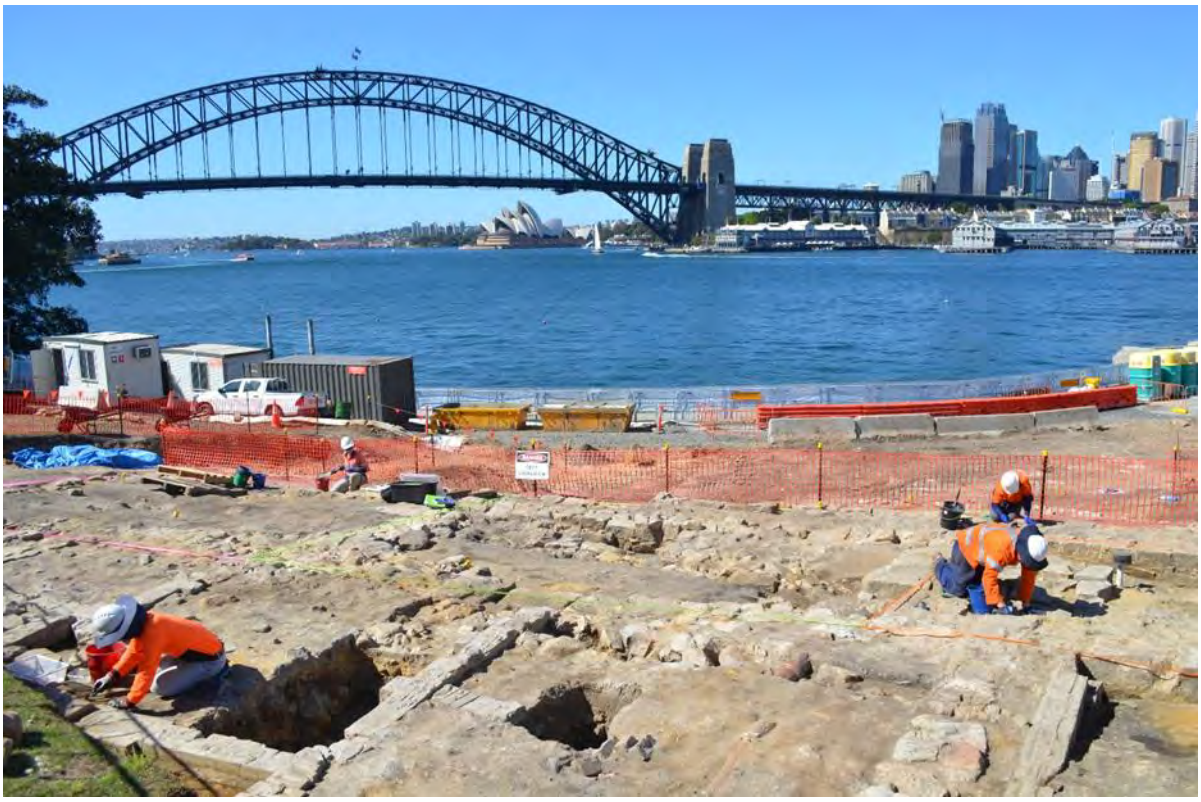
Archaeological Investigation
Temporary Works Site
Henry Lawson Reserve, Blues Point
May 2022



Sandstone foundations of mid-19th century cottages at Blues Point, Sydney (C&L 2018).

© Sydney Metro 2018

Document History

Version	Date	Doc. Control no.	Notes
Draft 1	18/02/2021	2021/1	Preliminary Draft for Sydney Metro information – 60%
Draft 2	13/5/2021	2021/2	Updated version for issue to Sydney Metro
Final Draft	21/12/2021	2021/3	Final Draft for final review by Sydney Metro
Final	11/05/2022	2022/1	Final for issue

© Sydney Metro 2018

Executive Summary

Project

The Sydney Metro & City Southwest project is a 30km-long new rail system from Chatswood to Sydenham and includes a new crossing beneath Sydney Harbour and new railway stations. The scope includes Tunnels and Station Excavation Works (TSE) - construction works associated with a number of stations, dives and shafts. The works at the Blues Point temporary site involve the excavation of a shaft to access the tunnels below to retrieve the tunnel-boring machines' (TBM) cutter heads and shields from the Chatswood dive and Barangaroo Station sites. Casey & Lowe were commissioned by AMBS Ecology and Heritage on behalf of John Holland CPB Ghella Joint Venture (JHCPBG) to undertake historical archaeological investigations at the Temporary Works Site, Henry Lawson Reserve, Blues Point. This Archaeological Investigation Report covers the findings of the open area historical archaeological excavation, monitoring and salvage program undertaken by Casey & Lowe at Blues Point Reserve site from 17 August 2018 to 27 November 2018.

The post-1788 occupation of the site began when Governor Macquarie granted 80 acres of land to William 'Billy' Blue in 1817. Blue was born in America, likely a 'freed African American slave' and was known as a convict, settler and ferryman in the colony with an ongoing relationship with the Macquaries. Three residential properties were built on the study area from the 1850s to mid-1860s and the area was later used for commercial and transport purposes with the construction of a horse ferry and depot of the NSW Fresh Food & Ice Co. in the early 1900s. The later phases of archaeological remains at the site were assessed as being of local heritage significance, while any substantial remains associated with Billy Blue's occupation were assessed as being of potential State significance.

Main Archaeological Findings

During the historical archaeological excavation sandstone footings of the three cottages were found, buried beneath a thick layer of imported fill material used to create the park/reserve in the 1960s. The archaeological evidence recorded included structural remains and artefacts from all three residential premises, evidence of the pre-European landscape, various reclamation and levelling events along the harbour shoreline, and the construction of drainage features, retaining and seawalls in both brick and sandstone. The following report discusses the archaeological evidence of the post-1788 occupation of the site in chronological phases, grouping various structures, fills and artefacts into time periods informed by the relevant historical context of the site.

The following is a summary of the main findings:

- Evidence of the underlying bedrock shelves, parts of which had been quarried and been incorporated into the later retaining walls.
- Ecological evidence including pollen and shells of the pre-1788 vegetation and marine environment and changes to the natural landscape during early British occupation.
- A natural soil profile including modified historic sands/topsoil throughout the northern part of the site.
- Sandstone wall footings of a pre-1857 two-roomed cottage (House 1) with a verandah and a contemporary circular cistern dug deep into the bedrock to collect water from the roof of the cottage.

© Sydney Metro 2018

- A substantial underfloor deposit was excavated from the back room of the two-roomed cottage (Room 2 of House 1). 4472 artefacts were found in this deposit, including 879 bone fragments, 173 pieces of shell and 3 human teeth. These artefacts were associated with everyday life of the residents and revealed the presence of women and children. The artefacts are considered to be typical of successful working-class and/or middle-class households of the Victorian period. There was evidence in care and taste in choosing objects, such as matching china, varied but inexpensive array of jewellery and personal adornments and toys and slate pencils indicate a high level of care and aspirations for children living in the houses.
- Two additional stone cottages were built by John Stevens in c.1869 abutting the eastern end of the earlier cottage. The construction of these cottages (Houses 2 and 3) required large amounts of raising and levelling fills to be brought onto the site and the structures to be angled differently to the original cottage to better utilise the topography of the site.
- Modifications and additions including rear rooms built of brick and yard surfaces were added to all three cottages during the late 19th-century. Rubbish pits, garden paths and services were all added to the yards of the houses throughout the early 20th century.
- A series of seawalls and retaining walls were used to secure and consolidate the reclamation of the foreshore and provide access to the harbour, with evidence of later modifications, relocation and realignments to the earlier seawalls showing the changing use of the foreshore. A weighbridge and road sloping down from Blues Point Road to Stevens' jetty were created to allow vehicles to access the lower levels of the site.
- Despite the increasing commercial and transportation uses of the site by the NSW Fresh Food & Ice Co in the early 20th century, the cottages remained in use until the 1940s when they were demolished.
- Finally, thick layers of bulk fills were brought onto the site in the 1950s and 1960s to create a public park.

© Sydney Metro 2018

Table of Contents

VOLUME 4: Registers & Artefact Catalogue

SITE ARCHIVE (DIGITAL ONLY)

1. Introduction

1.1 Background

The Sydney Metro & City Southwest project is a 30km-long new rail system from Chatswood to Sydenham and includes a new crossing beneath Sydney Harbour and new railway stations. The scope includes Tunnels and Station Excavation Works (TSE) - construction works associated with the following stations, dives and shafts (Figure 1.1).

- Chatswood
- Artarmon
- Crows Nest
- Victoria Cross (North Sydney)
- Blues Point
- Martin Place
- Barangaroo
- Pitt Street
- Waterloo
- Marrickville

The Project was approved by the Minster for Planning on 9 January 2017 subject to a number of Conditions set out in Critical State Significant Infrastructure Sydney Metro & Southwest Chatswood to Sydenham Infrastructure Approval (Application no. SSI 15_7400) (Project Planning Approval). Tunnelling works would remove any historical archaeological remains that may be present at each of the sites.

John Holland CPB Ghella Joint Venture (JHCPBG) undertook the TSE works and commissioned AMBS Ecology & Heritage (AMBS) to manage the heritage provisions for the project. Casey & Lowe were commissioned by AMBS Ecology and Heritage to undertake historical archaeological investigations at the Temporary Works Site, Blues Point Reserve, Blues Point, Sydney. In June 2018 Casey & Lowe prepared the *Archaeological Method Statement* (AMS) for the temporary site in Blues Point Reserve. In accordance with CoA E17, the *Archaeological Method Statement* provided an updated strategy to implement the earlier AARD for the Blues Point Reserve site. The works at the Blues Point temporary works site involve the excavation of a shaft to access the tunnels below to retrieve the tunnel-boring machines' (TBM) cutter heads and shields from the Chatswood dive and Barangaroo Station sites removing or impacting all archaeology across the footprint of the site. In addition, a temporary ramp would be built into the harbour at the edge of the Blues Point foreshore to allow the use of a barge (Figure 1.2). Casey & Lowe also commissioned Cosmos Archaeology, on behalf of AMBS and the Joint Venture, to undertake a maritime archaeological survey of the underwater area.[1]

The later phases of archaeological remains at the site were assessed as being of local heritage significance, while any substantial remains found to be associated with Billy Blue's occupation would be of potential State significance. The AMS noted that Billy Blue lived nearby rather than on the current site. Recent research identified new plans showing Blue's house and the subdivision of this estate (Figure 2.7, Figure 2.8).

Open area archaeological excavation at the Blues Point temporary works site began on the 17th August 2018 and were ongoing until November 2018. The areas with archaeological remains included three houses constructed in the northwest corner of the site, land

[1] The results of the maritime archaeological survey are found in Appendix 4 of the AMS, C&L June 2018.

© Sydney Metro 2018

reclamation and the construction of retaining walls and a road to Steven' jetty in the centre of the site, maritime infrastructure and different phases of construction and relocation of former seawalls in the southern portion of the site. During this time AMBS Ecology and Heritage undertook the salvage excavation of the Aboriginal archaeological remains. This report only provides details of the historical archaeological investigation.

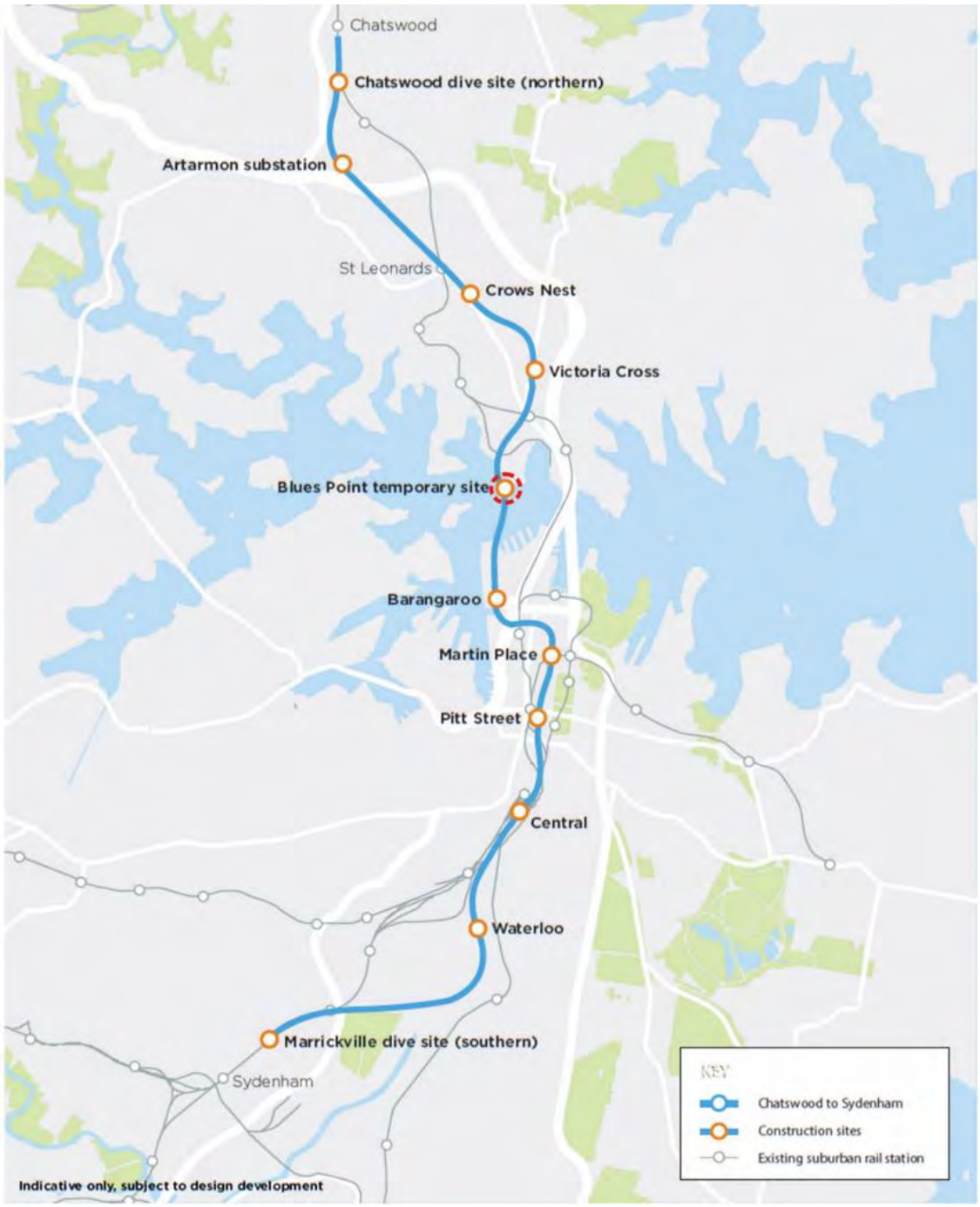


Figure 1.1: Project overview with Blues Point Temporary Site circled in red (Sydney Metro Transport for NSW).

1.1.1 Previous Reports

In June 2018 Casey & Lowe prepared an *Archaeological Method Statement* (AMS) for the temporary site in Blues Point Reserve. In accordance with CoA E17, this Archaeological Method Statement provided an updated strategy to implement the earlier AARD for the Blues Point Reserve site. It also provided additional information missing from the AARD in response to the Heritage Council submission on the PIR and the Department of Planning & Environment - Secretary Assessment Report 2016: 35-38, notably further historical research and more detailed analysis of archaeological potential undertaken for the AMS.

Other reporting for this project included:

- **October 2016a**, *Sydney Metro City & Southwest Chatswood to Sydenham: Historical Archaeological Assessment & Research Design*, report to Jacobs/Arcadis/RPS, Final 14102016.
- **May 2016b**, *Artefact Heritage* prepared the *Chatswood to Sydenham Environmental Impact Statement, Technical Paper 4: Non-Aboriginal Heritage Impact Assessment*, report to Jacobs/Arcadis/RPS, May 2016.
- NSW Government Department of Planning & Environment, 2017, *Critical State Significant Infrastructure, Sydney Metro City & Southwest Chatswood to Sydenham Conditions of Approval*, for Transport for NSW, 9 January 2017.
- NSW Government Transport for NSW, 2016, *Sydney Metro City & Southwest, Chatswood to Sydenham Design Guidelines,* September 2016.
- NSW Government Transport for NSW, 2016, *Sydney Metro City & Southwest, Chatswood to Sydenham Environmental Impact Statements*, May 2016.

1.2 Site Location

The Blues Point temporary works site is located at the southern end of Blues Point Road within the Blues Point Reserve and incorporates Henry Lawson Reserve. It is bounded by Henry Lawson Avenue to the north Blues Point Road to the west and Blues Bay to the south covering an area of 2100 square metres (Figure 1.2, Figure 1.3). The site was used to retrieve the Tunnel Boring Machine (TBM) cutter head and shields and involved the excavation of a shaft to the tunnels below, resulting in the removal of approximately 8,000 cubic metres of spoil.

Casey & Lowe divided the study area into two excavation areas: the northern third of the site (which included Stevens' cottages) was named Area A; and the central and southern parts of the site designated Area B (Figure 1.4). Some testing was undertaken in the north eastern portion of the site to determine whether remains of George Barnett's c.1870 boat-building workshop survived and warranted archaeological investigation, however given that no archaeological remains were identified and there were only minimal impacts to the ground levels from the proposed works in this area, no open area salvage excavation was undertaken within the northeast part (Figure 1.4, Figure 1.5).

Prior to commencement of the works the barge location was the subject of a maritime archaeology survey which found no maritime archaeological remains were located within the footprint of the barge location and identified there were no significant heritage issues or

impacts associated with the proposed works, therefore no maritime excavation or recording or management was required.[2] Casey & Lowe commissioned Cosmos Archaeology, on behalf of AMBS and JHCPBG JV, to undertake a maritime archaeological survey of the underwater area, the results of which are referred to in text and provided in full in the AMS (Appendix 4).

Figure 1.2: Location plan showing the Blues Point subject site outlined in red and barge and ramp in yellow. Six Maps 2017.

[2] Cosmos Archaeology 2018.

Figure 1.3: Location plan showing the study area outlined in red. The yellow outline is the proposed ramp with the location of the barge. SIX Maps, 2018.

© Sydney Metro 2018

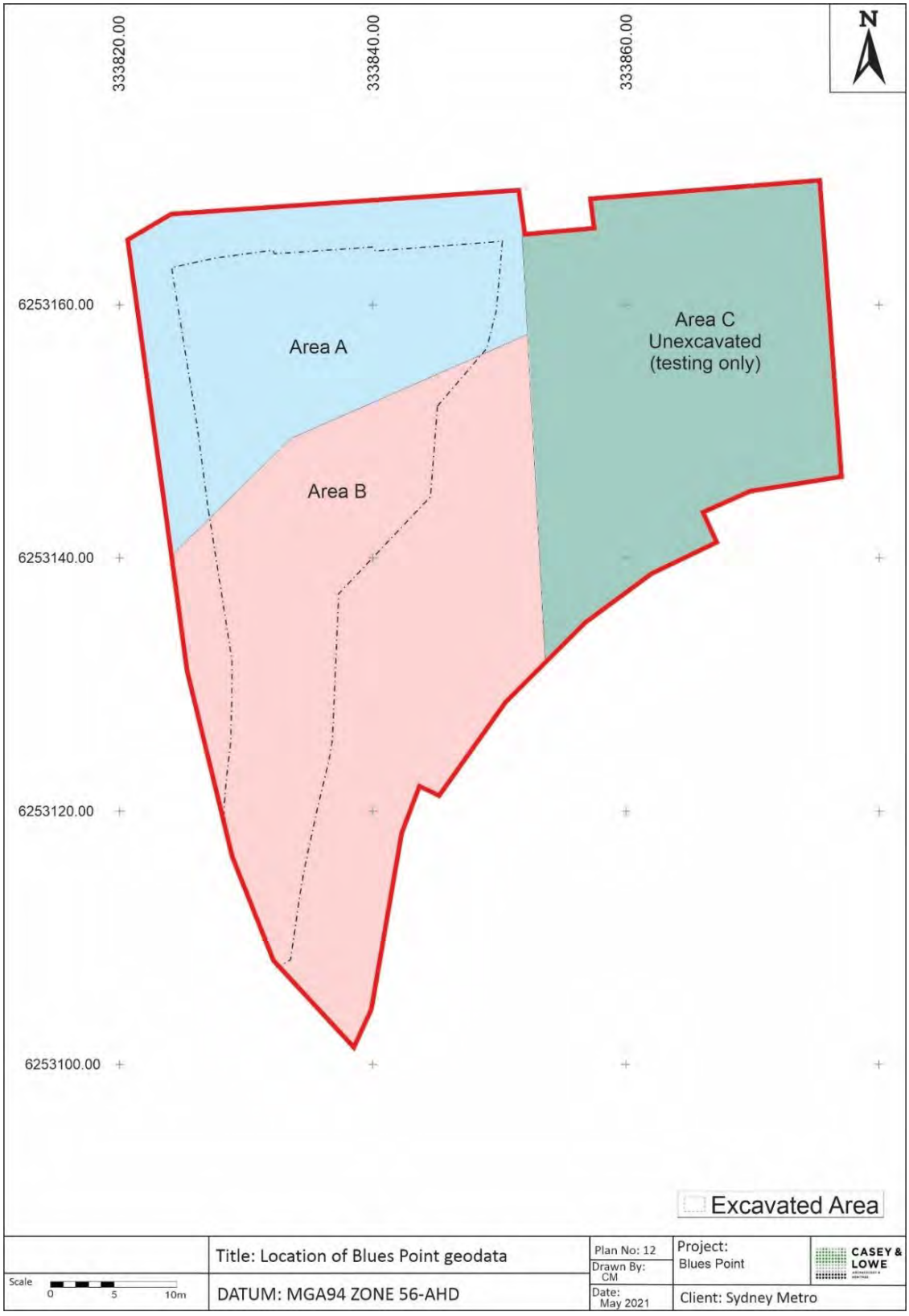


Figure 1.4: Study area plan, with an accurate site location, scale, north arrow and geo-referenced data.

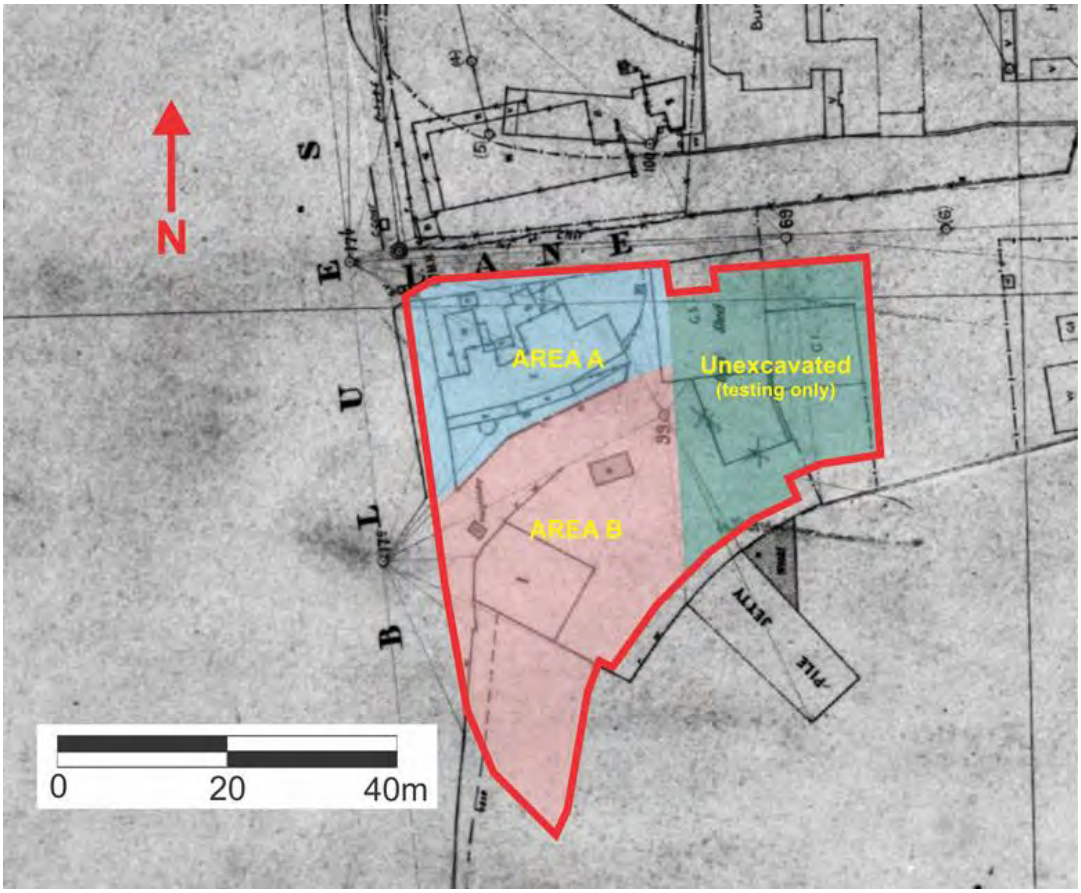


Figure 1.5: The location of the study area outlined in red overlaid onto the North Sydney sewer survey dated 1891. For the archaeological excavation the site was divided into two areas (Area A and Area B). PWDS 1544-S901 Sydney Water with Casey & Lowe annotations.

1.3 Statutory Context

The Project was approved by the Minster for Planning on 9 January 2017 subject to a number of Conditions set out in Critical State Significant Infrastructure Sydney Metro & Southwest Chatswood to Sydenham Infrastructure Approval (Application no. SSI 15_7400) (Project Planning Approval). Documentation for the project includes a *Non-Aboriginal Impact Assessment* (EIS Technical Paper 4) and *Sydney Metro Historical Archaeological Assessment and Research Design Report* (AARD), both prepared by Artefact Heritage. Minister's Condition of Approval (CoA) **E17** refers to the pre-excavation reporting requirements prior to construction:

> The Archaeological Assessment Research Design Report (AARD) in the PIR must be implemented. Final Archaeological Method Statements must be prepared in consultation with the Heritage Council of NSW (or its delegate) before commencement of archaeological excavation works. The final methodology must:
>
> (a) provide for the detailed analysis of any heritage items discovered during the investigations;
>
> (b) include detailed site specific archaeological management and artefact management strategies;

> (c) include cored soil samples for soil and pollen for the Pitt Street site within the Tank Stream Valley; and (d) provide for a sieving strategy.

In accordance with CoA E17, this Final Archaeological Method Statement provided an updated strategy to implement the earlier AARD for the Blues Point Reserve site.

> Minister's Condition of Approval (CoA) **E18** required the nomination of suitably required Excavation Director to oversee archaeological excavations and provide advice on archaeological issues. This condition also requires final reporting within two years of the completion of the archaeological excavations for the project: Before excavation of archaeological management sites, the Proponent must nominate a suitably qualified Excavation Director who complies with the Heritage Council of NSW's *Criteria for Assessment of Excavation Directors* (July 2011) to oversee and advise on matters associated with historic archaeology and advise the Department and OEH.
>
> Where archaeological excavation is required, the Excavation Director must be present to oversee excavation and advise on archaeological issues. The Excavation Director must be given the authority to advise on the duration and extent of oversight required as informed by the provisions of the approved AARD and Excavation Methodology.
>
> A final archaeological report must be submitted to the Heritage Council of NSW within two (2) years of the completion of archaeological excavation on the project. The report must include information on the entire historical archaeological program relating to the CSSI.

The qualified excavation directors identified to the Heritage Council of NSW were:

- Primary Excavation Director: Dr Mary Casey
- Secondary Excavation Director; Dr Amanda Dusting (initial works)
- Secondary Excavation Director: Ms Rhian Jones (main archaeological program)

All works were undertaken in accordance with paragraph two of this condition. This archaeological report is submitted for completion of archaeological works at the subject site.

Conditions E19 (Unexpected Heritage Finds Procedure) and E20 (Archaeological Relics Management Plan) did not need to be implemented for this project.

1.4 Impact of Temporary Works & *In Situ* Archaeology

As per the statutory context discussed above, the proposed construction works required salvage of the archaeological resource of the site where impacts were anticipated. In areas where either archaeological remains were not encountered or there were no assessed impacts archaeological salvage was not required. There is potential for some *in situ* archaeological remains to remain within the study area, in the southern portion of the site (south of the southern retaining wall) (Figure 1.6). Once the finish level of RL 2.8m was reached no further excavation was required for the temporary civil works below that depth. Machine excavation of contamination test trench (TT 01, Figure 4.76) in this area exposed deeper fills and deposits including reclamation fills and beach sands. With no further investigation required these fills and deposits were retained *in situ*.

The eastern half of the site also has potential for *in situ* archaeology. This area was outside the archaeological salvage excavation as there were limited impacts required as part of the temporary civil works. A 10m buffer zone was placed around the extant tree. Within the buffer zone the ground level was raised for placement of temporary amenities (Figure 1.7). West of the 10m buffer zone the ground level was lowered 200mm for the installation of a concrete pad for storage (Figure 1.7). Monitoring of machine excavation of two test trenches (300mm wide) was undertaken west of the buffer zone by AMBS as part of the Aboriginal archaeology program. The trenches reached depths of 1.3m to 1.5m but only exposed bulk

rubble fills associated with ground raising and levelling for the public park in the 1960s leaving potential for *in situ* archaeological remains at deeper depths below the 20th-century bulk fills.

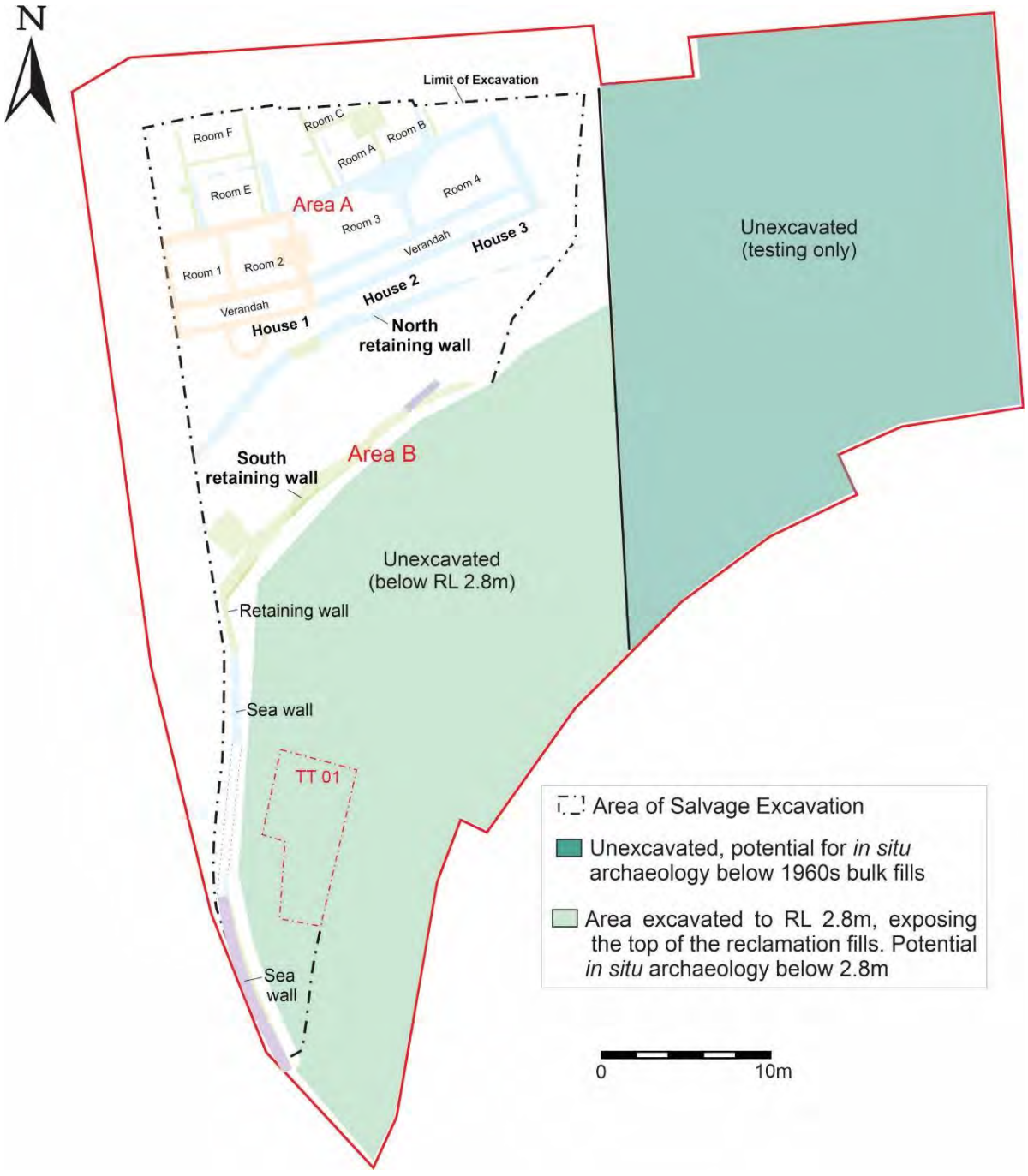


Figure 1.6: Potential for *in situ* archaeology (light green) in the southern part of the site as excavation below RL 2.8m was not required. The eastern portion (dark green) also has potential for in situ archaeology below the 1960s bulk fills.

© Sydney Metro 2018

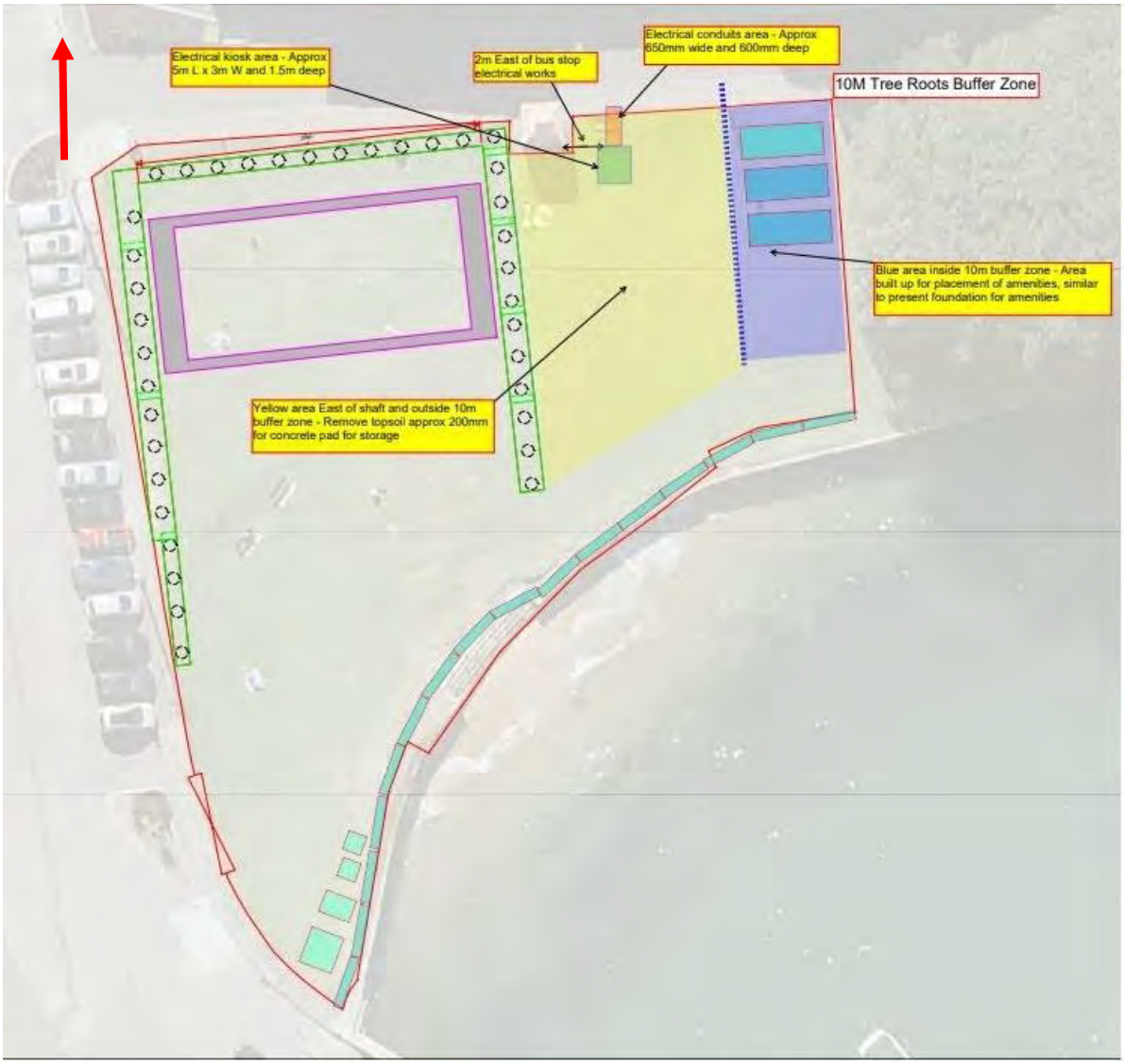


Figure 1.7: Location of temporary works within the eastern portion of the site at Blues Point including annotations of the impacts from the temporary works. Joint Venture.

1.5 Heritage Significance

The initial Statement of Heritage Significance from the *Sydney Metro Archaeological Assessment and Research Design* report was compiled by Artefact Heritage in October 2016.[3] This report was based on limited historical research. An updated Statement of Significance from the *Archaeological Method Statement* was prepared by Casey & Lowe in June 2018 and is provided below. As part of finalising an archaeological program it is important to review the original Statement of Significance and determine if it provided a reasonable assessment of significance for the impact of the project. Following completion of

[3] Artefact, 2016a PIR AARD: 130-131

the archaeological program and reporting it is confirmed that this statement adequately identified the potential and significance for the subject site and does not require updating.

1.5.1 Statement of Heritage Significance (Casey & Lowe June 2018)

The Blues Point temporary site has the potential to contain a number of phases of archaeological remains relating to the development of the area and dating from Billy Blue's ownership (1817-1839) to the early 20th century. Physical remains relating to Billy Blue's occupation might include a seawall, jetty, slipway, evidence of land clearance and cultivation, and structural remains of a cottage which may date back to Blue's lifetime. Later phases would include archaeological remains associated with structures relating to the vehicular horse ferry wharf and other wharves, jetties, seawalls, slipways and other boat-building operations. These remains would have potential to address a range of research questions relating to:

- Residential housing and material culture
- Landscape archaeology
- Shipbuilding
- Maritime infrastructure
- Industrial archaeology

Response to these research questions would allow for comparative analysis with Darling Quarter, Darling Harbour Live, Barangaroo South, Barangaroo Headland, boat-building sites in Balmain, and other North Sydney archaeological sites. The remains are typically representative of smaller-scale maritime sites around Sydney Harbour but they are also quickly disappearing due to the massive redevelopment of the Sydney foreshore.

Substantial remains associated with Billy Blue's occupation would be of State significance, whereas other remains dating from the 19th and early 20th centuries would be of local significance. Evidence for the natural foreshore and maritime remains are also likely to be present and would be of local significance.

1.5.2 Revised Statement of Heritage Significance (Casey & Lowe May 2022)

The archaeological remains within the study area were well-preserved, with features from all phases of development of the site from the pre-1788 landscape to the creation of the mid-20th century park identified and recorded. The majority of the archaeological resource was associated with the three residential properties on the site; the earliest cottage was constructed pre-1857 and contained a substantial underfloor deposit, with two other cottages added in c.1869. Evidence of the natural landscape including bedrock, natural soils, pollen and shells were found and sampled. Multiple phases of seawalls, retaining walls, reclamation and levelling/raising fills were recorded, however no substantial or readily interpretable remains of the maritime, transport or industrial uses of the site were identified.

No substantial remains could be firmly associated or linked with Billy Blue's occupation of the site; any such remains were originally assessed as being of State significance. The archaeological remains identified, recorded and analysed at the Blues Point site answered a number of important research questions and generally contributed to our understanding of both the development of the North Shore and comparative sites around the harbour foreshore at a level of local significance, in keeping with the original assessment of heritage significance.

© Sydney Metro 2018

1.6 Research Questions

A series of archaeological questions and themes were developed by Casey & Lowe and form the basis of overarching theorised Research Questions discussed below. These are based on 25 years of developing research frameworks for urban archaeological programs in Sydney CBD, Pyrmont, Surry Hills and Parramatta. The Response to Research Questions is addressed in Section 6.0 of this report.

1.6.1 Research Framework

An archaeological research design is:

> A set of questions, which can be investigated using archaeological evidence and a methodology for addressing them. A research design is intended to ensure that archaeological investigations focus on genuine research needs. It is an important tool which ensures that when archaeological resources are destroyed by excavation, their information content can be preserved and can contribute to current and relevant knowledge.[4]

Casey & Lowe identified an appropriate set of research questions based on excavations of similar sites within the inner city of Sydney as well as elsewhere, such as Pyrmont, Darling Harbour, Kirribilli and Parramatta. The research questions, excavation methodology and artefact cataloguing and analysis provides solid strategies for individual site analysis, as well as comparative analysis and identification of high-level research questions.[5]

1.6.2 Residential Housing and Material Culture

These questions are developed from investigating the archaeological remains at the CSR site (1996), and were further developed for Union & Edward Street, Pyrmont (2004), 19-41 Reservoir Street, Surry Hills (2005) and Darling Quarter (Walk) 2008-2012. These have been found to provide a solid basis for exploring residential housing in a range of working-class and lower middle-class environments. This discussion starts with taphonomic questions and then builds on them with more theorised archaeological questions.

- Is there evidence for the nature of 19th-century housing in this part of Blues Point?
- What evidence is there for the standard of living enjoyed by the earliest residents? Is there artefactual evidence for different standards of living between the houses occupied on the early manufacturing sites and workers housing?
- Is there evidence for cottage crafts or other unrecorded professions or works in the area?
- Has evidence for mid 19th-century early industry survived along the foreshores?

The material culture associated with the 19th-century occupation of North Sydney has the ability to inform us about day-to-day issues associated with the lives of the local residents. The material culture can provide information on living standards, consumer choices, construction of gender identity and the nature of childhood.

An important aspect of the analysis of the archaeological remains from this study area is the opportunity it provides for a comparative examination of the sets of archaeological evidence from a few individual households and the houses as part of a larger neighbourhood. This is a focus of the overall analysis. It requires a comparative analysis of the few houses within

[4] Heritage Council 2009: 35

[5] Please note this section is the Intellectual Property of either Casey & Lowe or Dr Mary Casey.

the site or specific context, such as cesspit deposits, to each other. This is facilitated by the archaeological methodologies established for comparative analysis by Casey & Lowe which includes such things as a ceramic pattern series, and the cataloguing process which is designed to facilitate a comparative analysis of sets of data through using criteria such as minimum vessel counts.[6]

Therefore, the material culture of the Blues Point site adds to our understanding about the cultural, social and economic influences on the residents of North Sydney, and how these influences affected their behaviour, as manifested through their choices about:

- Where activities were undertaken within a house?
- What type of activities were undertaken within a house:
  - what, how and where to eat,
  - what to wear,
  - what was acceptable recreation for adults and children within working-class homes?
- What to buy to provide an appropriate expression of the lives of a resident on this area, both as expression of personal and class identity?
- Other relevant questions will be addressed as they arise.

These questions mostly focused on urbanisation, material culture of consumerism and gender identities, childhood and women's lives in the home. These are currently important questions feeding archaeological research designs.

It should be noted that the archaeological evidence may provide us with a range of information we are not expecting and the research questions are likely to evolve depending upon the type of evidence and artefacts found at the site.

1.6.3 Boat Building[7]

One of Governor Phillip's instructions for the foundation of Sydney was that he should '..not on any account allow craft of any sort to be built for the use of private individuals..'.[8] The primary reason for this was to ensure that Sydney did not become a centre of trade and threaten the monopoly of the East India Company. The first British vessel built in Sydney was The Rose Hill Packet in 1789 at Underwood's boatyard on the Tank Stream at Circular Quay.[9] This vessel, however, was a Government-owned craft and was the first Parramatta River ferry. It was commonly known as The Lump because '...as from the quantity of wood used in her construction she was a mere bed of timber'. This observation is less a criticism of the skills of the shipbuilders but on the overcompensation in the construction due to the as yet unknown physical properties of the local timbers.

With the establishment of satellite settlements on the Hawkesbury River and Norfolk Island, the Government found it necessary to establish a yard where ships could be built and repaired. This started on the western side of Sydney Cove (Circular Quay) in 1796. This was the first formal shipyard in Sydney. A second, private, shipyard named Underwood's yard

[6] Casey 2004.

[7] This section has been adapted from material written by maritime archaeologist Cos Coroneos, Cosmos Archaeology for Casey & Lowe 2010.

[8] Watson 1919: 97.

[9] Watson 1919: 98.

was built around four to five years later on the western shores of Sydney Cove.[10] Another yard, owned by Campbell & Co., was operating around 1810.

Up until 1813, no vessel had been built in the colony of New South Wales without the permission of the Governor.[11] After that date this restriction, and the restriction to trade beyond the limits of the colony, was removed which allowed for unhindered development of the Sydney shipbuilding industry. In 1833 the Government Dockyard, on the western side of Sydney Cove, was closed and as the upper part of the Cove silted up the focus for shipbuilding moved westwards to Darling Harbour (such as the Cuthbert, Barclay and Corcoran yards), Johnstons Bay and Pyrmont (such as the Thomas Chowne, J W Russell and Samuel Charles yards).[12] The government continued its direct involvement in the industry with the repair of the HMS Blanche in 1839 at Cockatoo Island, which employed 80 to 100 shipwrights.[13]

In the 1830s, with the increasing frequency of settlements along the coast north of Sydney, there was an increased demand for coastal shipping. This in turn led to a need for smaller tonnage vessels. Shipyards were also constructed along the major rivers of the Central and North Coast where good quality timber (cedar) was easily accessible. Newly launched vessels for these yards were loaded up with this timber and shipped to the main shipyards in Sydney. Australian-built vessels in the 1830s to 1840s were less expensive to build than British vessels, however, North American-built vessels were starting to appear on the market and these were considerably cheaper than the local product.[14]

Despite competition from American shipyards and no doubt stimulated by the Goldrush, by 1854 the colonial shipbuilding industry was at its peak. Associated with the yards were service industries as well as of course a substantial skilled and unskilled labour force. The most intensive land uses for shipbuilding occurred along the northern foreshores of Darling Harbour with boat and shipbuilders also being established in Pyrmont and Balmain. Most of the service industries, however, such as shipsmiths, anchorsmiths, block and mast makers, chandlers and sailmakers, were located on the eastern periphery of Darling Harbour.[15]

Shipbuilding was one of Sydney's, if not Australia's, earliest industries. Directly it employed a large workforce and ancillary industries. Its products, the ships, carried supplies and people to settlements that were being created along the coast. The availability of coastal shipping facilitated the increase in settlements. In turn the resulting increases in the volume of the goods and passenger trade required more shipping which led to the expansion of the shipbuilding industry in the 1840s and 1850s. Watson was not exaggerating when he stated in 1919, 'from the earliest days of settlement shipbuilding was commenced, and the development of the country was largely due to the locally built ships'.[16]

Corresponding with the increase in the number of vessels plying the southern and eastern coasts of Australia in the 1830s and 1840s was an unfortunate and disproportionate increase in the number of shipwrecks. The causes for this phenomenon have been sought in the

[10] Watson 1919: 100; 104.

[11] Proudfoot 1983:76.

[12] Watson 1919: 114.

[13] *The Australasian Shipping Record*, April/June 1994:90.

[14] Bach, J. 1976:76; Jeans 1974 60(3):158.

[15] Proudfoot 1983:73.

[16] Proudfoot 1983:96, quoting Watson.

© Sydney Metro 2018

dangers of a relatively unknown and unlit coastline, poor seamanship, building practices or the scarcity of quality materials (other than timber).[17]

With respect to the latter causes, the wrecks of early Australian-built vessels are rare, more often than not very poorly preserved, and as well as difficult to access for inspection.[18] The other source of archaeological information - early Australian shipbuilding sites - could provide some insights into the manner in which the vessels were constructed and the quality of their craftsmanship. Few archaeological investigations into Sydney shipyards from the 1830s to 1850s have been published or are otherwise available. Exceptions include Bass's shipyard in Barangaroo South (1830s-1853) and John Bell's shipyard (1840s-1875) Balmain.[19] On a national level the only early shipbuilding sites known to have been investigated in detail are the government yards in Port Arthur and Sarah Island. The earliest archaeological remains related to shipbuilding expected at the Blues Point temporary site are dated to the 1860s. There are therefore not among the earliest examples in Sydney but are still able to contribute to the understanding of this important industry in the later 19th century.

Specific Research Questions

Archaeological remains of boatbuilder George Barnett's premises, and possible boatbuilding premises of James Glover, should be examined to determine if they can reveal information about the variety and quality of boatbuilding that took place on the site over time. This in part can be answered by the examination of discarded fittings and tools on the site, as well as timber off-cuts. The arrangement of the work space such as the relationship of the slipway(s), sail loft, saw pits, forges and other features can say much about organisation and efficiency. It would be of interest to see if some features such as saw pits and forges were absent from the site as this would demonstrate the interconnectedness, or otherwise, of the boatyards with other local businesses. It is noted that often the archaeology of ship building is limited to ephemeral remains of the odd copper nail and part of a slip.

How did boat building change across the site and how did it relate to changing economic concerns of the colony with the development of the colonial economy with the shipping wool to Britain the Goldrush as well as the shipping to the northern coast of NSW?

1.6.4 Maritime Infrastructure[20]

Prior to Federation, much of Sydney's maritime infrastructure was held in private hands. These properties were built to suit the individual requirements of the private firms that owned them. In Darling Harbour, this cacophony of odd shapes and sizes led to congestion and inefficiencies on the waterfront. Though some individual larger firms may have fared well in this system, the economic benefits of the seaborne trade to the wider society were not fully exploited. Such concerns were raised by the residence of North Sydney in 1867.[21]

With the rapidly increasing dimensions of vessels, capital was needed to construct larger jetties with deeper berths was beyond the means of most of the jetty owners. The required sizes of these new jetties were such that a number of earlier facilities would need to be demolished before being replaced by a single jetty and the necessary cooperation between

[17] Coroneos, C. 1991:2.

[18] Bullers 2006.

[19] Casey & Lowe 201a, b.

[20] This section has been partially adapted from material written by Cos Coroneos for Casey & Lowe 2010.

[21] *Sydney Mail* 12 Jan 1867, 9.

jetty owners was not automatic. The inability to react quickly to changes in shipping technology would eventually see Sydney become a less competitive port of trade.

The opportunity for change and direct government takeover of much of Sydney's waterfront came with the appearance of the bubonic plague in 1900. The resumption of the Sydney waterfront at this time was a momentous event, which defined the character of shipping, commerce, the lives of those who worked on the waterfront and of Sydney Harbour itself for the new century. The catalyst for this change was the poor condition of the waterfront and the health risk it posed for the city's inhabitants. Interestingly, this does not seem to have immediately occurred at Blues Point. This is not surprising in the case of the public wharf but is notable with regards to its privately owned eastern neighbours. Area C was not resumed until 1911, and Area B was not resumed at all. Perhaps North Sydney was still to isolated and sparsely populated at the time to be considered a priority plague risk (or commercial interest), or perhaps the private wharfage in this area was considered to be more up to standard than those on the opposite side of the harbour.

The redundancy of this infrastructure with the construction of the Sydney Harbour Bridge in 1932 is also of interest. The site was transformed from an important transportation node to recreational space in a relatively short period of time as reliance on shipping and waterways was replaced by land transportation.

Specific Research Questions

The Blues Point site provides an opportunity to explore the transformation North Sydney's waterfront from the early 19th century to the construction of the Sydney Harbour Bridge in 1932. The focus of this theme is on the evolving nature of the maritime infrastructure, and the differences between public and private facilities. Of interest would be the comparison between the quality of public versus private infrastructure, both in materials and construction. For example, was turpentine, an excellent hardwood resistant to marine borers, consistently used? If lesser quality timbers such as ironbark were used as piles, were they copper sheathed (a protection against marine borers)?

- Documenting the quality of the jetties, seawalls and other maritime infrastructure constructed by private firms would provide insight into the attitudes of those firms.
- Can we determine why the horse and cart ferry platform was closed and removed soon after its opening in 1874? Was it replaced by a more successful design? Is there evidence that the 'uncoppered' wooden piles were unsuitable?
- What was the state of the public and private wharves at the time of bubonic plague and government resumptions at the beginning of the 20th century? Do the physical remains of the private wharves suggest why these facilities were not immediately resumed?
- Did high quality structures indicate confidence and a willingness to invest for the long term?
- Did poor quality and poorly maintained structures reflect a struggling owner or one that did not see it economically beneficial to build durable infrastructure on their property or lease? Did the maintenance and condition of the waterfront infrastructure drop off towards the start of the 20th century?
- If so, how much was this due to the 1890s depression and/or to owners suspecting that the government was considering resumptions?
- Is there any evidence of the pre-1850s maritime structures and how were they built?
- Other relevant questions will be addressed as they arise.

© Sydney Metro 2018

1.6.5 Industrial Archaeology

Blues Point has the potential to contain archaeological remains associated with industrial uses of the site, such as its use as a boatbuilding facility from c.1868 (discussed elsewhere), Stevens' operation as a timber merchant from the site from c.1885, its occupation by the NSW Fresh Food and Ice Company from c.1902, and other unrecorded industrial activities typical of a waterfront site. The questions relating to the industrial uses of the study area relate to both the technological nature of the site, the evidence for work place practices, and as issues of urbanisation and the spatial arrangement of work and living areas. A set of questions was developed by Casey & Lowe in 1995 for an iron foundry site in Pyrmont and also for a brickmaking area in Surry Hills on three different archaeological projects during the 1990s and in 2005.[22] These questions relate to the exploration of the layout of the industrial set up, and how work moved through the site. These have been explored successfully at the Darling Quarter and Barangaroo South archaeology projects and subsequent reporting. The type of research questions which would be used to address the potential industrial sites within the Blues Point temporary site are:

Specific Research Questions

- What can be determined of the spatial use of the workspace and identification of activity areas?
- Levels of technology evident in the various processes of the industrial activities undertaken?
- Evidence for the type of items produced by the individual company?
- Evidence for the working conditions of the staff?
- Were these exclusively male workplaces, if so, do they help us understand the construction of male gender roles and relationships?
- How the landscape or landform was transformed to allow for the operations of the factory or workshop, i.e., the casting of moulds in the ground, the creation of a mill pond or the construction of a building?
- Relationship between the workshop/foundry/factory and any associated residential accommodation:
    - How was the life in the residences affected by being in such close proximity to an industrial complex?
    - Is this relationship exemplified by the presence or evidence of pollution within close proximity to the house? In the case of the Bulwarra Road house the whole backyard was overlain with metal dross, suggesting that it was used as an extension of the adjacent industrial premises. The proximity of the foundry meant that there were no windows in the northern side of the house, the sunny side, so as to stop any smoke and soot on furnace firing days from entering into the house through the windows. Also, no washing could have been done on furnace firing days.
- Other relevant questions will be addressed as they arise.

1.6.6 Landscape Archaeology

The exploration of how the landform of Blues Point was altered between the 1830s and the early 20th century is interesting as it testifies to the need for more land in specific locations and to provide adequate drafts for shipping. The methods and means by which the landform was altered can tell us much about attitudes to waste and rubbish disposal, particularly the deposition of waste from other construction projects and harbour dredged sands.

[22] Casey & Lowe 1995: 4-5.

Specific Research Questions

- What was the nature of the original landform?
- Evidence for shells, such as cockles and oysters, and what plant species were found in this area?
- How has this part of North Sydney evolved over time?
- How many times was the landform remade within the study area?
- What different materials and means were used, and what was the depth of the reclamation at each stage? How different was this to the practices at other sites such as Darling Quarter, Barangaroo South, Darling Harbour Live and the KENS sites?
- Were the phases of reclamation successful or not?
- Were the different properties reclaimed at different times?
- Where did the reclamation fill come from?
- How was the new landform used?
- What was the relationship between the reclaimed land and the wharfage?
- Other relevant questions will be addressed as they arise.

1.7 Artefacts

A total number of 29 boxes of artefacts and samples, were recovered during the archaeological program as seen in Table 1.1. An overview of the artefact assemblage is presented in Section 5 of this report. The artefact catalogue is included in Volume 4. The artefacts from this site will be lodged with North Sydney Council as they are the owners of this site and therefore have ownership of the relics.

Table 1.1: Total number of artefact boxes by category.

Artefact Category / Samples	No. of Boxes
Ceramic	4
Metal	4
Glass	11
Miscellaneous	3
Building Materials	6
Soil and Pollen Samples	4
Organics	1
Animal Bone	1
Shell	1
TOTAL	**35**

© Sydney Metro 2018

1.8 Report Layout

This report is intended to respond to the standard conditions set by the NSW Heritage Council to produce a report presenting the results of an archaeological investigation in compliance with the conditions of approval. This approach is outlined in the AMS for the project. The report includes:

Executive Summary

Section 1: Introduction

Section 2: Historical Background

Section 3: Archaeological Investigation Methodology

Section 4: Results of the Archaeological Investigation

Section 5: Artefact Overview

Section 6: Response to the Research Design

Section 7: Conclusions and Recommendations

Section 8: References

© Sydney Metro 2018

1.9 Public Open Day

A heritage community or open day was held on Saturday 15th September 2018. This was co-ordinated by Sydney Metro in response to requests from the local community. The Open Day was held four weeks into the excavation so as to show the full extent of the archaeology before the site was handed over for civil works. Prior to the open day information signs were placed on the hoarding along Henry Lawson Avenue street frontage. As part of the Open Day information program a media release was issued by Metro allowing members of the community to sign up and attend a 'historic talk' at scheduled times (Figure 1.8). A fact sheet was provided to the public that was designed and produced by Metro (Figure 1.9). The archaeological team explained the archaeology and history of the site and showed artefacts to the general public (Figure 1.10 to Figure 1.13). A total 63 members of the community visited the site on the Open Day.

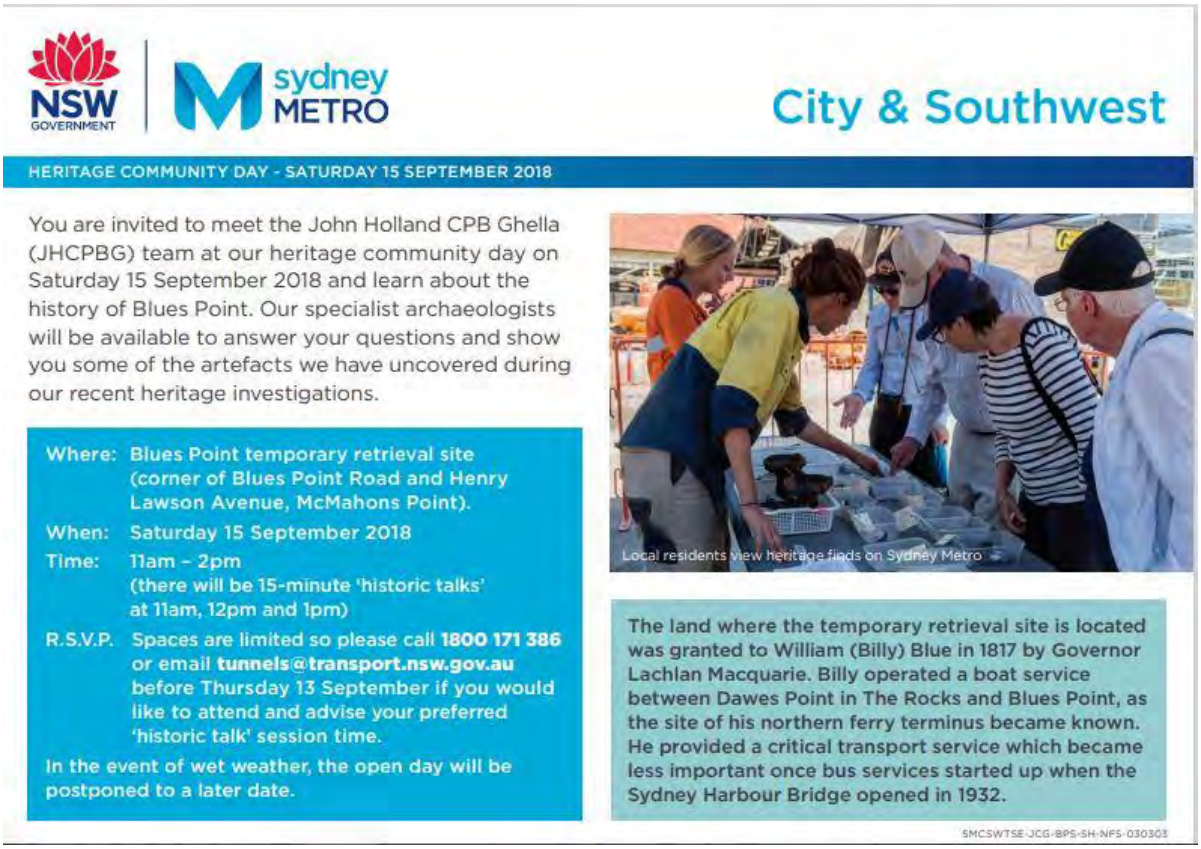


Figure 1.8: Invitation to the Heritage Community Day at Blues Point and to sign up for a 'historic talk' with the archaeologists. 15/09/2018.

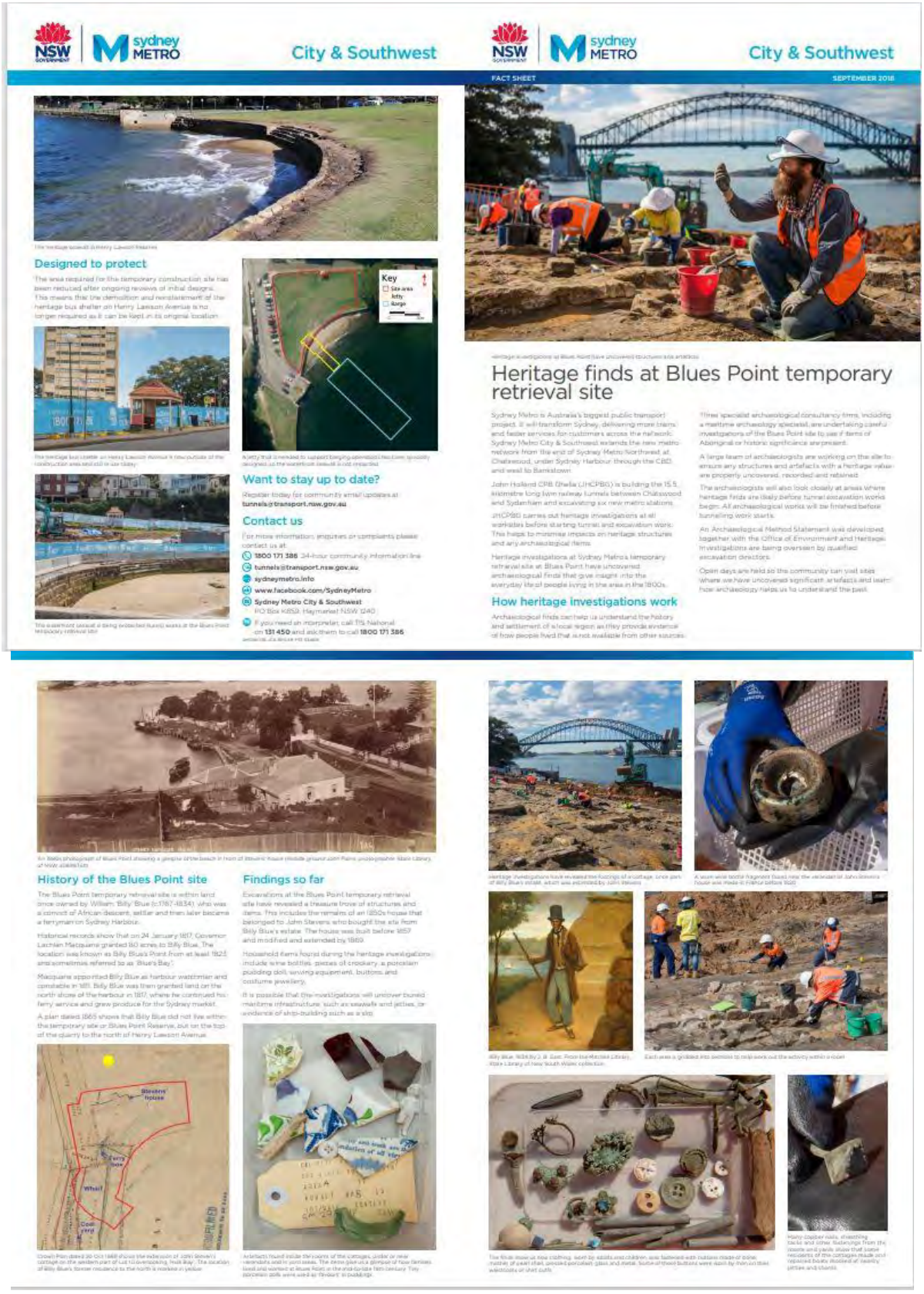


Figure 1.9: Fact sheet prepared by Sydney Metro for members of the public on the Open Day. 15/09/2018. Based on information provided by Casey & Lowe.

Figure 1.10: Members of the public looking onto the site at Blues Point and out over the harbour during the historic talk. The public stood behind jersey kerbs and temporary fences along Blues Point Road. 15/09/2018. DSC_4842.

Figure 1.11: Archaeologist explaining the site to members of the public. 15/09/2018. DSC_4837.

© Sydney Metro 2018

Figure 1.12: Setting up a display of artefacts for the Open Day. 15/09/2018. DSC_4855.

Figure 1.13: Archaeologists showing members of the public historic finds from the site. 15/09/2018. DSC_4839.

1.10 Authorship and Acknowledgements

1.10.1 Authorship

This report has been written by Jill Miskella, Senior Archaeologist, Casey & Lowe with contributions by Rhian Jones, Secondary Excavation Director and Dr Mary Casey, Primary Excavation Director. Archaeological excavation was undertaken by Dr Amanda Dusting (preliminary) and Rhian Jones (main stage), Secondary Excavation Directors, Casey & Lowe.

© Sydney Metro 2018

Jill Miskella was the site supervisors for Area A. Catherine Monroe, Casey & Lowe produced site plans. For details of excavation team see Section 3.4.

Artefacts were managed by Jane Rooke at the Metro South artefact processing facility in Rosebery. Artefact categories were catalogued by a number of artefact specialists (Table 1.2). The artefact overview (Section 5) was written by Dr Jeanne Harris based on the reports from the artefact specialists (Volume 2). Photographs of significant artefacts in this report were mainly photographed by Russell Workman working with Lilith Malcolm. Much of the original historical background was written by Caroline Plim with additional research by Sandra Kuiters and Mary Casey and has come from the *Archaeological Method Statement* (Casey & Lowe 2018). The response to the research questions was written by, Rhian Jones, Jane Rook, Dr Jeanne Harris and Dr Mary Casey. Jane Rooke, Hannah Flood, Cat Munroe and Tayla Newland provided assistance with finalising the report and managing report production and appendices. The report was edited and reviewed by Rhian Jones and Dr Mary Casey, Directors, Casey & Lowe.

Table 1.2: Post-excavation team and authors.

Name	Project Role	Responsible for Authorship
Dr Mary Casey	Primary Excavation Director	Review and contribution to various Sections and Responses to Research Questions
Jill Miskella	Site Supervisor	Sections 1 to 5
Rhian Jones	Secondary Director	
Dr Jeanne Harris	Artefact specialist	Artefact Analysis Results
Dr Jeanne Harris	Catalogue ceramic artefacts	Ceramic artefact report
Dr Jeanne Harris	Catalogue glass artefacts	Glass artefact report
Gary Marriner	Catalogue of building materials	Building materials report
Jane Rooke	Catalogue of miscellaneous artefacts	Miscellaneous artefacts report
Catherine Munro	Catalogue of metal artefacts	Metal artefact report
Hannah Flood	Catalogue of organics	Organics report
Dr Melissa Gibbs	Catalogue of shell artefacts	Specialist faunal report
Dr James Roberts	Catalogue faunal material	Specialist shell report
Mike Macphail	Analysis of pollen samples	Specialist pollen report
Catherine Munro	Production of final report plans	Produced final excavation plans and schematic interpretive plans

© Sydney Metro 2018

1.10.2 Acknowledgements

Jennie Lindbergh, AMBS, Ecology & Heritage

Chris Langeluddecke, AMBS, Ecology & Heritage

Cath Snelgrove, Senior Heritage Advisor, Sydney Metro

Robert Muir, Project Environment Manger, Metro South, John Holland CPB Ghella Joint Venture

Joint Venture Communications Team.

1.11 Abbreviations

These abbreviations relate to this report. Abbreviations for artefacts are found within the artefact catalogue, Volume 4.

AARD	Archaeological Assessment & Research Design
AMBS	AMBS Ecology and Heritage
AMS	Archaeological Method Statement
c.	circa
CoAs	Conditions of Approval
CCSA	Council of the City of Sydney Archives
CSSI	Critical State Significant Infrastructure
EIS	Environmental Impact Statement
FB	Field Book
JHCPBG	John Holland CPB Ghella Joint Venture
LGA	Local Government Area
Lot	Allotment
LPI	Land and Property Information NSW
ML	Mitchell Library (in the State Library of NSW)
nd	not dated
NLA	National Library of Australia
PIR	Preferred Infrastructure Report
PWD	Public Works Department
RL	Reduced level (in metres according to Australian Height Datum)
Sec	Section
SHR	State Heritage Register
SLNSW	State Library of NSW
SMH	*Sydney Morning Herald*
SANSW	State Archives of NSW
SSD	State Significant Development
SSI	State Significant Infrastructure
TBM	Tunnel Boring Machine
TfNSW	Transport for NSW
TSE	Tunnels and Station Excavation Works

© Sydney Metro 2018

2. Historical Background

2.1 Background

The following history for the study area has been summarised from the comprehensive history of the site in Section 3 of the *Archaeological Method Statement* (Casey & Lowe 2018). Artefact Heritage (2016a) had previously written a historic background for the study area but it did not include any land title research to understand the early development of the site.[23] Additional research on the specific lots within the study area was undertaken by Caroline Plim, historian, with additions by Sandra Kuiters for the development of the AMS. The historic plans in this report have been updated to reflect the final amended study area as shown in Figure 1.3 with annotations by Casey & Lowe.

2.2 Timeline

This timeline provides a brief summary of major events at the study area in conjunction with historic plans and images.

Table 2.1: Historic Timeline.

Date	Historic Event	Figure
1794	First land grants made by Lieutenant-Governor Francis Grose on the northern shore of Sydney Harbour.	
1811	William 'Billy' Blue (c.1767-1834), a convict, settler and ferryman on the north shore was appointed as harbour watchman and constable by Governor Lachlan Macquarie.	
1817	Macquarie granted Billy Blue land on the north shore of the harbour where he continued his ferry service and grew produce for the Sydney market. The location was known as 'Billy Blues Point' from at least 1823 and sometimes as' Blues Bay'.	
1839	A public wharf was dedicated at Blues Point offering a reliable link to the city.	
1840s	An etching of Blues Point dated to c.1840s shows a stone seawall and jetty in the study area.[24]	Figure 2.4
1850s	Much of the land on the north shore peninsula remained in the Blue family until the 1850s, after which it was progressively subdivided and sold.	
1857	Crown Plan shows a building was constructed within the study area along the east side of Blues Point Road. It also shows a 'public' wharf or pier and a jetty or slip jutting into the harbour.	Figure 2.5
1864	A building and fenced enclosures are shown on the east side of Blues Point Road. There were no other buildings in the study area at this time.	Figure 2.9
1867	Shipwright' John Stevens of the City of Sydney purchased the western part of the study area (Lot 10 Section E of the Blues Estate).	Figure 2.9

[23] Artefact, October 2016a, *Sydney Metro City & Southwest Chatswood to Sydenham, Historical Archaeological Assessment & Research Design*, report to Jacobs / Arcadis / RPS, pp 109-123.

[24] Available at http://www.photosau.com.au/StantonPictures/scripts/home.asp (accessed 29/1/18).

Date	Historic Event	Figure
1868	Mariner James Glover purchased the eastern part of Lot 10 Section E, part of which is included in the study area.[25]	Figure 2.9
1869	Crown Plan showing the extension of Stevens' cottage on the western part of Lot 10. The elongated, multi-occupancy dwelling built by Stevens appears to be divided into three residences, with a long verandah facing south.	Figure 2.10
1871	A boat builder's shed, leased by George Barnett, was constructed on Stevens' part of Lot 10. James Glover's part of Lot 10 remained undeveloped.[26]	Figure 2.12
c.1880	Stevens' applications to purchase reclaimed land adjacent to Lot 10 although land reclamation at Blues Point may have started as early as 1866. Stevens' reclamation of 19¾ perches (499 m²) of land between the high and low water marks was not finalised until 1885.	
1881	Crown Plan provides evidence of the residential and commercial development of Stevens' land and the steep topography between the land and the harbour. The survey shows Stevens' house as largely built of stone with brick additions and three outhouses confirming that the building incorporated two or three residences by this time. He did not live on this property himself. There is also a boat shed on Glover's part of Lot 10.	Figure 2.15
c.1885	From c.1885 Stevens operated as a timber merchant from the site and is thought to have been transporting timber and fuel from his wharf.	
1896	At the time of his death in 1896 his Blues Point 'Wharf Property' was commonly known as Stevens Wharf and included a jetty 'cottages, buildings and erections' extending over part of Lot 10 and the reclaimed allotments.	
1891	By 1891 alterations and changes had been made to the buildings or sheds on Stevens' and Glover's parts of Lot 10. A pile jetty and a timber wharf extended from the shoreline into the harbour. A weighbridge was positioned outside the western boundary of the site adjacent to Blues Point Road. Fencing separated the commercial and residential parts of the site.	Figure 2.19
1897	The Minister for Public Works approves for the construction of a vehicular or 'horse ferry' service, including a 'dock and landing' for ferries between Dawes and Blues Points.	
1902	The North Shore Ferry Service including a vehicular ferry was in service although the congested Milson's Point service still remained the principal ferry between Sydney and North Sydney.	Figure 2.21
1902	The New South Wales Fresh Food and Ice Company Limited announced the proposed establishment of a North Shore distribution branch on the waterfrontage known as Stevens' Wharf. The company proposed to construct 'a depot, with ice-house and other cool storage premises' at the Blues Point site.	
1914	In 1914 the vehicle dock at Blues Point was replaced with the aim of lessening the 'steep grade' and improving vehicle entry and exit points from the ferry	Figure 2.20
1923	Sydney Harbour Trust commenced plans to improve the docking facilities of the Blues Point Punt Service. The 1926 Survey plan shows the new vehicular ferry dock to the south of the study area.	Figure 2.22 Figure 2.23

[25] LPI Schedule.

[26] CP 130-574, 25 Sep 1871, LPI

Date	Historic Event	Figure
1932	Construction of the Sydney Harbour Bridge reduces demand for a vehicular ferry.	
1934	By 1934 the waterfront extending from Blues Point to McMahon's Point ferry jetty had for some years been utilised by Sydney Ferries Ltd 'as a depot for the company's idle ferries'.	
1937	Aerial photograph shows the houses originally owned by Stevens were still extant.	Figure 2.26
1943	Aerial photograph confirms the demolition of Stevens' houses and the workshop in the north-eastern corner of the site by this date. Sheds on the reclaimed part of the allotment are still extant but are not the same sheds as those depicted on the 1891 plan. Stevens' jetty remained extant.	Figure 2.29
1960	Cumberland Council acquire the study area	
1971-2018	Site placed under the control of North Sydney Council for use as a public park, reserve or recreation space	Figure 1.3

2.3 Aboriginal Background

The original landscape context of Blues Point is likely to have consisted of a rocky shoreline environment, at the base of a large sandstone ridgeline running north-northwest. The underlying geology of the local area is Hawksbury Sandstone, and the Hawkesbury soil landscape, which is characterised by shallow soils with high erodibility, with steep landform contexts. The local environment would have represented a resource-rich estuarine environment, and it is likely that Aboriginal people made significant use of shellfish from the area as food.[27]

Aboriginal occupation of the Sydney region is likely to have spanned at least 20 000 years before the British established the settlement on Sydney Cove in 1788. The study area lies within the district Governor Phillip associated with the Gamaragal (also spelt Cammeraygal, Camerragal or Càmeeragal):

> Those who live on the north shore of Port Jackson are called *cam-mer-ray-gal,* that part of the harbour being distinguished from others by the name *cam-mer-ray*.[28]

Aboriginal people in the study area belonged to the Darug language group, speaking a coastal dialect that was in use between Botany Bay and the northern shores of Port Jackson.[29] Aboriginal inhabitants likely maintained a mixed food economy based on exploiting marine resources from the harbour, on hunting terrestrial animals and on collecting and processing plant materials.

The rocky slopes, uneven terrain and dense vegetation of the North Shore, combined with the lack of an obvious fresh water source, were likely contributing factors to the focus of European settlement on the southern side of the harbour during the early years of the colony.

[27] Adapted from AMBS 2018: 6.

[28] Attenbrow 2010:22.

[29] Attenbrow 2010:34.

© Sydney Metro 2018

From as early as the 1790s, however, the Aboriginal people of the North Shore were being displaced by large land grants[30].[31]

2.4 The North Shore of Sydney

Lieutenant-Governor Francis Grose made the first land grants on the northern shore of Sydney Harbour in 1794 with the aim of establishing farms to provide food for the colonists. Eighteen land grants were located between what are now known as the suburbs of Kirribilli and Artarmon. One of the first grants was 30 acres (12 ha) opposite Sydney Cove granted to First Fleet convict Samuel Lightfoot in February 1794. Robert Ryan later purchased this land. The steep and rocky topography initially appeared unsuitable for agricultural although later 'North Shore' settlers such as William Blue and James Milson successfully developed areas for small-scale farming and fruit growing.[32]

2.5 William 'Billy' Blue (c.1767-1834) & Blues Point

On 24 January 1817 Governor Lachlan Macquarie granted 80 acres (32.4 ha) to William 'Billy' Blue (c.1767-1834), a convict, settler and ferryman (Figure 2.1, Figure 2.2). Named Northampton, the grant was conditional on cultivation of 18 acres (7.3 ha) with five years restriction on its sale. The location was known as Billy Blue's Point by at least 1823 and also sometimes referred to as 'Blue's Bay' and includes the study area.

Blue's history is unclear and there are various versions of his life before his arrival in NSW. Blue was illiterate and most of what we know about his life before being sentenced to transportation in 1796 is not well documented or easily researched. Blue is thought to have been a 'freed African-American slave' born in Jamaica, a neighbourhood located in the borough of Queens, New York City, not the island in the West Indies. Pybus suggests he was born to an enslaved family associated with a Blaauw or Blue family living in New York.[33] It is likely Blue eventu8ally became a solider or marine in the British army and was involved in key battles against the American revolutionaries during the Revolutionary War and at Quebec, Canada. Blue tells elements of his story, notably in a court case 'Martin v. Munn October 25, 1832, he noted that Governor Macquarie,

> built the little octagon house at the corner of the domain for my especial accommodation; I was with General Wolfe in the American war, and with Lord Howe; I got the name of the old Commodore for being in charge of the old Enterprise at Tower-hill; I do not want more than fourteen or fifteen years of being a hundred years old;[34]

Blue probably escaped New York working as a seaman on a ship taking Loyalist evacuees back to England, escaping from the American army between 1782 and 1783. He arrived at 'Deptford, an impoverished maritime district of London with a rapidly expanding black

[30] Foley 2001:15.

[31] Adapted from AMC 2015: 5.

[32] G. Blaxell, *The River: Sydney Cove to Parramatta*, Eastwood, NSW, 2004, 14; Grants Register Bk 1 No 78 & Bk 3 No 37, LPI.

[33] Pybus 2007:257.

[34] 'Martin v Munn', Supreme Court, *Sydney Gazette*, 25 October 1832:3d. Pybus 2007.

population' which serviced the Royal Navy.[35] Merchant ships also moored and unloaded their cargo further up river. It was a difficult economic period in London following the war and many people had no employment or had to buy food and accommodation. In August 1786 Blue had signed on for food relief.[36]

A record of Billy is encountered 10 years later, in 1796, when he was working seasonally as a 'lumper' at for ships that carried goods on ships from the West Indies. A lumper unloaded cargo from merchant ships which were moored up to eight ships deep in the Thames River. It was a poorly paid job and to ameliorate this it was common practice to allow minor plundering of merchandise. Unfortunately, or perhaps fortunately for Blue he stole a larger amount which could not be overlooked and was charged with four thefts of 20 pounds (9kg) of raw sugar. At the court case Billy explained he also worked was a chocolate maker, for which he used the sugar and then sold chocolate. He would often hide bags of sugar under his clothing.[37]

On 4 October 1796 Billy was tried and convicted of stealing sugar in Maidstone, Kent Quarter Sessions. Sentenced to seven years transportation, he spent several years in hulks on the Thames before transportation to Sydney in 1801, arriving in 1802 and was freed by servitude in 1803. When he died in 1834, he was believed to be aged between 97 and 99 having lived in the colony for 31 years, possibly a third of this life.

Governor Macquarie appointed Blue William Blue to be:

> Watchman of the Heaving Down Place in Sydney Cove, to have Charge thereof, reside near it, and be answerable for such Articles as are put under his Charge by the Harbour Master.—William Blue is to be invested with the Powers of a Constable, and to be sworn in as one.[38]

Prior to this he had was:

> the only Waterman licenced to ply the Ferry in this Harbour, they will always be accommodated with a tight and clean boat, an active oar, and an unalterable inclination to serve those who honour him with their commands.[39]

He also sold oysters to support his wife and family. Widely known as 'The Commodore', Blue's engaging and eccentric personality contributed to his popularity amongst colonists and he gained the respect of many officials, in particular Governor Macquarie. In 1817 Macquarie granted Blue land on the north shore of the harbour where he continued his ferry service and grew produce for the Sydney market (Figure 2.2).[40] A plan dated to 1865 shows his house to be immediately north of the study area (Figure 2.3).

Blue did not live in the early cottage within the study area and it was probably not built until after his death. Blue lived quite close to the site, to the north (Figure 2.7). Blue's family

[35] Pybus 2007:269.

[36] Pybus 2007:271.

[37] Pybus 2007:272-73.

[38] *Sydney Gazette* 17 August 1811:1a

[39] *Sydney Gazette* 2 August 1807:2b

[40] M. Park 'William 'Billy' Blue (1767-1834)', ADB 2005; *Sydney Gazette* 6 Nov 1823, 2; *Sydney Gazette*, 2 Aug 1807, 2; See LPI Schedule; Surveyor's Sketch Book No 1 Fol 22, State Archives; SMH 19 Mar 1932, 22; C. Pybus *The Monthly* April 2012.

continued to own the study area and surrounding land until they sold it at subdivision in 1863 (Figure 2.8).

Figure 2.1: 1834 Portrait of Billy Blue by J.B. East. He is standing in front of the inscription at Mrs Macquarie's Chair with a view of the harbour in the background. It was probably a posthumous portrait Source: State Library of NSW, ML 560.

St Leonards Road or Blues Point Road ran roughly north-south along the peninsula and was one of the earliest roads in the locality. It was gazetted in 1839 as the main thoroughfare linking the St Leonards township (North Sydney) to the ferry wharf and boat and ship building enterprises on the northern shore of Port Jackson.[41] Billy Blue died in 1834 and a long obituary was published in the Sydney Gazette. The article mentions Macquarie's grant, describing it as being situated '…on a point of ground on the northern shore of Port Jackson'. From at least 1839 William Blue (junior) was advertising waterfront land and other Blues Point allotments for lease. The prime location opposite Dawes Point Battery was described as offering opportunities to the newly arrived capitalist, businessman or retiree, as well as being of 'inestimable value' to 'boat builders, Shipwrights, Coopers, Timber merchants'. The

[41] M. Park ADB 2005; North Sydney DCP 2013: C9-21.

location avoided the 'enormous demand made for houses to rent in Sydney' with the 'advantages of sufficient firewood … pure water, pure air, and a situation for beauty of scenery'.[42]

A public wharf was dedicated at Blues Point in 1839 offering a reliable link to the city. Brothers Joseph and Thomas Gerrard promptly established a steamer ferry service between the Government Jetty at Macquarie Place and 'Billy Blue's Point'.[43] Licenced waterman Charles Brown offered a similar ferry service from at least 1840.[44] An etching of Blues Point dated to c.1840s shows a stone seawall and jetty, accompanied by a number of small boats had been built in the bay by that time (Figure 2.4).

Figure 2.2: An 1831 plan in the Surveyor's Sketch Book illustrating the location and extent of Blues 1817 grant on the northern side of Sydney Harbour opposite Dawes Point. Bk 1 Fol 22, 31 Mar 1831, State Archives.

[42] *Sydney Monitor* 13 Feb 1839, 4.

[43] *Commercial Journal* 24 Apr 1839, 2.

[44] *Australasian Chronicle* 19 May 1840, 1.

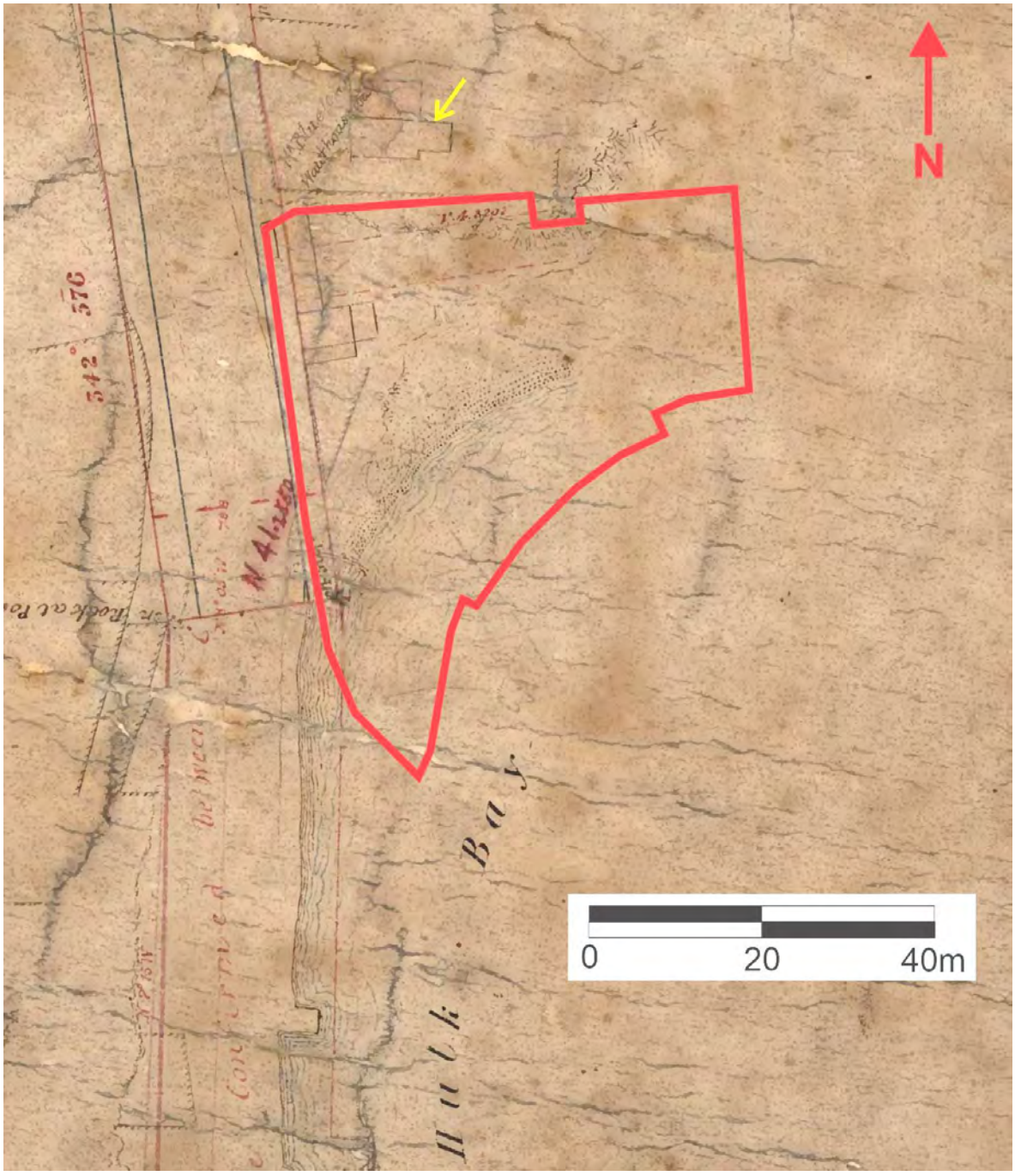


Figure 2.3: Buildings within the study area (red outline) in 1865. Billy Blue's former residence to the north is labelled (arrowed in yellow). 'Plan of Road from Blues Point towards St Leonards showing Proposed Alignment, Ph Willoughby, Co Cumberland', 1 Oct 1865, Crown Plan 6-1990, NSW LPI.

Figure 2.4: Etching of Blues Point, tentatively dated to c.1840s showing a seawall and jetty in to which a small paddle steamer is moored. 'Etching of Blues Point and view west towards Parramatta River', c.1840s, Face of North Sydney, LH REF PF393. Available at https://stanton.imagegallery.me/site/welcome.me (accessed 14/02/2021).

Much of the land on the north shore peninsula remained in the Blue family until the 1850s, after which it was progressively subdivided and sold. An 1857 Crown Plan which includes the northeast corner of DP 902933 Lot 1 (later part of Lot 10 Section E) indicates that a building was constructed on the east side of Blues Point Road (Figure 2.5). The date this building was constructed is unclear but it is possible that it predates the 1857 plan by some time. Lot 10 Section E, including parts of the study area, remained in the ownership of the Blue family and was either occupied by the family or leased. The plan shows a 'public' wharf or pier jutting into the harbour and the waterfrontage along the point shows evidence of a terraced embankment to aid the docking of vessels (Figure 2.5). The Fig Tree Cottage Inn, an early Blues Point hotel and landmark, was named in subdivision advertisements. The public house was a short distance north of the wharf and the study area, and at this time was operated by Thomas Redgrave, although it was later linked to the family of John Stevens, the later owner of part of the study area.[45]

[45] *Sands* Schedule; Crown Plan 7-1990, 6 Feb 1857, LPI.

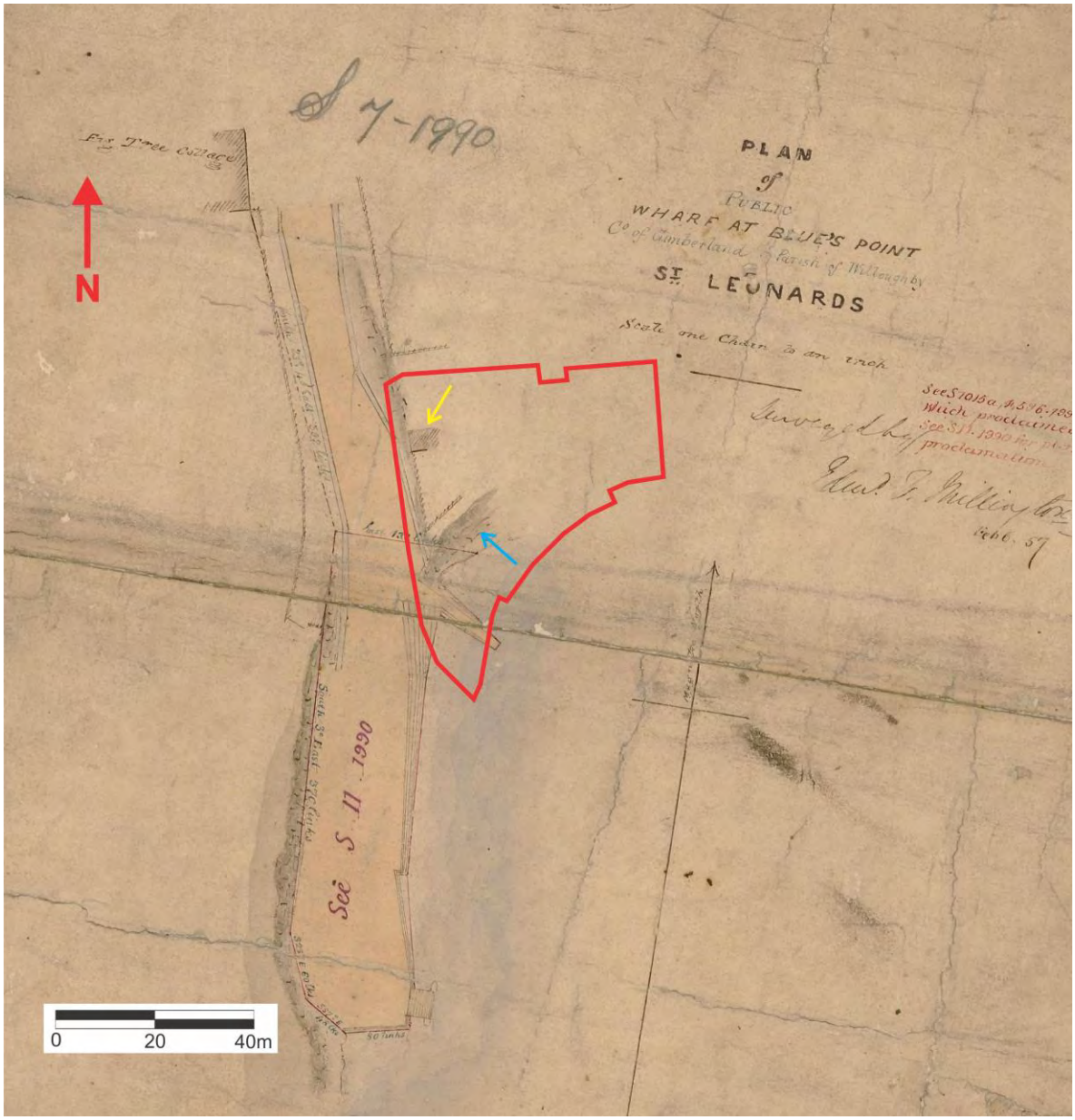


Figure 2.5: An 1857 Crown Plan illustrating the extent of development at Blues Point in the vicinity of the study area at this time. A building (yellow arrow) and a jetty or slip (blue arrow) is recorded in the study area. Crown Plan 7-1990 LPI.

Accomplished amateur photographer Robert Hunt's c.1858-59 photograph of Blues Point provides evidence of the modifications to the shore and its use by this time. Hunt, the chief clerk at the Mint, explored the harbour in his skiff 'Terror' creating rare photographic records of the harbour landscape (Figure 2.6).[46] The photograph shows the stone seawall and jetty evident in the c.1840s etching, as well as additional structures on the waterfront, as well as the location of dinghies on the sandy beach.

[46] S. T. Gill, 'City of Sydney from St. Leonards North Shore', No 51 PX*D383 ML SLNSW, c.1861.

Figure 2.6: An undated (c.1858-59) photograph of Blues Point by Robert Hunt providing evidence of the sandy shoreline of the study area on the right-hand side of the image. Note the large drainage pipes (yellow arrow) ready for installation. SPF/799 ML SLNSW.

The *Sands Sydney and Suburban Directory* (Sands Directory) lists 'Blue's Point' and 'Blue's Bay' at the North Shore in the 1858/59 issues. Due to the lack of detail in the listing it is not possible to make a link between residents or business owners and the study area. Providing an example of the types of Blues Point residents, the 1861 Sands Directory lists John Blue junior and James Russell as ballast masters at Blue's Bay, with the occupations and trades of other residents at Blue's Bay including a stonemason, engineer, master mariner, gardener and carpenter.[47] The proximity to the harbour to the Sydney township made it a convenient location for residents, except in the roughest weather when the harbour was difficult to navigate. The rocky nature of the environment prevented anything more than small-scale agriculture and orchards but was a ready source of building materials for stonemasons.

[47] *Sands* Schedule.

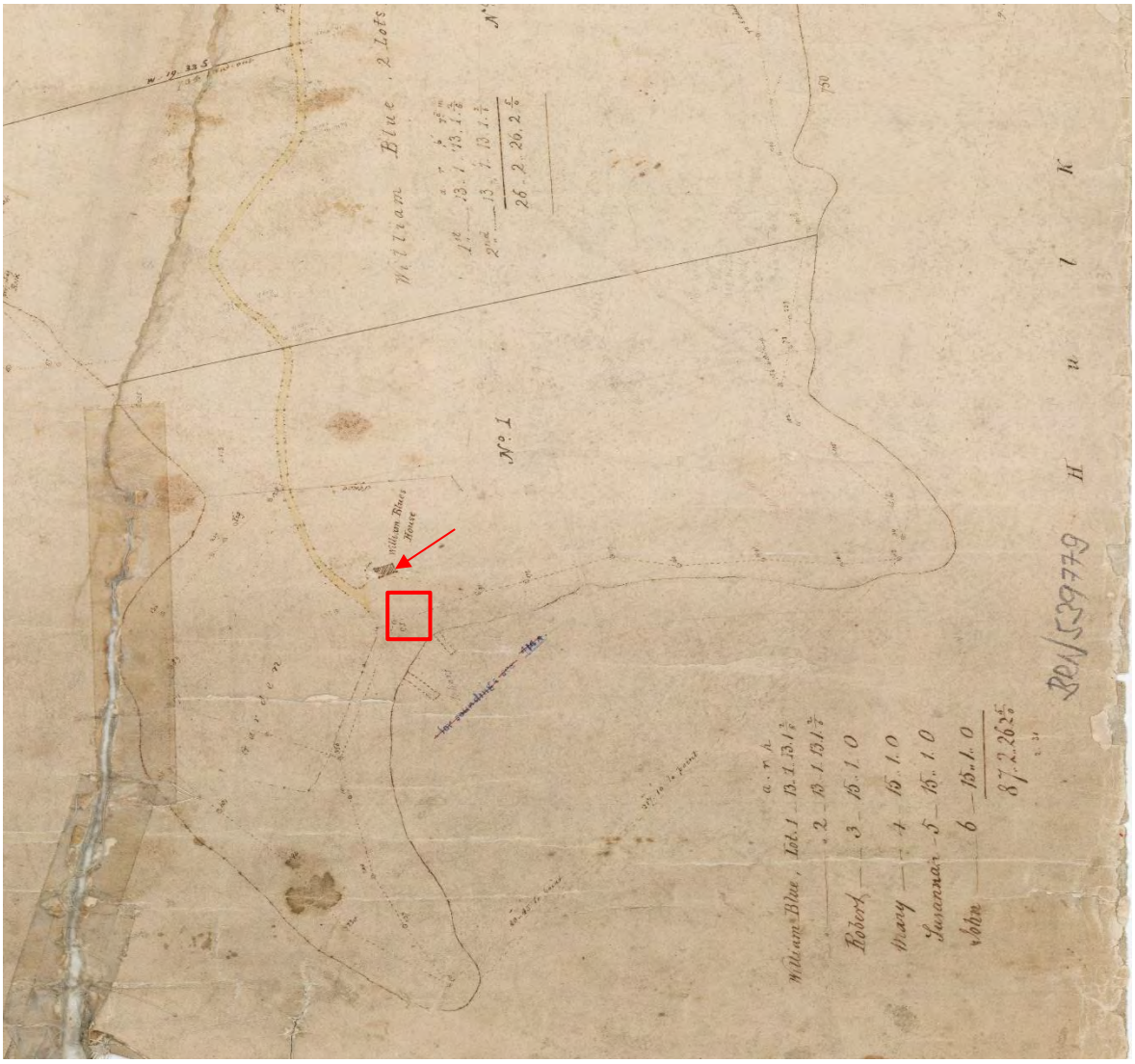


Figure 2.7: Plan of Blue's Point prior to the 1863 subdivision. The arrow shows the location of William Blue's house, this is thought to be the house built by either William 'Billy' Blue or his son William Blue (jnr). *Allotments of land belonging to John Blue, Susannah Blue, Mary Blue, William Blue and Robert Blue.* North at the top. Dated between 1816 and 1845. Maps/0272, SLNSW.

© Sydney Metro 2018

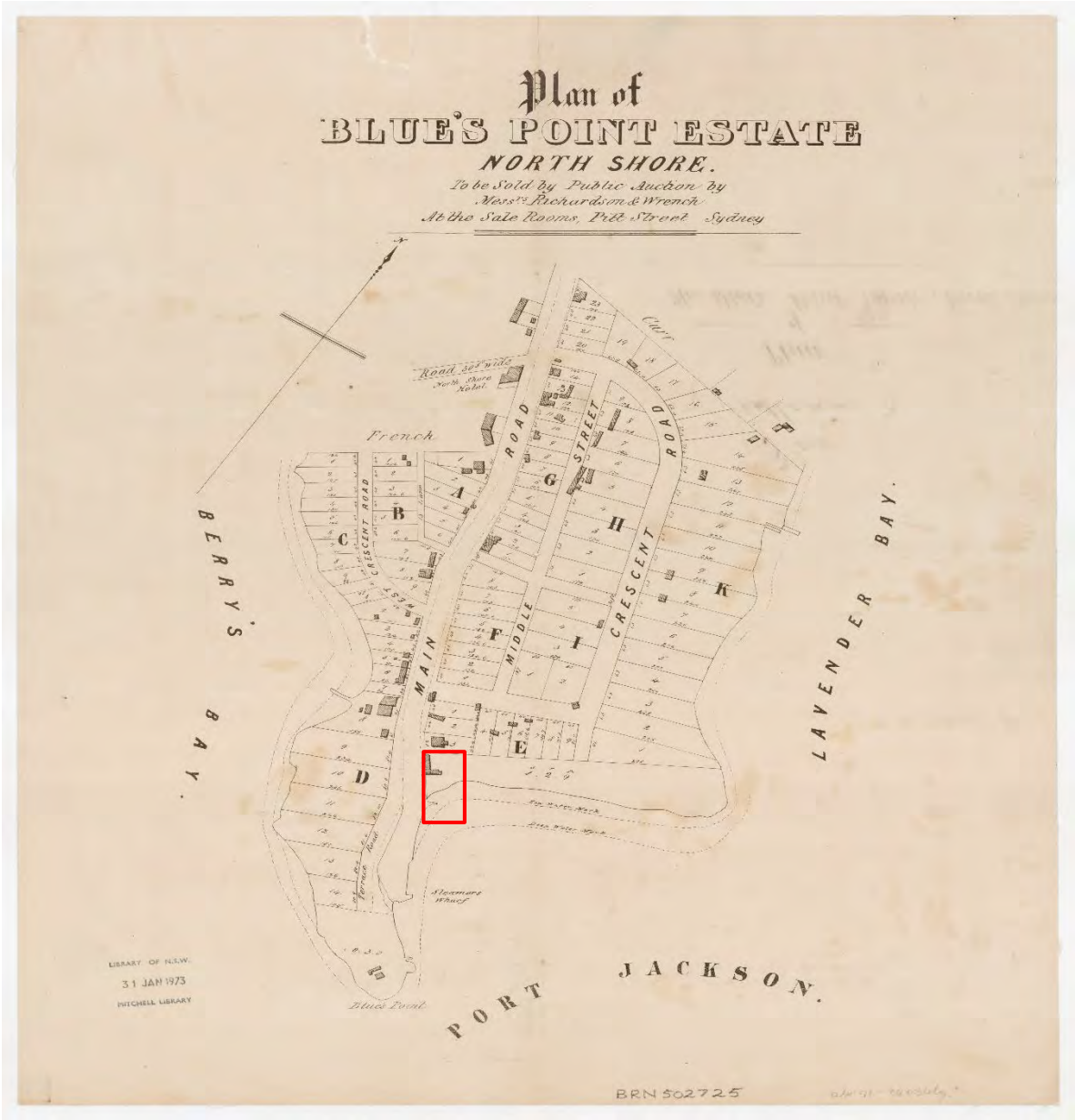


Figure 2.8: Subdivision plan of Blue's Point Estate. Shows the original buildings within the study area at the time of subdivision. House 1 was already within the study area indicting it was built by the Blue family. *Plan of Blue's Point Estate North Shore: to be sold by public auction by Messrs. Richardson & Wrench at the sale rooms, Pitt Street, Sydney*. Maps/0294 ML SLNSW.

In December 1863, 26 acres 2 roods 26 perches (10.8 ha) of what remained of Blue's grant was converted to Torrens Title in preparation for subdivision and sale (Figure 2.8). In the ownership of William Blue junior Esquire of St Leonards, representatives Richardson & Wrench sold parts of the estate from 1863.[48]

[48] LPI Schedule; SMH 20 Jun 1863, 13.

Development on the estate by this date already included the Figtree Cottage Inn and a number of cottage residences. Of the eleven sections in the subdivision, Section E with waterfrontage to Lavender Bay (including the study area) was described as:

> …9 lots, most of which front the main road adjoining the ferry house; on lots 1, 2, and 3 are the premises occupied by Messrs Crane, Taylor, and Anderson; and on lots 4 to 7 those occupied by Messrs Hunt and Andrews.[49]

Lot 10 Section E, in which part of the study area is located, was not mentioned but was sold in two parts in 1867 and 1868. An advertisement described the unsold land at 'Blue's Point Estate North Shore' St Leonards being offered at a 'clearing sale' in 1867 as:

> … a highly favoured beautiful locality, [that] will now, with properly directed municipal action, and regular communication with the city, take its proper position as the most valuable suburb of the city, and properties generally in eligible situations, enjoy a considerably enhanced value.[50]

On 28 March 1867 'shipwright' John Stevens of the City of Sydney purchased the western part of Lot 10 Section E of the Blue's Estate and on 21 April 1868 mariner James Glover purchased the eastern part of Lot 10 Section E, part of which is included in the study area.[51] The land's proximity to the harbour opposite Dawes Point provided business opportunities and investment potential for the two Sydney men.

2.6 John Stevens (1842-1896) – West Part of Lot 10 Section E

John Stevens (sometimes shown as Stephens) was born in 1842 to Thomas Stephens and Catherine Larkins of Windmill Inn. Stevens' 1867 title to the 38 perches (961 m²) of Lot 10 Section E, at Blue's Point land describes him as a shipwright of the City of Sydney; however, a period of his career was spent in the pearl shell industry and other occupations. Periods were spent as the licensee of the Hit or Miss Inn, Windmill Street, Millers Point (1866-1870s) and the Fig Tree Inn, Blues Point after his brother's death. From the 1880s he was a timber and fuel merchant. It was claimed in a 1902 newspaper article, that Stevens earned '£1000 a year' from the pearl shell and 'invented the heavy leaden boots now used by divers' although the second claim has not been verified.[52] His pearl fishing career between c.1876-80 took him to the Solomon Islands, Thursday Island, Albany Island and Wai Weer, among other Torres Strait islands north of Australia. Stevens traded with Captain Ferguson and Messrs Cowlishaw Brothers of Sydney. Stevens owned and skippered a number of boats including the ketch, the *William and Mary*, and the 44-ton schooner *Susie*. He is linked to a number of houses in North Sydney including 'Wai Weer'. From c.1880 John Stevens lived in West Crescent Street and later in William Street. At the time he was operating the timber and fuel merchant business. He died at Ada Cottage, William Street, North Sydney in 1896.[53]

A plan showing Blues Point Estate subdivision and development from April 1864 provides evidence of a building on the west portion of Lot 10 purchased by John Stevens (Figure 2.9). Evidence of this structure was found during excavation; it is referred to as Stevens' cottage

[49] SMH 16 May 1863, 9.

[50] *Empire* 10 Jul 1867, 7.

[51] LPI Schedule.

[52] *Truth* 16 Nov 1902, 8.

[53] John Stevens (1842-1896), Ancestry. ATCJ 22 Feb 1880, 23; *Sands* Schedule; *Evening News* 14 Jan 1891, 4; ATCJ 27 Jul 1878, 11; *Weekly Times* 19 Aug 1876, 11; *Queenslander* 26 Jul 1873, 4.

in the historical background although it was already on plan prior to the purchase by Stevens. Throughout the archaeological results (sections 4, 5 & 6) it is referred to as House 1. William Waterhouse, a steamboat proprietor, occupied 'Mr Blue's' building immediately to the north of Lot 10, and further north again Stevens' brother, Archibald Patrick Stevens, owned and operated the Figtree Cottage Inn on the western side of Blues Point Road.[54] A lane on the north side of Lot 10 provided access to James Glover's portion of Lot 10 to the east. As far as can be determined John Stevens did not lived in the house on the western part of Lot 10 and rates and directories indicate that, at least in the early years of ownership, he leased the boatsheds on the property. From c.1885, Stevens operated as a timber merchant from the site and is thought to have been transporting timber and fuel from the wharf to the southern side of the harbour.

At the time of Stevens' death in 1896, his Blues Point 'Wharf Property' was commonly known as Stevens Wharf and included a jetty 'cottages, buildings and erections' extending over part of Lot 10 and the reclaimed allotments.[55] Stevens died a wealthy man and, as well as other business, real estate and investments, he left shares in the Queensland Pearl Shell Company. The history of land in the study area by Stevens and others is continued and expanded on in Section 2.8.

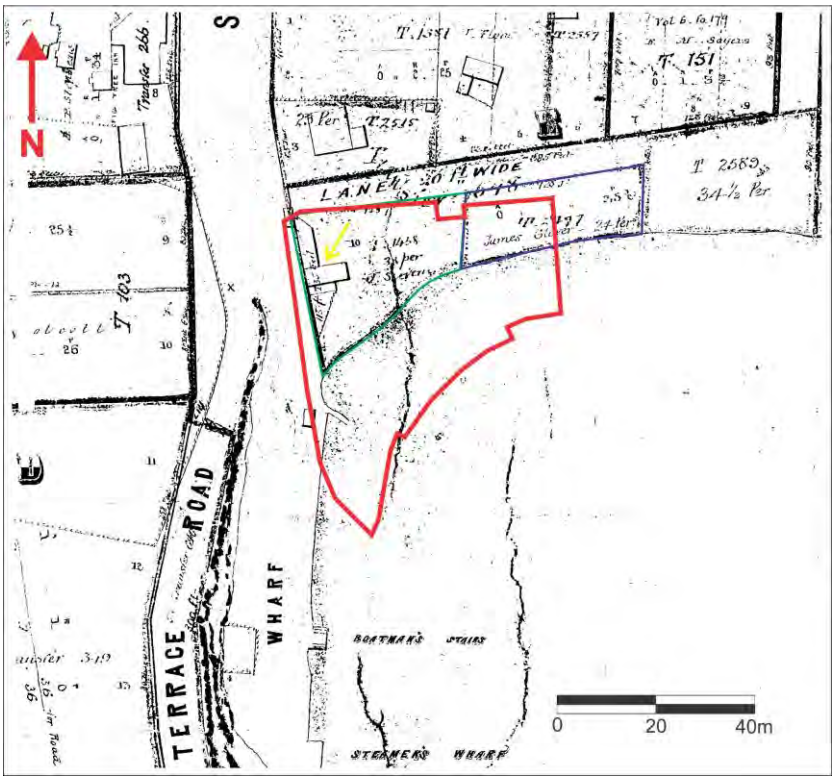


Figure 2.9: Part of DP 8 showing Stevens' portion of Lot 10, Section E (green outline) and Glover's portion (blue outline). A building (arrow) and fenced enclosures are shown on Stevens' land on the east side of St Leonards' or Blues Point Road. 1 April 1864, DP 8 LPI.

[54] Vol 2 Fol 197 LPI; DP 8, 1864, LPI; CP 6-1990, 1865, LPI.

[55] Will No 12443, NSW Will Books.

© Sydney Metro 2018

2.7 James Glover (1823-1874)

James Glover was born in 1823, the son of convict Thomas Glover and widow Mary Kearns.[56] In 1868 Glover reported his occupation on the title deeds to 24 perches (607 m^2) of Lot 10 Section E at Blues Point, as a mariner. As far as can be determined Glover was not a mariner and pursued a number of other occupations during his career. In 1840 he was apprenticed as ship's carpenter to George Green, a North Shore boat builder. He abandoned the apprenticeship in April 1840 claiming that he was not being taught the trade nor provided the board and lodging to which he was entitled. His brother-in-law James Pashley then employed him. A court case resulted in an order cancelling the indentures, however, there were ongoing legal proceedings.[57]

The *Sands Directory* issued in 1858/59 and 1861 record James Glover as a builder of the Miller Street, North Shore (now North Sydney) (Vol 4, Section 12.8).[58] After his marriage to Jane Fogg in 1860 he was granted a publican's license to the Sailor's Return (later the Rag and Famish) in Miller Street, under the same name as his father Thomas Glover's hotel in The Rocks.[59] From c.1866-70, and at the time of the purchase of part of Lot 10 Section E at Blues Point, Glover lived at Princes Street, Sydney and was working as a carpenter.[60] A plan showing Blues Point Estate subdivision and development from April 1864 shows that the east portion Lot 10 was undeveloped (Figure 2.9).

James Glover, 'shipwright of [85] Princes Street, Sydney', died at his residence on 2 January 1874. At the time of his death, he owned numerous properties including in Princes Street, Sydney, a waterside property at Blues Point, and properties at Miller Street, St Leonards (North Sydney). His wife, Jane Glover, inherited a life interest in James Glover's estate and on her death son, James Thomas Glover, inherited a life interest (for occupation or lease) in the Blues Point property. As far as can be determined neither James Glover, nor his wife or son ever occupied the eastern portion of Lot 10.[61]

To avoid repetition, the history of the ownership of Lot 10 by both James Glover and John Stevens is expanded on in Section 2.8.

2.8 Lot 10, Section E, Blues Point Estate

A plan prepared in 1869 for the dedication of additional land for a new public wharf at Blues Point provides evidence of the extent of development in the locality, and proposed developments to serve the growing North Shore community (Figure 2.10). From 1867 North Shore residents considered the wharf as 'small and insufficient' and began lobbying the Minister of Lands for better facilities at Blues Point.[62] Residents feared that landowners along the shore were reclaiming large areas of the waterfrontage, leaving insufficient land for expansion of the ferry wharf. They asserted that:

[56] Reg No 661/1823 V1823661 8 NSW BDM.

[57] *Sydney Herald* 14 Oct 1840, 2; *SMH* 15 Feb 1845,

[58] *Sands Directory* 1858/59, 155.

[59] Lic No 0339 NRS 14403 [7/1512], SRNSW; *Australian* 11 Mar 1836, 2.

[60] *Sands Directory* 1867-70.

[61] Will No 476, NSW Will Books; *Sands* Schedule.

[62] *Sydney Mail* 12 Jan 1867, 9.

© Sydney Metro 2018

> …considerable sums of public money, together with a large amount of prison labour, has been expended on the wharf at Blue's Point and the road leading from it; and also, that much money has been paid for land and for improvements on it in this neighbourhood by private persons, upon the faith of this being preserved as a public thoroughfare, all of which will be considerably depreciated if this wharf is so circumscribed as to be insufficient for commercial purposes.[63]

An undated photograph (thought to be between Feb and Oct 1869 or earlier) is evidence of the Blues Point waterfront and the upper part of Stevens' cottage, the gable end of which appears to be built of stone (Figure 2.11). A 'Ferry Box' and tiered stonework at the water's edge is located to the south of Stevens' house.

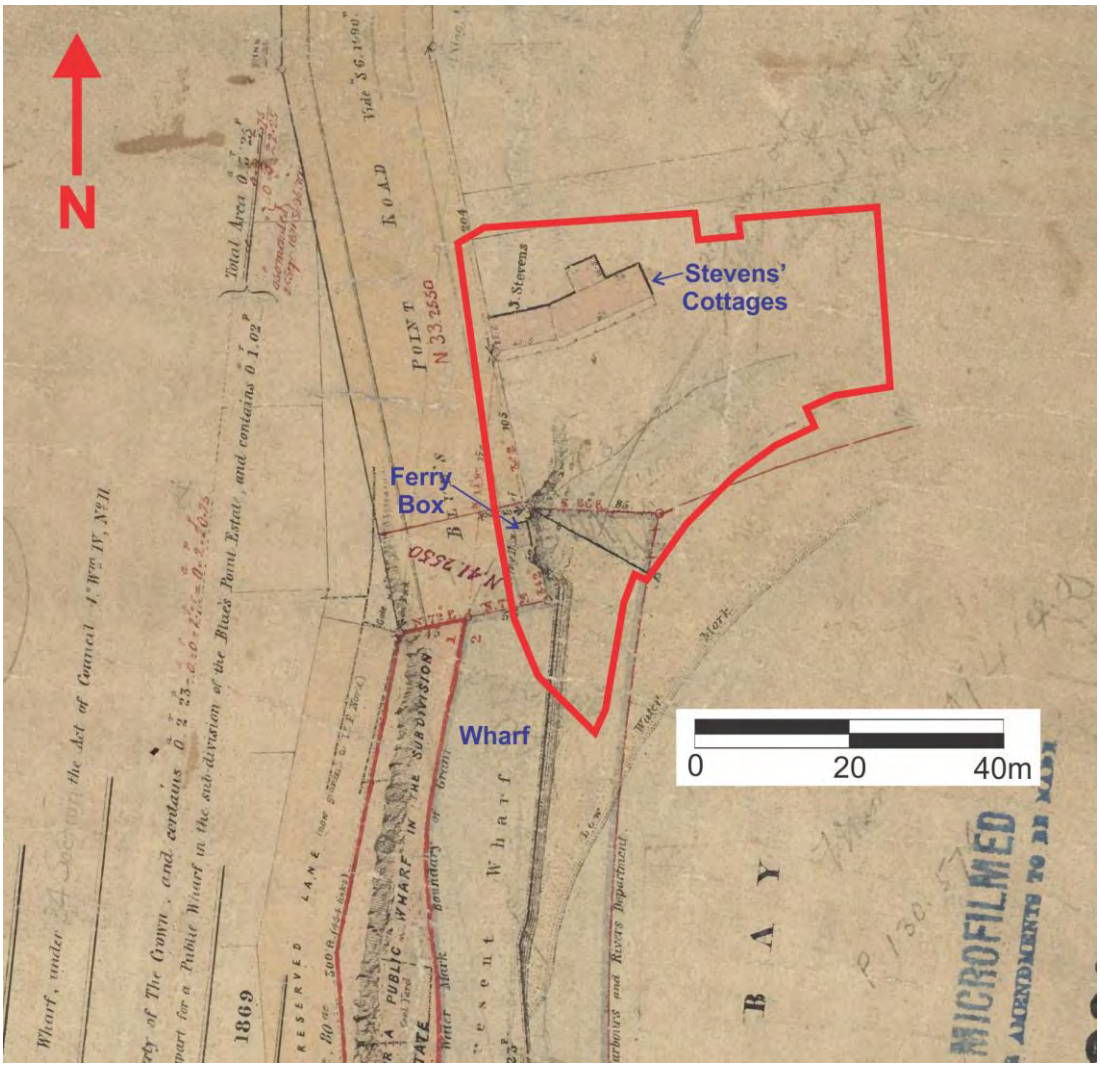


Figure 2.10: Crown Plan dated 20 Oct 1869 showing the extension of Stevens' cottage on the western part of Lot 10 overlooking 'Hulk Bay'. CP 11-1990, 20 Oct 1869, LPI. Annotations by C&L.

[63] *Sydney Mail* 12 Jan 1867, 9.

In April 1869, John Stevens advertised for a mason to put in a foundation at 'Blue's Point, North Shore'.[64] Although Stevens developed other sites in the locality, given the date it is thought that it relates to alterations to the house on Lot 10 as by late 1869 surveys show that the cottage on Lot 10 near Blues Point Road had been extended to the east. A further advertisement placed in May 1869 called for tenders for a mason to construct 'two cottages' at Blues Point. Contractors were invited to obtain particulars of the project from Figtree Cottage, linked to Stevens' brother, Archibald Stevens.[65]

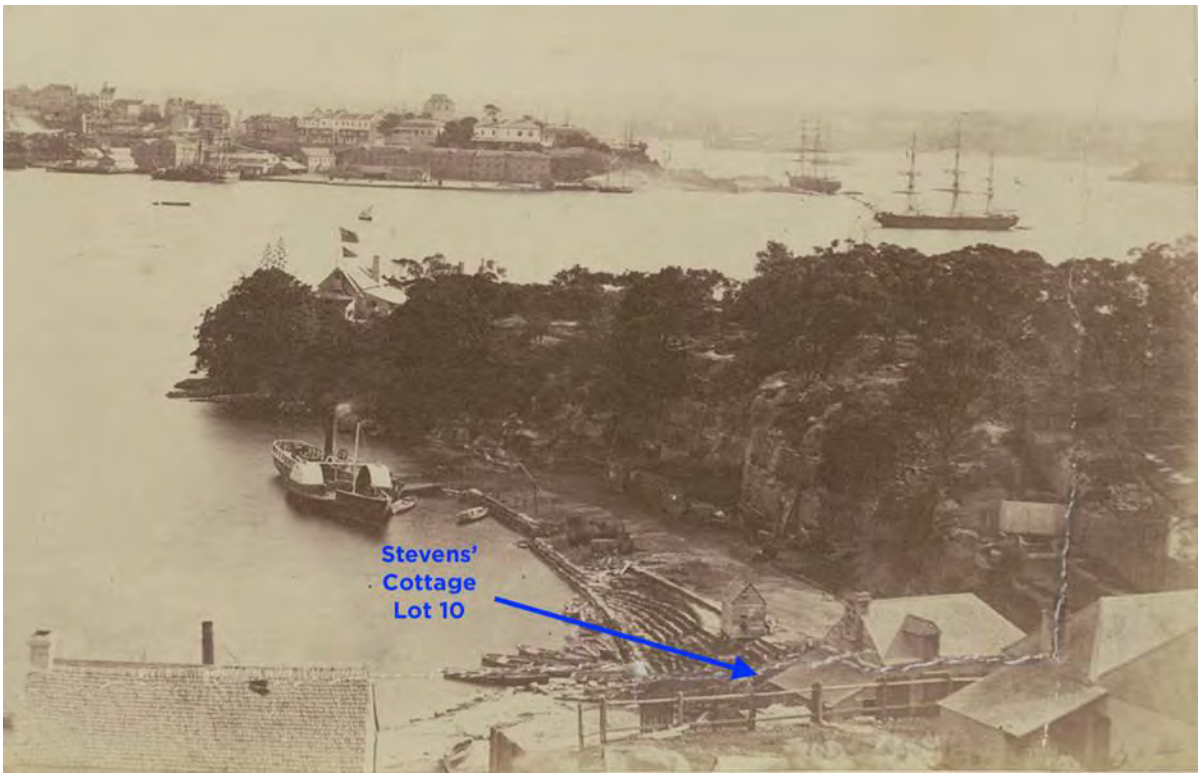


Figure 2.11: Undated c.1869 (or earlier) photograph of Blues Point showing a paddle steamer moored at the wharf, stone-tiered embankment, the Ferry Ticket Box, and the roof of Stevens' earliest cottage on Lot 10, prior to the eastern additions which were built by October 1869 (Figure 2.10). SPF/932, ML. SLNSW.

The elongated, multi-occupancy dwelling built by Stevens is shown in an October 1869 Crown Plan and appears to be divided into two or possibly three residences, with a long verandah facing south. Evidence of two additional houses were found during the archaeological excavation and were recorded as House 2 and House 3. All three houses are referred to as Stevens' cottages/houses throughout this section of the site's history. The angled alignment of the houses, differing from the original cottage, is likely to have been to accommodate the line of the natural stone of the waterfront. The houses overlooked the stretch of water shown on some plans as Hulk Bay after the hulks or permanently moored, disused ships (often used

[64] *SMH* 14 Apr 1869, 8.

[65] *SMH* 12 May 1869, 8.

© Sydney Metro 2018

for prison accommodation or storage) that were once anchored there. Stevens' houses lay to the north of the 'Ferry Box' (or ticket box), wharf and coal yard, as well as an area of land proposed for reclamation. The location of the Ferry Box and part of the wharf correspond with Blues Point Road in the western extension of the study area. The low-water mark was a considerable distance from Stevens' allotment providing incentive for reclamation along the Lot 10 waterfront boundary. The location of the southern boundary on this plan suggests Stevens might have already reclaimed some of the harbour frontage (Figure 2.10).[66]

The development of waterfront allotments around Blues Point, Berrys Bay and Lavender Bay was stimulated by the expansion of ferry transport for passengers and goods, and maritime-related industries on both sides of Sydney Harbour. The proximity of Blues Point to Sydney Cove made it a prime location for both residential and commercial use. A survey prepared in 1871 (showing annotations up to the 1890s) provides evidence of the expansion and growth of the location (1871). James Glover's part of Lot 10 purchased in June 1868 remained undeveloped, although by 1871 a boat builder's shed, leased by George Barnett, was constructed on Stevens' part of Lot 10. Stevens' reclamation of 19¾ perches (499 m^2) of land between the high and low water marks was not finalised until 1885 and will be discussed later in the report.[67]

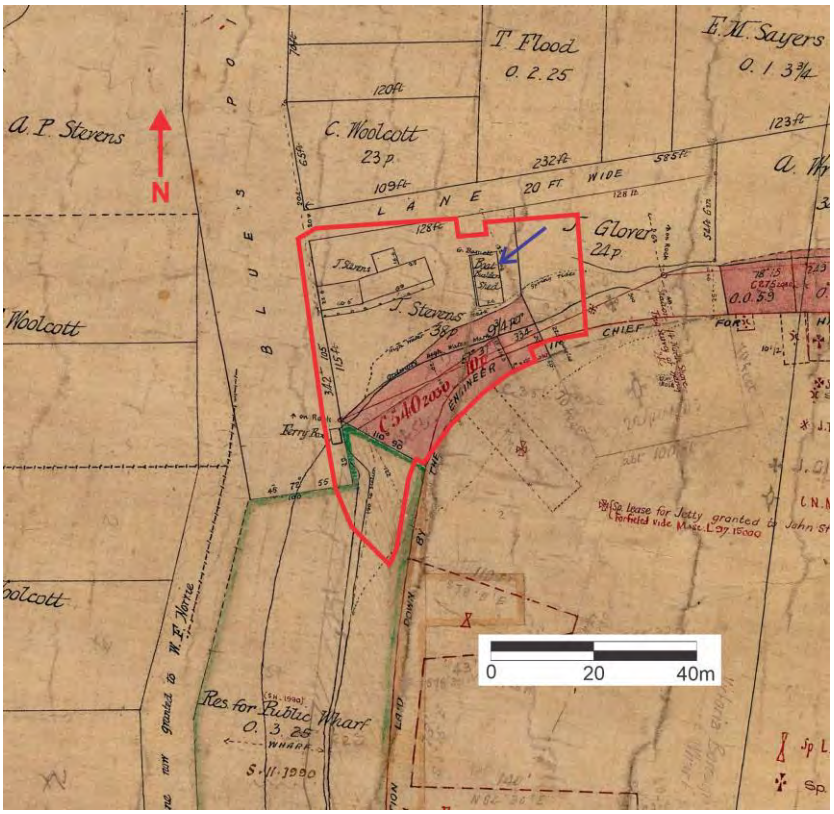


Figure 2.12: Tracing of 'Lavender Bay' showing George Barnett's boat-building workshop (arrowed) on part of Lot 10 leased from John Stevens. CP 130-574, 25 Sep 1871, LPI.

[66] CP 11-1990, 20 Oct 1869, LPI.

[67] CP 130-574, 25 Sep 1885, LPI.

2.8.1 George Barnett, Boatbuilder of Blues Point

The Sands Directory lists George Barnett as a boat-builder at Blues Point and from 1868 he leased the boat shed and possibly also part of the house on the Stevens' waterfront site. The brief listings in the directory do not provide further details about the address until the 1871 edition of the directory where it lists Barnett on Blue's Point Road. He is listed at this address until c.1888. An article on Port Jackson yacht and boat builders published in September 1880 describes Barnett as an 'excellent workman' specialising in 'watermen's skiffs, or boats of that class' with a high turnover of that type of craft. Originally apprenticed by Charles Barnett of Windmill Street, a relative, he later established his own business on the 'Lavender Bay side of Blue's Point, where he had a suitable building-house, with a nice sandy shore for beaching boats attached to it'. Barnett was an accomplished boatbuilder and is linked to the construction of a variety of vessels including,

> …fishing boats, notably the Sea Breeze, for Mr Oliver, which was pitted against one of the cracks of the day, the Kingfisher, in an ocean race to Broken Bay and back. The Tim Whiffler and some other substantial fishing boats are from Mr Barnet's [sic] establishment. There is now being finished a very nice 21-feet skiff, with rather more sheer than usual, as it is to be employed in the rough water at the Heads, in connection with Sir Clayton's butchering business. Barnet has just completed a well-finished waterman's boat for Mr Alstead, of North Shore. Among the numerous skiffs he has built may be mentioned the Sydney Morning Herald prize boat given by Messrs John Fairfax and Sons for the watermen's race at the New South Wales National Regatta. Richards, the younger, was the winner; and though the boat has been subjected to constant work, it has stood it well, and otherwise given the most unqualified satisfaction to its owner, the subject of our notice has been favoured by Mr French, of George-street, with an order for a centre-board pleasure craft, which is now in course of construction at Mr Barnet's building-house. The boat will be 25 feet overall, 22 feet on the keel, 8 feet 6 inches beam, 3 feet deep, and half decked. It is to be carvel-built and double planked, so that no caulking will be necessary. A fishing boat similarly constructed, Mr Barnett informs us, he has put together for Stannard, of Double Bay, and he found the principle give satisfaction. The centre-board will be launched in about two months' time, and will no doubt give her owner the same degree of satisfaction that Barnet's skiffs give the watermen of Port Jackson.[68]

Although George Barnett only leased the boatshed on the western part of Lot 10, insolvency records for his business in 1870 might provide further information on the equipment used on the site, details of the premises, and boats stored there.[69]

As evidence of the growth of the locality, in 1871 the Borough of Victoria including Blue's Point was recognised as a 'distinct municipality' separate from St Leonards. John Stevens of Windmill Street, Sydney, was one of the many petitioners supporting the change.[70] Land was dedicated to the public for a public wharf in July 1871 and the development of the wharf at Blue's Point and the extension of Stevens' property with the addition of two more houses on Lot 10 are recorded in a photographic view looking south towards the city c.1873 (Figure 2.13).[71]

[68] *Sydney Mail* 11 Sep 1880, 508.

[69] George Barnett, boatbuilder, North Shore, 25 Oct 1870, File No 10429, SRNSW.

[70] NSW *Government Gazette* 29 Jul 1870, 1593; SMH 24 Jan 1871, 8.

[71] SPF/934 ML SLNSW; NSW *Government Gazette* 28 Jul 1871, 1645.

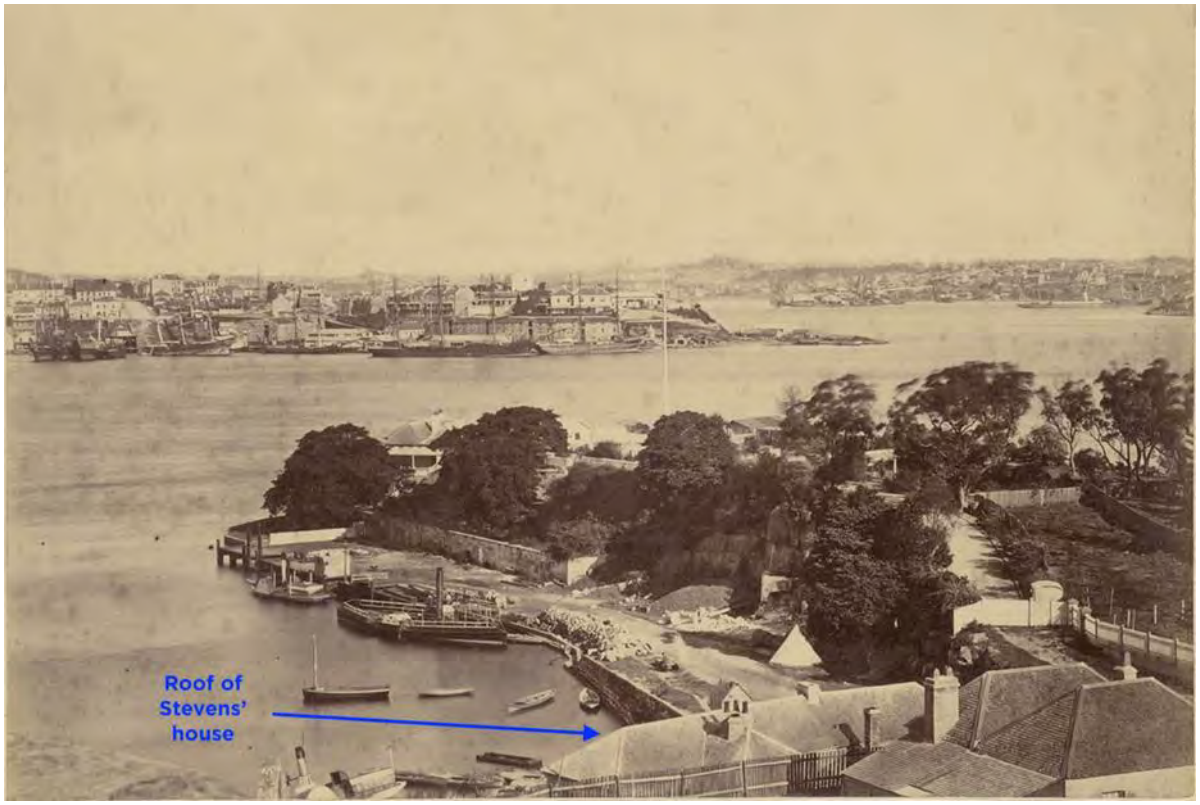


Figure 2.13: Undated view from Blues Point towards Millers Point attributed to John Paine and dated to 1873. The roof of Stevens' houses on Lot 10 is visible in the lower part of the image. SPF/934 ML SLNSW.

2.9 Lot 10, Section E in the 1880s

Land titles show that James Glover, the owner of the eastern portion of Lot 10 Section E, bequeathed a Life Estate over the 24 perches (607 m^2) allotment to Jane Glover, his wife. The two leases are also recorded on the Certificate of Title and dated May 1885 and June 1891. The first was to Michael McMahon, a landowner to the east of the study area and after whom McMahons Point is named. The Victoria Council alderman was active in lobbying the government for improved ferry services as well as local fresh water supplies. George Robert Whiting held the lease on Glover's land from June 1891 to January 1894.[72]

The Blues Point public wharf south of the study area was expanded by July 1874 and a public meeting was held to discuss the formal dedication of the wharf.[73] An undated photograph of the 1870s illustrates the expansion of the wharf, however, Stevens' land retained the area of sand on which boats could be pulled ashore (Figure 2.14).[74] As already stated, in the 1870s

[72] *SMH* 3 Jan 1874, 1, 12; LPI Schedule; M. Park, *Dictionary of Sydney*, 2008.

[73] *SMH* 10 Jul 1874, 7.

[74] SPF/800 ML SLNSW.

© Sydney Metro 2018

Stevens' primary business interest was in the operation of a pearl-shelling station on Albany Island in the Torres Strait rather than in Sydney or Blues Point.[75]

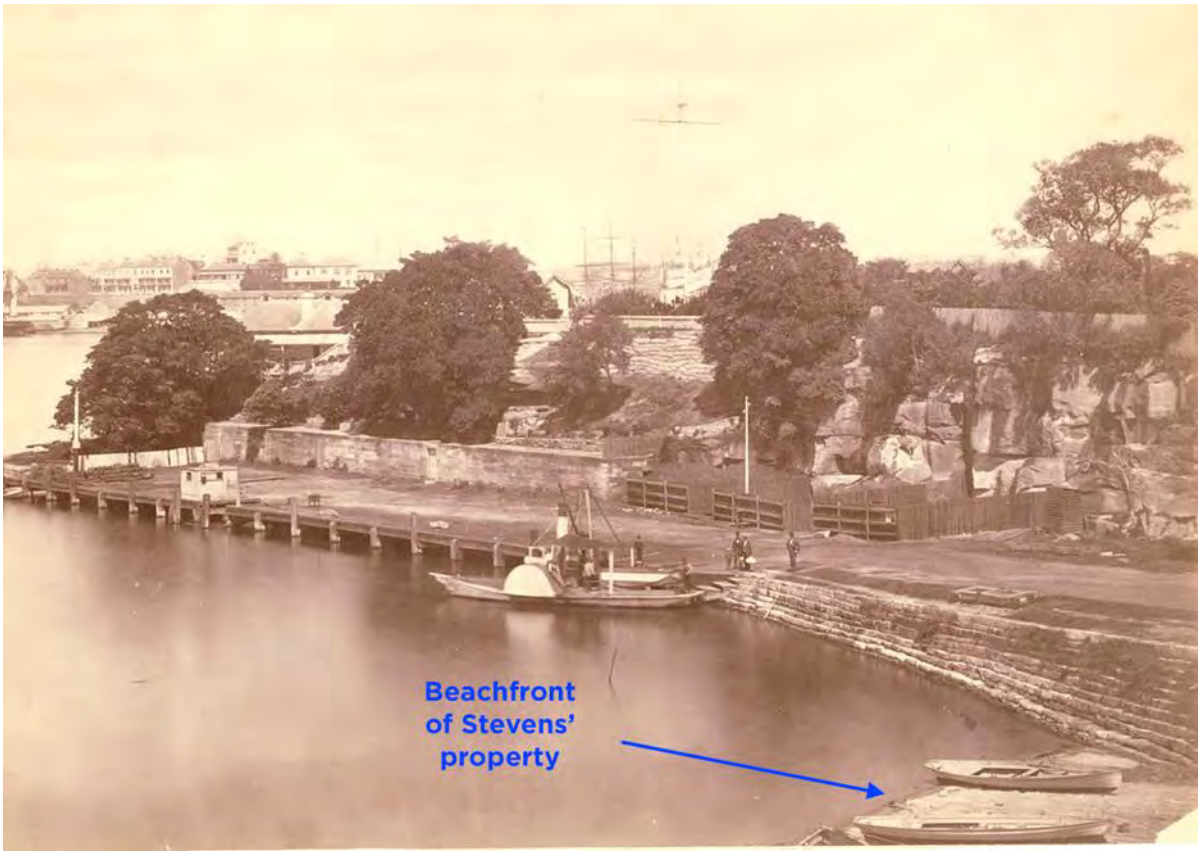


Figure 2.14: Undated photograph of Blues Point public wharf and dated from c.1874. Stevens' Lot 10 retained a sandy beach on the southern boundary of the property on which to pull skiffs and other small craft ashore. SPF/800 ML SLNSW.

By 1880, shipowner and businessman John Stevens and his wife Mary Ann Alicia Madden had moved to Blues Point and were living in a house in West Crescent Street to the north of the study area.[76] Blues Point continued to develop as a transport link to the city, and as one of several hubs for boatbuilding on Sydney harbour, including Berry's Bay to the west. Barnett's boat building enterprise on the western part of Lot 10 appears to have been on a relatively small scale compared to others around the harbour. Crown Plan 356-2030 dated 1881 (including annotations to 1884) is linked to Stevens' application to purchase 'reclaimed land' at the waterfront, maximising access to the waterfront with the potential for expansion

[75] *Queenslander* 22 Jul 1876, 14; *ATCJ* 26 Jul 1879, 24; *ATCJ* 28 Feb 1880, 23.

[76] *Sands* Schedule; Marriage Reg No 145/1866 NSW BDM.

of the current use (Figure 2.15).[77] Crown Plan 540-2030 dated 1884 also documents the reclamation and cites references for files related to the application (Figure 2.16).

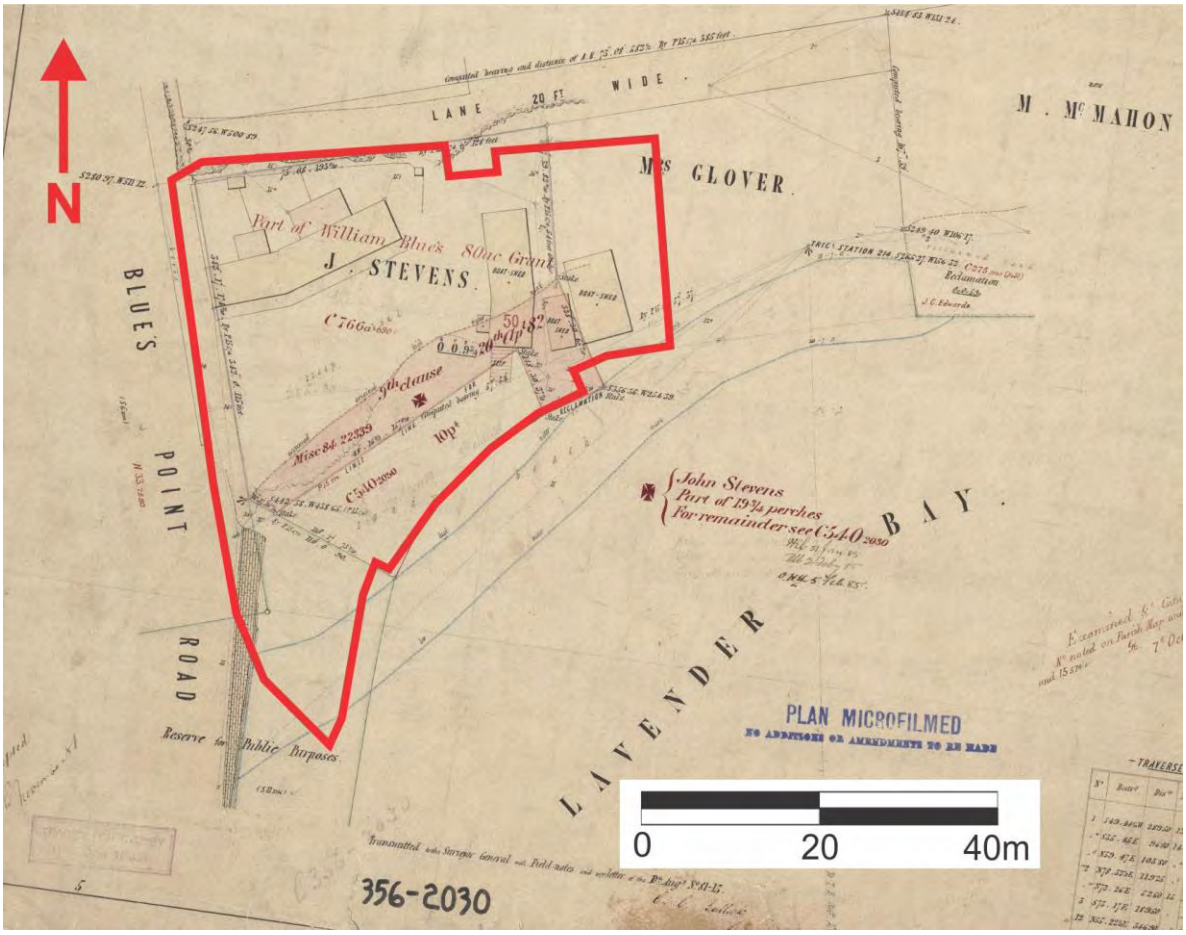


Figure 2.15: Crown Plan dated from 10 August 1881 showing land reclamation adjacent to Stevens' part of Lot 10 and to which a title was issued in February 1885. It also shows the extent of development on Stevens' and Glover's Lot 10 between 1881 and 1884 at the time of Stevens' application for land reclamation. CP 356-2030 LPI.

Land reclamation was occurring at Blues Point from at least 1866, well before Stevens' applications from c.1880 to purchase reclaimed land adjacent to Lot 10. Residents and the boating public generally opposed applications as it increasingly restricted access to the water and from freely drawing up their craft on 'beaches … occupied by private individuals.' In addition, it restricted the future extension of the public wharf built at significant Government expense. Contributing to increased resentment among residents, the Minister approved Stevens' application prior to its advertisement in the *Government Gazette*. The annotations on the plan record reclamations of land by Stevens, the first dated 20 April 1882 and the latter

[77] CP 356-2030 LPI; CP 540-2030 LPI.

in 1884 between the southern boundary of Lot 10 and the harbour. Annotations on the plan showing the 'assumed high water mark' suggests the reclamation predated Stevens' application and that informal reclamation is likely to have occurred on the southern boundary of Glover's Lot 10. After payment of £25 the title to 19 ¾ perches (areas of 10 perches and 9 ¾ perches (totalling 500 m^2) was issued to John Stevens in February 1885.[78]

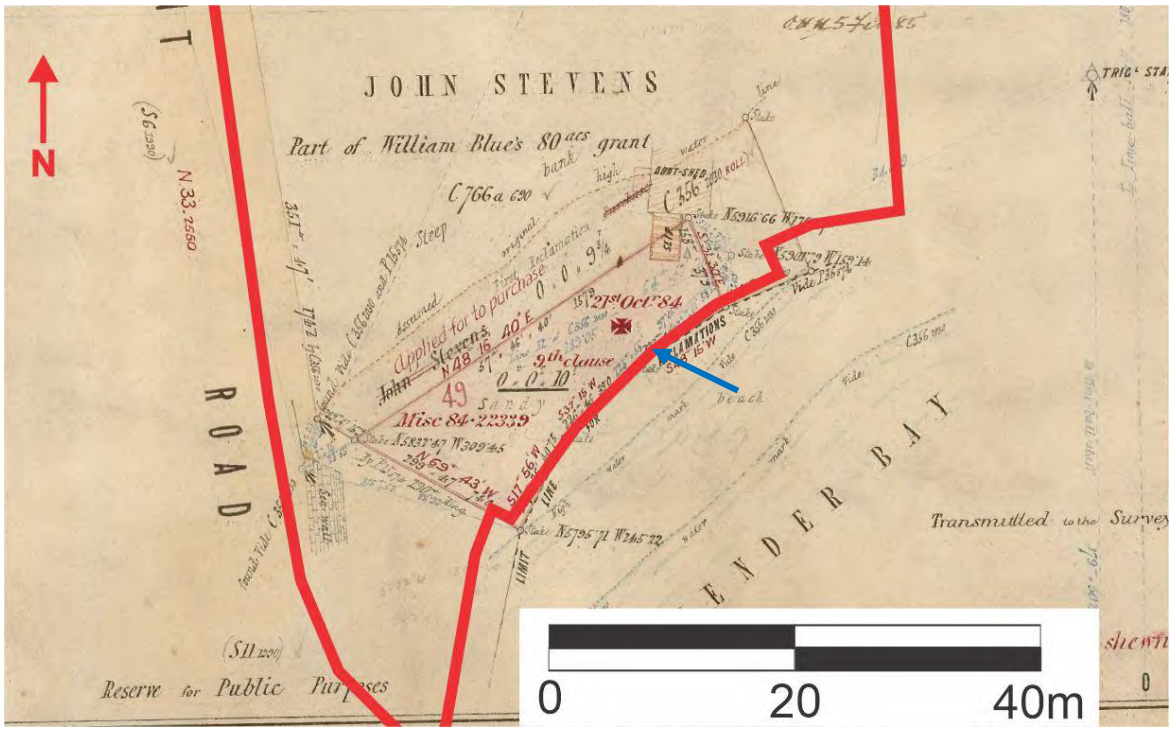


Figure 2.16: Plan showing Stevens' reclamation. Note a seawall (blue arrow) along southern boundary of the reclamation is in the same location as the present-day seawall along the foreshore. 'Additional Reclamation: Plan of Lavender Bay North Shore in the Parish of Willoughby… applied for to reclaim and purchase… by John Stevens', Steven Perdriau, Govt Surveyor, 25 Apr 1884, Crown Plan 540-2030, NSW Land and Property Information.

Crown Plan 356-2030, dated 1881, also provides evidence of the residential and commercial development of Stevens' land and the steep topography between the land and the harbour. The survey confirms Stevens' houses as largely built of stone and with wings of brick construction perpendicular to the main range of the house. Division of the north-western corner of Stevens' land and the provision of three outhouses confirms that the building incorporated three residences in 1881. The boat shed near the eastern boundary was extended towards the harbour, and another smaller boat shed encroaching on the boundary of Glover's allotment. The plan also shows a timber boat shed on Glover's part of Lot 10

[78] CP 356-2030 LPI; *NSW Gov Gaz* 30 Nov 1866, 2921; *Evening News* 3 Mar 1880, 3; *Evening News* 27 Feb 1880, 2; *SMH* 16 Jul 1881, 3; LPI Schedule.

positioned between the high and low water marks and in close proximity to sheds on Stevens' land (Figure 2.15).

Although streets and roads were shown on maps and plans at the time of subdivision it was not uncommon for those such as Cliff Lane to the north of Lot 10 to be formed or completed at a later date due to the expense of construction on the rocky terrain. On 21 May 1881 the Borough of Victoria called for tenders for the formation of the lane on the north side of Stevens' and Glover's properties including the construction 'of a retaining wall and excavation of a large quantity of rock'. Given the extent of the work, the project estimated at £400 was not approved until 1882 and on the condition that £300 '…be voluntarily subscribed' before any agreement was entered into.[79] A road survey commissioned by the council in 1883 provides evidence of the extent of the new lane as well as the buildings on Glover's and Stevens' portions of Lot 10. Illustrating the steepness of the topography, the lane remained incomplete and would require the removal of a further 'wedge of rock' comprising a perpendicular rock face about 30 feet high (c.9m). Pencil notes on the plan confirm that the completion of lane construction post-dated the original survey. Small outbuildings were built on both Stevens' and Glover's land (Figure 2.17).

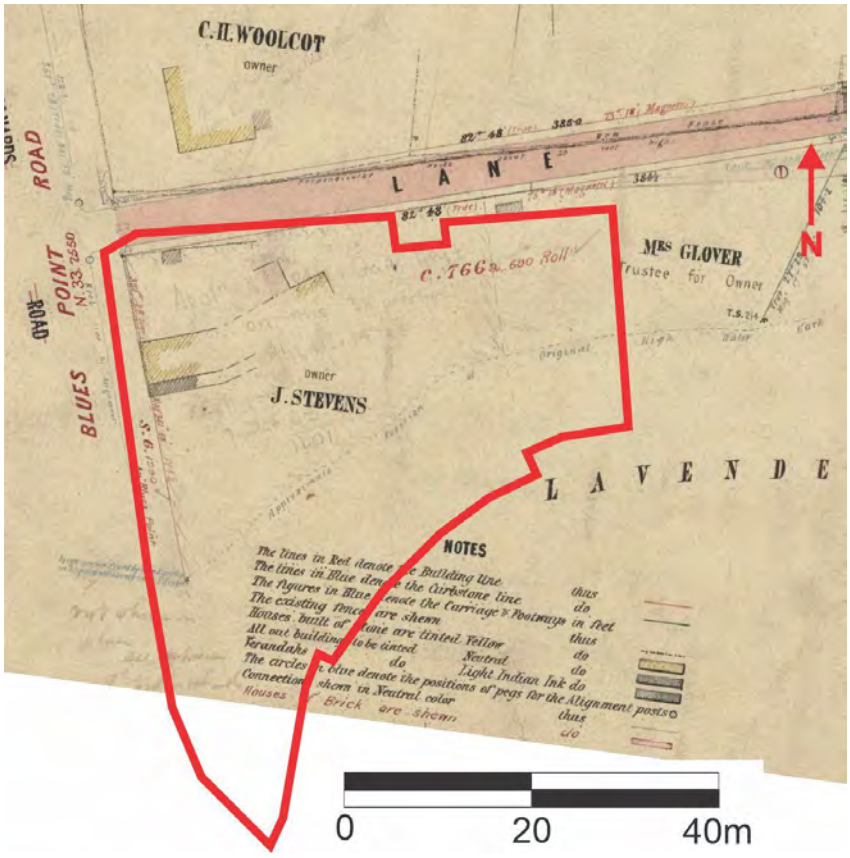


Figure 2.17: Crown Plan dated 24 Feb 1883 recording the extent of Cliff Lane hewn through the sandstone rock north of Lot 10, as well as Stevens' stone and brick house, and outbuildings on Stevens' and Glover's portions of Lot 10. CP 4-2202, LPI.

[79] SMH 13 Apr 1882, 6.

© Sydney Metro 2018

An undated (1884 or 1887) photograph of Blues Point looking south over Stevens Lot 10 provides a glimpse of the roof of the house, part of the reclaimed area of beach, and boats moored adjacent to the shore. Due to the steep topography the boatshed and slip are not visible (Figure 2.18).

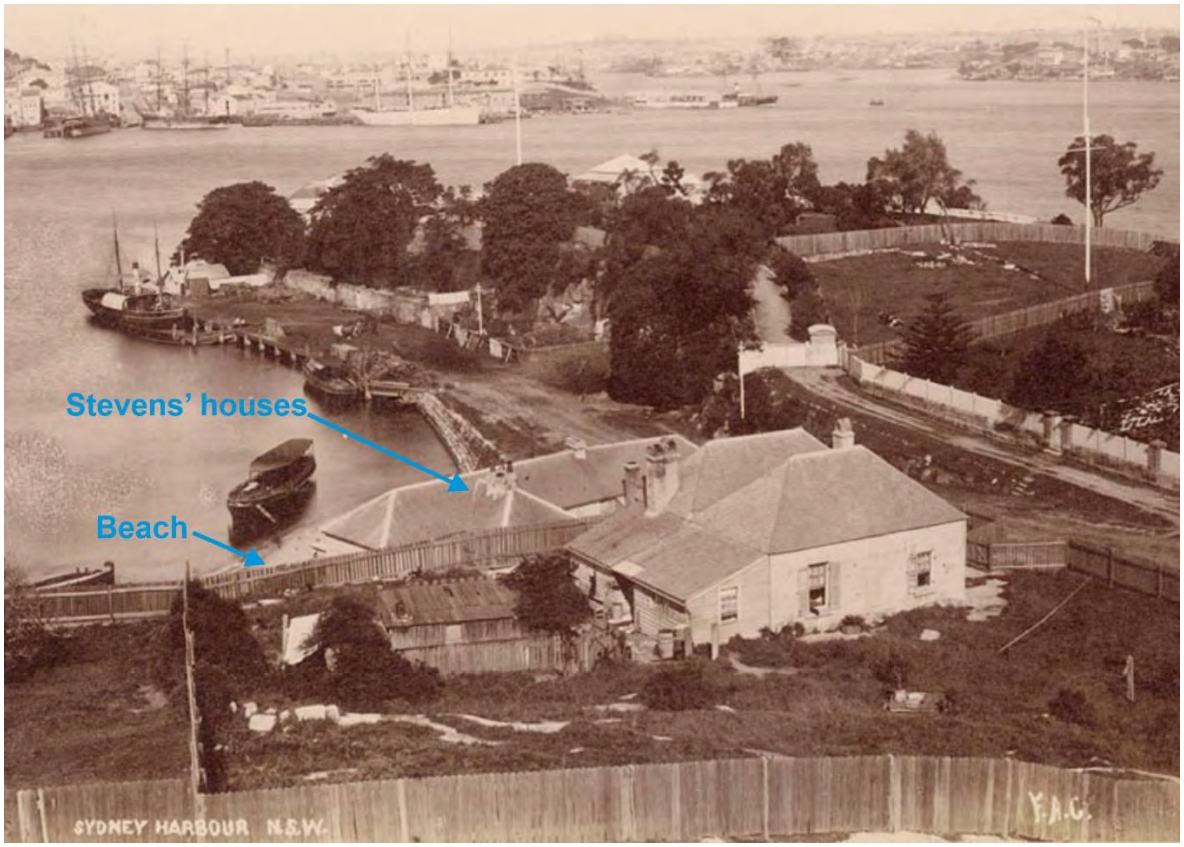


Figure 2.18: An 1884 or 1887 photograph of Blues Point by photographer F A Coxhead showing a glimpse of the beach adjacent to Stevens' reclaimed land on the harbourside of Lot 10. An arrow indicates the roof of Stevens' houses. SPF/935 ML SLNSW.

In May 1885 John Stevens' application to the Government to construct a jetty on piles in front of his property at 'Lavender Bay' was accepted and the structure was in evidence in 1890 (Figure 2.19). By this time Stevens operated a number of businesses and was linked to the development of several Blues Point and North Sydney sites. As evidence of work he was undertaking which indicated potential links to the study area, Stevens placed a number of advertisements in the newspapers of the day. They related to the employment of four men for trenching and other work at Blues Point, two shipwrights required at Blues Point and a coasting master for Port Stephens trade. In May 1887 Stevens took out a mortgage on the western part of Lot 10 and the reclaimed land. Due to financial difficulties, he was unable to meet the rent for the pile jetty and it was advertised as forfeited in May 1888. Stevens reapplied in 1890. His 44-ton wooden schooner *Susie* was also offered for sale in December 1888 however, it did not sell. In 1891 Stevens' 'well-known' coasting vessel *Susie,* carrying

© Sydney Metro 2018

a cargo of coal, 'sprang a leak' and 'foundered' near Port Stephens. Fortunately, all hands were saved.[80]

2.10 Lot 10, Section E from 1890

Surveys were made for the North Sydney Sewerage System in 1890 and construction took place in the period up to 1898. The sewer line was transferred to the Metropolitan Board of Water Supply and Sewerage in 1899.[81] Prior to this time, sewage, surface drainage and other 'liquid refuse' ran into the harbour.[82] The first survey and revisions made in 1892 and 1930 provide detailed information about Lot 10 and its buildings (Figure 2.19). The first survey plan records a water tank or cistern located to the south of Stevens' westernmost house on the west side of Lot 10 into what would have been the natural rock.[83] A newspaper report in 1884 indicates that the North Shore did not have a permanent water supply at that time. Residents and businesses relied on rainwater collected in tanks, with some properties having wells. In very dry seasons water supplies failed and residents relied on the purchase of carted water.[84]

A Public Works Department survey shows that by 1891 alterations and changes had been made to the boatshed, and to the other galvanised iron, and timber and iron buildings or sheds (some open) on Stevens' and Glover's parts of Lot 10 (Figure 2.19). A pile jetty and a timber wharf extended from the shoreline into the harbour. A weighbridge was positioned outside the western boundary of the site adjacent to Blues Point Road. Fencing, separating the commercial and residential parts of the site, enclosed the house and the water closets. The surveyor's field books linked to the final plan notes that a timber yard was operated near the pile jetty and open shed. The triangular section of wharf near the pile jetty was noted as unfinished (Figure 2.19).[85] Not all details of the surveys are plotted on the final drawing and the surveyor's field books provide detailed information about the site at the time of survey.[86]

In 1892, James Thomas Glover, a son of James Glover, applied to lease 18½ perches (468 m2) of the harbour frontage on which to construct a wharf. A published record of the outcome of the application has not been located.87 A list of shipping facilities in Port Jackson in 1894 described Stevens' Wharf at Blues Point as comprising:

> 1 jetty - 1 berth - 25/0 length of berth - 25/0 width of jetty or wharf - 7/6 draught of vessel taken - 4/0 depth of water at low tide.[88]

On October 1896 well-known resident of North Sydney John Stevens died from 'the effects of paralysis' at his residence, 'William-street, Blue's Point'. He was considered to be 'one of

[80] *SMH* 9 May 1885, 4; *NSW Gov Gaz* 1 Dec 1885, p7710; *SMH* 2 Oct 1885, 16; *NSW Gov Gaz* 28 Aug 1888, p6057; *SMH* 22 Dec 1888, 22; *NSW Gov Gaz* 14 Oct 1890, p7946; *Evening News* 14 Jan 1891, 4; *NSW Gov Gaz 22* Jan 1892, 518; LPI Schedule.

[81] W. V. Airds, *The Water Supply, Sewerage and Drainage of Sydney*, MWS&DB, Sydney 1961, 154-8.

[82] *SMH* 21 Feb 1888, 11.

[83] PWDS 1544-S901 Sydney Water.

[84] *Evening News* 6 Oct 1884, 5.

[85] PWDS 1544-S901, from 1891, Sydney Water.

[86] Field Book No 1770, 31 Jul 1890, Sheet 16 North Sydney, Sydney Water; Field Book No 2669, 19 Feb 1930, Sheet 16 North Sydney, Sydney Water.

[87] NSW *Government Gazette* 9 Sep 1892, p7358.

[88] *Sydney Mail* 24 Oct 1896, 3.

the pioneers of the pearl-shell industry in Torres Straits' having 'a number of small craft employed in fishing in the locality of Thursday Island'. He had a 'genial and kindly disposition' and 'made hosts of friends everywhere, even amongst the aborigines [sic] about Torres Strait and Thursday Island'. He was one of the founders of the St. Leonards Bowling Club and left a family of two sons and five daughters.[89]

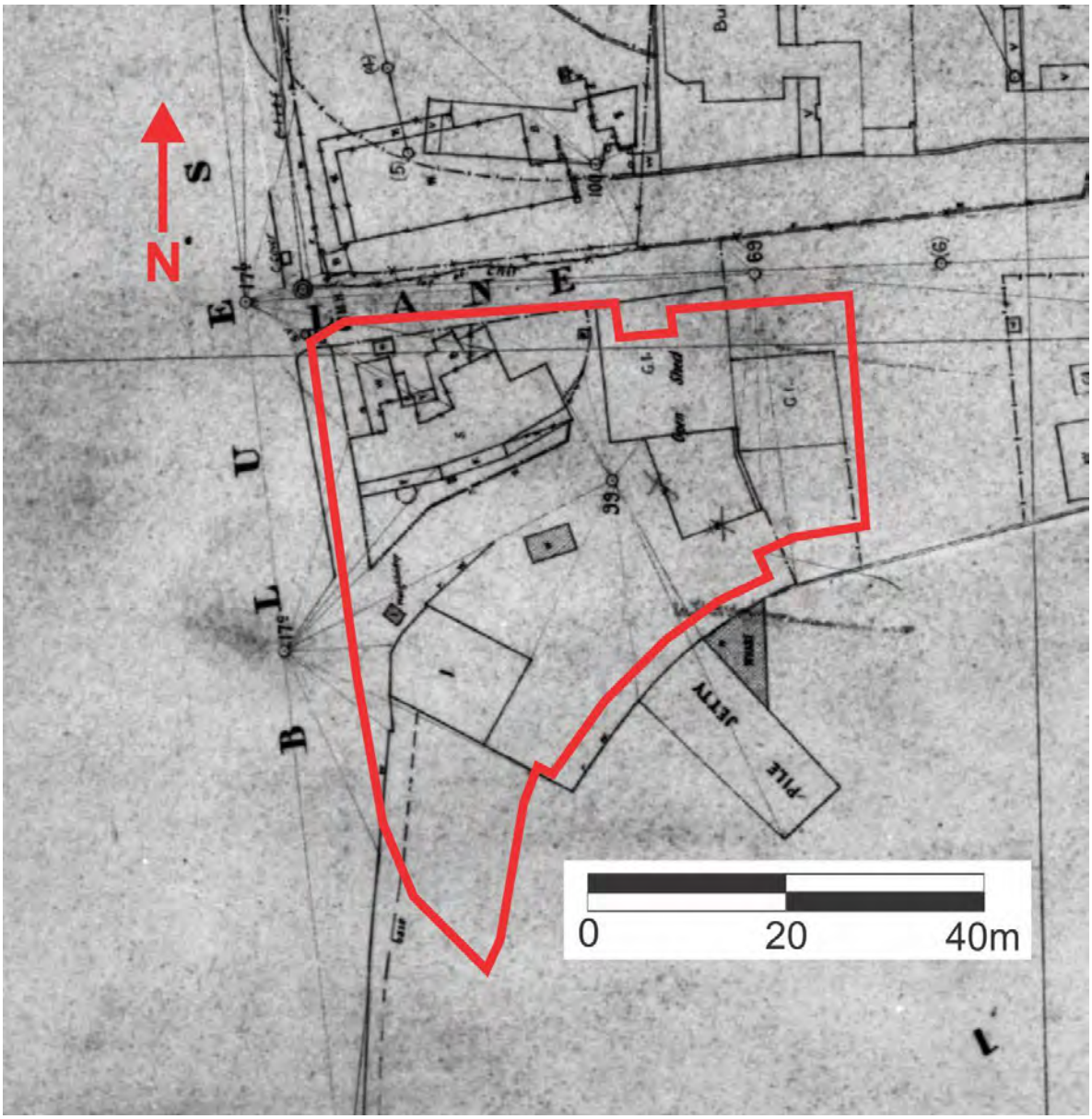


Figure 2.19: North Sydney sewer survey dated 1891 showing Stevens' houses, sheds, pier and weighbridge on Lot 10. The plan includes information from revision surveys in 1892 and 1930 and the study area is outlined. PWD S1544-S901 Sydney Water.

[89] *Daily Telegraph* 17 Oct 1896, 10; *Freemans Journal* 24 Oct 1896, 14.

The Special Lease for Stevens' jetty was forfeited due to unpaid rent for the second time in December 1897.[90] In 1900 some of the North Sydney assets of Stevens' Estate were put up for sale. An advertisement placed by Richardson and Wrench described the waterside property:

> SYDNEY HARBOR [sic], at BLUE'S POINT. 105 FEET frontage to deep waters of Harbor [sic], 113 feet to Blue's Point-road, rear line to lane is 128 feet. It has a solid stone sea wall, JETTY with overhead tramway, three stone cottages, two large stores of iron, etc., office, weighbridge. A VALUABLE WATER FRONTAGE for Coal, Timber Merchants, or Shipping Companies.[91]

A photograph (from c.1914) of the construction of the Blues Point vehicular ferry dock shows what appears to be the southern end of Stevens' Wharf visible on the left-hand side of the image (Figure 2.20). The history of the Blues Point vehicular ferry dock is expanded on in Section 2.10.1.

The Stevens' Estate 'wharf property' was passed in at £2,000. In September 1900 plant, machinery, fittings and materials from a 'White Lead Works' at Stevens' Wharf, Blues Point was offered for sale by Hugh Duff & Co on the premises, however, a link to Stevens' business interests, or one of his tenants, has not been confirmed. In 1902 an Order for Foreclosure was made on the mortgage over the 38 perches (960 m^2) of Lot 10, as well as the adjacent reclaimed land (19 ¾ p or 500 m^2) owned by the Stevens Estate.[92] Stevens' Wharf was again advertised for Public Auction in February 1902 as comprising '3 Cottages and Stores'. The outstanding amount owing to the Commercial Banking Company of Sydney (Limited), including the principal and interest up to 8 April 1902, was advertised as £2360/18/9.[93]

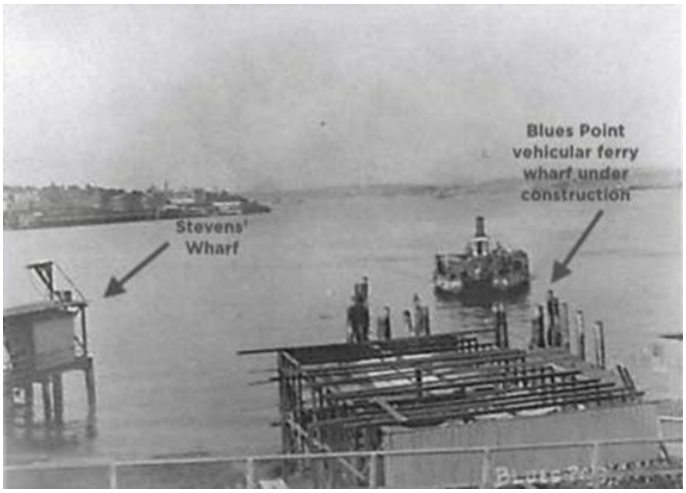


Figure 2.20: An undated photograph of Blues Point (from c.1914) showing the construction of the Blues Point vehicular ferry dock. Part of Stevens' Wharf is to the left. LH Ref PF567 Stanton Library.

[90] NSW *Government Gazette* 15 Dec 1897, p9263.

[91] *Daily Telegraph* 5 May 1900, 3; *Evening News* 16 May 1900, 5.

[92] *Evening News* 16 May 1900, 5; *SMH* 14 Sep 1900, 8; LPI Schedule.

[93] *Australian Star* 31 May 1902, 12; *SMH* 13 Feb 1902, 8.

2.10.1 Blues Point Wharf and the Vehicular or 'Horse Ferry'

Ferry services have been synonymous with Blues Point since William 'Billy' Blue established a ferry service there in the early 19th century. As the North Shore population grew, increasing demand led to the extension of passenger services and provision of vehicular ferries to cater to the needs of residents and businesses demanding regular access to the city and other harbour locations.

Blues Point Wharf and its approaches (partially located within the southwest of the study area) were expanded in the early 1870s at a 'considerable cost to Government', also drawing on Municipal funds. A meeting of residents in 1875 revealed the limitations of the new wharf despite the investment of several thousand pounds. It was considered that if restricted to passenger traffic far less money could have been spent. A stage was built on the wharf for a horse and cart ferry but inexplicably the wooden landing was removed and the entrance closed. Criticism was made of the materials used and 'that [the] uncoppered wooden piles in the harbour would be perforated through by the Cobra in about twenty years'. It was hoped that the wooden structure would not rot before it was used.[94]

It was reported in 1897 that the Minister for Public Works approved £7,000 for the construction of a vehicular or 'horse ferry' service, including a 'dock and landing' for ferries between Dawes and Blues Points.[95] The construction of a suitable vehicular ferry dock at Blues Point did not proceed and in August 1901 a deputation of North Shore representatives again lobbied the Minister for Works and to establish a Government 'horse ferry' service. Sydney Ferries Ltd refused to commence a service claiming adequate provision had not been made 'on land'. The construction of a horse ferry dock and landing began on the western side of Dawes Point in 1898 but work on the Blues Point Dock was delayed. As plans in progress for the construction of a harbour bridge required an enormous outlay in funds, the Government's investment in improving ferry services to Blues Point was of low priority.[96]

The Public Works Department finally constructed a cable hut at Blues Point in 1901 in anticipation, it is assumed, for the construction of a vehicular ferry wharf.[97] The North Shore Ferry Service including a vehicular ferry was in service by February 1902 and, although the timetable was considered 'not the most convenient', it was anticipated that increasing traffic would make it the principal vehicle ferry between Sydney and North Sydney, replacing the route between Milsons Point and Macquarie Point (Increasing patronage, however, required the Council to better maintain Blues Point Road where loose gravel and the steep incline were a problem for heavily-laden vehicles).[98]

In 1905 a comparison of the two North Shore ferry services showed that 2,793 vehicles were conveyed from Blue's Point Dock, compared to 4,823 from the more frequent but congested Milson's Point service.[99] The McMahon's Point Tram Service opened in 1909 providing a service along Blues Point Road turning into Cliff Lane (or Cliff Avenue) and terminating at McMahons Point Ferry wharf, connecting with ferry services to the city.[100] In 1914 the vehicle

[94] *SMH* 30 Sep 1875, 3.

[95] *Evening News* 20 Jan 1897, 3.

[96] *SMH* 23 Aug 1901, 4; NSW Public Works Department Report 1900-01, 63.

[97] NSW Public Works Department Report 1901-02, 33.

[98] *Daily Telegraph* 15 Feb 1902, 12.

[99] *Daily Telegraph* 16 Mar 1905, 3.

[100] McCarthy, K. 'Reaching the North Shore', *Trolley Wire: Journal of Australian Tramway Museums*, No 199, Apr 1982, 20.

© Sydney Metro 2018

dock at Blues Point was replaced with the aim of lessening the 'steep grade' and improving vehicle entry and exit points from the ferry.[101] A photograph thought to be of the 1914 vehicular ferry dock facing due east towards Milsons Point is shown in Figure 2.20 and Figure 2.21.

In 1923 Sydney Harbour Trust commenced plans to improve the docking facilities of the Blues Point Punt Service. Following representations of the North Sydney Council the Harbour Trust Commissioners agreed to:

> … remove the metal hoppers to a more suitable position on the existing wharf, to remove the building occupied by Mr Wakefield to a position clear of the proposed new roadway and to build the necessary seawall.[102]

The commissioners were not prepared to take over the existing pontoon or contribute to road maintenance, but as a concession they agreed to renew portions of the Council's lease of the existing wharf at a reduced rental of £20 a year.[103]

Figure 2.21: Photograph showing activity at a vehicle horse ferry in Sydney, possibly Blues Point. Harold Cazneaux, c.1908, 'Ticket collector, horse punt', Australian National Maritime Museum.

[101] *Evening News* 2 Apr 1914, 9.

[102] *Sun* 28 Nov 1923, 9.

[103] *Sun* 28 Nov 1923, 9.

A January 1926 survey of the vehicular ferry dock illustrating the location of the vehicular ferry dock to the southwest of Lot 10 and to the north of the public wharf, partially within the south of the study area. The survey records a concrete roadway leading to the dock, to the east of which was a shed. The vehicular ferry dock comprised two, ramped landing stages flanked on the north side by a wharf on piles and landing steps. The wharf and steps are outside of the study area. A shed was located on the central arm of the dock and the entire dock area including outlying structures totalled 19 perches (480 m^2). A 'dolphin' shown to the northeast of the dock was either used for mooring or for navigation aids and is likely to have been secured by piles driven into the harbour floor (Figure 2.22). The completed Blues Point vehicular ferry dock is shown in Figure 2.23.

Figure 2.22: Part of a 1926 survey of the vehicular ferry dock recording the Blues Point vehicular ferry dock to the south of Lot 10. McMahons Point Subdivision Plans M2/17 ML SLNSW.

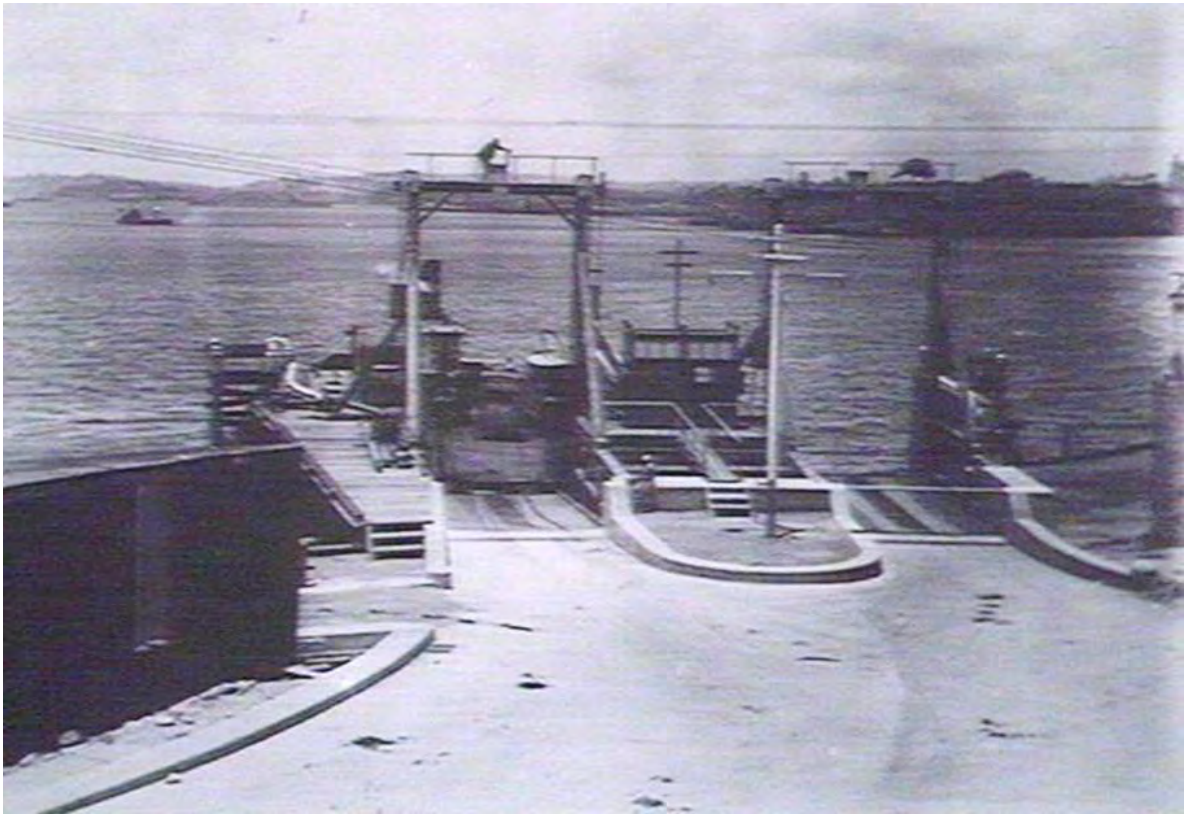


Figure 2.23: Undated view of the North Shore Ferry Company's PS Warrane docking at the Blues Point Vehicular Ferry Dock. GPO 1 - 19851 ML SLNSW.

After the construction of the Sydney Harbour Bridge in 1932, demand for a vehicular ferry declined. In March of that year the Harbour Trust served a notice to Sydney Ferries Limited to terminate Blues Point passenger and vehicular services while the McMahons Point run was to be retained 'until further notice'.[104] The Blues Point vehicular ferry dock is listed in the North Sydney Heritage inventory as of local significance (Figure 2.24).[105]

[104] *Labour Daily* 15 Mar 1932, 6.

[105] Listing No I0451, North Sydney LEP, Database No 2180681, State Heritage Inventory.

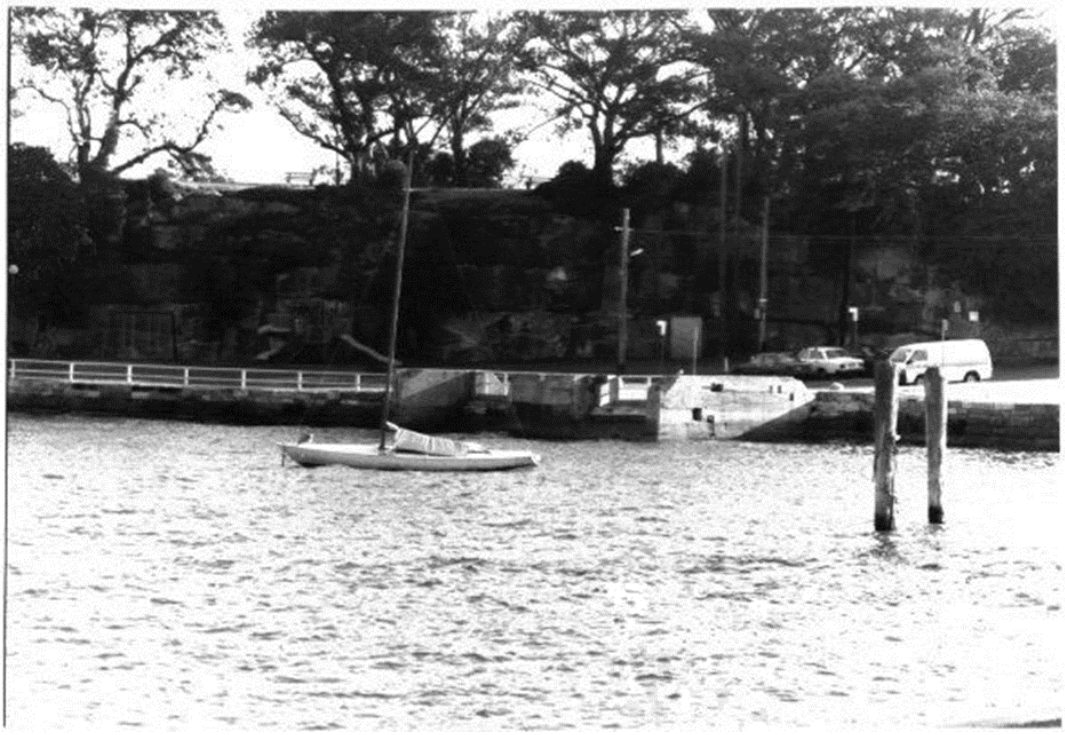


Figure 2.24: Undated photograph of the remnants of the Blues Point vehicular ferry dock after the demolition of the superstructure. Database No 2180681, State Heritage Inventory.

2.11 NSW Fresh Food & Ice Company and Harbour Land & Transport Co Ltd – Lot 10 Section E (West)

In November 1902 the New South Wales Fresh Food and Ice Company Limited announced the proposed establishment of a North Shore distribution branch on the waterfrontage known as Stevens Wharf, the western part of Lot 10 Section E. The conveyance dated 2 February 1906, post-dating the company's announcement in the *Daily Telegraph* of the purchase, suggests the company had an option to buy the property.[106] The company is significant in Australian history for its links to advances in methods of refrigeration contributing to safe transport of food. From 1861, engineer Eugène Dominique Nicolle carried out experimentation into the refrigeration of meat and other goods for export in collaboration with businessman Thomas Sutcliffe Mort. T. S. Mort established the New South Wales Fresh Food and Ice Company in 1875.[107]

In 1902 the head office and refrigerating works were at Harbour Street, Sydney with branches and agencies throughout Australia. The company proposed to construct 'a depot, with ice-house and other cool storage premises' at the Blues Point site at the estimated cost of about £3000. The facilities would provide for the supply of fresh fruit to the northern suburbs and

[106] *Daily Telegraph* 10 Nov 1902, 9; LPI Schedule.

[107] *SMH* 23 Dec 1902, 7; *Sydney Mail* 4 Apr 1906, 866, 882 & 883; Barnard, A. 'E. D. Nicolle (1823-1909)', *ADB*, http://adb.anu.edu.au/biography/nicolle-eugene-dominique-4304/text6973 (26/3/2018)

more efficiently delivering milk in a steamer from Darling Harbour to the Blues Point depot, rather than the Macquarie Point to Milson's Point horse ferry service.[108]

In November 1902 architect T. W. Hodgson invited tenders for additions, alterations and general repairs to the company's Blues Point property. Further tenders were advertised for excavation at the depot, details of which were available from the on-site depot manager.[109] Further information about the work is not known. Sometimes recorded as No 1 Blues Point Road, the *Sands Directory* lists the NSW Fresh Food and Ice Company and the manager W. W. Hilton on the east side of the road and at times in Cliff Lane or Cliff Avenue from 1903. Subsequent issues of the *Sands* record changes in the company's depot site managers who might also have lived in one of the semi-detached residences or 'cottages' built by Stevens. A photographic view of Blues Point from Dawes Point provides a record of the study area and the development of Lot 10 in 1910 (Figure 2.25).

In November 1926 the Harbour Land and Transport Company Limited, a subsidiary of the Sydney Ferries Ltd associated with their properties, purchased the western portion of Lot 10 Section E (38 perches or 960 m^2) and the adjacent reclaimed land (19 ¾ perches or 500 m^2).[110] By 1934 the waterfront extending from Blues Point to McMahon's Point ferry jetty had for some years been utilised by Sydney Ferries Ltd 'as a depot for the company's idle ferries'. At the time the company was considering schemes for the use of the 'unproductive' land they owned (including part of the study area and 'Gibraltar' to the southwest) there and were considering schemes including the construction of 'swimming baths, the erection of a clubhouse' with the building of blocks of flats, with swimming pools, tennis courts, detached garages, and gardens being favoured.[111]

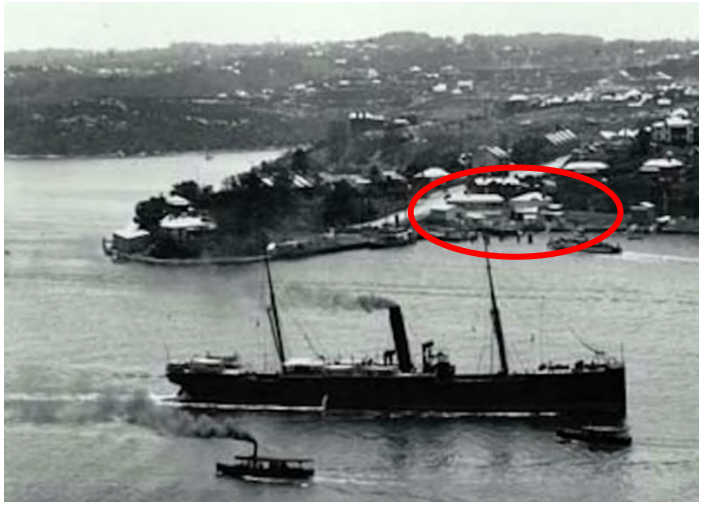


Figure 2.25: View of Blues Point and the study area (circled red) in 1910 showing a considerable amount of development on the western end of Lot 10 owned by the NSW Fresh Food and Ice Company. Image No 498 1 Jan 1910 State Archives & Records.

[108] *Daily Telegraph* 10 Nov 1902, 9; LPI Schedule.

[109] *SMH* 12 Nov 1902, 5; *Daily Telegraph* 1 Apr 1903, 3

[110] LPI Schedule; *Daily Commercial News & Shipping List* 12 Mar 1919, 4.

[111] *SMH* 17 Jan 1934, 14.

© Sydney Metro 2018

2.12 Acquisition of the Glover Estate – Lot 10 Section E (East) from 1910

Following widow Jane Glover's death in 1891 the eastern part of Lot 10 was transferred to accountant Ernest Thomas Joseph Glover, one of James Glover's sons, and to architect Thomas Wilson Hodgson. Hodgson is linked to the preparation of plans for the New South Wales Fresh Food and Ice Company Limited on the western part of Lot 10. The reason for Hodgson's inclusion on the title, whether due to business interests or as a trustee of the Glover Estate, is not known. In July 1911 the Minister for Public Works resumed land on the Cliff Lane boundary for tramway construction. The Sydney Harbour Trust Commissioners purchased the residue in January 1912 for wharfage improvements.[112]

2.13 Occupants of the Study Area from 1914 - 1930s, Lot 10 Section E

Due to the arrangement of the listings in the *Sands Directory* it is difficult to accurately identify tenants in the residence on the corner of Blues Point Road and Cliff Lane (or Avenue). Due to the corner location some are listed in either or both Cliff Lane and Blues Point Road. With the exception of the company and on-site manager, a list of the tenants thought to be linked to the study area (east and west parts of Lot 10 Section E) during this period of ownership is shown in Table 2.2.

Table 2.2: Occupants of the residence on the corner of Blues Pont Road and Cliff Lane 1914-1930s.

Year of Publication	Street Name	Location	No.	Tenants
1915	Blues Point Road	Between No 1 (NSW Fresh Food and Ice Company. Tel 22 N.S. Charles M. Quinlan, manager) and Ferry Wharves		Langham's boat shed
1916	Blues Point Road	Between 'Blues Point' and Ferry Wharves		Donald McInnes
1916	Cliff Lane	Off Blue's Point Road to McMahon's Point Ferry		Donald McInnes Thomas Marsh Charles W. Wrigley, launch proprietor Langford's Boat Shed
1917, 1918, 1919	Blues Point Road	Between Cliff Lane and Blues Point Ferry Wharves		Donald McInnes
1917, 1918	Cliff Lane	Off Blue's Point Road to McMahon's Point Ferry		Donald McInnes Mrs Sarah Richards Charles W. Wrigley, launch proprietor Langford's Boat Shed
1919	Cliff Lane	Off Blue's Point Road to McMahon's Point Ferry		Mrs Sarah Richards Langford's Boat Shed
1920, 1922	Blues Point Road	Between Cliff Lane and Blues Point Ferry Wharves		Alfred S. Wakefield, engineer
1920, 1922	Cliff Lane	Off Blue's Point Road to McMahon's Point Ferry		Mrs Sarah Richards Luen's Boat Shed

[112] LPI Schedule; *NSW Gov Gaz* 26 Mar 1913, 1819.

Year of Publication	Street Name	Location	No.	Tenants
1925	Blues Point Road	Between Cliff Avenue and Blues Point Ferry Wharves		Alfred S. Wakefield, blacksmith N. W. Abraham marine engineer
1925	Cliff Lane	Off Blue's Point Road to McMahon's Point Ferry		Mrs Emma Lynch Mrs Sarah Richards Wrigley's Boatshed Charles W. Wrigley
1926	Blues Point Road	Between Cliff Avenue and Blues Point Ferry Wharves	No 1 - -	Mrs Emma Lynch A. S. Wakefield, blacksmith N. W. Abraham marine engineer
1926	Cliff Lane	Off Blue's Point Road to McMahon's Point Ferry		Mrs Emma Lynch John W. Harris Wrigley's Boatshed Charles W. Wrigley
1927	Blues Point Road	Between Cliff Avenue and Blues Point Ferry Wharves		Mrs Harding A. S. Wakefield, blacksmith N. W. Abraham marine engineer
1927, 1928, 1929, 1930, 1931	Cliff Lane	Off Blue's Point Road to McMahon's Point Ferry		John W. Harris Wrigley's Boatshed Charles W. Wrigley
1928	Blues Point Road	Between Cliff Avenue and Blues Point Ferry Wharves		C. Wrigley Mrs Harding N. W. Abraham marine engineer
1929, 1930, 1931, 1932/33	Blues Point Road	Between Cliff Avenue and Blues Point Ferry Wharves		Thomas Morris
1932/33	Cliff Lane	Off Blue's Point Road to McMahon's Point Ferry		Thomas Morris Wrigley's Boatshed Charles W. Wrigley

2.14 Lot 10 Section E and Adjacent Land from the 1930s

An undated c.1937 aerial photograph of Blues Point provides evidence of the study area and the extent of development at this time. The vehicular ferry dock was still extant and a vessel is shown docked there. Harbour Land and Transport Company Limited linked to Sydney Ferries owned the western part of Lot 10, docking their ferries on jetties between the vehicular dock and McMahons Point. The houses originally owned by Stevens were also extant and, although the image is indistinct, a large shed-like structure is evident on the western part of the allotment. Sydney Harbour Trust Commissioners owned the eastern portion of Lot 10 at this time and a smaller shed is visible on the western boundary (Figure 2.26).[113]

[113] M. C. Kent et al. *Sydney From the Air*, [1937?], LH Ref PF2624, Stanton Library.

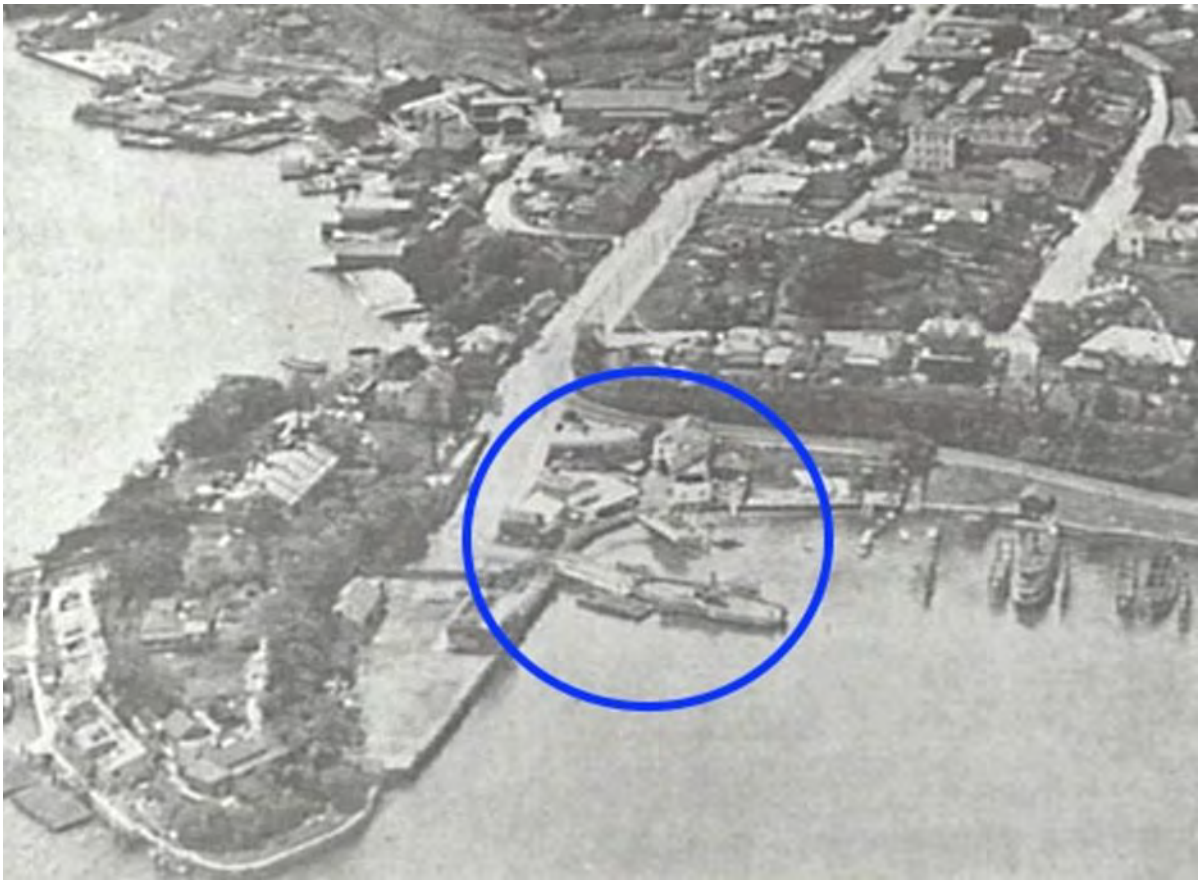


Figure 2.26: Aerial photograph of Blues Point taken by Milton C. Kent in 1937 providing evidence of the study area including Lot 10 Section E and the vehicular ferry dock at this time. Kent et al. LH Ref PF2624, Stanton Library.

An undated North Sydney Block Plan No 48 (catalogued as c.1930s-40s) provides evidence of the study area during this period (Figure 2.28). The plan incorporates annotations dated to the 1950s and 1960s. The houses built by John Stevens on the western part of Lot 10 is not shown, however, residences are not shown on many of the other Blues Point allotments. Other structures on Stevens' former allotment include a galvanised iron shed (open on one side) near the eastern boundary and a pile jetty extending into the harbour. The eastern part of Lot 10 formerly owned by James Glover shows an enclosed galvanised-iron shed and a jetty or slipway extending from it into the harbour. The Blues Point vehicular ferry dock remained *in situ* and the North Sydney Municipal Council workshops were located immediately to its north. Cliff Avenue (or Lane) is shown as widened to accommodate the tramline between Blues Point Road and the McMahons Point Ferry Wharf. The notation 'No 5' shown circled on Lot 10 refers to the c.1963 acquisition of the property by the State Planning Authority (Figure 2.28).[114]

[114] North Sydney Block 48, n.d, H. E. C. Robinson, Stanton Library.

Figure 2.27: Detail of c.1921 aerial photograph of Blues Point. The cottages originally owned by Stevens are still extant (red arrow) with a number of other shed/store structures to the south and east of the cottages. The vehicular ferry is also operational. 'Sydney from the Air', Kent & Love c.1921.

© Sydney Metro 2018

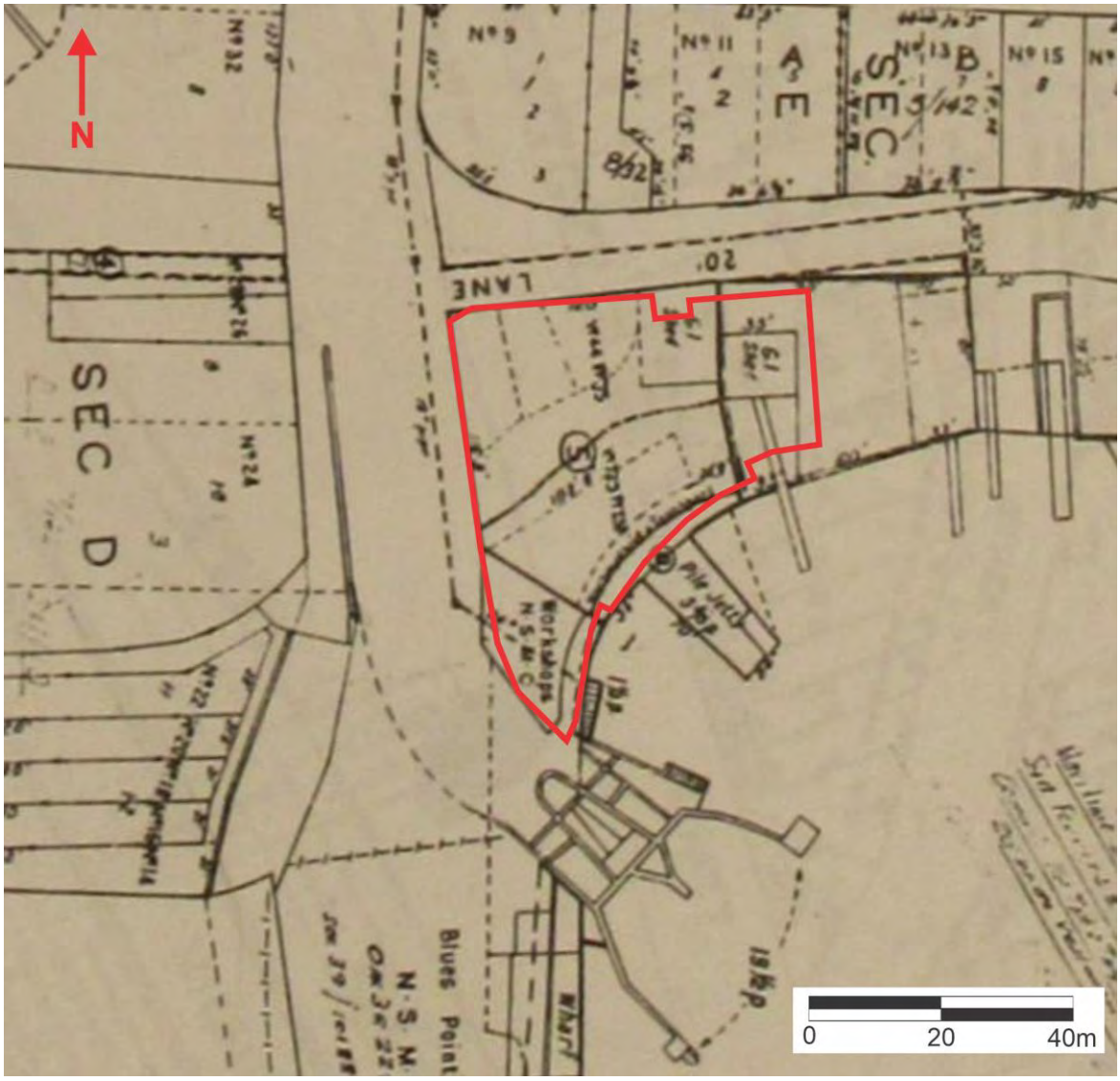


Figure 2.28: North Sydney Block 48 showing the study area between the mid c.1930s and the 1960s. North Sydney Block 48, n.d, H. E. C. Robinson, Stanton Library.

Examination of North Sydney Rates and Valuation Books indicate that the house or 'cottage' at No 1 Blues Point Road was demolished in 1942, or soon after, with only a stone wall remaining. The adjacent site shown in rate records as 'off Blues Point' is thought to relate to Stevens' area of reclaimed land and listed as comprising a seawall and mooring dolphins. The adjacent rated site showing a workshop (demolished 1942-43) is thought to relate to the structure on the north eastern corner of Stevens' western part of lot 10. Glover's former grant has not been able to be identified in 1942 rates records.[115] An aerial photograph taken in 1943 confirms the demolition of Stevens' houses and the workshop in the north-eastern corner of the site by this date. Sheds on the reclaimed part of the allotment are still extant but are not the same sheds as those depicted on the 1891 plan (Figure 2.29).[116]

[115] North Sydney Council Rates Schedule.

[116] 1973 Aerial SIXMaps, LPI.

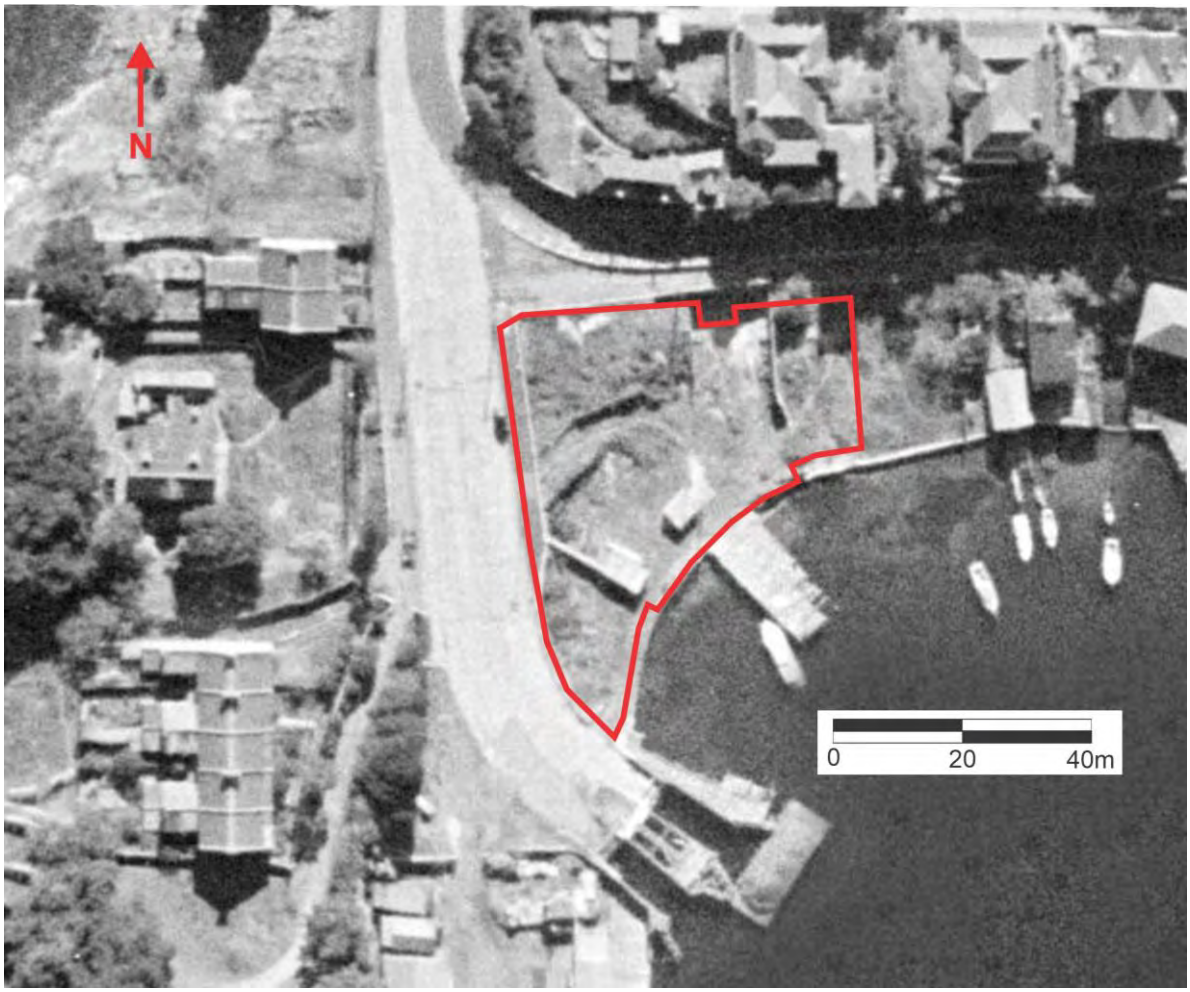


Figure 2.29: Aerial photograph showing the study area in Blues Point in 1943. The image confirms the 1942-43 demolition of house and workshop linked to Stevens' part of Lot 10. The sheds shown on plan in 1891 have been replaced. Stevens' Wharf is still extant on the reclaimed land near the shoreline. Sydney 1943 Imagery, SIX Maps LPI.

In comparison to the photograph above, a 1949 aerial photograph of the study area provides evidence that Stevens' Wharf remained extant and that a wharf was built or land reclaimed at the shoreline of the eastern part of Lot 10. The use of the study area is not known but might be linked to building work or to a building material storage depot or salvage yard. Owners at this time include the Harbour Land and Transport Company Limited (western part of Lot 10 Sec E and reclaimed Portion Nos 1009 & 1010) and the Sydney Harbour Trust Commissioners (residue of eastern part of Lot 10 Sec E). The vehicular ferry dock was demolished by this date (Figure 2.30).

© Sydney Metro 2018

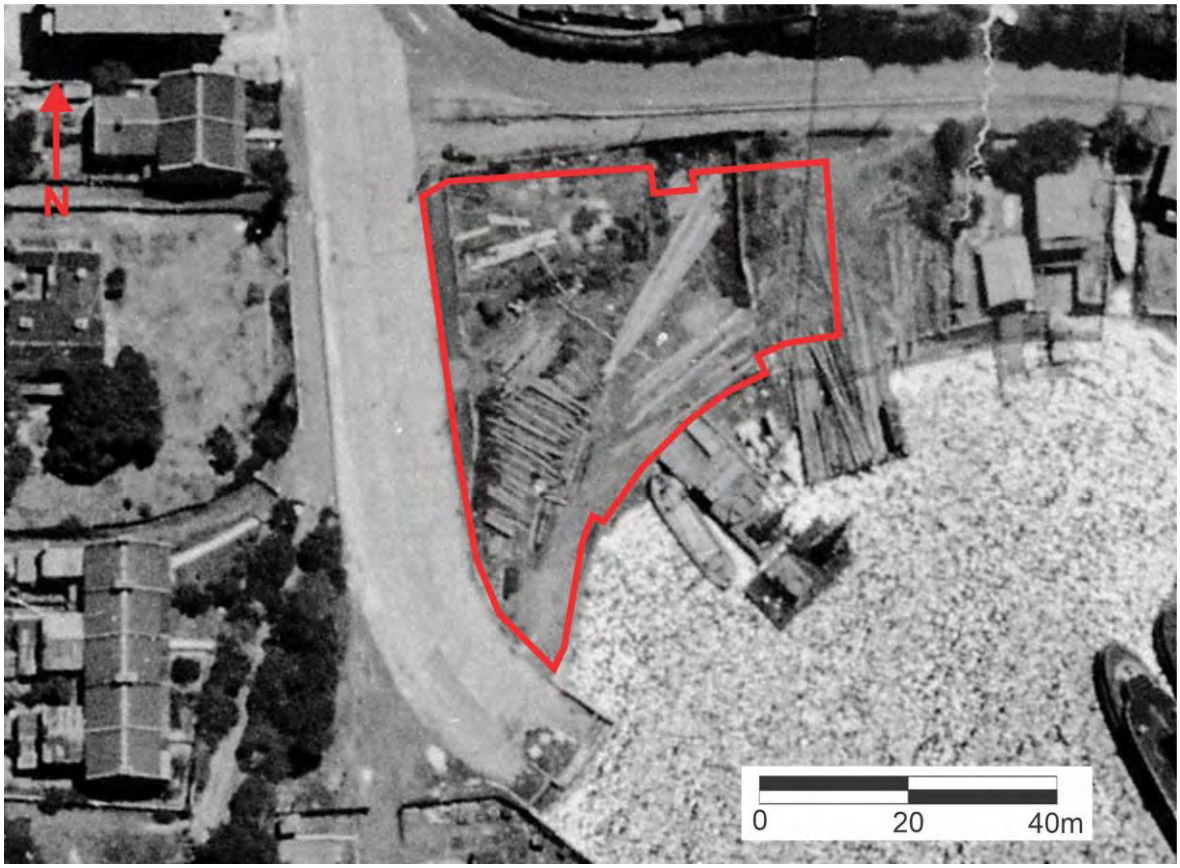


Figure 2.30: Aerial photograph showing the study area in Blues Point in 1949. The owners or lessees of the land might have used the study area as a material storage depot or salvage yard. Stevens' Wharf is still extant and a wharf or pier-type structure lies adjacent to the eastern part of Lot 10. Image No 1132-001, Historical Atlas of Sydney, CCSA.

With extensive co-ordination responsibilities for town planning in the County of Cumberland between 1945 and 1963, the Cumberland County Council acquired the western portion of Lot 10 Section E and the reclaimed Portion Nos 1009 and 1010 in June 1960.[117] In 1971 the State Planning Authority placed Lot 2 DP 230594 (a subdivision of the eastern part of Glover's Lot 10) under the control of North Sydney Council for use as a public park, reserve or recreation space. Council carried out site modifications and maintenance from this date. Other allotments in the reserve include Lot 1 DP 902933 and Lot 1 DP 1159898 (linked to Stevens' part of Lot 10 and reclaimed land), and areas of Crown Land. Between 1976 and 1977 Cliff Lane or Avenue was renamed Henry Lawson Avenue.[118] A bus shelter was built fronting the former Cliff Lane in 1984.[119] The study area is included in the Blues Point Waterfront Group list on the North Sydney Local Environmental Plan as an item of local heritage significance.[120]

[117] LPI Schedule.

[118] NSW *Government Gazette* 23 Jul 1971, p2727; Sht 15, North Sydney Block Plans 1977, Stanton Library.

[119] *Artefact*, PIR AARD 2016: 122.

[120] Blues Point Waterfront Group, Listing No I0423, North Sydney LEP, Database No 2180677, State Heritage Inventory.

© Sydney Metro 2018

3. Archaeological Investigation Methodology

3.1 Archaeological Program

The archaeological excavation at Blues Point Reserve began on the 17 August 2018 with the final monitoring works completed on 27th November 2018. The Aboriginal archaeological excavation began after the historical excavation was completed, with some limited overlap. It was undertaken by AMBS Ecology and Heritage and began at the level of the natural sandy deposits which pre-dated the historical archaeology. The site was divided into two areas of archaeological excavation, Area A and Area B (Figure 1.5, Figure 3.1).

The research for the AMS provided overlays of the early historic plans which included data for the location of likely remains. The site was excavated using an open area stratigraphic methodology with the focus of the excavation program on any intact remains found to survive within the impact area in the western portion of the site; Areas A and B. The sub-division of the study area into two separate areas allowed excavation in both areas to progress simultaneously. Separate groups of context numbers were assigned to each area. This approach maximised the identification of temporal relationships in the archaeological record during excavation.

3.1.1 Early Works

Machine excavation (14-tonne and 5-tonne excavator) began in the northwest corner of Area A on 17 August 2018, then moved eastwards and finally to the south of the site towards the foreshore and site entrance. During early works prior to the archaeological salvage program, archaeological monitoring established that the entrance of the site was positioned across part of a former seawall which had to be removed to allow heavy equipment to gain access. New service trenches were required to be excavated below the footpath along Blues Point Road and extended westwards towards Blues Point Reserve. Modern garden soil and late 20th-century fills were removed by machine from the study area. It was then excavated stratigraphically through the 19th-century fills and deposits until the natural sand deposits were reached.

3.1.2 Test Trenches

A number of machine trenches were initially dug across all areas to test the soils for contamination (Figure 3.2). During the course of the excavation 23 test trenches were excavated throughout the project area to assist with clarifying the stratigraphy at various stages of the excavation. The test trenches were both hand and machine excavated (Figure 3.3, Figure 3.4). See Volume 4 for summaries of the location and purpose of each of these test trenches. Seven phases of activity were identified throughout the study area based on the historical research (see Section 3.3). Context numbers were allocated with reference to each archaeological area and individual features. Interpretive relationships between the features in each area were established and recorded during excavation. These associations form the basis of the archaeological analysis in Section 4. The relationships are displayed schematically in the Harris Matrix for the project (Volume 3) and accompanied with a complete set of phased site plans (Volume 3) and interspersed through the report. The archaeological evidence from this site can enhance the historical record contributing to an understanding of the history and settlement of the local region, in particular the maritime, industrial and residential development around Blues Point.

© Sydney Metro 2018

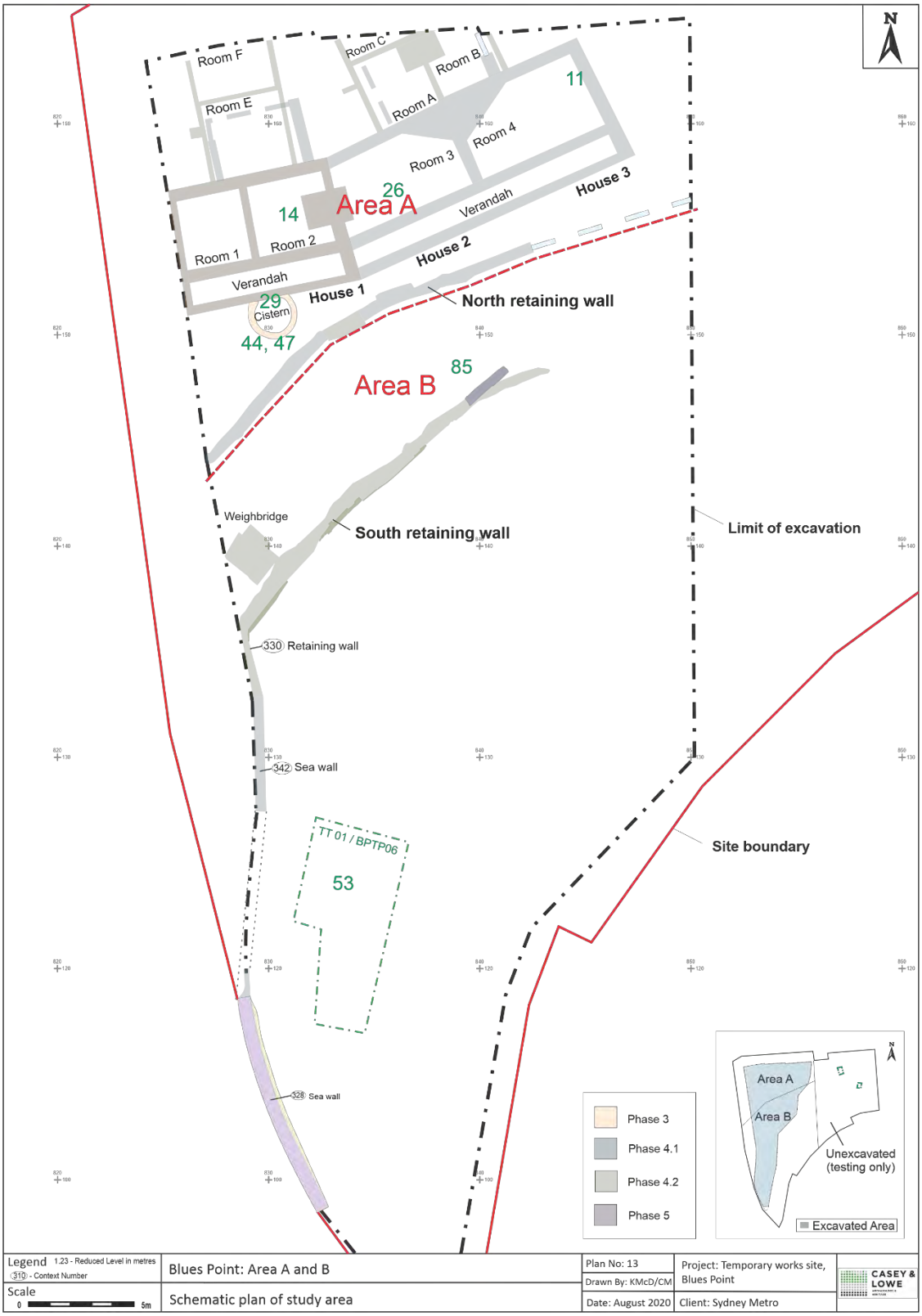


Figure 3.1: Schematic plan of the archaeological remains within the study area. The houses all located in Area A in the north. The colours reflecting the different phases of construction and occupation.

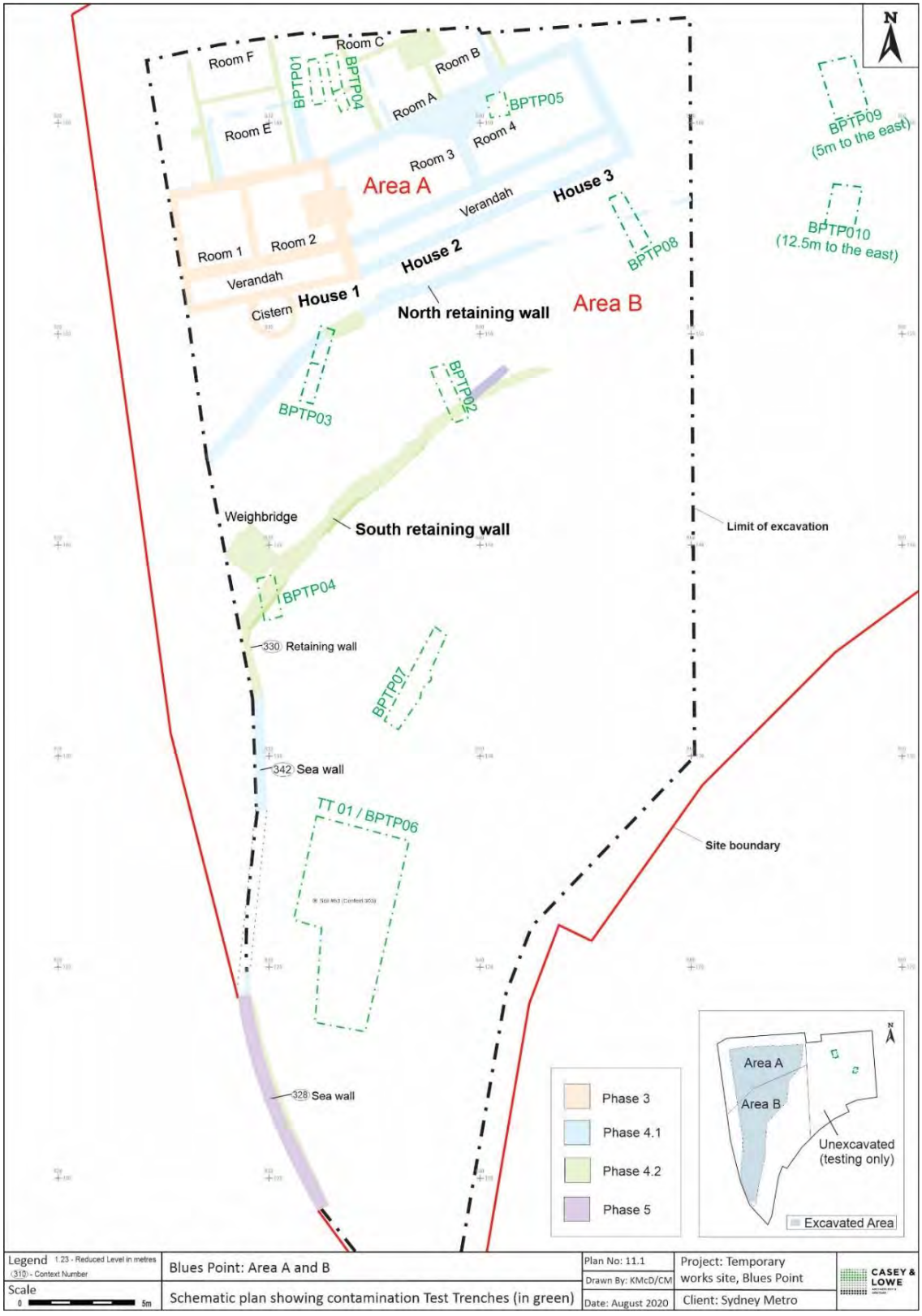


Figure 3.2: Location of machine dug test trenches across the entire site at the start of the excavation to test soils/fills for contamination.

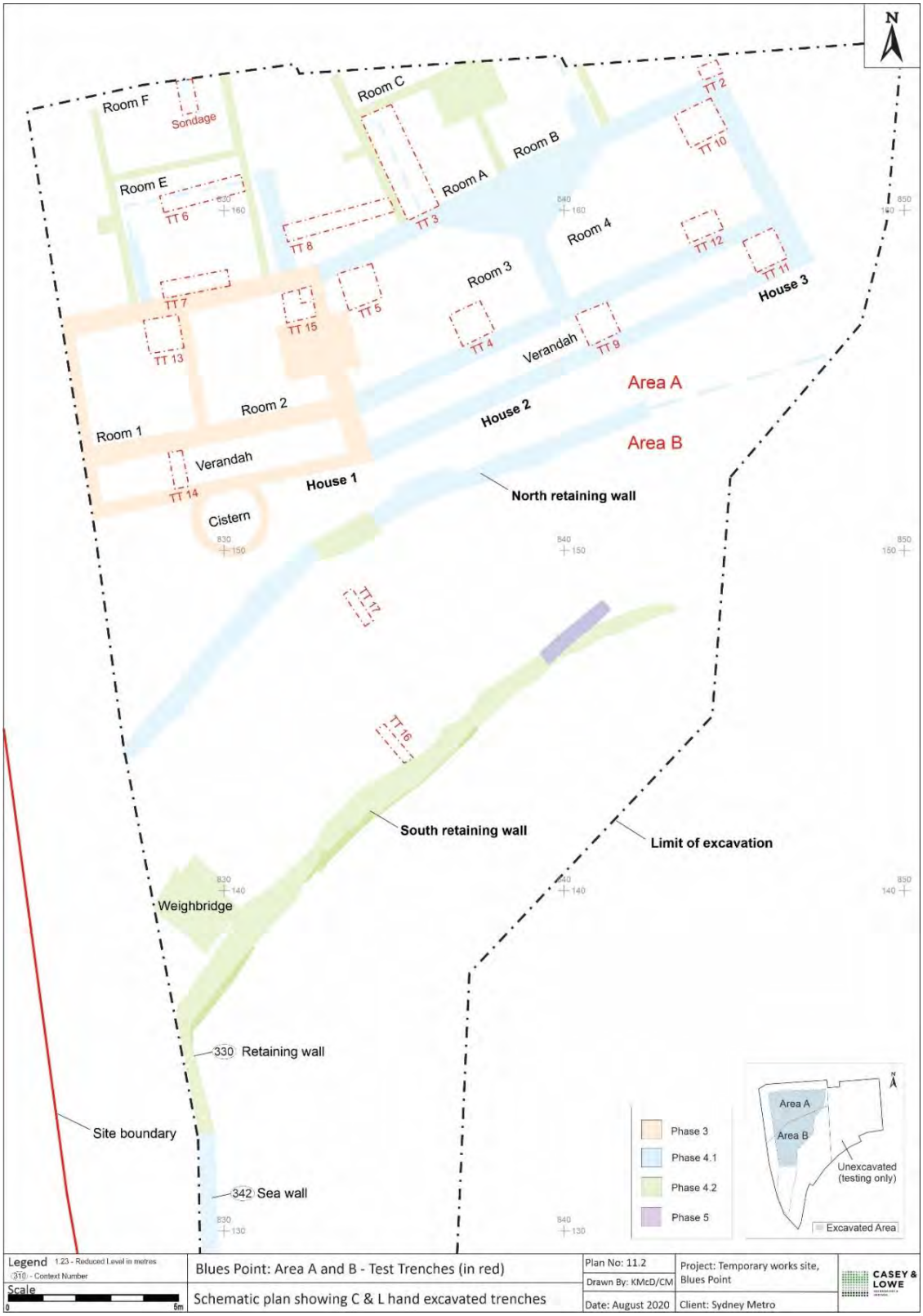


Figure 3.3: Location of hand excavated test trenches through TT 2 to TT 17 during the course of excavation.

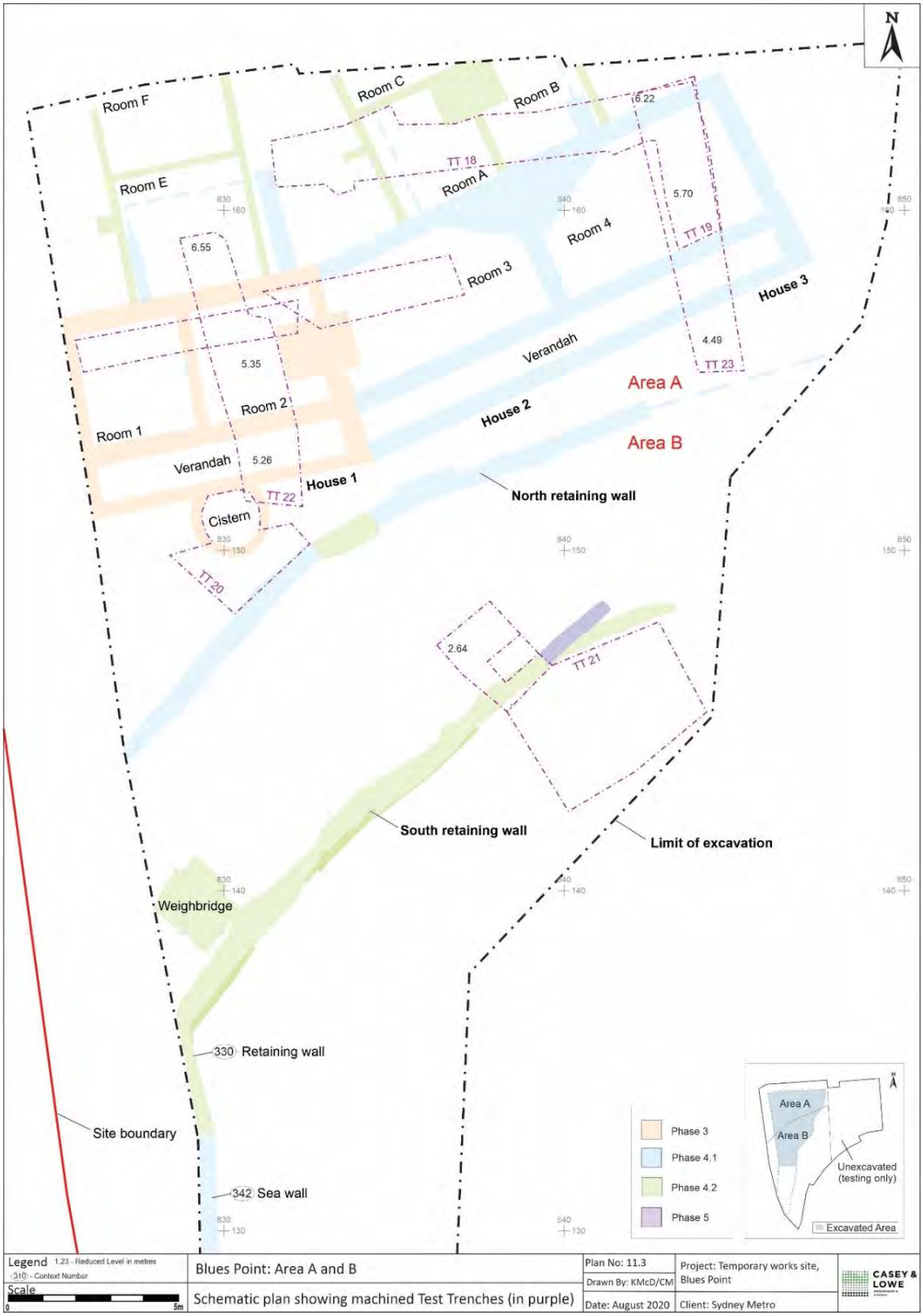


Figure 3.4: Location of machine excavated test trenches TT18 to TT23 towards the end of the excavation to help understand the natural topography.

3.2 Archaeological Excavation Methodology

The site was primarily investigated via open area excavation, with some test trenches which crossed stratigraphic boundaries to investigate certain questions. This allows for investigation of the layers via section due to the depth of deposits. These trenches/sampling are aimed at investigating the process of reclamation and landscape modification, a core research theme. The areas of open-area excavation exposed, investigated, and recorded archaeological features, fills and deposits in their entirety, phase by phase. Test-trenching provided a detailed sample and section though archaeological features and fills, phases and events. A total of 23 test trenches were excavated through the site for this purpose. Although most test trenches were formalised and recorded some machine trenches were informal and largely used for the purposes of planning further excavation or as a means of sampling an archaeological feature or fill.

The archaeological remains were excavated and recorded within a site grid established at the beginning of site works. The site grid was established in the format of MGA94 Zone 56 with grid points set at intervals of 10m east and 10m north. Several datum points were also established throughout the excavation, and all levels (RLs) were calculated to Australian Height Datum (AHD). The grid was maintained during all stages of excavation by the site surveyor with several points of the grid removed and reset as the site levels were reduced. The site survey data was adopted to assist with details site planning.

The 10m x 10m grid system facilitated the planning of the site at a scale of 1:50 using A3 sized sheets of permatrace. A series of 6 'top-plans' were made for the site, recording multi-phases and multi-context archaeological remains at a 'start level'. A series of eight overlays were produced as features and fills were excavated. Section drawings and feature profiles were produced at a scale of 1:20. The position of section drawings are marked on plans.

The physical excavation and recording of the archaeological remains were undertaken by professional archaeologists. Excavation tools included mattocks, shovels, spades, hoes and hand-trowels. Mechanical excavation was utilised to expedite the excavation where suitable.

All archaeological structures, features and deposits of significance were assigned a context number and recorded on a context sheet. Context sheets detail general and specific context characteristics such as colour, soil matrix, stratigraphic and physical location, dimensions, building methods and materials, artefact quantity and type, and preliminary phase etc (Volume 4; Digital Site Archive). A total of 150 context numbers were assigned. Not all individual features or modern disturbances were given a context number. In some cases, one number was assigned to a group of related contexts. This practice was discretionary and was generally employed where bulk removal of fill layers between archaeological phases was carried out by machine or where a group of deposits with ill-defined boundaries existed, but belonged to the same general event, such as demolition material within a room displaying slightly different properties, but clearly relating to the same general event.

Along with the drawn and written record, the archaeological remains were also photographed. The photography was digital, with archival photographs saved as both RAW and JPEG files (Volume 4).

Sydney Metro undertook some video footage of the site for media distribution. A copy of this was provided to the project team. General area shots were also taken to provide context to the features. Photogrammetry was also undertaken by the surveyor to get detailed area shots to scale (Digital Site Archive).

© Sydney Metro 2018

Artefacts were collected according to context number and processed at the artefact facility provided for the project. There was not a 100 per cent collection of artefacts from either machine or hand excavated fills and deposits, as this is unnecessary and unrealistic for historic sites of this type. For the most part diagnostic items and a representative range of artefact category and type were kept from fills. Items discarded were noted on the context sheet or discard sheet. The processing of the artefacts was done off site and included washing, drying, sorting by category and type, labelling and boxing.

Where an occupation-related deposit was present, a 1m by 1m grid was set up, and excavated by context in 'spits' of 50mm. Each 1m grid square was given a northing and easting alphanumeric coordinate beginning in the northwest corner (for example A1, A2, A3 etc.). The material was 100 per cent wet sieved on site to guarantee the collection of the small artefacts (such as pins, buttons, and beads) and ecofacts (seeds, small mammal and fish bones) which are often lost in this type of deposit. This methodology, linked with the artefact database designed by Casey & Lowe, and allows for spatial and comparative analysis of the artefacts from such deposits. Wet sieving was also used on other significant deposits including early imported fills and the historic natural sandy deposits.

Posthole fills were excavated to a depth of 50mm, just deep enough to give definition to the feature and expose the sides of the cut. The post-pipe was fully excavated, as its characteristics are the most relevant when comparing postholes to one another. This also indicated the depth of the post.

A sampling strategy for the excavation included the collection of soil and building materials samples. Natural deposits were sampled to provide information on the soil matrix as well for as pollen analysis. Significant occupation deposits, historical accumulation layers and fills were also sampled, for both pollen and soil analysis. These samples provide extra environmental information, such as landscape and vegetation, to the archaeological results. Samples of building materials included timber, bricks, mortar and render from structural remains, construction and demolition deposits. Other samples collected from the site included roofing slate, 19th-century ceramic service pipes, metal, and any other material deemed relevant to aid in the understanding and interpretation of its source and/ or the site.

© Sydney Metro 2018

3.3 Archaeological Phases

Archaeological phasing remains during the excavation was based on the main historical developments identified in the *Archaeological Method Statement* (2018). These phases were reassessed during excavation and as part of writing this report. The archaeological remains are divided into seven main historical phases (Table 3.1), providing baseline information for predicted phases of development within each excavation area. Some adjustments were made to the phasing during the excavation and in the post-excavation analysis according to the archaeological evidence from the site with subphases identified in Area A. The detailed description of the archaeological excavation (including the site plans) is presented within this chronological framework.

Table 3.1: Summary of the archaeological phases identified.

Phase	Date	Description
1	-	Natural landscape
2	-	Aboriginal occupation
3	1817-mid 1860s	Early British occupation, wharf construction
4	1867-1890s	Wharfage, maritime industries & residential occupation
5	Early 1900s-1930s	Vehicular ferry, upgrades, new businesses
6	1940s-1960s	Demolition of ferry wharf and cottages
7	1960s-2018	Public park

The seven phases include:

- **Phase 1: Natural Landscape**
  - Steep, rocky foreshore with sandy beaches.
  - Natural bedrock and naturally deposited harbour sands.
- **Phase 2: Aboriginal Occupation**
  - Evidence of artefact scatters and hearths (AMBS report).
- **Phase 3: Early British Occupation, Wharf Construction, 1817 to 1860s**
  - Early land clearance and modification, small-scale farming.
  - Earliest phase of wharves, jetties and seawalls.
  - First phase of cottage and associated fences in northwest of Area A.
  - Subdivision of Blues estate.
- **Phase 4: Wharfage, Maritime Industries & Residential Occupation, 1867 to 1890s**
  - Extension of original cottage, additional outbuildings.
  - Reclamation and further development of wharves, jetties and seawalls.
  - Public and private infrastructure.
  - Establishment of maritime industries and associated infrastructure, including boatsheds, other sheds, a slipway and a weighbridge.
- **Phase 5: Further Developments, Early 20th Century to 1930s**
  - Vehicular ferry established at the public wharf, and subsequently upgraded.
  - Large-scale businesses take control of private land.
  - Changes to buildings and infrastructure, apparently minor.
- **Phase 6: Demolition, Storage Yard, 1940s to 1960s**

- Vehicular ferry wharf demolished.
- Cottages and sheds demolished.
- Land used as a building materials storage depot, salvage yard or similar.
- Small-scale structures built.

- **Phase 7: Public Park, 1960s to 2018**
  - Land reserved by Council for public recreational use.

Phase 4 was subdivided into two sub-phases which helped to clarify the different construction phases and additions to the houses in Area A along with the repairs and modifications to the retaining walls and seawall:

- Phase 4.1: 1860s-1870s, construction and early occupation of two houses built by Stevens c.1869. Early land reclamation, levelling, surfaces and retaining wall.
- Phase 4.2: 1880s-1890s, additions to the houses, land reclamation, with repairs and modifications to the retaining walls and the construction of Stevens' jetty and maritime infrastructure.

3.4 Excavation Team

A large team of archaeologists were involved in the archaeological excavation at the Blues Point site (Table 3.2). Dr Mary Casey was the primary excavation director, Dr Amanda Dusting (early works only) and Rhian Jones (main excavation stage) were secondary excavation directors, managing the on-site excavation program, assisted by trench supervisors, Jill Miskella and Francesca McMaster. Site planning was undertaken by Kylie McDonald. Survey and photogrammetry were undertaken by Guy Hazell (Arcsurv) with assistance by Brian Shanahan and Ronan Mc Eleney.

Table 3.2: Archaeological Excavation team at Blues Point site and the artefact processing team at Rosebery.

Name	Project Role
Dr Mary Casey	Primary Director
Rhian Jones	Secondary Director (main)
Dr Amanda Dusting	Secondary Director (initial)
Jill Miskella	Site Director/Supervisor
Francesca McMaster	Supervisor
Guy Hazell	Surveyor
Dr Gary Marriner	Archaeologist/Supervisor
Brian Shanahan	Surveyor
Kylie McDonald	Planner
Robyn Stocks	Specialist Archaeologist
Ronan Mc Eleney	Senior Archaeologist
Glenn Suey	Archaeologist
Maggie Butcher	Archaeologist
Caitlin McCormack	Archaeologist
Matt Byron	Archaeologist
Coral Hardwick	Archaeologist

© Sydney Metro 2018

Name	Project Role
Adam Pietrzak	Archaeologist
Hannah Flood	Archaeologist
Holly Winter	Archaeologist
Antonella Skepasianos	Archaeologist
Karen Stokes	Archaeologist

3.5 Excavation Limitations

There were few limitations on the excavation of the site beyond the difficulties of excavating safely given the sloping topography of the site. Modern impacts to the site were few as it was as a public park since the mid-20th century. Asbestos fragments were present in some 20th-century service trenches and demolition material and was removed by the site hygienist, Pure. The archaeological investigation was targeted to areas to be impacted during the temporary works program particularly the area within the footprint of the shaft in the northwest corner. This was the most northerly parts of the study area which included the cesspits and part of the extensions to Stevens' cottages. For safety reasons an area was retained for benching a few metres to the south of the temporary fencing that was placed around the perimeter of the site along Henry Lawson Avenue. This retained section also protected existing live services that ran east-west along the northern boundary. During excavation a number of auger holes (300mm diameter) were dug along the edge of the footpath on Henry Lawson Avenue as part of the civil works for the installation of piles and a new perimeter wall. Machine-made bricks laid end to end were found in some of these auger holes indicating the brick additions to the houses extended beyond the limit of excavation.

In the southern portion of the site, once the finish level of RL 2.8m was reached, the deeper fills or deposits, including reclamation fill and beach sand observed in one of the contamination test trenches (TT 01) were not investigated further and were therefore retained *in situ* but only at depth (Figure 1.6). The entrance to the site needed to be lowered for machinery access, this involved removing parts of the existing pavement along Blues Point Road which included the upper courses of an earlier seawall.

© Sydney Metro 2018

4. Results of the Archaeological Investigation

4.1 Introduction/Overview

This section of the report presents a synthesis of the results from the archaeological excavation. It provides a detailed description and discussion of the main archaeological findings using the overall site phases and where necessary within the defined excavation areas, Area A and Area B (Figure 4.1). Information from the field reports, matrices, detailed site plans, historic research and cartographic sources, artefact specialist reports, environment samples analysis and the artefact catalogue have all been used to write this section. The research questions formulated for the archaeological investigation prior to the excavation have also been considered in the structure and presentation of the archaeology in this section.

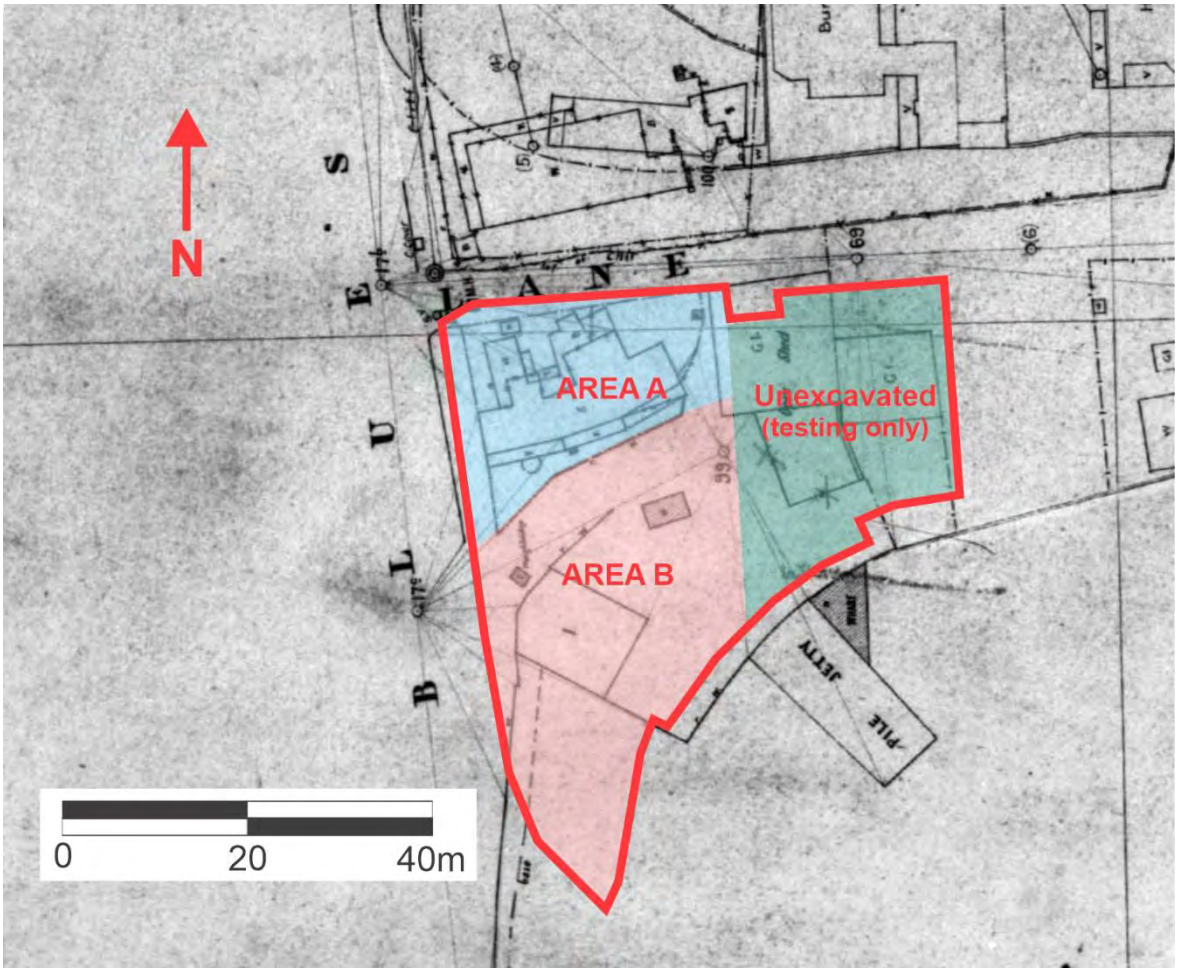


Figure 4.1: The location of the study area outlined in red overlaid onto the North Sydney sewer survey dated 1891. For the archaeological excavation the site was divided into two areas (Area A and Area B). PWDS 1544-S901 Sydney Water with Casey & Lowe annotations.

© Sydney Metro 2018

The northwest corner of Area A was the highest point on site (RL 8.24m) with a natural slope to the east and a much steeper slope to the south extending to Sydney Harbour foreshore. Archaeological material was encountered between RL 7.40m and RL 2.8m. The earliest cottage (c.1850s) was built in this northwest corner of the site where the ground was relatively level. At the eastern end of Area A, a number of levelling fills were imported and other deposits accumulated in order to lessen the steep slope created by the natural rock shelf of the harbour foreshore and raise the ground level to accommodate the construction of Stevens' additional cottages (c.1869). This northern area was a key focus of the archaeological investigation, as it contained different phases of construction and underfloor occupation deposits. In Area B, south of the cottages were a number of east-west retaining walls and surfaces which had undergone modifications and repairs throughout the occupation of the site.

Evidence of sandstone seawalls were found along the western edge of the site below the current footpath along Blues Point Road. Within Area B reclamation fills were encountered at RL 2.8m. The finish level of excavation in the southern part of the site the deeper fills and deposits (reclamation fills and beach sands) were not further investigated and were retained *in situ* below RL 2.8m (Figure 1.6). Following the excavation and recording of the visible 19th-century fills and structures, a number of machine-excavated test trenches were dug through Area A to obtain a clearer understanding of the natural shoreline topography.

Seven phases of activity were identified throughout the study area (Table 3.1). Most of the phases were concerned with the residential and industrial development of the site between the 1850s and 1930s. Typical remains included footings, retaining walls, seawalls, a cistern, some postholes and pits, occupation deposits, yard surfaces, levelling fills and reclamation fills. In all a total of 150 contexts were assigned to the remains. Context numbers 001 to 108 were assigned to Area A and contexts 301 to 349 to Area B.

4.2 The Site Prior to Excavation

Prior to the archaeological works there were no extant structures within the study area (Figure 1.3) as the site was a grassed reserve that used as a public park/reserve since the 1960s. The site sloped steeply from the northwest corner at the junction of Blues Point Road and Henry Lawson Avenue towards the south to the harbour (Figure 4.2). The extant heritage seawall and foreshore steps formed the southern boundary and was not be impacted by the current site works. A number of live services ran along the northern boundary of the site over late 19th-century brick footings and cesspits associated with the houses within the study area. Below the grass turf and garden soil was a thick layer of imported fill material used to create the park/reserve in the 1960s. These late 20th-century fills were mechanically removed where necessary. Several historical construction phases were identified, buried beneath these imported fills. There were no remains of 20th-century structures, therefore minimal modern impacts.

© Sydney Metro 2018

Figure 4.2: Henry Lawson Reserve, looking northeast with the Harbour Bridge in the right background. Google Street View 2015.

4.3 Results of the Salvage Excavation

4.3.1 Phase 1: Natural Landscape

4.3.1.1 Regional Geology & Topography

Sydney Harbour is located on the eastern edge of the roughly disc-shaped Sydney Basin, characterised by Hawkesbury Sandstone and Wianamatta Shale.[121] Sydney Harbour is within a broader Sydney region geological landscape which began taking shape 300 million years ago when it lay at the mouth of a swampy river basin. The rocky outcrop along the Blues Point foreshore is Hawkesbury Sandstone and the dominant soil materials are described as:[122]

> 'ha1 - loose, coarse, quartz sand.
>
> This is a sand to sandy loam with loose apedal single grained structure and porous sandy fabric. It generally occurs as topsoil (A1 horizon) Colour varies from brownish-black (10YR 2/2) when abundant organic matter is present. To dull yellow orange (10YR 7/2). Colour gets lighter with depth. Charcoal fragments and roots are common. Commonly water repellent. Low erodibility, high susceptible to concentrated flow erosion'.

Historical records such as early accounts, paintings, surveys combined with modern scientific analysis (pollen analysis) assists in recreating our understanding the natural landscape at Blues Point at the start of British settlement, which is not formally documented in the early to mid-1800s. Within the study area the original waterfront was a sandy shoreline onto which boats could be pulled ashore (Figure 2.4, Figure 2.6). Reclamation of the foreshore took place between the 1860s-1880s with new seawalls and a jetty (Stevens' jetty) replacing the sandy beach.

The natural site topography sloped steeply from the north western corner of the site down to the east and south towards the harbour foreshore. The natural soils within the study area were all sandy deposits with increasing clay content with depth sitting on horizontal sandstone

[121] Benson & Howell 1990:7-8

[122] 1989, Chapman G.A. et al, *Soil landscapes of the Sydney 1:100000 Sheet*, pg44-45.

outcrops stepping down to the foreshore (Figure 4.2, Figure 4.3). RLs were taken across the site on the remnant A and B soil horizons and exposed sandstone outcrops to show the steep nature of the topography. The falling contours on bedrock illustrated this topography (Figure 4.3).

Natural sandy deposits were predominantly exposed in large machine trenches (TT 16, TT 22 and TT 23) in the northern part of the site (Area A). In the southern half of the site (Area B), the natural sands were only evident in small areas south of the retaining walls (Figure 4.6). There is evidence to suggest a natural water channel or gully may have flowed north-south through the western part of Area A towards the harbour and was modified during historic settlement (see Section 0). The level of the original 19th-century sandy foreshore (Figure 2.6) was infilled and raised by reclamation fills from the 1860s onwards. The beach sands near the foreshore were only observed within machine-excavated test trenches (context 304, TT 01, Figure 3.2). As there were no impacts from the proposed works below the required finish level of RL2.8m, sandy beach deposits still survive in the foreshore below the reclamation fills (Figure 1.6). The native bushland occupying the northern side of Sydney Harbour at the time of initial British settlement was not documented. Analysis of the pollen material from this site shows the pre-1788 vegetation in the study area was dominated by casuarina scrub/heath in which other species were rare (Volume 2, Macphail 2020, Pollen Report).

© Sydney Metro 2018

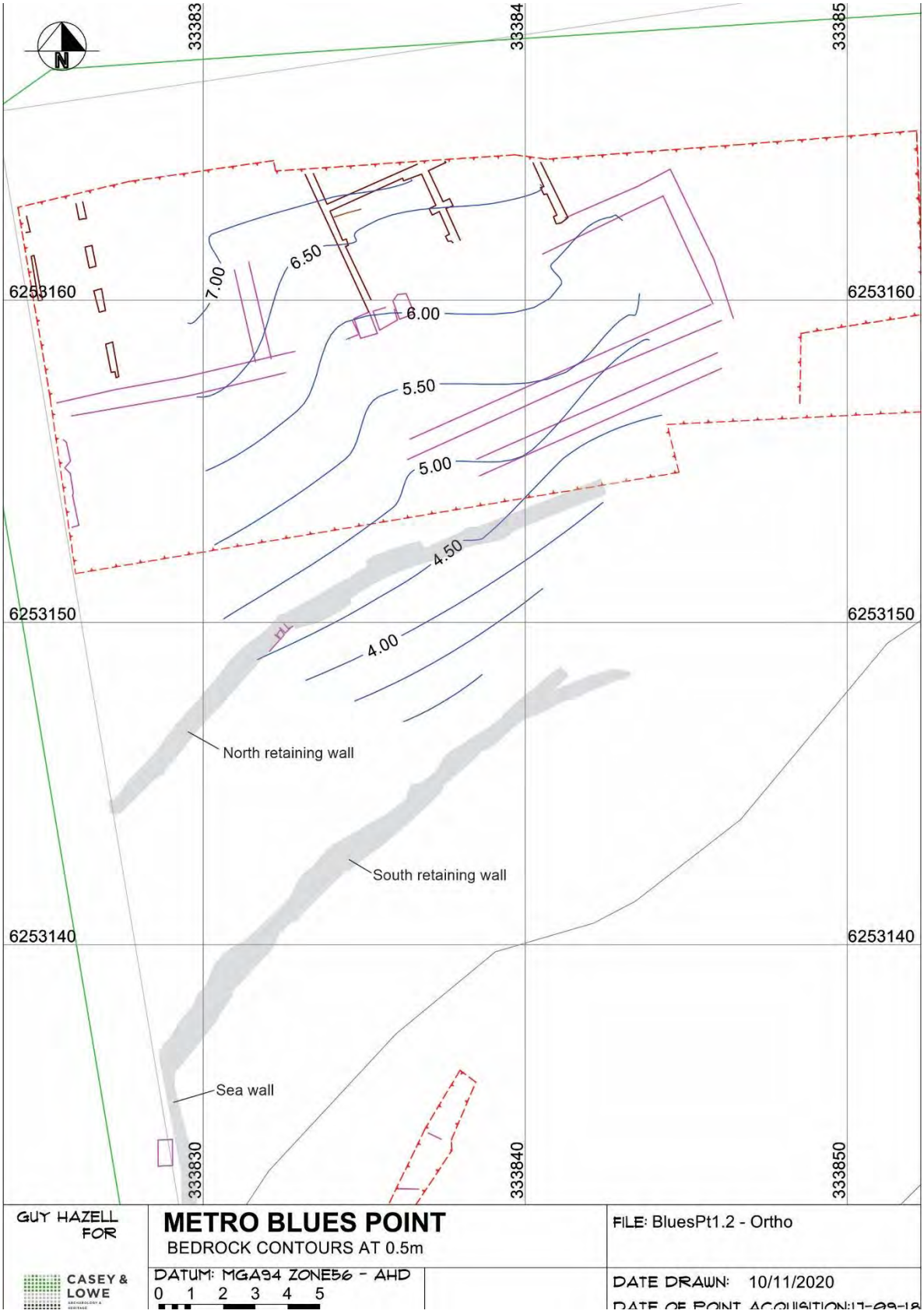


Figure 4.3: Contour plan of bedrock across the site.

© Sydney Metro 2018

4.3.1.2 Soil Profile

The most intact evidence of the natural soil profile was concentrated in the northwest corner of the site, on higher ground below the 19th-century cottages (Figure 3.3). Although the footings and services from these structures truncated the natural deposits in part, significant areas of the natural profile remained intact. There was little evidence of a natural soil profile in Area B due to the steepness of the topography with stepped rock outcrops occurring as horizontal benches along with the infilling of bulk reclamation fills along the original foreshore (Figure 4.3). Small areas of bedrock were exposed, much of which was incorporated into the retaining walls (Section 4.3.1.2.4).

The dark grey-black sandy remnant A1/A2 horizon, generally occurring as historic topsoil, was modified and mixed with historical inclusions, artefacts and frequent shells. It was also mottled with the upper parts of the underlying lighter grey sandy subsoil. The subsoil (B1 horizon) was relatively intact with most of archaeological features cutting into it. Below these grey sandy deposits, the clay content of the soil greatly increased and the colour changed to a yellowish-brown sandy clay (B2 horizon) until bedrock was reached. The soils were classified into types that represented both cultural modification and natural development of the profile. Numerous samples of each type were taken across the site for pollen and soil analysis (Volume 2). Table 4.1 summarises the soil profile, associated context numbers and soil sample numbers within Area A and Area B. Specific areas of the soil profile are discussed in the following sections.

The dark modified historic topsoil or A horizon (103), refers to the original sands across the area which were disturbed after British contact. Initially it was given different context numbers when it was found in isolation within small test trenches until its stratigraphic relationship became clear (In Table 4.1, Figure 4.6). This deposit was either disturbed, redeposited or continually accumulated as a result of general use of the site throughout its 19th and 20th-century occupation. It includes both the pre-construction phase of the cottages and post-settlement accumulation. There is also evidence to suggest that some of the darker sands may have been washed down from further up slope. The A horizon sand recorded underneath House 1 were sealed and therefore were less disturbed than sands present in the yard area, further to the east of House 1, and laid down as levelling fills.

The cleaner sands below the darker humic modified sand (103) are referred to as the subsoil throughout this report (040, 104), (Figure 4.6). The subsoil was below the surface layer and above the natural clays and was predominately lighter in colour and showed less evidence of modification and little humic content. The colour and composition of the subsoil did change below House 1, Room 2, numbered separately (105) and below the north retaining wall (070). This change in matrix of the subsoils may be due to water channelling through this area and is discussed in detail below. Nearly all the archaeological remains cut through the remnant topsoil down into the lighter grey sandy subsoil. Finally, the lowest soil profile of natural clay (106) and degraded stone (060) below the subsoils did not contain any cultural inclusions and was only exposed within test trenches (Figure 4.5, Figure 4.6). The bedrock was given separate contexts numbers in Area A (041) and Area B (314).

© Sydney Metro 2018

Table 4.1: Soil profile description, context numbers and sample numbers given to the natural deposits in Areas A and B.

Type	Depth (mm)	Description	Context (Area A)	Context (Area B)	Sample No.s	Munsell
Modified historic sands (A Horizon)	50–300	Fine, loosely compacted, dark brownish-grey to black silty sand, some lighter grey sand mottling, occasional roots, charcoal flecks and shell fragments. Historic inclusions, brick and stone frags, historic artefacts	103, (also 014, 029, 030, 032, 063 and 098)	332	Context 103 #43, 44 & 45 #60, 61 & 62 #75, 76 & 77 Context 063 #25, 26, 27	2.5Y 3/1 – 2.5/1 very dark grey to black
Subsoil 1 (B1)	400–450	Fine, loosely compacted mid-light brownish-grey sand, occ charcoal flecks, little to no historical inclusions	104, (also 040)	332	Context 104 #46, 47 & 48 #63, 64 #78 & 80	2.5Y 5/4 – 4/3 light olive brown to olive brown
Subsoil 2 (B1)	300–600	Firm, olive-brown, sandy clay, orange-yellow mottling, occasional small degraded stone frags. No historical inclusions.	105 (also 070)	332	#69, 70 & 71	2.5Y 4/4 – olive brown
Clay B2 Horizon	60-200	Compact, pale whitish-yellow to orange-yellow clay	106	-	#72, 73 & 74 #81, 82 & 83	2.5Y 6/8 – olive yellow
Degraded stone	unexcavated	Compact, orange-yellow to mustard-yellow clayey sand, isolated patches	060	-	-	-
Bedrock	unexcavated	Hawkesbury sandstone	041	314	-	-

© Sydney Metro 2018

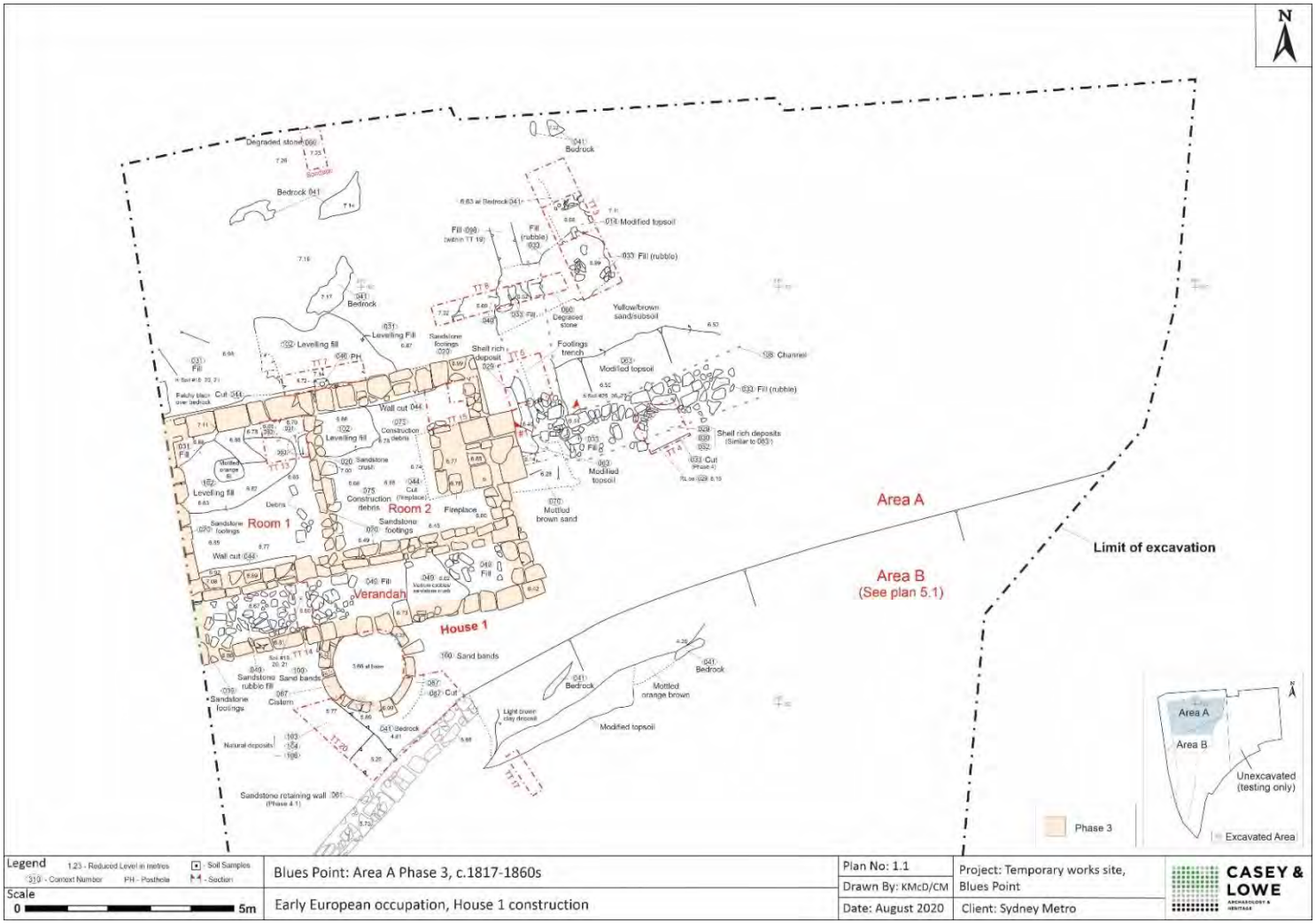


Figure 4.4: Area A, showing the early phase (Phase 3) historical remains, hand excavated test trenches and exposed natural sands and modified sands. Plan 1.1, Volume 3.

© Sydney Metro 2018

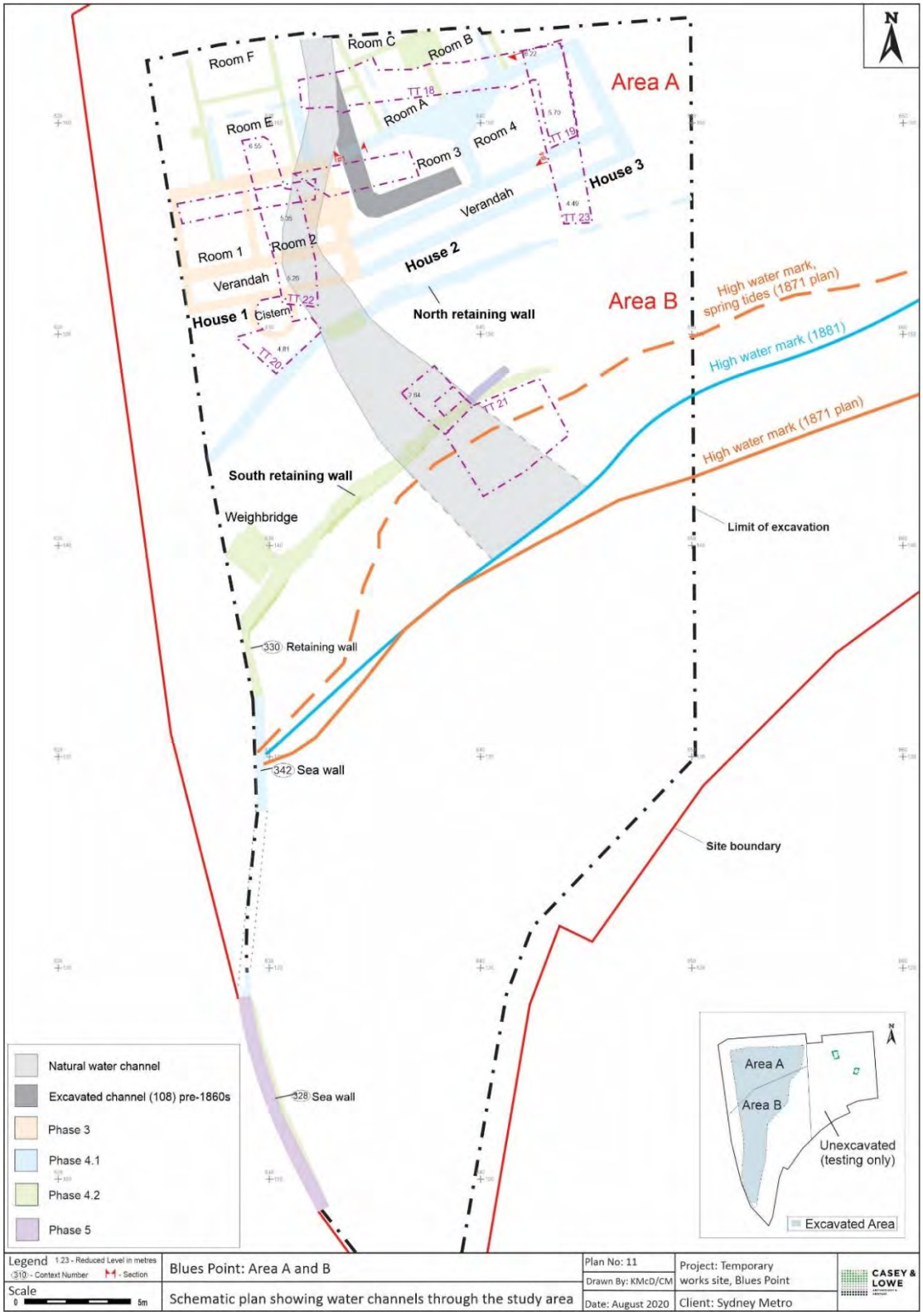


Figure 4.5: Schematic plan showing potential channel (light grey) of water movement through the study area to the foreshore. The 'L' shaped channel (dark grey) appears to be a later addition to redirect water away from House 1.

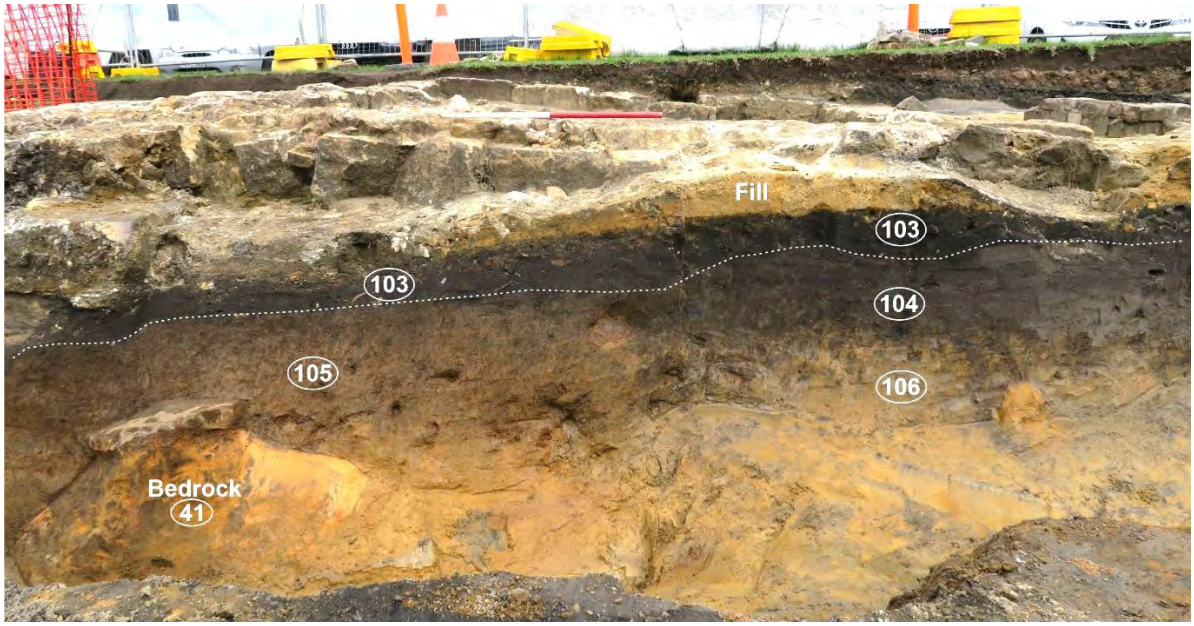


Figure 4.6: East facing section of Test Trench 22 (TT 22) (Figure 3.3) showing the natural soil profile below House 1 footings. The dark sands of the A1 horizon (103) sat above two different subsoil, contexts (104) and (105). Below the subsoil was a compact olive-yellow coloured clay (106) and undulating bedrock (041). View to west, scale 1m. IMG_161.

4.3.1.2.1 Modified Historic Topsoil

The modified historic topsoil/A horizon (103) was a loosely compacted, fine grained dark brownish-grey to black silty sand with occasional light grey or small yellow sand mottles. It was distinctly darker than the lower layers suggestive of a higher humic content and the presence of organic matter. It was given different numbers in various test trenches (contexts 014, 029, 030, 032, 098) but it was the same stratigraphic unit. The modified topsoil was also found redeposited within individual features and also used to raise and level areas, in such instances it was variously recorded as a fill.

1 The modified topsoil contained occasional charcoal flecks, shell fragments and historic inclusions, including small brick and sandstone fragments along with historical artefacts. The deposit varied in depth from 100-300mm. In the area to the east of House 1 (below later House 2, Room 3) the dark modified silty sand was given a separate number (063) due to the high concentration of shell inclusions, mostly oyster and cockle. In this area it measured 50-120mm in depth and may have been exposed or used as a yard surface associated with the first house, prior to the construction of Houses 2 and 3 (Figure 4.7). The shell concentrations within this modified deposit may reflect the diet or activities of the residents of the house. Pollen analysis of context 063 (sample #26) showed the presence of trace pine (*Pinus)* pollen indicating it probably accumulated in the 1840s-1860s. The shell fragments within this deposit are more likely to have come from the production of shell lime mortar at the site or as shell grit used to aid drainage and not an *in situ* shell midden.[123]

[123] Macphail 2020, Section 3.3., Volume 2.

Within TT 04, to the east of House 1, the same dark sandy shell rich deposit (032) contained a number of artefacts including fragments of Chinese-made ceramics (Figure 4.4). It is possible this shell concentration washed down from higher up the slope. The dark modified silty sand (063) was truncated by a large concave north-south drainage channel (108) which may have originally been a natural gully or water channel that was backfilled with rubble (033) before the construction of House 2 (Figure 4.4, Figure 4.5, Figure 4.7), see Section 0 for a detailed discussion on the natural channel.

The concentration of shell fragments and artefacts was much less frequent in the same dark deposit (103) recorded below the footprint of House 1 (see TT 22, Figure 4.6) again suggesting the shells had washed in or were associated with the early occupation phase of the first house (House 1) rather than being associated with a shell midden or Aboriginal occupation of the site. Samples of the modified historic sands was collected (Table 4.1) for pollen analysis. Sample #44 of context (103) was taken from below the footprint of House 1 securing it from any disturbance post-1850s. The absence of exotic pollen types in this sample dated it to the period before Blues Point was settled by the British, suggesting the topsoil was substantially less disturbed below the house.[124] Sample sieving of the deposit was also undertaken to determine if small artefacts or ecofacts were present. The remaining natural soil horizons were retained *in situ* for the Aboriginal archaeological excavation (see AMBS final report). RLs across the shell rich deposits were all between 6.51m and 6.63m. Similar modified historic sands with shell inclusions were found in TT 10 and TT 19 below House 3 at RL 6.3m (Figure 3.3, Figure 3.4).

Artefacts in deposit (103, modified topsoil) included 139 MIC of bone, ceramic, glass and metal items. The shell artefacts included the remains of locally available species Sydney rock oyster, Club mud whelk, Sydney cockle and Common periwinkle, which were identified in several fill contexts. One fragment of mud oyster (O. *angasi*) was identified from the modified sands (context 030, in TT 04). This species was identified in two other contexts (067 and 068, Phase 4). The low numbers of Mud oyster in both occupation and fill deposits indicate this species may not have occurred in the waters off Blues Point. As Mud oysters enjoy sheltered estuaries, the more exposed nature of the site did not provide a suitable habitat for this species.[125]

In many places this modified deposit was not sealed and secured to one particular phase of occupation, instead it was continually accumulating and worked throughout the 19th and early 20th century. Although the A horizon was modified throughout its history, it still retained something of its original gradient sloping to the east and south dropping from RL 7.04 to RL 6.08 within TT 22 which ran north-south and to RL 6.50m to the east below House 3 before reaching the edge of the rock shelf.

Due to the steep nature of the site little evidence of the soil profile was present within Area B. The natural soil profile was only evident in the south-facing section below the north retaining wall on the boundary with Area A (Figure 5.6). Within Area B the natural profile was the same as Area A. The deposits were all recorded from the section as one context (332) but with each horizon described separately (Table 4.1).

[124] Macphail 2020, Pollen Report: Section 3.3, Volume 2.

[125] Gibbs 2020:15, Volume 2.

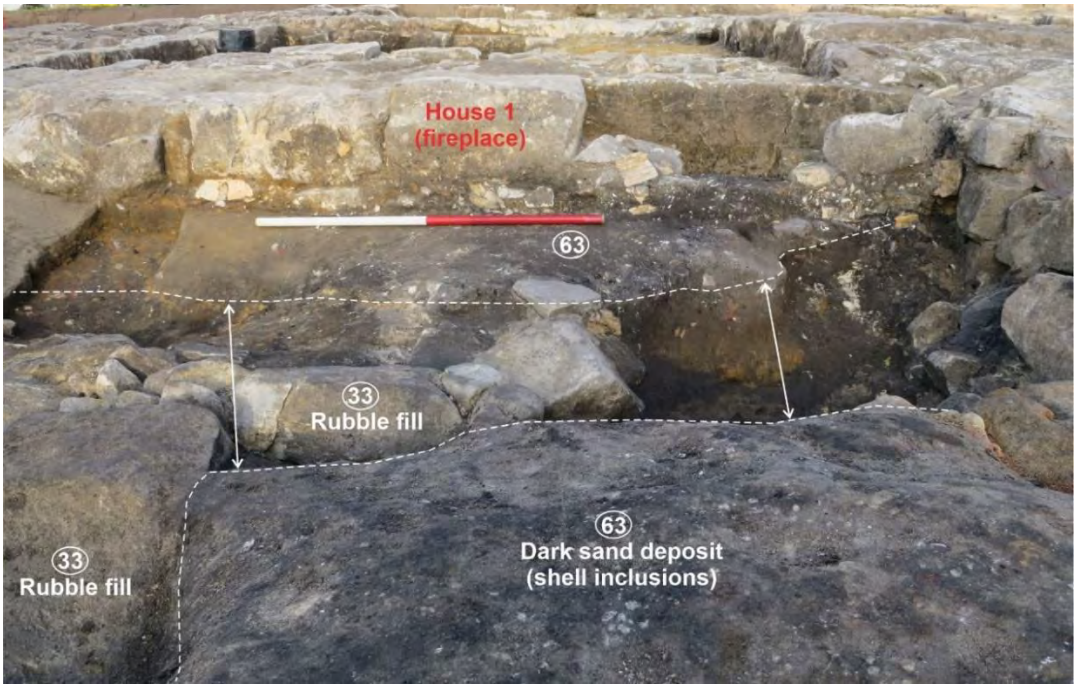


Figure 4.7: Modified dark grey-black sand with frequent shell inclusions (063) below House 2, Room 3. This deposit was truncated by a linear channel filled with stone rubble (033) that pre-dated Stevens' later cottages (House 2 and 3). View to west, scale 1m. IMG_9909.

Figure 4.8: South-facing section of the natural soil profile above bedrock in Area B truncated by the retaining wall (contexts 071, 084). The profile is similar to the southern part of TT 22. View to north, scale 500mm. IMG_1363.

4.3.1.2.2 Subsoils, B1 Horizon

Below the dark grey-black modified sands was a deeper deposit with minimal historical impacts, referred to throughout this report as the subsoil. The subsoil included the natural deposits below the modified A horizon sands and above the lower B horizon clays. The subsoil was not uniform throughout the site. In some areas it was a mid-light grey sand (104) while in other areas it was an olive-brown coloured clayey sand (105) (Figure 4.9, Figure 4.10). The variation in colour and composition appears to be the result of water impacts to the subsoil, both are described separately.

Subsoil 1 (context 104)

The subsoil was a loosely compacted, mid-light grey sand with a brownish hue (Munsell 2.5Y 5/4 to 4/3 – light olive brown to olive brown). Its paler colour was due to the absence of organic material. It contained occasional charcoal flecks and minimal historical inclusions (Figure 4.9, Figure 4.10). RLs were taken on the top of the subsoil across the site where it was exposed (Figure 4.4).

Below House 1 (within TT 22) RLs on the top of the subsoil ranged between 5.90m and 6.73m (Figure 4.11) whereas further east (within TT 23) the highest RL was 6.63m before it dropped dramatically over the rock shelf into Area B. The depth of the subsoil was only visible within machine excavated trenches and it ranged from 400-450mm deep (Figure 4.9). The sections also showed, context (104) forming a diffuse interface with the underlying mottled yellow clay (106). The subsoil was typically a culturally sterile deposit although the lower portion was cut into by a number of historical features. Remains of the mid to late 19th-century structures cut into the subsoil. Soil and pollen samples were taken across the study area (Table 4.1). During excavation when undisturbed natural deposits were identified within small 1m x 1m test trenches or at the base of excavated features, they were generally recorded as context (040) (TT 03, TT 04 and TT 10). The lighter grey sandy subsoil (104) was evident at the eastern and western ends of Area A but subsoil exposed in the centre of Area A was quite different and was recorded as context (105) (Figure 4.12).

© Sydney Metro 2018

Figure 4.9: East-facing section showing the darker and lighter sands of the natural soil profile in the area between the cistern (House 1) and the north retaining wall. Above context (103) were a number of sandy fills and accumulations associated with House 1. Below context (104) was a thin clay lense (106) above the bedrock. View to west, scale 500mm. IMG_0041.

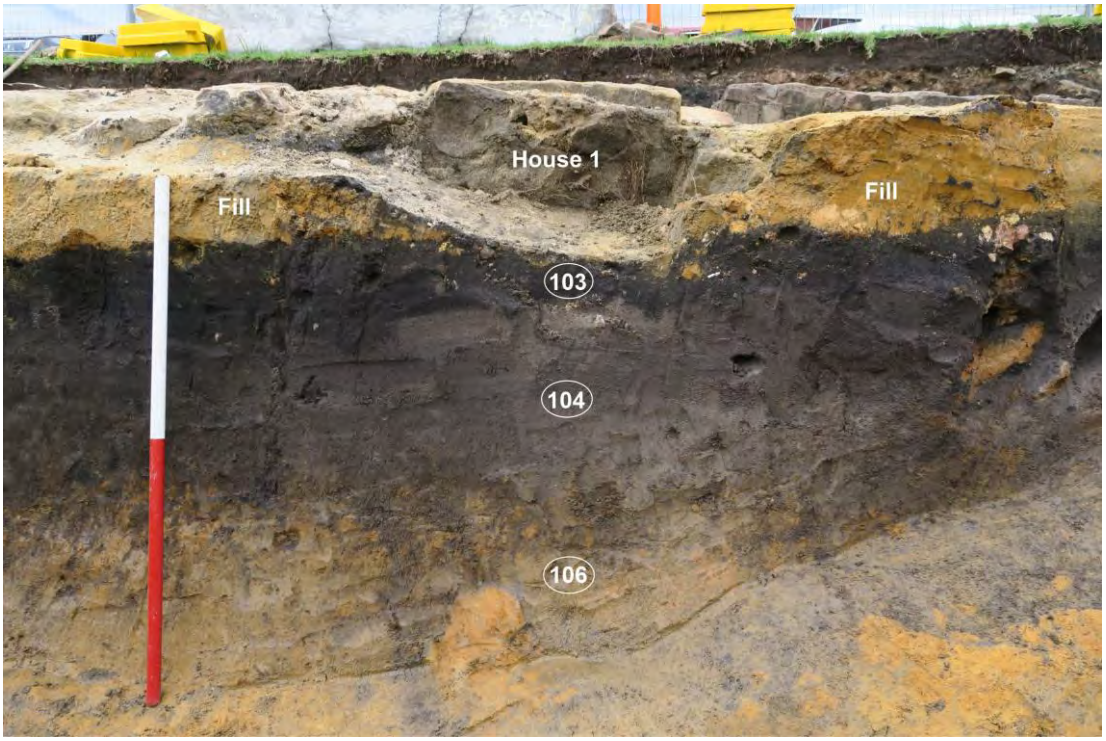


Figure 4.10: Detail of the east-facing section within TT 22 below House 1, Room 2 showing the darker modified sands (103) above the paler grey subsoil (104) then onto the mottled yellow clay (106). View to west, scale 1m. IMG_0154.

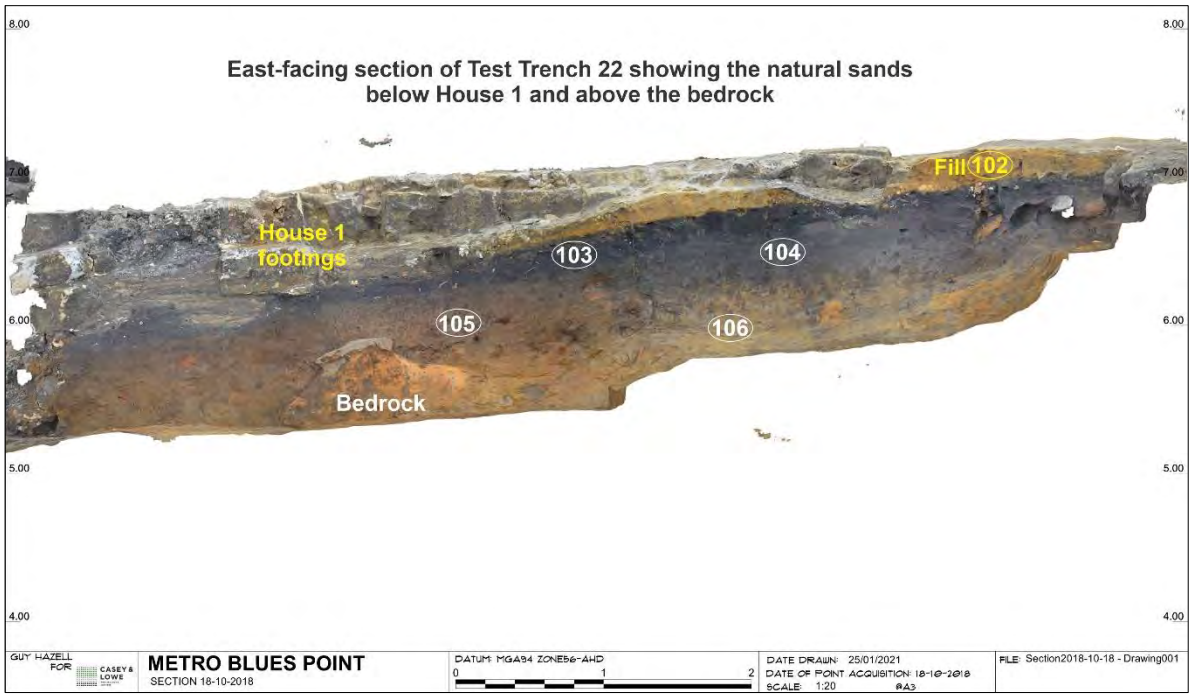


Figure 4.11: Scaled ortho photo of the east-facing section of TT 22 showing heights of the natural deposits. The top of the subsoil is between RL 5.90m and 6.73m. Arcsurv 2021.

Subsoil 2 (context 105)

Context (105) was a firmly compacted, olive-brown fine, sandy clay with common orange and yellow mottling and small degraded stone fragments (Munsell 2.5Y 4/4 – olive brown). It was quite different to context (104) but stratigraphically the same (Figure 4.11, Figure 4.12). It was directly below the darker modified sands (103) and above the mottled yellow B horizon clay (106) and bedrock. Within Area A this clayey subsoil was found below the eastern end of House 1 and western end of House 2 and exposed in section TT 22 at the end of the archaeological program (Figure 4.12, Figure 3.4). North of the houses, it was found in the yard space between House 1 and 2 additions and further south context (105) was again identified below the brick wall addition (071) to the north retaining wall. It appeared localised to an area roughly 3-4m wide running north-south through the centre of the study area towards the south (Figure 4.5), possibly once a natural channel or waterway which flowed through the weakest parts of the rock from higher up slope towards the harbour. The impacts of water action in this area would explain the different composition of the subsoil (see Section 0). Context (105) ranged from 300-600mm in depth and soil samples were collected (Table 4.1). During excavation when the subsoil was found in isolation within small test trenches (TT 06, TT 08) and in House 2 (Room 3) it was recorded as context (070).

© Sydney Metro 2018

Figure 4.12: Test Trench 22 showing the natural soil profile below House 1, Room 2 and the more mottled clayey brown subsoil, context (105). View to northwest, scale 1m. IMG_0166.

4.3.1.2.3 Natural Clay (B2 Horizon)

The basal clay (106) above bedrock was quite sandy and was only exposed in two large machine excavated test trenches (TT 22 and TT 23). The depth of the clay varied greatly by filling undulations above the bedrock, while in other areas only a small interface of sandy clay remained above bedrock. Its appearance was mottled, varying in colour from white and yellow to a deeper orange-yellow (Figure 4.12, Figure 4.13). A munsell colour for the base clay was 2.5Y 6/8 – olive yellow. The clay was sterile and unexcavated. Soil samples were collected from TT 22 and TT 23 (Table 4.1). In the base of TT 22 the natural clay was at RL 6.23m at the northern end and falling to RL 5.23m at the southern end of the trench, showing a drop of 1m across a length of 8.8m.

In parts of the northwest corner of the site where there was no longer subsoil there was a very compact clayey sand (060) which was a strong mustard yellow colour and appeared more like degraded sandstone than the finer base clay. It contained sandstone fragments (<200mm in size) but no historic material (Figure 4.3). In some places this compacted yellow sand was later redeposited into wall trenches or used as a levelling fill.

© Sydney Metro 2018

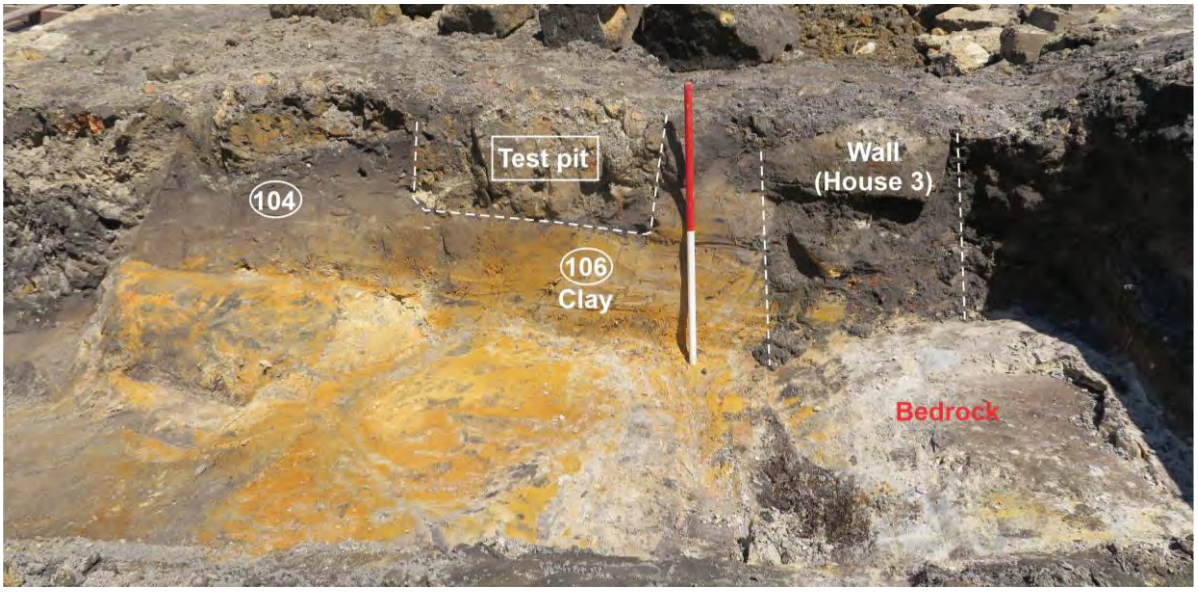


Figure 4.13: Compact, mottled yellow and white base clay (106) below grey subsoil (104) and above the bedrock in the east-facing section of TT 23. Note the stone foundations of the north wall of House 3 were sitting directly onto the bedrock. View to west, scale 1m. IMG_0216.

4.3.1.2.4 Bedrock

The natural underlying bedrock at Blues Point is Hawkesbury sandstone. Where it was exposed in large test trenches it formed a stepped effect towards the harbour (Figure 4.3, Figure 4.13, Figure 4.16). In Area A the bedrock was recorded as context (041) and in Area B as context (314). In some places the bedrock was utilised in the construction of retaining walls and seawalls. In the northwest corner of the site patches of bedrock were exposed within the footprint of Rooms E and F at the same level as the brick foundations. There was also evidence to suggest quarrying of the bedrock, with large fissures and tool marks in the rock, possibly for the construction of the local houses or the seawalls at Blues Point. A deep circular cistern, contemporary with House 1, and a small weighbridge which first appears on plan in 1891, were cut into the bedrock. Where exposed the height of the bedrock dropped from RL 7.14m in the northwest corner, where it formed a large sandstone ledge on which the houses were built, to RL 4.81m along the south retaining wall. Further evidence of cut bedrock was found at RL 3.6m along the western boundary of the site below a north-south retaining wall (Figure 4.15). The steep topography also extended to the north, outside the study area, with a perpendicular quarried rock face (c.9m high) visible along the northern edge of Henry Lawson Avenue (formerly Cliff Lane) (Figure 4.14). In the early 1880s Cliff Lane was made by excavating large quantities of sandstone, through the steep sandstone outcrop (Figure 2.17). The construction of the road involved the excavation of a large quantity of rock and took longer than expected (see Section 2.9).

© Sydney Metro 2018

Figure 4.14: View west along Henry Lawson Avenue showing the vertical quarried rockface to the north of the road with the study area to the south, behind the blue hoarding. Google Street View April 2021.

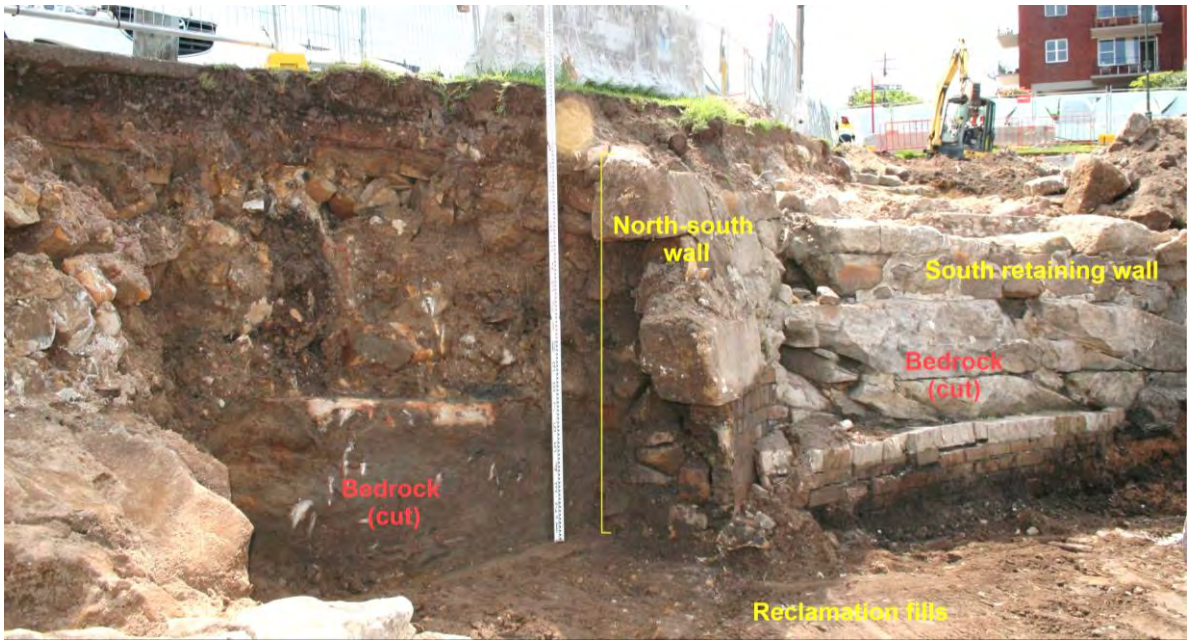


Figure 4.15: Cut bedrock associated with the south retaining wall. Note the excavator situated in the northwest corner of the site where bedrock was also exposed and the height dropped nearly 3m to the bedrock in the foreground. Scale 3m. IMG_5684.

Figure 4.16: Test Trench 23 through the eastern end of House 3, the red dashed line running along the edge of the trench illustrates steps in the bedrock down towards the original foreshore. The blue east-west line is the southern retaining wall, everything to the south of this wall was reclaimed land. View to southwest, scale 1m. IMG_5539.

4.3.1.2.5 Modifications to the Natural Landscape and Water Management

Prior to British settlement the site was a series of exposed rocky outcrops, stepping down to the harbour foreshore. The bedrock was cut by a natural water channel or gully through which stormwater flowed (Figure 4.5), carving through the bedrock. The movement of water across the site was probably seasonal, following heavy rain and flooding, but the steepness of the topography would indicate significant movement of water, as it flows rapidly down a steep slope leaving it less time to infiltrate the ground. The source of this channel would have originated beyond the study area, further up slope to the north following a path of least resistance before eventually entering the harbour foreshore. During excavation a number of factors and features supported the idea of water channelling southwards. Further, there was evidence to suggest modifications were made throughout the occupation of the site in attempts to manage stormwater and redirect the flow of water towards the harbour and away from the houses. Despite these efforts water will always try to follow the path of least resistance, easiest route downslope.

As the site was developed throughout the 19th century the impacts of water movement resulted in modifications to try to divert the flow path or to repair weaknesses to structures built over the course of the natural channel. Each of these modifications are discussed in full in the relevant sections in Phase 4.2, they included:

© Sydney Metro 2018

- a man-made 'L'-shaped channel (108) dug to divert the water to the east of House 1, prior to the construction of Stevens houses in 1869 (see Section 0).
- two large retaining walls south of the houses had to be strengthened with brick repairs (071, 321) above the backfilled channel (Sections 4.3.5.4.1 , 4.3.5.4.2).
- the installation of drainage pipes (327) to direct the flow of stormwater down slope, behind (south) of the north retaining wall under the access road to the jetty to limit surface erosion (Section 4.3.6.3).

The full extent and width of the natural channel could not be determined due to the impacts from later structures but sufficient evidence was found to show its north-south alignment. An interpretation of its path towards the foreshore towards the high-water mark is shown on Figure 4.5.

By 1857, House 1 was built on the highest point, on a rock shelf in the northwest corner, close to Blues Point Road. The house was located on fairly level ground before the bedrock dropped off to the south and east resulting in minimal need to import fills to raise ground levels underneath the house. A large test trench (TT 22) excavated through Room 2, House 1 suggests the water channel extended below the footprint of Room 2 (Section 0). In TT 22 the original channel was modified in an attempt to redirect the flow of water, to divert it away from underneath the house. An 'L'-shaped channel (108) was dug to the east of House 1 to try and divert water away from the house but instead sent it over the rocky outcrop to the east. The L-shaped channel, 700-800mm wide, was backfilled with sandstone rubble (033) prior to the building of Stevens' adjoining houses in 1869 (Figure 4.5, Figure 4.40). The infilling with stone rubble would have assisted with drainage and slowed erosion.

When TT 22 was dug through the eastern end of House 1 (Figure 4.12) a number of rounded sandstone boulders were exposed within the clayey subsoil (105) below the archaeological remains and associated with the pre-1788 landscape. Isolated rounded boulders on the bedrock further suggests a flow path or movement of water down slope, along a channel towards the harbour and carving a path through the landscape. A change in composition of the subsoil (105), localised to this north-south path, was further evidence of water movement through this area (see Section 4.3.1.2.2). Despite attempts to redirect water to the east, it may not have worked very well particularly in times of heavy rain or flash flooding and water persistently kept seeping through the natural flow path.

At the northern end of the study area, between House 1 and House 2, a dark sandy fill (context 098) packed a shallow concave linear channel. Although directly north of the man-made channel (108), it's location along the same north-south alignment suggests it was part of the original channel (Figure 4.17). This channel (also recorded as 098) was 810mm-1.10m in width. The sandy fill (098) was rich in shell inclusions, similar to the modified topsoil deposit (063). Excavation of (098), which was only 70mm deep, showed it sat directly above the degraded yellow sandstone (060) with no subsoil present. The absence of natural sand deposits in this area and shallowness of the channel suggests the area was stripped down to accommodate later services pipes (installed c.1898) with only shallow sandy fill (098) surviving in the base of the channel below the pipes.

Other factors supporting the persistent need for channelling water through this area was a repair to both the north retaining and south retaining walls. The north retaining wall was originally a stone wall and was contemporary with the building of Stevens' two additional houses (House 2 and 3) c.1869. There was evidence to show the location of the brick replacement (071) to the north wall was built over the course of the natural channel. The dry-pressed brick segment of the north retaining wall (071) was 2.25m in length and was located

© Sydney Metro 2018

in exactly the same area as the clayey subsoil (105) and aligned with the edge of the rubble filled channel (108) further north. The natural deposits adjoining the eastern end of north wall (071) were the same as the olive-brown natural sandy clays (105) that was found further north in TT 22, where the change in subsoil was indicative of water activity (see above). The original stone wall (061) had weakened or collapsed in this area and was then replaced with the brick wall (071) (Section 4.3.5.4.2 , Figure 4.84). The need to repair/strengthen this segment of the retaining wall was probably due to seasonal water continuing to follow the natural flow path from further upslope (Figure 4.18). Despite modifications already in place associated with the houses, stormwater still continue to take the easiest path to the harbour.

The brick repairs to the south retaining wall (321) also suggest a weakness in this wall, which was located just above the high-water mark (Section 4.3.5.4.1 , Figure 4.81). The brick segment (321) of the south retaining wall was a lot wider (16.5m in length) than the brick segment (071) in the north wall. This may have been due to the natural channel getting wider towards its mouth and with the south wall founded on reclamation fills which would require strengthening of the structure for stability. Drainage pipes (Section 4.3.6.3) were installed along the access road to the foreshore and Stevens' jetty to help prevent erosion of the road. The pipes (327) contained small holes to assist with surface drainage or runoff from higher up the slope to catch excess water and help prevent erosion of the roadway. Further evidence of runoff was evident in the accumulation of sandy fills (337, 338, 339 and 340) at the base of the slope where the bedrock meets the reclamation fills, just below the high-water mark (TT 21, see Section 4.3.5.4.4).

Figure 4.17: Context (098) within a shallow north-south trench/ channel through the natural yellow degraded stone (060) and impacted by later service pipes. View to north, scale 1m. IMG_9974.

Outside of the study area, along the northern edge of Henry Lawson Avenue (former Cliff Lane), is a steep vertical wall of bedrock quarried for the construction of Cliff Lane. Although shown on plan in 1883 it was not completed until a later date due to the expense of construction on such a rocky terrain (see Section 2.9). A large brick retaining wall was built into the rock face (Figure 4.18) in filling a void or channel in the bedrock and stabilising the rock face. The intentional holes in the brick work and the water stains running down both the rockface and bricks suggest water continually seeps through from further up slope. The construction of Henry Lawson Avenue and the installation of stormwater pipes in the late 19th century would have had more lasting impacts to the management of water flow in this area.

Figure 4.18: Directly north of the study area the bedrock was quarried for the construction of Henry Lawson Avenue (formally Cliff Lane) c.1883. A large brick retaining wall was keyed into the bedrock, filling a natural void or channel in the rock. The weep holes in the brick work and the water stains on both rock and bricks suggest water continually made its way through the area from higher up slope. Google Street view April 2021.

4.3.2 Phase 2: Aboriginal Occupation

The salvage excavation of Aboriginal archaeological remains was carried out by AMBS Ecology and Heritage in conjunction with the historical archaeology. Their excavation methodology involved digging a total of 34 test pits (1m x 1m) that were numbered within a site grid. The majority of the pits were excavated in the northern, more elevated portion of the site (Area A) as the southern portion (Area B) was either reclaimed land or heavily disturbed and unlikely to retain Aboriginal archaeology. Test trenches in the eastern half of the site (outside the salvage excavation area) were monitored by AMBS. The deposits

excavated from the test pits was 100% sieved and a total of 459 cultural lithics were recovered.

Types of lithics recovered included 405 flaked artefacts, 25 heat shatters and 19 indeterminate and broken fragments. The assemblage was notable because it was dominated by raw material types not available in the local area, including silcrete, indurated mudstone/silicified tuff (IMST), flint and a variety of other raw material types (such as quartz, quartizite and chalcedony). Most of the artefacts were made of silcrete (71% of the overall assemblage) and the few available age determinations suggest that the assemblages dominated by silcrete suggest a date range of between 5000 cal BP and 2400 cal BP. Current analysis indicates that silcrete may have travelled more than 30kms to Blues Point, either carried by people directly from the sources or obtained via exchange or trade. Most of the silcrete artefacts were of yellow and red heat-treated stone (cooked before flaking) which is typical of silcrete from the St Marys Formation of Western Sydney.

IMST was the second most frequent raw material, accounting for 11% of the artefacts. Quartz artefacts were relatively infrequent (5%) and a few artefacts of weathered granite were also found. IMST, quartzite, igneous and other coarse-grained raw material types were most likely sourced from the Nepean River Gravels and Rickabys Creek Gravels, between 50 and 54kms away in Western Sydney.

Six flint artefacts were identified in the Blues Point assemblage, which are of particular interest as flint does not naturally occur on the eastern coast of Australia. Flint was commonly used as ballast on ships travelling to Sydney from Britain or Europe during the historic period and was generally offloaded once they reached Australia. The presence of flint at the Blues Point site shows Aboriginal visitation of the site during the early historic period, interaction with the early British colony and evidence for continuing traditional practices of Aboriginal people in Sydney post-1788. It indicates Aboriginal innovation, adaptation and use of foreign material suing traditional manufacturing methods. Flint artefacts have also been found at Government House and the Randwick Stabling Yards light rail project and, to date, this is the only known Aboriginal flint site on the northern side of Sydney Harbour. The results of the Aboriginal archaeological investigations are provided in [TITLE] and Blues Point Metro: Lithics Analysis (in draft).

4.3.3 Phase 3: 1817-1860s Early British Occupation, Wharf Construction

4.3.3.1 Overview

In 1817 Governor Macquarie granted land on the north shore of the harbour to William ‘Billy’ Blue, a convict settler and ferryman. Blue was probably born in New York of African heritage. He was a loyalist who supported the British during the Revolutionary war. Governor Macquarie appointed him harbour watchman and constable.[126] Much of the land on the north shore peninsula remained in the Blue family until the 1850s. The 1857 Crown Plan is the first plan to show structures within the study area (Figure 4.19). It showed a building along the east side of Blues Point Road and further south a ‘public’ wharf and jetty/slipway jutting into the harbour. The building may predate the 1857 plan by some time as an c.1840s etching of Blues Point also shows a seawall and jetty (Figure 2.4). The house was probably occupied or leased by members of the Blue family until it was sold (see Section 2.5). A boundary fence or wall to the south of the house on the 1857 plan aligns with a large retaining wall found during excavation which was built into the rock shelf. This retaining wall was evident on later plans, extending eastwards in front of all three cottages.

[126] Pybus 2007.

On the 1864 plan (Figure 4.19) a slightly larger house in this same location with front and rear fences. There were no other buildings evident on plan at this time. Archaeological remains of this early house (House 1) were found and are discussed below. Its footprint included sandstone footings of two rooms, a large fireplace/chimney and a front verandah (Phase 3). In 1867 John Stevens, 'Shipwright' purchased the western part of the study area (Lot 10, Section E) of the Blues Point Estate

The archaeological evidence from Phase 3 included the construction of the earliest house in the northwest corner of Area A. As this house survived into the 1940s the occupation and modifications over the lifetime of the house along with its associated yard structures, fills and deposits are mostly discussed within later phases of occupation (Phases 4 and 5). This structure is referred to as House 1 throughout this report. Other remains dated to Phase 3 included a drainage channel to the east of House 1, a cistern below the front verandah of the house and fencelines associated with the house.

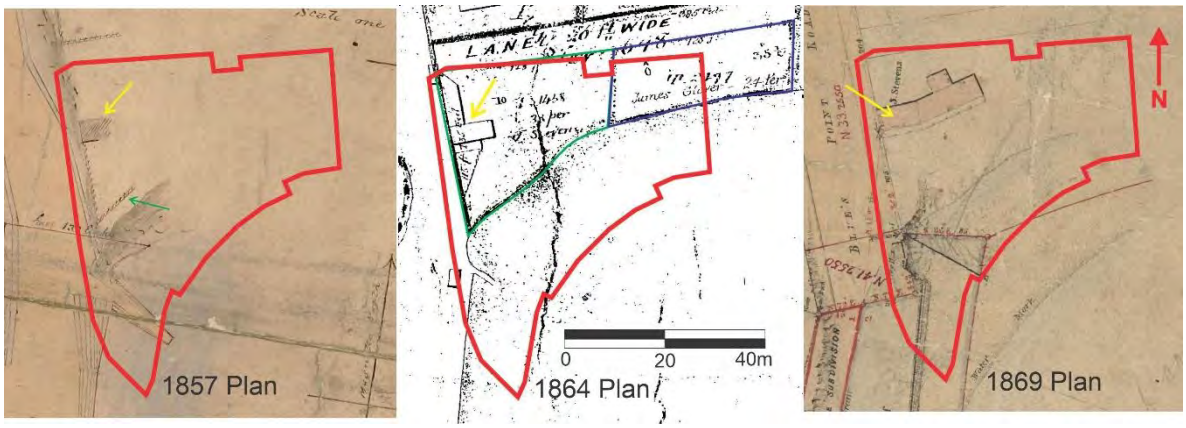


Figure 4.19: Historic plans showing the first cottage (House 1) in the northwest corner of the study area (yellow arrows). The 1857 Crown plan (left) shows a boundary fence/wall (green arrow) north of the highwater mark which corresponds with a rock shelf later incorporated into the south retaining wall found during excavation. By 1869 John Stevens' had built two additional cottages to the east of House 1. 1857 Crown Plan 7-1990 LPI. 1864 Plan, 1 April 1864, DP 8 LPI and 1869 Crown Plan 11-1990, 20 Oct 1869, LPI.

4.3.3.2 Construction of the Earliest Cottage (House 1)

Historical plans from 1857, 1864 and 1869 show the same structure in the northwest corner of the study area, located perpendicular to Blues Point Road (Figure 4.19). The 1864 plan shows a longer building extending further to the east but with no front verandah at the eastern end. Subsequent plans from 1865 and 1867 also show an additional room at the eastern end of the house but with no verandah (Figure 2.3, Figure 4.20). As no verandah was found with this eastern extension it may indicate a temporary addition or lean-to abutting the original stone structure, demolished prior to the construction of Stevens' two adjoining stone cottages c.1869 (Houses 2 and 3). An undated photo (Figure 4.21) pre-dating the construction of Stevens' cottages shows a dormer window in the northern side of the roof, suggesting an upstairs loft room and a small addition at the eastern end of House 1 with a skillion roof. There were no additions to the rear (north) of the house evident on plan until 1881 (Figure 2.3, Phase 4.2). A large circular cistern was found partially below the front wall of the verandah (Figure 4.22, Figure 4.23). The cistern was shown on the 1891 plan but archaeological remains suggest it is contemporary with the construction of House 1 (Figure

© Sydney Metro 2018

2.19). It is not unusual for below-ground structures such as wells and cisterns to be omitted from historical plans. Evidence was found of ground preparation and levelling prior to the construction of the house as well as accumulated bands of sands (101) washed into the area during construction.

Figure 4.20: An 1867 plan of House 1 with eastern addition and no front verandah at eastern end. The house is annotated 'stone building'. Northwest of the house was another rectangular structure (blue arrow), no evidence of this building was found. Subdivision Plan, Z/SP/B22/12 - showing a portion of land between high and low marks fronting Mr. F. Norris allotments of Blues Point North Shore - no boundaries shown, 1867. ML, SLNSW.

Figure 4.21: Undated c.1869 (or earlier) photograph of Blues Point showing a dormer style cottage (House 1) the gable chimney and an additional small room with a sloped roof at the eastern end of the house (red arrow). This additional room was replaced with Stevens' later cottages. View to southwest. SPF/932, ML. SLNSW.

© Sydney Metro 2018

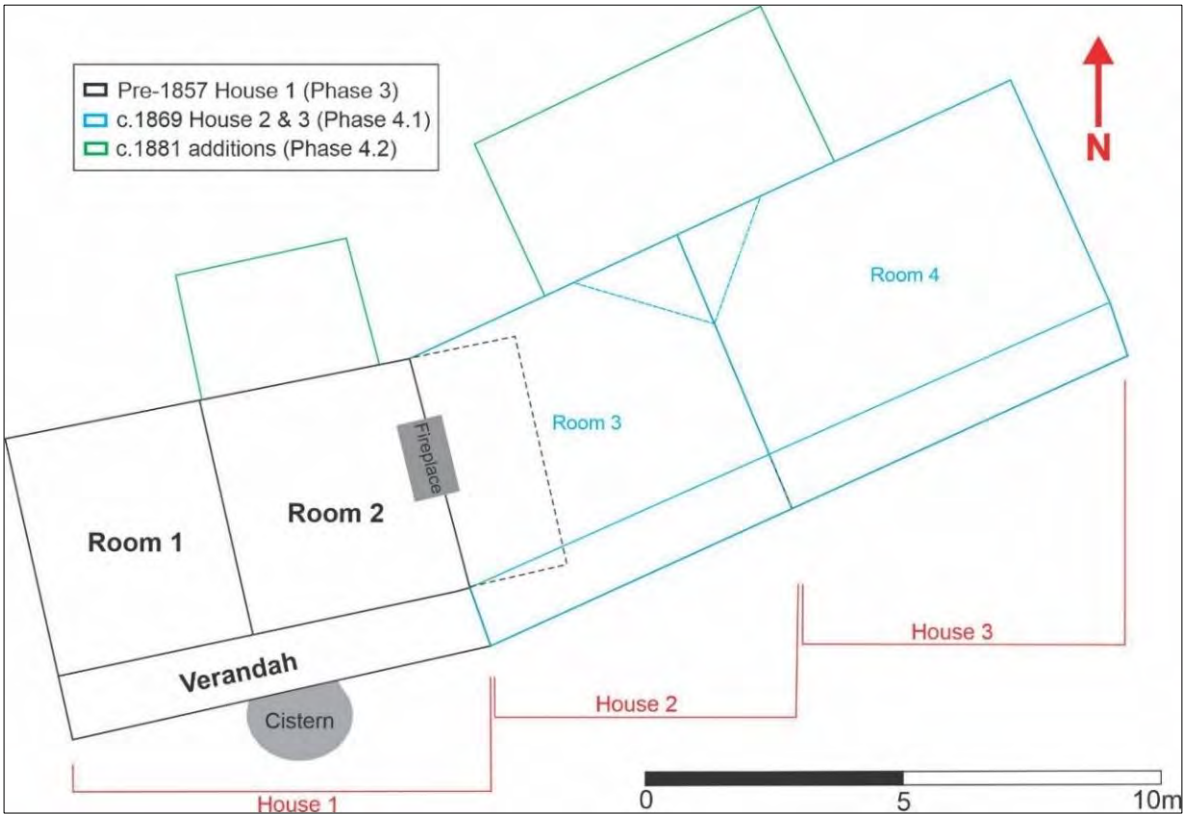


Figure 4.22: Layout of the pre-1857 cottage (House 1) in black with a small addition (dashed line) at the eastern end. The adjoining c.1869 houses (House 2 and 3) followed a different alignment to the first house. C&L 2020.

© Sydney Metro 2018

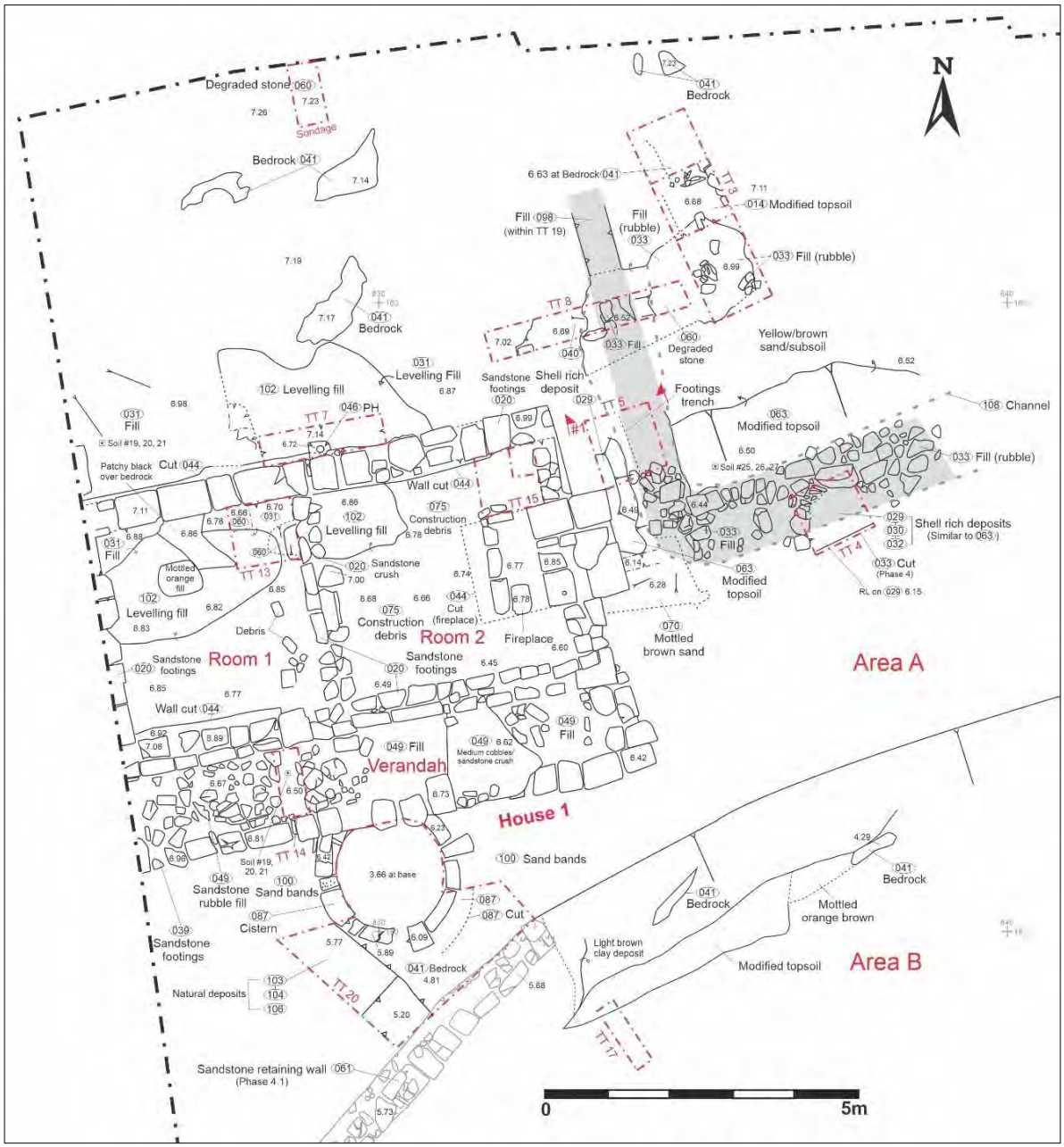


Figure 4.23: Detail plan of House 1, Phase 3, including the cistern below the front verandah and other archaeological remains. Extract from Plan 1 (see Figure 4.4), Volume 3.

Figure 4.24: Orthophoto of House 1 (yellow), a 2-roomed cottage with a fireplace and front verandah prior to the cistern being uncovered. Later additions to House 1 are outlined in green. Arcsurv.

4.3.3.2.1 Pre-House Levelling Fills

House 1 was built on the highest and most level part of the site, the northwest corner (Figure 4.3, Figure 4.22 to Figure 4.24). The stone footings were cut into the upper natural sand deposits. In some places a compact, clean, orange-yellow clayey sand fill (102) was deposited above the dark sandy modified A1 horizon to level uneven pockets of ground prior to the construction of House 1 (Figure 4.25). This redeposited yellow sandy fill was 100-220mm deep and was quite similar to the yellow degraded sand (060) found north of the original house. Similar pre-house levelling fills included contexts (031 and 083). Context (031) was stratigraphically the same as context (102). It was a mix of mustard yellow and black sand with occasional sandstone inclusions and extended from the western limit of excavation below Room 1 and north under the rear yard area of House 1 (Figure 4.24). The levelling fills contained occasional artefacts including bone, ceramics and glass and was only excavated within test trenches. Context (083) was exposed within a test trench (TT 15) in the northeast corner of Room 2 (Figure 4.23). When the large trench (TT 22,Figure 3.4) was excavated (at the end of the project) it confirmed contexts (083 and 102) were the same fill. Naturally occurring compacted yellow clayey sand (060) was exposed further north of House 1, the redeposited yellow sands (031, 083 and 102) may have been stripped from this higher area and spread further south to create an even surface on which to build the house.

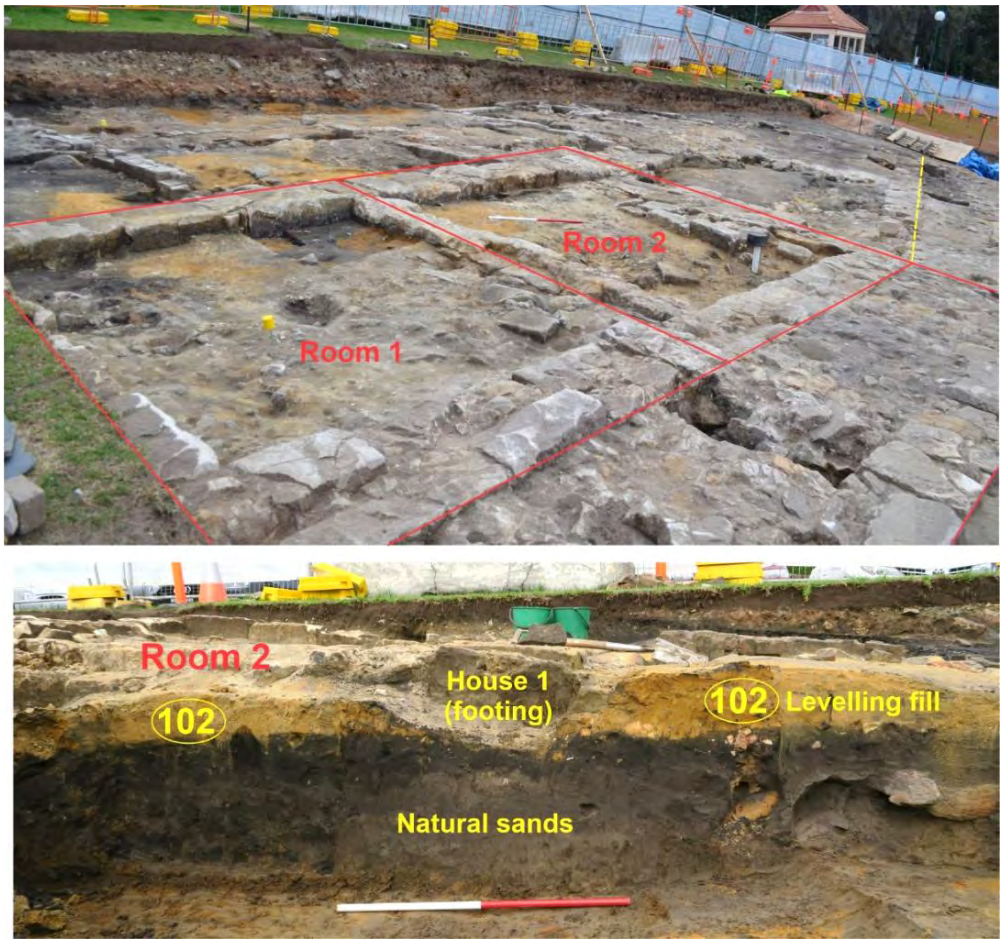


Figure 4.25: Yellow sandy levelling fills in plan and in section (east-facing) which pre-dated the construction of House 1 (above). View to west, scale 1m. DSC_4784, IMG_0138.

© Sydney Metro 2018

4.3.3.2.2 House 1 Footings

The sandstone footings of House 1, including the verandah, measured 7.7m (east-west) by 6m (north-south). The original house had two room, with a fireplace in the eastern room (Figure 4.23, Figure 4.24), the rooms were almost square, Room 2 measured 3.3m x 3.3m, Room 1 was slightly smaller 3.3m x 3.1m. The foundations of the main part of the house (Rooms 1 and 2) were recorded as context (020) while the verandah footings were given a separate number (039). Archaeological remains suggest the verandah was contemporary with the original structure.

The western wall of the house was only partially exposed due to its location along the western limit of the site (Figure 4.24). The footings (020) were mostly roughly cut sandstone blocks; some were neatly worked into rectangular or square blocks, particularly in the lower course of footings. The walls measured 550-620mm in width and were one to two courses deep. As the natural slope fell to the south, the foundations of the southern wall and verandah were deeper than the north wall. All the foundations were cut into the subsoil (contexts 104 and 105). There was not a lot of visible mortar used to bind the stones, some buff sand shell mortar was sampled from the northwest corner of the building (BM sample #5), where there were also small fragments of slate on the upper course of the wall.[127] The slate was probably used as a damp-proof course, although there was no further evidence of slate on any of the other walls. The cut for the foundation trench (044) was only visible along the exterior of the north wall of the house where it cut through the pre-house levelling fills (030 and 102). This suggests the stones abutted the southern edge of the trench. The wall cut extended 40-90mm to the north of the footing suggesting a wall trench 600-700mm wide (Figure 4.23) and was clearly evident in TT 07. The fill of the wall trench (045) was a mix of black sand and light brown sandstone crush and rubble frags. Within TT 07 there was also a posthole (046, 047) abutting the exterior wall of the house and cutting through the wall trench (see Section 0).

North wall of House 1

The north wall of House 1 was a continuous wall (7.7m long) built with a single row of large roughly cut sandstone blocks laid end to end (Figure 4.26, Figure 4.30). The largest block measured 1140 x 550mm. The remnant footing was mostly one course deep and varied from 550-600mm in width with the cut for the foundation trench (044) visible along the exterior (northern) side. Towards the eastern end a shallower second course was visible due to the natural slope (Figure 4.27). This wall abutted the later wall (009) associated with Stevens' later cottages (Phase 4.1) but was keyed into the eastern wall of House 1.

South wall of House 1

The upper course of the south wall was built with more irregular-shaped stones laid in two rows with occasional larger stones orientated across the wall to achieve a better bonding (Figure 4.28, Figure 4.30). The south wall was 7.7m long and keyed into the west wall of the house and measured 570-620mm in width and at least 420mm (2 courses) deep.

East wall of House 1

The east wall of the early house had the chimney keyed into the footings which extended 500mm out beyond the line of the wall. The east wall was constructed from a single row of long rectangular blocks and was keyed into the north wall. A small test trench (TT 15) excavated in the northeast corner of Room 2 exposed a lower course to the northern end of

[127] Shell mortar was found at 'Greencliffe', Kirribilli in an 1865 house, http://www.caseyandlowe.com.au/wp-content/uploads/1995/03/greencliffe-Kirribilli.pdf , accessed 14/02/2021.

the east wall (Figure 4.27). The chimney and fireplace are discussed below with Room 2 recording.

Figure 4.26: Detail of north wall of House 1 built of a single row of large rectangular blocks of stone laid end to end and cutting into the yellow sandy levelling fill (102). View to east, scale 500mm. DSC_4822.

Figure 4.27: TT 15 in the northeast corner of Room 2 showing a second course of stone in the north and east walls sitting on the modified sands (104). View to north, scale 500mm. DSC_9950.

West wall of House 1

The west wall was only partially exposed along the western limit of excavation but appeared to be a single row of large rectangular stones the width of the wall and number of courses was not evident. The intersection of the north and west walls was therefore not visible (Figure 4.30).

Internal partition wall of House 1

The internal north-south partition wall (020) separating Rooms 1 and 2 was not keyed into the other two walls. The upper course of stone was quite worn and degraded and measured 460mm in width. Some of the stones had collapsed off the wall forming demolition debris in Room 1. The lower course was wider (600mm) consisting of a single row of large blocks end to end with some through stones up to 700mm wide in the centre of the wall (Figure 4.29, Figure 4.30).

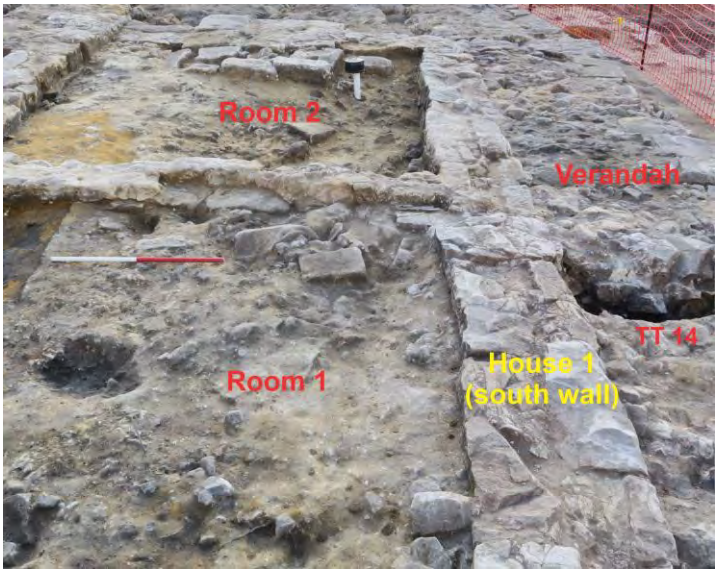


Figure 4.28: View along south wall of House 1 which was a continuous wall for both Rooms 1 and 1. View to east, scale 1m. IMG_9902.

Figure 4.29: Detail of internal partition wall, House 1 with Room 2 in the foreground. This wall was not keyed into the south wall. The lower course was wider and constructed of larger blocks up to 600mm wide. View to west. Scale 500mm. DSC_4816.

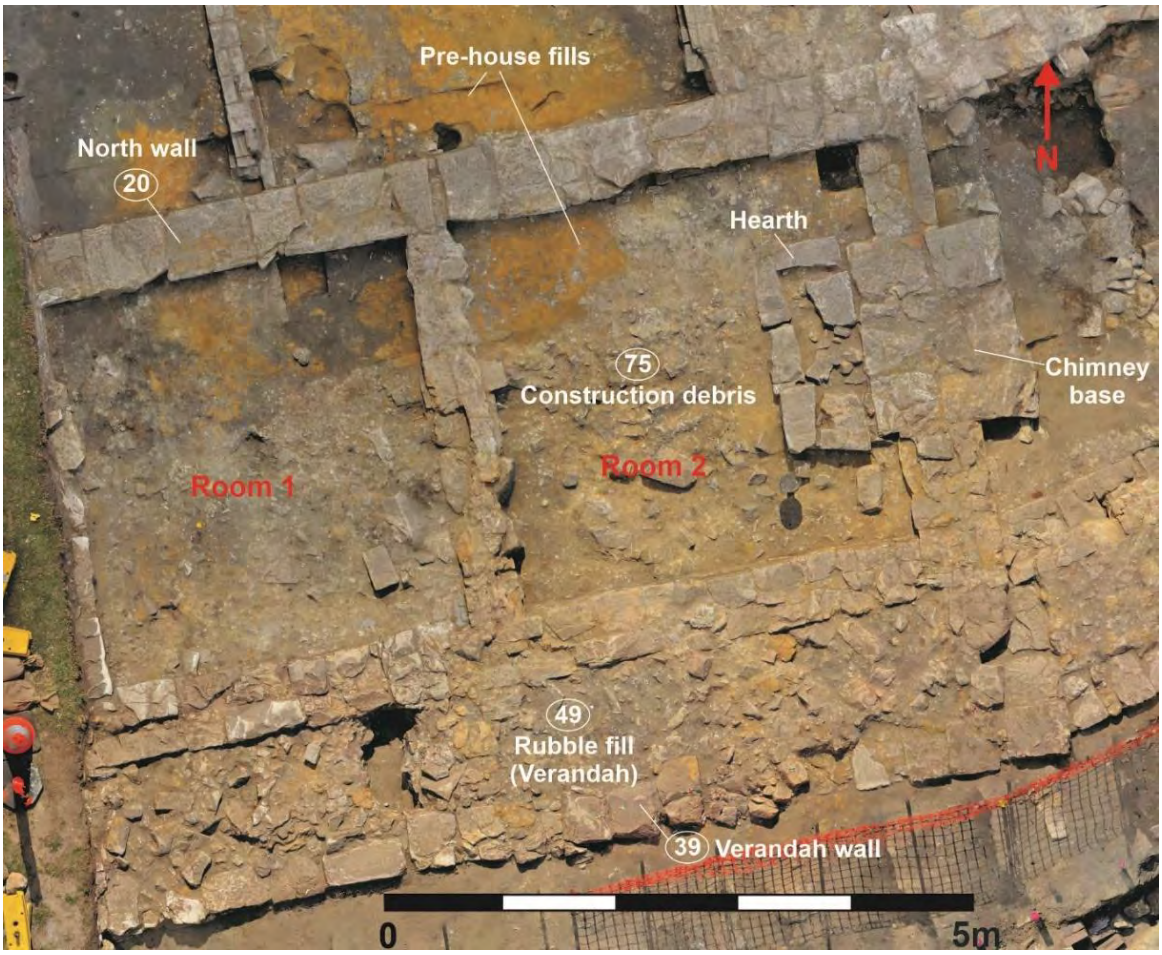


Figure 4.30: Annotated orthophoto of the footings of House 1 (020). The front wall of the verandah was recorded separately (039) although it was most likely contemporary with House 1.

4.3.3.2.3 Rooms 1 and 2, House 1

The 1860s photograph (Figure 4.21) shows House 1 as a cottage with a dormer style roof with an additional room (lean-to) at the eastern end. There is a single small dormer window in the eastern half of the northern roofline (above Room 2) which shows there was at least one room in the upper storey or attic. This attic room was most likely a bedroom and may have been divided into two spaces, especially if there were other windows facing to the south to take advantage of the view. The eastern lean-to was probably a storage room or kitchen; given the large scale of the chimney base, the fireplace may have opened into both the interior of Room 2 and into the eastern room. No evidence of the additional room at the eastern end of the building was found any remains were likely removed by the later construction of Stevens' cottages c.1869. The ground floor footprint of the building consisted of two rooms and a front verandah (Figure 4.23, Figure 4.24).

Room 1

Room 1 the westernmost room measured internally 3.33m (north-south) by 3.10m (east-west). There was no evidence of any surviving thresholds or openings within the room. Room 1 did contain a demolition deposit (019) and an underfloor deposit (021). As these deposits were formed through ongoing occupation during the lifespan of the house they are discussed with later phase of occupation (Phase 5). The demolition debris is discussed with Phase 6. Below the underfloor deposit were some thin patches of construction debris (075), (Figure 4.30).

Room 2

Room 2 was a slightly larger room measuring 3.33m (north-south) by 3.34m (east-west) and contained a large fireplace keyed into the eastern wall of the room. It was 240mm wider than Room 1. The fireplace and chimney space were one course deep and measured 1.68m x 1.3m and erected from six large sandstone blocks (average size 600 x 550mm) laid in a rectangular shape. The front of the fireplace extended a further 530mm west into Room 2 terminating with a narrower single row of stones (Figure 4.31). The demolition debris (026) and the underfloor deposits (066 and 069) within this room were recorded separately and are discussed with the later phases of occupation. A number of frogged sandstock bricks, context (072) (dated 1850-1900) were reused as supports for a timber floor located within Room 2, suggesting the floorboards were replaced during the lifespan of the house. Below the underfloor deposit was remains of a construction debris (075). The construction debris was light buff-brown coloured sand mixed with sandstone rubble (Figure 4.30). It was excavated within TT 15 in the northeast corner of the room and was 10mm deep (Figure 4.23) and got thicker as it followed the natural slope to the south. In the southern half of Room 2 there were a lot of larger and more frequent pieces of stone rubble (up to 330mm deep) possibly intentionally deposited as a raising event to level the ground within the room prior to the construction of the floors. The rubble stones could have assisted with drainage as further excavation of TT 22 showed Room 2 was constructed above a natural water channel, the flow of which was diverted further east away from the house (see Section 0). No artefacts were found within this debris.

© Sydney Metro 2018

Figure 4.31: Detail of the fireplace and chimney along the east wall of House 1. View to north, scale 1m. IMG_9940.

4.3.3.2.4 Verandah, House 1

The verandah of House 1 was located along the southern side of the house, offering views out over the harbour (Figure 4.32). The verandah measured 8.4m in length with an interior width of 1.02m. The verandah footing (039) was a single row of roughly cut square and rectangular sandstone blocks (Figure 4.30). The front wall of the verandah was 450mm wide with two courses visible in TT 14. Below the edge of the footing was a circular cistern (see Section 4.3.3.3.1). Some of the upper courses of the wall were removed with brick rubble infilling spaces. The western return was outside the area of excavation, while the south eastern corner of the verandah was defined with a large corner stone on the lower course (550 x 500mm in size) (Figure 4.33). A number of large stones along the eastern edge of the verandah may have formed a step onto the verandah of House 1 and were later incorporated into the construction of the verandah of House 2. The extension of the front verandah associated with the later cottages (context 023, Phase 4.1) followed a different alignment to the original house (Figure 4.30, Figure 4.33).

There were no underfloor deposits within the verandah interior as this space was filled with compacted sandstone rubble (049) packed with a dark brown clayey sand (Figure 4.30, Figure 4.34). The rubble stones varied in size from 50-300mm in length. Surface artefacts retrieved from initial cleaning in the verandah area to expose this rubble fill were recorded as context (038). It appeared too tightly compacted to be demolition material from the house and appeared to be an intentional fill to stabilise the footings. A test trench (TT 14) through the rubble fill showed it extended to a depth of 400mm with occasional artefacts (pins and nails) (Figure 4.23). Below the rubble was a mottled sand deposit (Figure 4.34) similar to the accumulated sand (100) underlying the footings of House 1.

© Sydney Metro 2018

Figure 4.32: View from House 1, showing the archaeological team excavating at the Blues Point Temporary Works Site. This shows the eastern view towards the Harbour Bridge. View to east, Sydney Metro 2018.

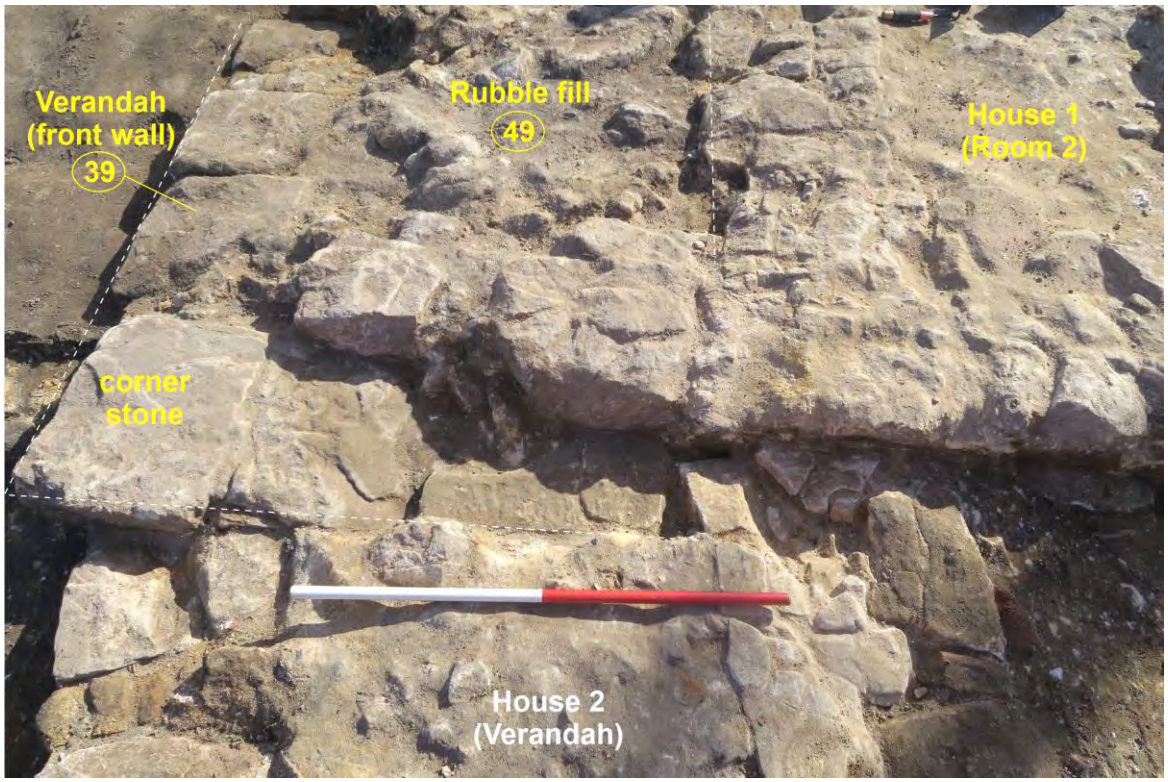


Figure 4.33: Southeast corner of the front verandah, House 1. The centre of the verandah was filled with rubble (049). View to west, scale 1m. IMG_9807.

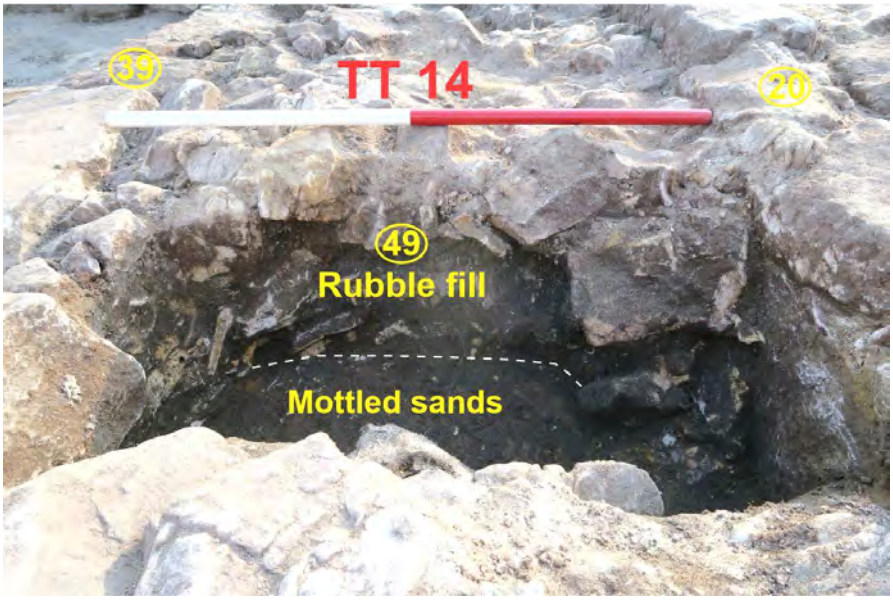


Figure 4.34: East-facing section of TT 14 through the front verandah. The interior was filled with rubble (049) post-construction, up to 400mm deep to stabilise the footings. View west, scale 1m. IMG_9837.

Towards the end of the excavation program a large machine was excavated test trench (TT 22) running north-south through Room 2, House 1 which confirmed the verandah footings (039) and the main house footings (020) were contemporary construction events (Figure 4.23). In both the east and west sections of this large test trench (Figure 4.35, Figure 4.36) the stone footings at the south end of House 1 were sitting in a cut into the modified sands (103). This may be a natural dip or the wall trench for the south wall and verandah. Its irregular shaped base and the infilling of sand lenses (100) between and below the footings suggests a heavy rain or flood event at the time of construction. This allowed for horizontal lenses of dark grey-brown and lighter brown sands to wash in and accumulate during the building phase (Figure 4.35).

These sand lenses (100) began in the area below the south wall of the house, then extended under the verandah area and were still evident further south, beside the cistern (087) (Figure 4.38) and thinned out just before the east-west retaining wall (061). The sand lenses or bands varied in depth from 300-400mm. The location of these sand lenses on the steeper sloping part of this northwest corner suggests the sands most likely washed in from the north and accumulated (settled from stormwater) while preparations were underway to lay the foundations of the southern end of the house and the associated cistern. It is possible that they were intentionally imported and deposited in this area although the banding effect indicates they were washed in to the trench rather than being a dumping event where tips lines may be visible. These sands were not found further to the north and were clearly the result of down slope build-up, probably an accumulation after heavy rain. At the base of the sand lenses was a thin layer of construction debris (20-60mm deep) sitting above the darker natural sand deposits (103). This construction debris (101) consisted of small pockets of crushed white and yellow sandstone fragments and yellow-white sandy clay (Figure 4.36), further evidence of (101) was found south of the cistern (Figure 4.38). Context 100 did not contain any visible artefacts, only occasional charcoal flecks. Soil/pollen samples were collected (samples #49, 50, 51, 57, 58 and 59).

© Sydney Metro 2018

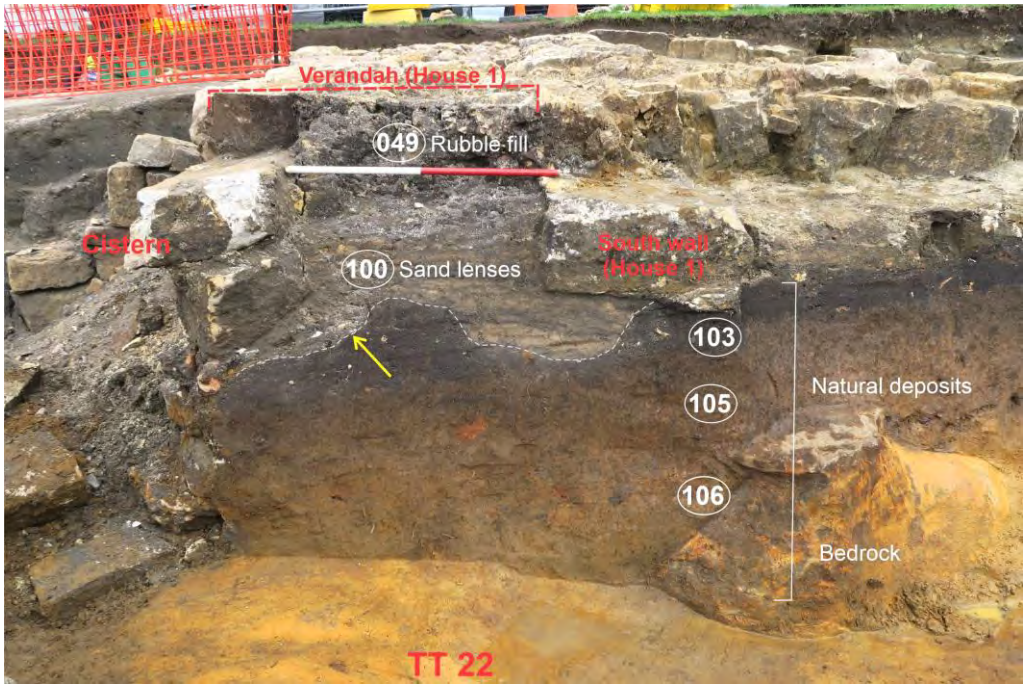


Figure 4.35: West-facing section through southern end of TT 22 showing accumulated sand lenses within cuts (yellow arrow) through the dark modified sands (103) associated with the construction (Phase 3) of House 1 and its verandah. Similar sand bands were found further east and south below the cistern. View to west, scale 1m. IMG_0163.

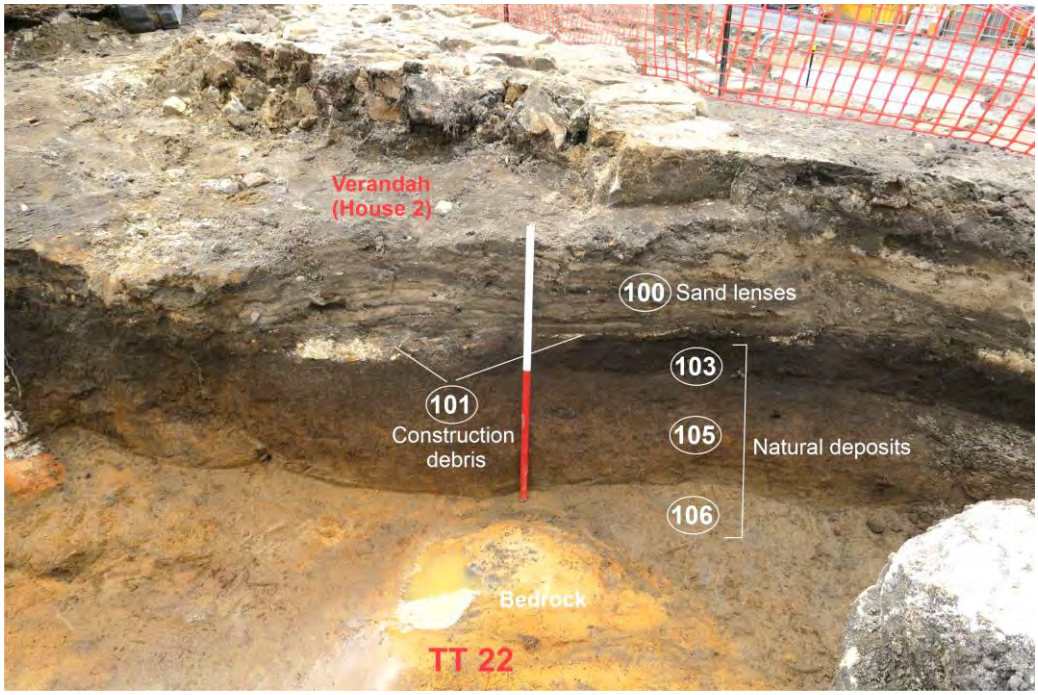


Figure 4.36: West-facing section of TT 22 showing bands of accumulated sands (100) up to 350mm deep above the natural soil profile. There are also small pockets of construction debris (101) below the bands of sand. View to east, scale 1m. IMG_0170.

4.3.3.3 Other Early Structures & Features

4.3.3.3.1 Cistern, House 1

A large circular structure (087) was located at the southern end of House 1, where it was partially underneath the verandah wall (039) by 200mm (Figure 4.30, Figure 4.37, Figure 4.38). This cistern was buried below loose grey brown sands (099, Phase 5) which accumulated during the lifespan of the house and then covered over the cistern when it was no longer in use. The location of the cistern below the edge of the verandah was probably intended to collect runoff water from the roof of the house and by this means collect stormwater. A newspaper report in 1884 indicates that the North Shore did not have a permanent water supply at that time and residents and businesses relied on collecting rainwater in tanks with some properties also having wells (collecting ground water). In very dry seasons water supplies failed and residents relied on the purchase of carted water.[128]

The cistern first appeared on plan in 1891 (Figure 2.19) but the archaeological remains indicate it was contemporary with the construction of House 1. The interior of the cistern measured 1.7m in diameter at the surface. The upper course of the structure was lined with dressed sandstone blocks (c.350mm wide) curved to fit the circular shape with some large stones protruding at intervals probably to support a capping (Figure 4.37, Figure 4.39). Hand tool marks were visible on the internal and top surface of the neatly cut stones. The lower courses of sandstone were rough cut stone with irregular coursing to a depth of 1.6m (approximately seven courses deep). After initial hand excavation could no longer be safely undertaken (due to the overhang of the verandah), the cistern was half sectioned and machine-excavated to a depth of 2.8m from the top of the verandah footing. The base was not reached. The lower half of the structure was carved into the bedrock (041). Water was reached at a depth of c.2m the lowest RL within the structure was at 3.66m. By cutting the cistern into bedrock this would have restricted the development of salt within the water, keeping it fresh.

Backfilling the cistern were four different fills (090, 091, 094 and 095). All are phased to the early 20th century (Phase 5) when the structure most likely became redundant and the houses were connected to the water mains. Although a later event, for ease of recording the fills are discussed here. The uppermost fill (090) was a dark grey to black coarse sandy silt with frequent industrial inclusions including cinder ash, slag, coke and large metal artefacts ranging in depth from 400-750mm. Below context (090) was a mound shaped dump of yellow-orange coarse clayey sand (091) with frequent sub angular gravels devoid of artefacts, possibly an intentional dump to fill the cistern. It was higher in the middle and varied in depth from 700-1500mm. The lower fills (094 and 095) were both dark grey-black fine silty sands with small angular gravels. Context (094) contained part of a leather/rubber boot and some wood pieces while context (095) was completely waterlogged with no artefacts found. Pollen analysis of the lower fill (context 094, sample #29) of the cistern confirmed an abundance of exotic weeds and coke fragments.[129] The presence of cereals and burnt wood fragments indicate the infill came from a weed infested domestic ash heap.[130]

Most of the artefacts from the cistern came from the upper fill (090) which contained 46 artefacts (MIC). These date from 1889 to 1932 indicating the date range for backfilling the cistern and the likely connection of reticulated water. The artefacts providing the early 20th-

[128] *Evening News* 6 Oct 1884, 5.

[129] Macphail M, 2020, *Pollen Analysis of Samples from Sydney's Metro TBM Retrieval Site Results*, Section 3.25.

[130] Macphail M 2020, Section 3.3.

cnetury date are: Botany Glassworks bottle (1889–1906) and a fine earthenware saucer made by W. Baker & Co (1839–1932). (Volume 2).

Figure 4.37: Sandstone cistern below front wall of verandah, House 1. The cistern was backfilled with four different fills. View to north, scale 1m. IMG_4859.

Figure 4.38: East-facing section showing the edge of the cistern cutting the natural deposits. This photo also shows construction debris/surface (101) above the natural sands likely associated with the construction of the cistern with sand bands (100) above the construction debris. View to west, scale 1m. IMG_0036.

Figure 4.39: Machine excavated trench through cistern (087) cut deep into the bedrock. Note how the two courses of the verandah wall slightly overhang the cistern. View to north, scale 1m and 4m. DSC_4897.

'L'-shaped Drainage Channel

No evidence for an additional room or lean-to along the east of House 1 was found during excavation, as suggested by historic photo (Figure 2.11). In the eastern area, below what later became House 2, Room 3 were large quantities of sandstone rubble (033) filling an 'L'-shaped man-made channel (Figure 4.23). From the excavation of test trenches there was sufficient evidence to suggest water was channelled down slope across Area A towards the harbour (Section 4.3.1.2.2). What was once a natural water channel following the path of least resistance and was manipulated or redirected with the development of the site. The L-shaped channel (108) to the east of House 1 is thought to be a natural channel altered to direct the flow of water eastwards away from either the first house (c.1857), or the eastern lean-to extension (1857-1864). It was backfilled with sandstone rubble (033), presumable to impede the flow of water and to raise the ground level prior to the construction of the later

© Sydney Metro 2018

houses in 1867 (Figure 4.23, Figure 4.40). The continuation of the stone rubble (033) to the east could have also acted as a revetment or retaining wall at the eastern edge of House 1, although this is less likely as the edge of the rock shelf was further to the south and east. The channel was 700-800mm wide and cut through the black sandy modified shell rich deposit (063) (Figure 4.7). The depth ranged from 250-600mm. The sides of the channel were quite vertical with a concave base.

The rubble fill (033) included a number of large angular stones (up to 700 x 400 x 300mm in size) embedded in light brown sandy fill with crushed sandstone and mottles of pink, orange and white sand. The rubble fill extended for at least 6m north-south with further evidence of the rubble filled trench visible to the north of House 2 (in TT 08) where it was truncated by the late 19th-century brick additions (006) to House 2. Context (033) was on the same alignment as a shallower north-south trench (098) further north (Figure 4.17) suggesting the two are connected. The foundations (009) for House 2 were built over the top of the rubble (Figure 4.41, Figure 4.42). At the southern end of the trench the rubble fill (033) within cut (108) turned a right angle to the east and continued in that direction for at least 4m (Figure 4.23, Figure 4.40) where it was 800mm–1.5m wide but shallower. Slumping in the foundations below the south wall of House 2 suggests the original drainage channel extended further south along its north-south course. Artefacts within the rubble fill (033) included a Victorian threepence coin, dated 1857. The rubble fill appears to post-dated the original construction phase of House 1 and is associated with either ground preparation for the eastern lean-to extension visible on the 1864 plan or is associated with preparation for the building of Stevens' two additional houses c.1869. With no evidence of the eastern extension found it seems plausible that the rubble fill (033) was ground preparation for the later houses (House 2, 3).

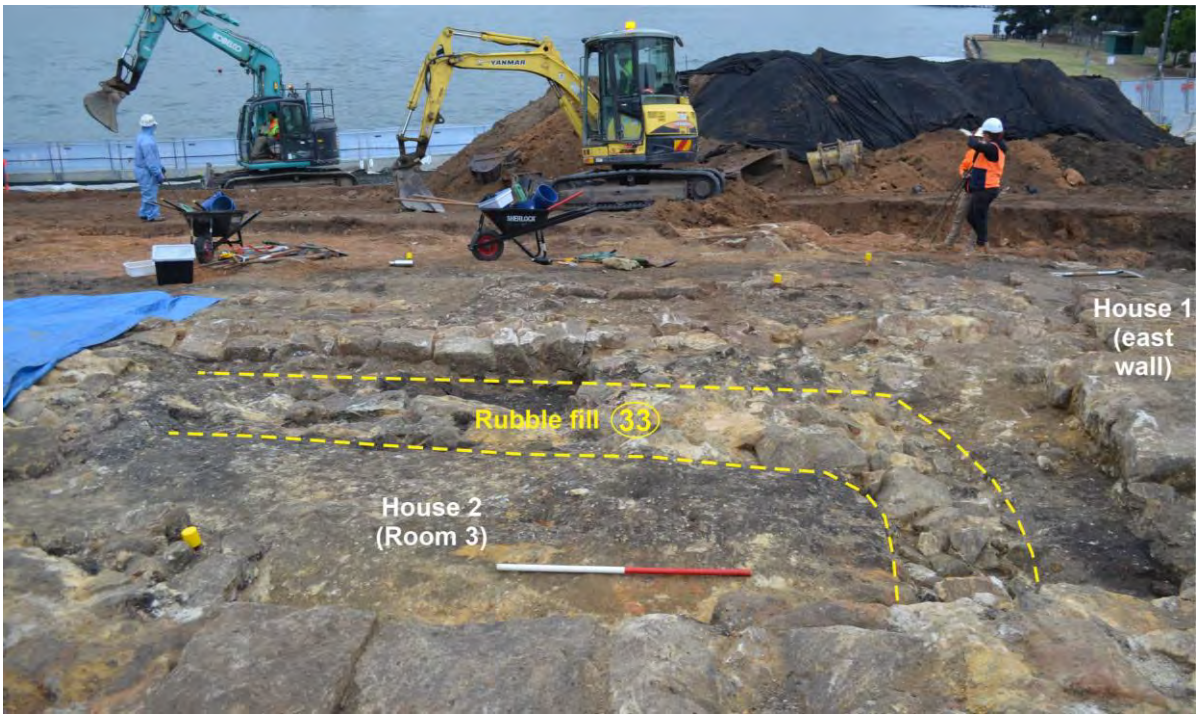


Figure 4.40: L-shaped channel, filled with brick rubble (033) pre-dating the construction of House 2. View to south, scale 1m. IMG_4712.

© Sydney Metro 2018

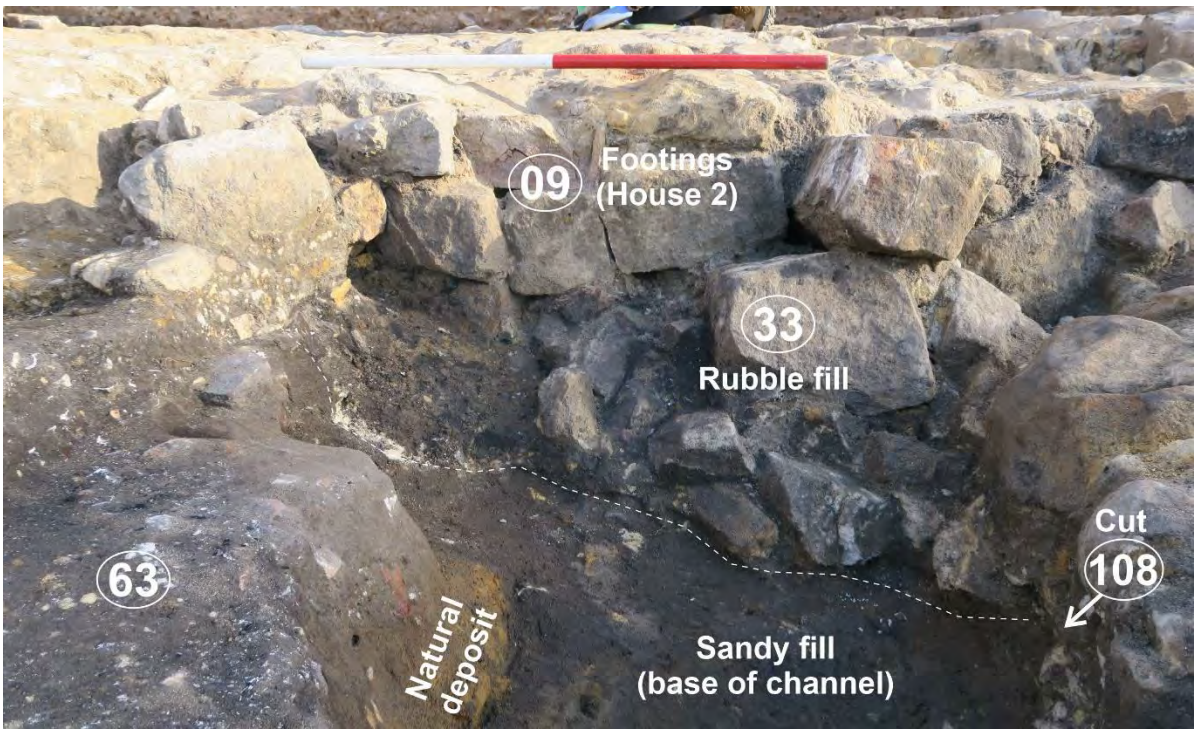


Figure 4.41: South-facing section of rubble fill (033) with north-south channel (108) below stone foundations of House 2 and cutting the shell rich deposit (063). View to north, scale 1m. IMG_9915.

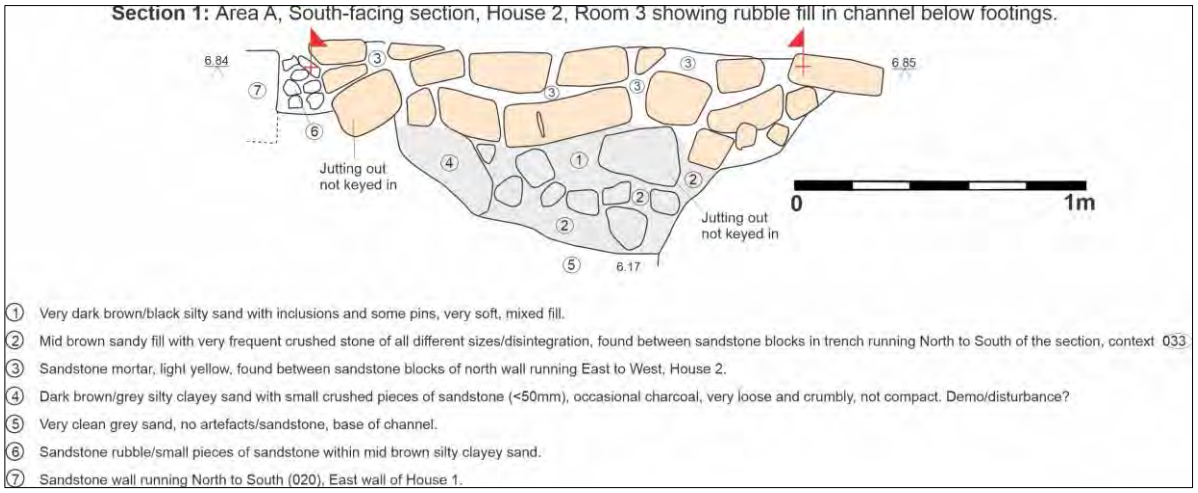


Figure 4.42: Section drawing #1, south-facing section showing rubble fill (033) in L-shaped channel (108) below the stone footings of House 2. The orange shaded stones (009) are part of the north wall of House 2, while the grey shading is of the rubble stones and sandy fill (033) within the L-shaped channel (108).

4.3.3.3.2 Fencelines

Prior to the purchase of Lot 10 and House 1 by John Stevens in 1867 a north-south fenceline was present on the 1864 plan (Figure 4.19) to the north of the House 1. The fenceline turned in a northwest direction ending at another structure, possible a shed along Blues Point Road. There was no fenceline/boundary along the eastern edge of the house. The purpose of this backyard partition in the centre of the backyard is unclear. It may have simply been to enclose small livestock, such as chickens or ducks, within the yard. Analysis of the faunal bones noted chickens were part of the diet of the occupants of House 1 and may have been kept on site. Among the fragments of bone 33 were identified as chicken. Full carcasses were represented along with a fragment from a juvenile animal and broken eggshells.[131]

Its location in the centre of the back yard may also have been due to water channelling downslope further to the east. The fence was on plan until 1869 but did not appear on plan after Stevens built the adjoining houses. Only one posthole (046) was found along this alignment during excavation that could be attributed to a boundary fence. Within TT 07 a sub-rectangular posthole (046) abutted the north wall of House 1 (Figure 4.23, Figure 4.43) cutting the edge of the wall trench (045) and the mottled yellow pre-house levelling fill (102). The posthole had a circular pipe (250mm in diameter) and vertical sides to a depth of 300mm with some corroded metal artefacts in the pipe fill (047).

Figure 4.43: Posthole (046) abutting north wall of House 1 and cutting pre-housel fill (102) and wall trench fill (045) of the house. Associated with early north-south fenceline. View to south, scale 500mm. IMG_9639.

The 1864 plan also showed some kind of fence or wall extending from the eastern corner of the front verandah of House 1 running at a 45-degree angle southwest towards Blues Point Road. This could have been an early retaining wall to stabilise the foundations of the house from slumping down the steep slope. The boundary on the 1864 plan does not align with the retaining walls (061 and 084) found on site suggesting it may have been replaced after Stevens bought this site and built two additional houses. No evidence of this earlier retaining wall or fenceline was found in this location during excavation.

[131] Roberts 2021, Animal Bone Report, Section 3.1.2.3, Volume 2.

4.3.4 Phase 4.1: 1860s-1870s Construction and Early Occupation of Stevens' Cottages (House 2 and 3)

4.3.4.1 Overview

Phase 4 has been divided into two sub-phases: Phase 4.1 (1860s-1870s) looks at the construction and early occupation of two houses built by John Stevens c.1869 along with ground raising and levelling and construction of retaining walls while Phase 4.2 (1880s-1890s) will focus on the later additions to the houses, new maritime structures, repairs and modifications to surfaces, retaining walls and seawalls. All three cottages remained extant until the 1940s (Phase 6) and were demolished by 1943.

In 1863 the remainder of Blues Point Estate, including the study area (Lot 10, Section E) was subdivided for sale. In 1867 John Stevens, 'Shipwright' purchased the western part of study area (Lot 10) which already had a building in the northwest corner of the allotment (House 1). In 1868 James Glover 'Mariner' purchased the eastern part of the allotment, part of which is included in the study area. A lane on the north side of Lot 10 provided access to James Glover's eastern portion of the allotment (Figure 2.9). The proximity of this land to Sydney Cove made it prime location for both residential and commercial use providing business opportunities and investment potential for the two Sydney men.

In May 1869 an advertisement placed in the *Sydney Morning Herald* called for tenders for a mason to construct 'two cottages' at Blues Point. The October 1869 Crown Plan shows an elongated extension to the east of the original cottage with an addition to the north of the structure (Figure 2.10). This plan suggests the eastern extension was one building as it does not show a partition but the archaeological remains clearly show two houses. The plan also shows the 'Ferry Box' (or ticket box), wharf and coal yard. In July 1871 land was dedicated to the public for the development of a public wharf at Blues Point, however Stevens' land retained the sand beach on to which boats could be pulled ashore (Figure 2.13, Figure 2.14). The *Sands Directory* lists George Barnett as a boat-builder at Blues Point but without a specific address. From 1868 he leased the boat shed and possibly also the early house (House 1) on the Stevens' waterfront land. The boatshed adjoined the highwater mark (Figure 4.44). The 1871 *Sands Directory* lists Barrett on Blues Point Road where he remains until c.1888. As far as can be determined John Stevens never lived in the study area. There were still no buildings on Glover's neighbouring land during this phase.

The archaeological evidence from Phase 4.1 is represented by construction and early occupation of two additional sandstone houses at the eastern end of House 1. These are referred to as House 2 and House 3 throughout this report. Archaeological remains of these two houses showed that the footprint of each house consisted of a single ground floor room with a corner triangular fireplace and a front verandah with small brick additions to the north. Ground preparation to raise and stabilise the area for the construction of these houses included an east-west retaining wall to the south of the buildings. Some additions to House 1 were also undertaken during this phase. No remains were found of the Ferry Box or the boat shed. The multiple phases of occupation and brick additions to the houses and its associated yard structures, fills and deposits will be discussed in Phase 4.2 and Phase 5.

© Sydney Metro 2018

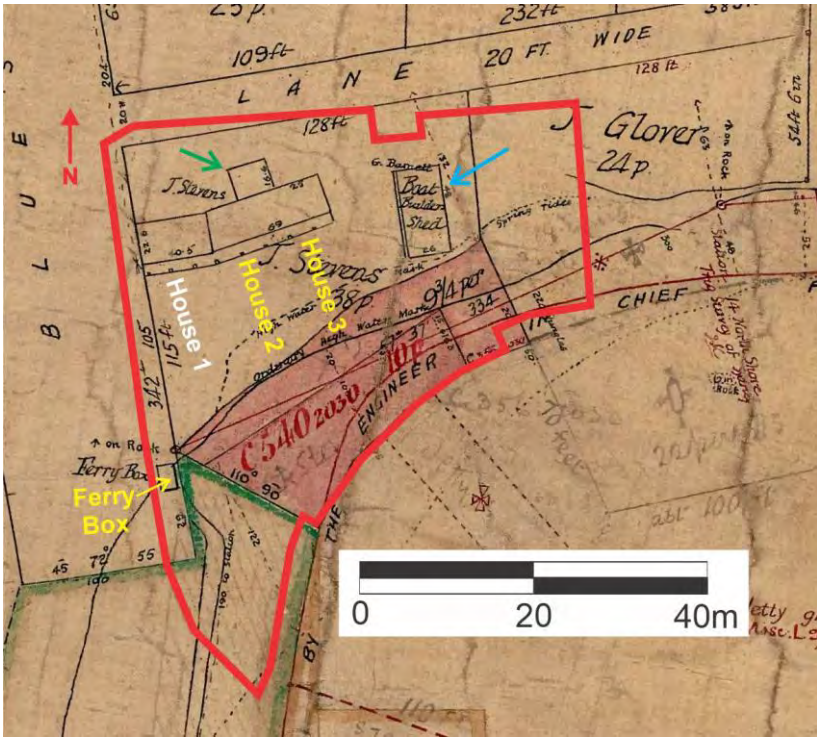


Figure 4.44: 1871 Crown plan of the study area with two new houses (House 2 & 3) adjoining House 1 and an addition to the rear of the new houses (green arrow). The boat shed (blue arrow) was leased to G Barnett. The area shaded pink illustrates (later annotation) reclamation below the high-water mark and the dashed lines below the pink shading is the proposed location for Stevens' jetty. CP 130-574, 25 Sep 1871, LPI.

4.3.4.2 North Retaining Wall, Area A

Two large retaining walls were uncovered below the late 20th-century fills (Figure 4.47, Figure 4.48, Figure 4.52, Figure 4.53, Figure 4.54) and are discussed as the north and south retaining walls. Both walls revealed a number of phases of construction and subsequent repair/modification. The north retaining wall (Area A) was identified as part of Phase 4.1. Although not shown on plan until 1891 it is reasonable to assume its construction was contemporary with the houses, its close proximity to the houses and the known drop off of the rock shelf would have necessitated some form of retention to provide a secure construction platform for the construction of the later houses and possibly for House 1 (Figure 2.19). The north retaining wall was given three different context numbers (061, 071, 084) to distinguish different phases of construction and repair/modification.

The western and earliest portion of the north wall (061), in front of House 1, was aligned northeast to southwest at a 40 degree angle (Figure 4.48), and due to its likely association with House 1, it may have been built in association with its construction (Phase 3). The 1864 plan (Figure 4.19) shows a boundary fence or possible retaining wall at a steep angle at the front of House 1, towards the end of the ownership of the site by the Blue family. The overlay of the remains of the wall onto the 1864 map reveals the alignment of the retaining wall as-built did not align with the wall shown on the historic plan (Figure 4.45).

Wall (061) had a different alignment to the rest of the north wall and therefore was considered to be a separate and earlier construction stage but not necessarily from the construction phase of House 1. As it did not align with the fence line shown on the 1864 plan (Figure 4.45, Phase 3) it is be discussed here in Phase 4.1. It was built of neatly cut sandstone blocks of varying sizes with prominent tool marks on many of the stones (Figure 4.48). It was 630-670mm wide, and c.8.5m in length. At the western end the wall was keyed into bedrock and formed part of the western section of the wall. One course of sandstone blocks sat directly

on the bedrock (Figure 4.46, Figure 4.47, Figure 4.48), then it followed natural slope to the east, with more courses added with depth. At the eastern end, where it joined with a later section of brick walling (071), it was 1m in height (4 courses). A yellowish-brown compacted sand mortar with shell grit was used in the upper two courses but not on the lower courses (BM sample #12). This may suggest repair of the upper courses. Along the top of the cut bedrock, at the western end of the wall, were two small square postholes cut into the bedrock (Figure 4.46). The postholes were 570mm apart and measured 190 x 195mm. Within the cut was a square post shape (110 x 110mm) with remnant cement packing fill. The cut was at least 140mm deep. Similar small square fence posts with cement packing were found in the sandstone pavement (328) along Blues Point Road from a later phase (Phase 5). They may represent evidence of fencing to provide safety and stop falling from the top of the wall.

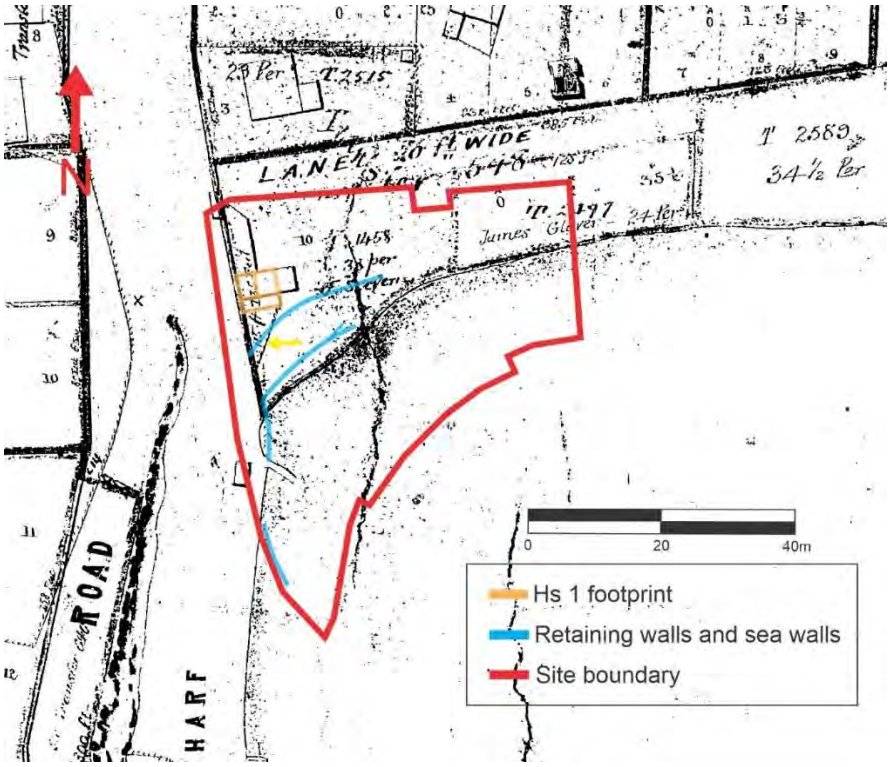


Figure 4.45: Overlay of north and south retaining walls (blue) and House 1 (beige) as found during excavation onto the 1864 plan. This overlay shows the north retaining wall did not align with the 45-degree angled fenceline (yellow arrow) show on the 1864 plan. 1864 Plan 1, April 1864, DP 8 LPI.

Figure 4.46: Cut and shaped bedrock at the western end of the north retaining wall (061). The blue arrows pointing to postholes in the rock. View to north, scale 1m. IMG_1216.

The rest of the retaining wall (071, 084) was aligned northeast-southwest but at a slightly different angle (60 degrees), mirroring the shifting alignment between House 1 and the later Houses 2 and 3. Most of this eastern portion of the retaining wall was built with irregular shaped sandstone blocks (084), (Figure 4.47, Figure 4.49). A central portion of the wall (2.3m in length) was rebuilt with machine-made bricks (071). It was a later modification or repair to the original stone walls, probably the result of water damage causing collapse to the wall (Section 4.3.5.4.2 , Phase 4.2).

Due to safety concerns, we were not able to fully expose the eastern end of the retaining wall (084) due to instability of the structure and its closeness to House 3 which was still being excavated and recorded at the time. We did not want to jeopardise collapse of the structural remains of the house. Despite it not being fully exposed, the purpose and alignment of the wall make it logical to assume it continued on to abut the southeast corner of House 3, therefore the eastern portion of the north retaining wall (084) is phased with the construction of Stevens' houses c.1869 (House 2 and House 3), despite it not appearing on plan until 1891. Unlike the initial section of wall (061), the later eastern part was in the exact location as the retaining wall shown on the 1891 plan. Wall (084) sat on natural sand deposits of the stepped foreshore at RL 4.5m, almost 2.5m below the ground level of the houses. A section of the wall measuring 8.8m was exposed during machine excavation but it become quite unstable further to the east. Some of the upper courses were missing (Figure 4.49, Figure 4.50). It was 500-620mm wide made with large roughly cut square and rectangular sandstone blocks packed with smaller stones, quite unlike the neatly cut sandstone block with tool marks used in wall (061).

© Sydney Metro 2018

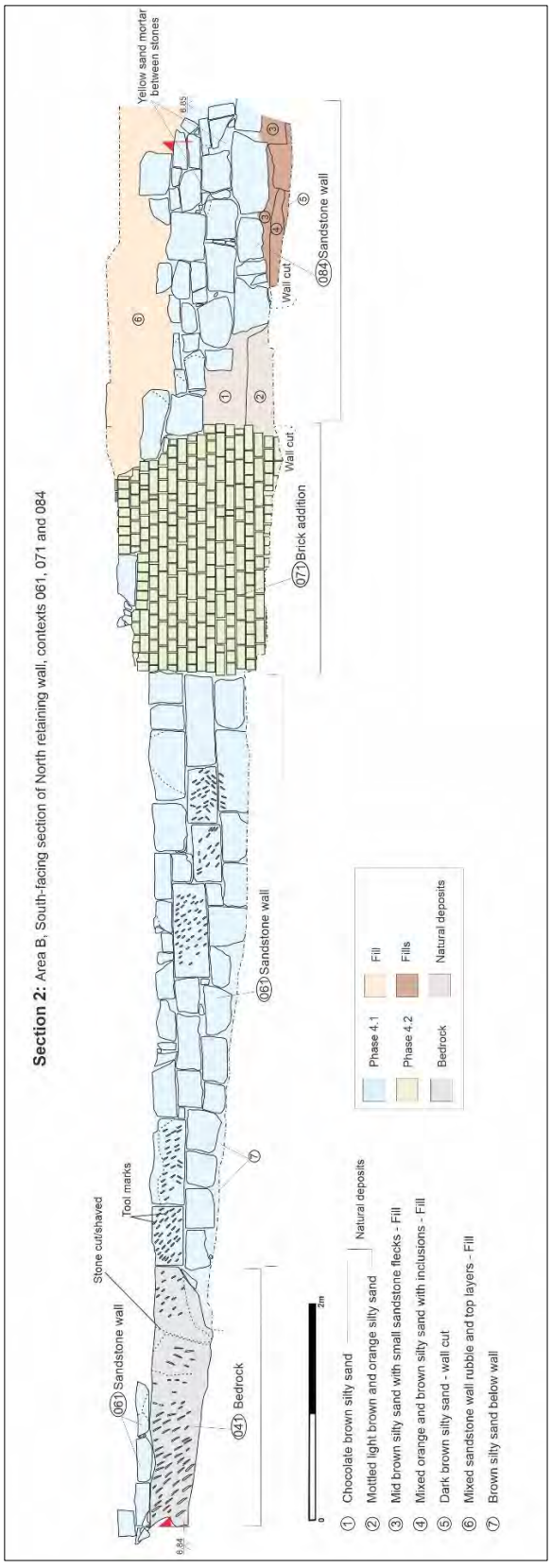


Figure 4.47: Section drawing #2 showing the south face of the north retaining wall. Plan 8, Volume 3.

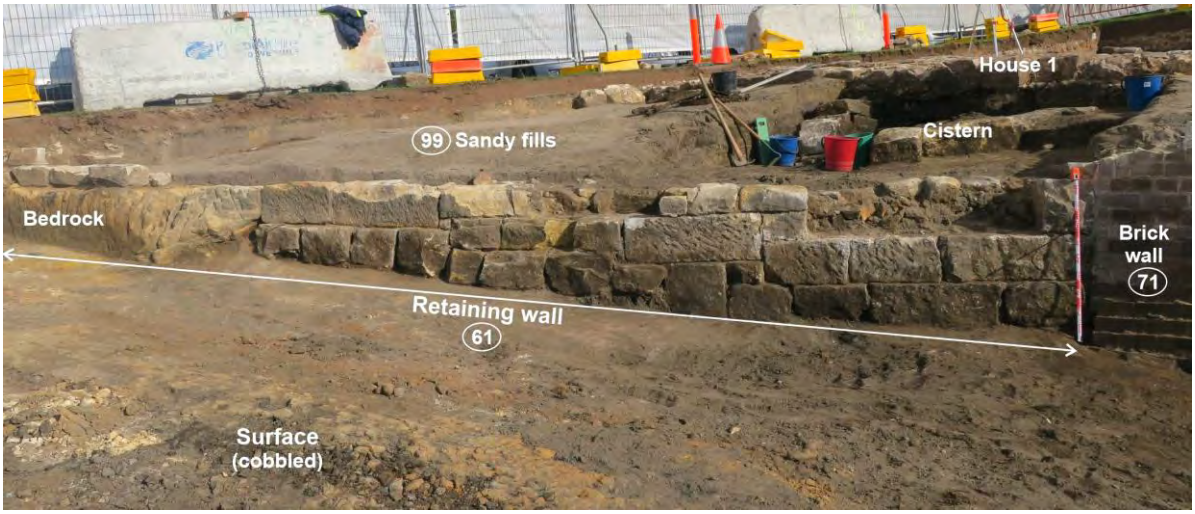


Figure 4.48: Western end of the north retaining wall (061) running northeast-southwest, south of House 1. Bedrock was incorporated into the stone wall. The later brick wall (071), to the right, abutted the sandstone blocks of (061), but was angled on a slightly different alignment to align with the later houses (House 2 and 3). View to northwest, scale 1m. IMG_1356.

Figure 4.49: Eastern end of north retaining wall (084) with later brick wall repair (071). Behind the wall were layers of fill (collectively recorded as context 067) to raise the ground for the construction of House 2 and 3. View to north, scale 1m. IMG_1257.

Behind the eastern end of the north retaining wall (upslope) were large quantities of imported fill which built-up the ground level prior to erecting Houses 2 and 3, as well as sandy deposits which accumulated or washed in during the occupation of the houses. Lenses of sands (099), behind the western end, probably built up over time, possibly washing down slope and eventually covering the cistern (Phase 5/6) and slumping over the top of the retaining wall

© Sydney Metro 2018

(Figure 4.48). Similar sandy fills and accumulations (067) up to 180mm deep were found to the south of House of 2 between the front verandah and the retaining wall (Figure 4.49); while further east the same deeper bulk fills associated with the construction of House 2 and House 3 were retained by this extension to the north retaining wall.

Figure 4.50: View along north retaining wall (084) below Houses 2 and 3. Some of the upper courses had collapsed. The fills that abutted the north face of the wall are visible in section. View to northeast, scale 1m. IMG_1261.

4.3.4.3 Construction of House 2 and House 3

The two houses built by Stevens c.1869 (House 2 and House 3) were contemporary semi-detached single-storey with attic roofs. They shared the same stone footings indicating they were built at the same time and area phased together (Figure 4.51, Figure 4.52, Figure 4.53, Figure 4.54). These two later houses followed a slightly different alignment to the earlier cottage (House 1). This different orientation appears to be in response to the natural topography of the site. The footprint of the two buildings measured 14m (east-west) by 6.08m (north-south) meaning the single ground floor room of each house had a space of approximately 42.5m² (7m x 6.08m). They were both slightly smaller in comparison with the ground floor area of approximately 46.2m² in House 1, which was split between two rooms. The stone footings for House 2 and House 3 were recorded as context (009) and the verandah footing was context (023) (Figure 4.53, Figure 4.54). Both the 1869 and 1871 plans show a small addition centrally located at the north side (rear) of the new houses (Figure 2.10, Figure 4.44). On the 1869 plan the small northern addition, possibly a scullery, is shaded the same colour as the stone houses suggesting it was built of stone. This addition was used by both new houses and was internally partitioned into two separate rooms. By 1891 the stone addition was replaced with a wider brick addition (Figure 4.51, Figure 2.17, Figure 4.53).

© Sydney Metro 2018

Limited evidence of the original stone addition (097) survived in the ground. Due to the steep drop in the bedrock shelf, the south and east verandah footings were extremely deep with a substantial quantity of fill brought into the area during the construction process to help stabilise the building (see Section 4.3.3.2.1).

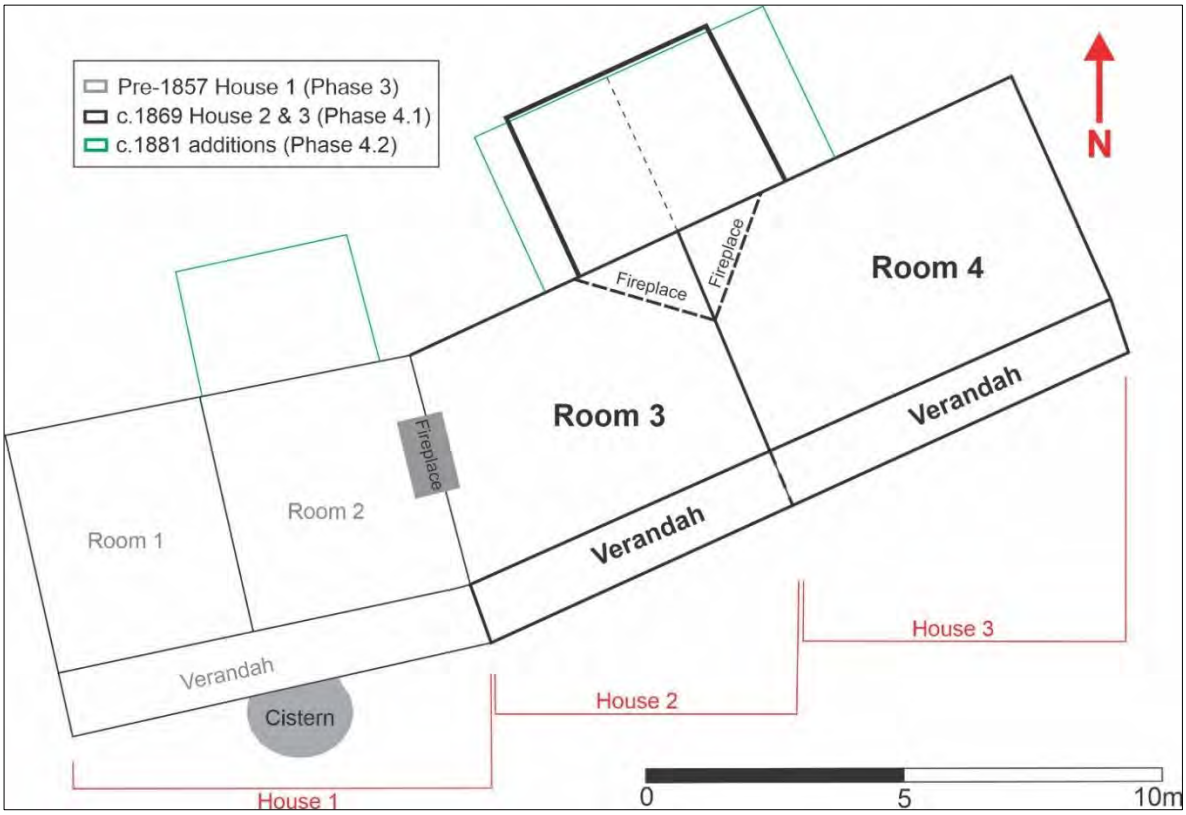


Figure 4.51: Drawing highlighting Phase 4.1 layout of House 2 and House 3 and northern additions (black outline) on plan by October 1869. The room numbers were assigned in the order they were exposed during excavation before it was concluded to be three different houses.

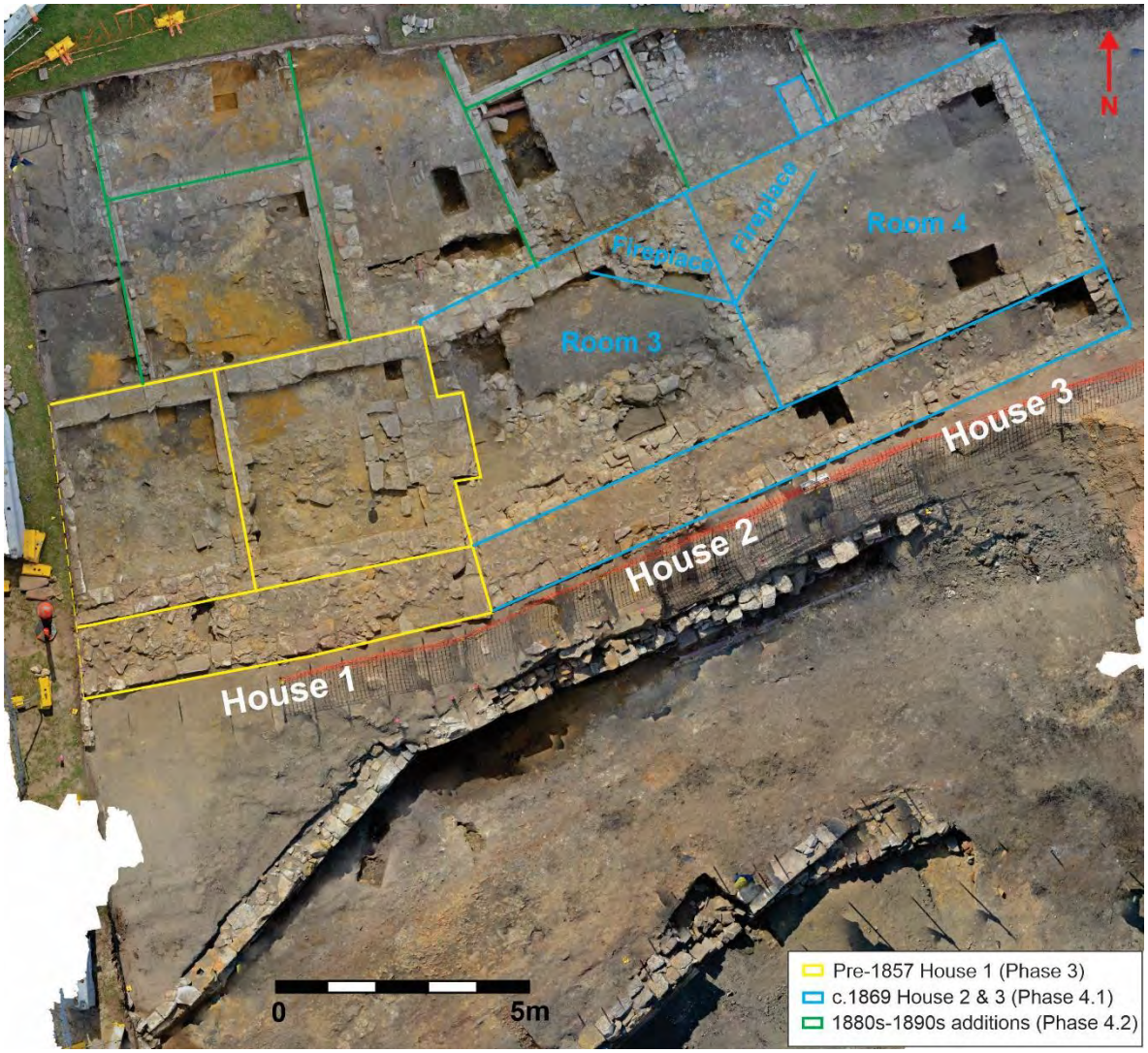


Figure 4.52: Orthophoto of all three houses in the study area. Stevens' c.1869 houses (blue outline) adjoined the eastern end of House 1 with other Phase 4.1 additions also in blue. The later additions (Phase 4.2) are outlined in green. The orthophoto also shows the north retaining wall directly below the houses. Arcsurv.

© Sydney Metro 2018

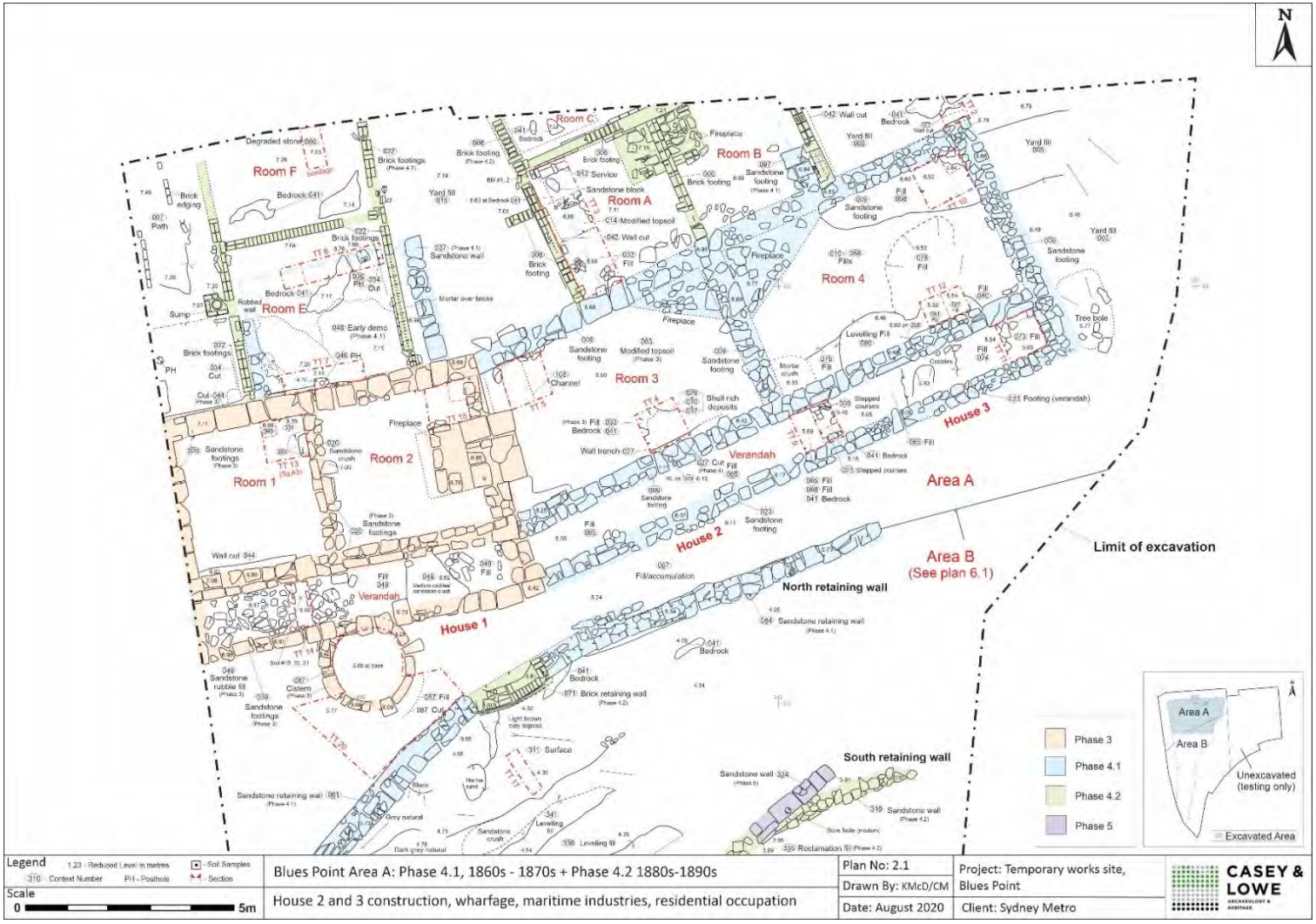


Figure 4.53: Phase 4 plan of Area A showing Stevens' two new houses (Phase 4.1) shaded blue along with the later brick additions to all three houses (shaded green). Plan 2.1, Volume 3.

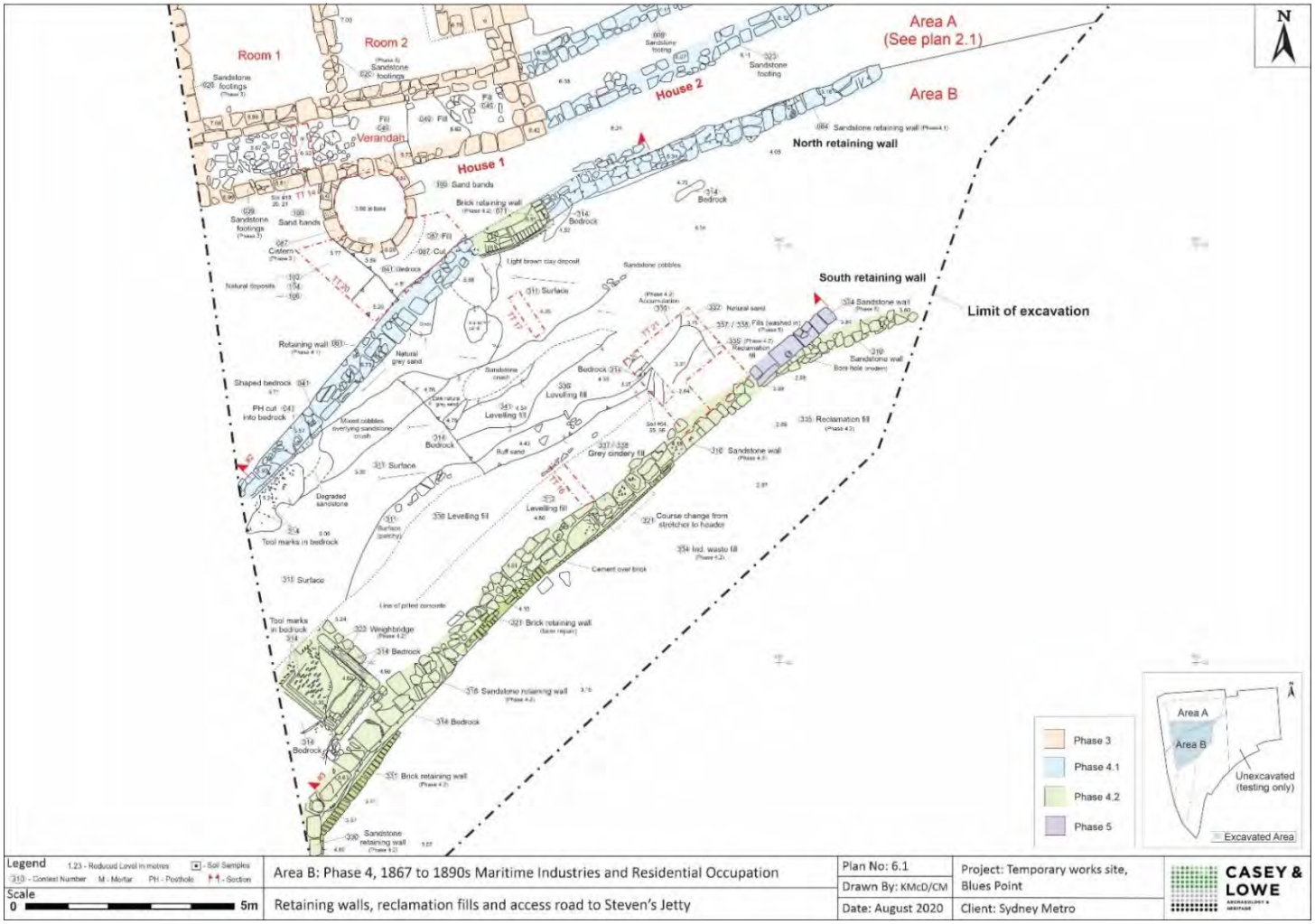


Figure 4.54: Phase 4 plan of Area B showing the different archaeological phases of two retaining walls and the access road to Stevens' Jetty. Plan 6.1, Volume 3.

© Sydney Metro 2018

4.3.4.3.1 Ground Preparation: Raising and Stabilising Fills

The location of Houses 2 and 3, further to the east along the edge of a rock shelf, required the ground to be raised and levelled to ensure the stability of Stevens' new houses. This was a particular concern along the southern and eastern edges where there was a steep drop to the south (Figure 4.16). The archaeological evidence illustrates an ongoing process to raise the ground for the construction of the houses, unlike the pre-house levelling fills identified before the construction of House 1. A number of levelling fills were imported to site and other deposits accumulated in order to remove the steep drop created by the rock shelf. The different fills reflecting different dumps and stages of construction. The construction process for House 2 and 3 was fully understood when a large machine excavated test trench (TT 19, Figure 4.55) was dug through the eastern end of House 3 (Room 4) to follow the depth of the fills below the house down to the natural sands (Figure 4.56, Figure 4.59). At the end of the excavation this trench was extended a further 4m towards the south and dug deeper to expose the steep slope and bedrock shelf. The larger machine trench was renumbered to TT 23 which incorporated the earlier TT 19 (Figure 4.16, Figure 4.53).

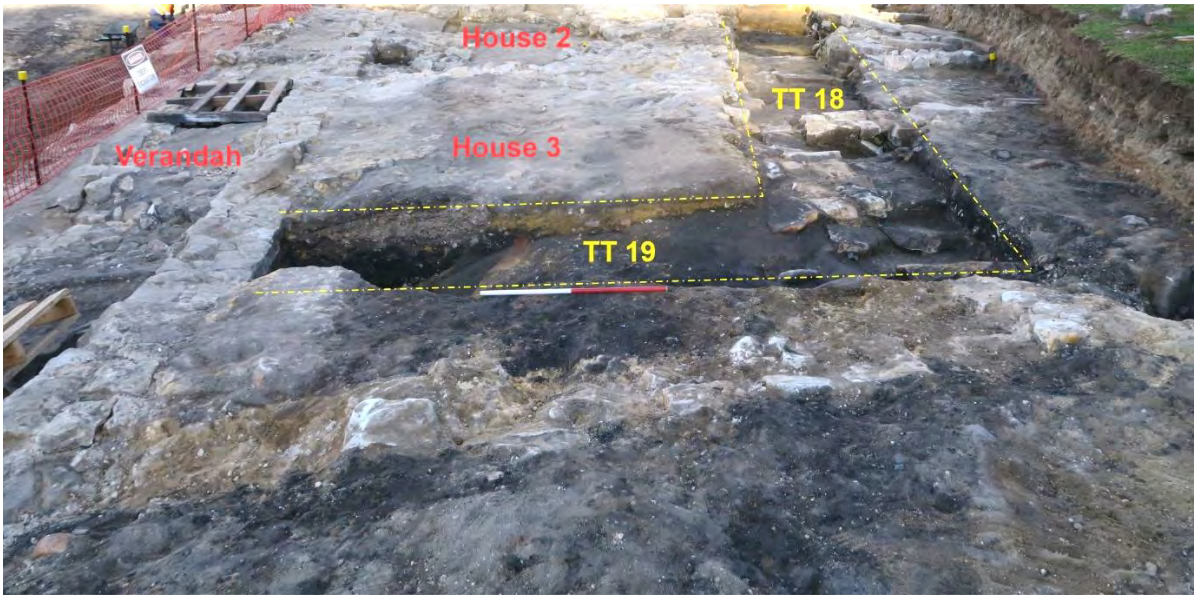


Figure 4.55: Machine excavated trenches (TT 18, TT 19) through Houses 2 and 3 to understand the fills and ground raising events associated with their construction. View to west, scale 1m. IMG_9967.

During excavation, prior to digging the large machine trenches, four smaller (c.1m x 1m) test trenches (TT 09, 10, 11 and 12) were excavated through the front verandah and Room 4 of House 3 to look for underfloor deposits and to understand the construction of Stevens' stone houses (Figure 4.53). It became clear that the foundations of the south wall of the house (009) and the verandah (023) were much deeper than the north wall of the building. There were no foundation trenches for these footings. Within TT 09 and TT 11 (Figure 4.57, Figure 4.58) deep layers of fill (800mm–1.2m) were tipped to infill between the sandstone foundations in the verandah, indicating these bulk fills within the verandah were not cut by

the foundations. The same fills were found in TT 12 within Room 4 where the fills abutted the south wall of House 3. Although recorded separately within the test trenches many of the bulk fills were similar and could be grouped together. Tip lines were evident in the sections through these fills (Figure 4.58) along with intermittent sandy lenses with stone rubble pieces remnant of construction debris (Figure 4.56). The build-up of imported fills and lenses of construction debris indicate they did not pre-date the houses but were contemporary with the construction of the walls. As each course of the foundations were built, remnant stone rubble and construction debris was spread out and left on the ground near the walls. Then imported fills were dumped between the walls to stabilise the footings and finally the process was repeated, leaving a distinctive mix of bulk fills between layers of construction debris. This was a clever construction technique, allowing for the footings to be safely built-up while at the same time removing the steep slope of the rock shelf, and raising the ground level until it was level with the northern end of the building.

© Sydney Metro 2018

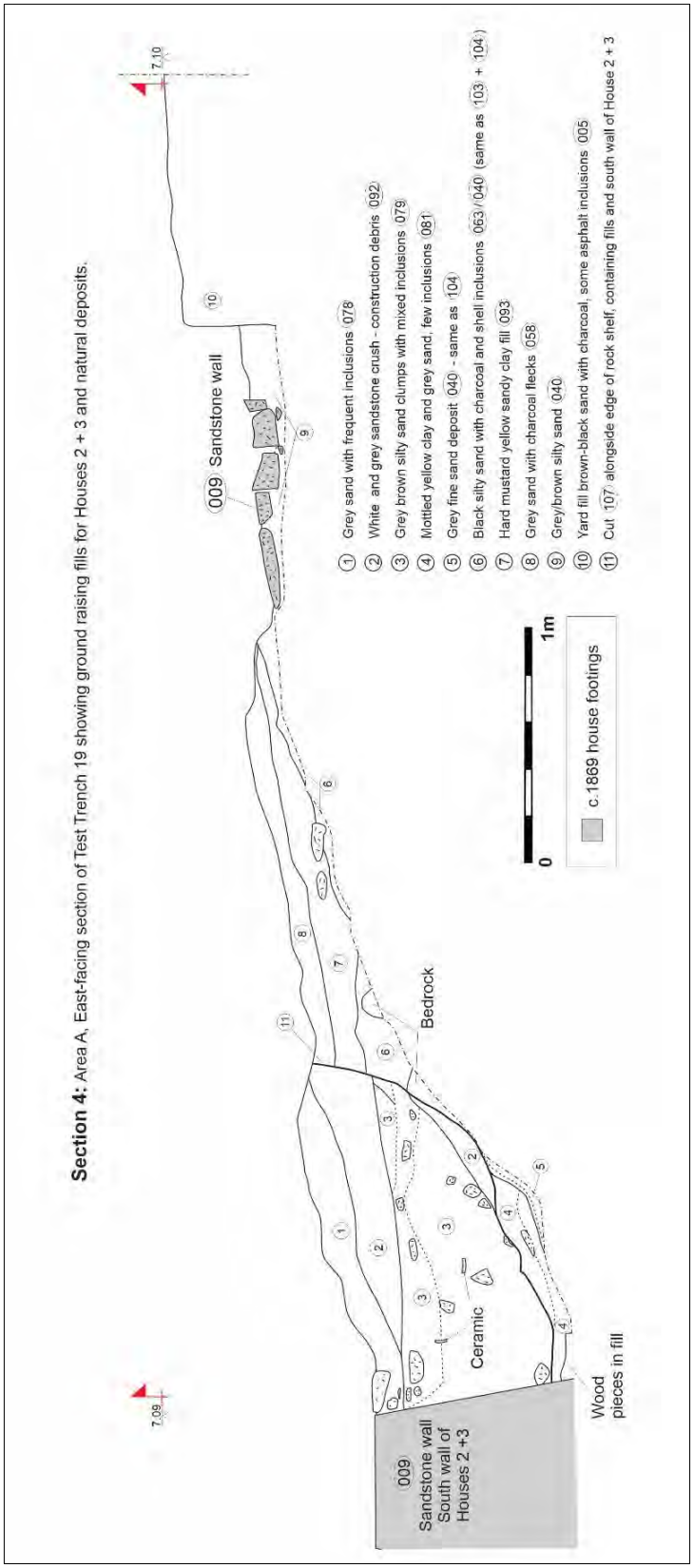


Figure 4.56: Section drawing #4, east-facing section of TT 19 showing ground raising fills below House 3. See Plan 4 and Plan 11, Volume 3.

Figure 4.57: Looking west along the front verandah of House 2 and 3 showing deep layers of fills (context 073) between the footings in TT 11. View to west, scale 1m. IMG_9933.

Figure 4.58: West-facing section of TT 09 within the front verandah of House 3. showing the depth of the foundations, tip lines and layers of construction debris within the bulk fill. The fills included black sandy fills (068). The green arrow is pointing to the top of the bedrock on which the footings sat. View to east, scale 1.1m. IMG_9816.

Test Trenches: TT 19 and TT 23

To better understand the relationship between the imported fills associated with the construction phase of Stevens' two houses (House 2, House 3) a large north-south test trench (TT 19) was machine excavated through the eastern end of Room 4 (TT 19, 23, Figure 4.60). TT 19 measured 4.4m x 1.3m and at the northern end joined another east-west test trench (TT 18). The evidence in this trench confirmed the bulk fills along the southern end of the house were contemporary with the construction phase of the houses. The section also revealed the fills were placed within a large concave cut or feature (107). This feature aligned with the drop-off of the rock shelf within the southern part of Room 4 (Figure 4.56, Figure 4.60, Figure 4.61). The full extent of the cut to the west is unknown but it was not found in Room 3. The trench was further extended to the south and excavated down to the bedrock (TT 23). TT 23 measured 8m x 1.8m. Due to the instability of the sides of the trench excavation ceased just to the south of the verandah footing and could not be extended to the north retaining wall (061, 084). Within the concave cut (107) were a number of fills laid above the natural deposits Figure 4.56, Figure 4.59, Figure 4.61).

© Sydney Metro 2018

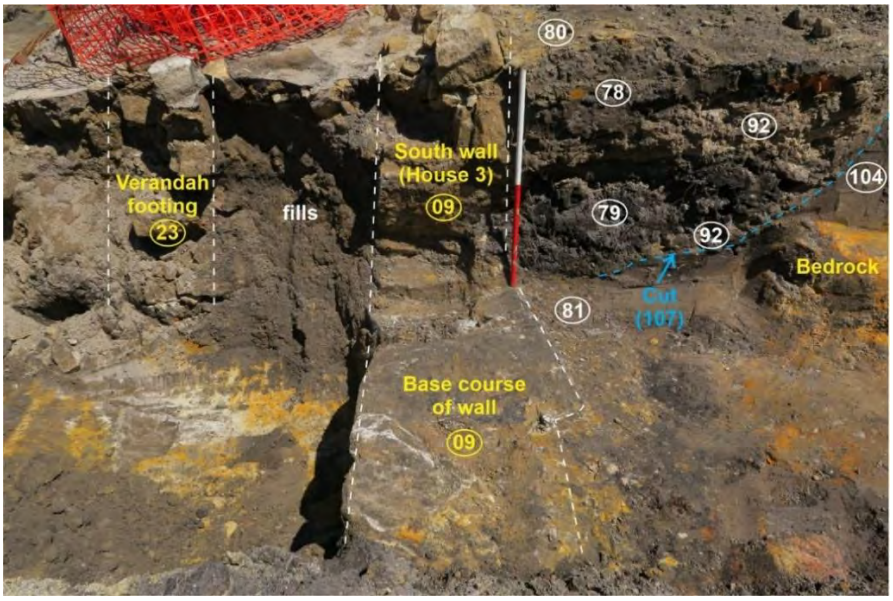


Figure 4.59: East-facing section in TT 23 and part of TT 19 (right) showing a large cut (107) along the drop-off of the rock shelf which contained the south wall (009) and verandah footings of House 3, along with a number of fills used to stabilise these walls. View to west, scale 1m. IMG_0227.

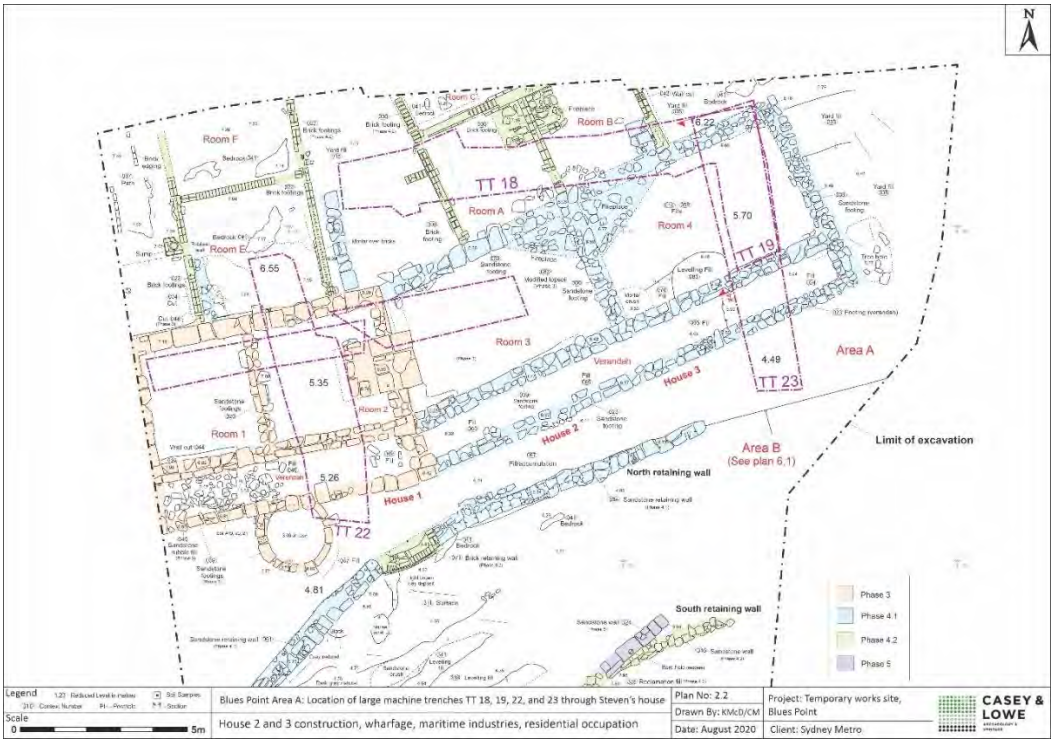


Figure 4.60: Plan showing the location of the large test trenches (dashed purple lines) through the houses in the northwest corner of the site. These trenches (TT 18, 19, 22, 23) provided key information in understanding the building techniques used along with the levelling fills and the natural landscape. Plan 2.2, Volume 3.

© Sydney Metro 2018

The upper fills (078, 079) with this large cut were separated by a layer of construction debris (092), (Figure 4.59). The uppermost mid-light grey sandy fill (078) was 200-300mm deep and contained artefacts (bone, ceramic, glass and metal). Directly below (078) was a layer of construction debris (092) from building the footings. A mix of silvery grey sands with frequent stone rubble of varying sizes. Below the construction debris was another bulk dark grey-black sandy fill (079) also abutting the walls. Similar fills and debris were found in TT 09 where both the upper fill and construction debris were recorded together as context (065). Context (079), within TT 19 & 23, was deeper (380-420mm) beside the south wall of the house and was shallower (120mm) to the north (Figure 4.56). Similar black sandy fill was found within the verandah (068, in TT 09). Within TT 09 the fill was 608mm deep (Figure 4.58). Another lense of construction debris (092) sat directly below the black sandy fill (079). Lining the base of the cut (107) was grey sand (081) mottled with yellow and white clayey sand or degraded stone. This mixed deposit sat directly above natural sands. It contained artefacts and presented as an area of disturbance or working surface from the construction of the foundations rather than an imported fill. It could also have been used to backfill a foundation trench for the lower course of the south wall and was at least 180mm deep (Figure 4.59).

Burying the fills in the large cut (107) was a mixed yellow clayey sand, mottled with grey and brown sands and some sandstone rubble (080) (Figure 4.47, Figure 4.53). It was localised to the southern half of Room 4 extending over an area 3.3m (E-W) by 1.2m (N-S) and was predominantly found filling in a dip abutting the southern wall of the room (150-200mm deep). Most off the fill contained some artefacts. As these fills appear to be imported, the artefacts are likely not localised to the buildings but were probably brought in to the site with the fills. The sandy nature of the fills suggests they were locally sourced. These deposits were all associated with the late 1860s construction phase of House 2 and 3. The artefacts do not provide information about the residents of the houses on site but can assist in dating events.

Context (024) was the uppermost fill in the eastern end of the front verandah, House 3 (Figure 4.57). It extended along the full length of the verandah (3.5m E-W) and varied in depth from 150-500mm. The fill was loose black fine silty sand containing a number of artefacts in the upper layer which were visible on the surface. Although not an underfloor deposit it contained artefacts which may be associated with the occupation of the house and the use of the verandah which overlooks the harbour.

There were 145 artefacts which date post-1830 (Table 5.8). This deposit more likely represents an accumulation of artefacts over time, as there are ones with early 19th-century date ranges, ones with mid to late-19th-century date ranges and one with a 1890s *TPQ*. Key temporal indicators include fragments of early pearlware vessels (1780–1830), dip-moulded beer/wine bottles (1820–1870), a press-moulded tumbler (1830 *TPQ)*, flow-blue transfer-printed vessels (1845–1870), a *Thomas White & Company* tobacco pipe (1847–1870), a clip with an 1856 registry mark, and a decalcomania decorated bone china vessel (1890 *TPQ*). Most of the artefacts were glass bottles and food-related ceramics. Among where were teawares, cups and saucers decorated in green, blue, and flow-blue transfer-printed patterns, including blue Chantilly pattern on tea cups. These artefacts collected as they were dropped broken on the verandah and it is likely residents enjoyed morning or afternoon tea sitting on the verandah looking out over the harbour or perhaps watching boats arrive at the jetty. It is likely that residents also stood on the verandah and smoked pipes and drunk alcohol.

Similar black sandy fills were found within the eastern half of Room 4 (contexts 010, 058) and beyond the footings to the east and north of House 3 (context 005) although numbered separately they were all part of the same fill event (Figure 4.62). To the east of House 3 the black sand fill (005) extended eastwards for a distance of 6-7m as yard fill, before dropping

© Sydney Metro 2018

off the slope and continued to the north beyond the limit of excavation where it was a lot shallower (150mm deep). It contained occasional artefacts. Within House 3, the same black sandy fill (058) was found throughout Room 4 and initially was excavated in the northeast corner of the room within a 1m x 1m grid (TT 10) until it became clear that it was not an underfloor deposit but rather it was an imported fill (Figure 4.63).[132] There was no evidence of a footing trench through these black sandy fills which suggests the footings abutted right up to them or they did not predate the houses but were dumped as part of the building events or directly post-construction to stabilise the footings. Below (058) and within TT 10 and TT 19, was another smaller localised lense of yellow clayey sand with orange and white mottles (093). It was confined to the northern end of Room 4 and appeared truncated by the large feature (107) along the edge of the rock shelf (Figure 4.56). Context (093) was 40-180mm deep and sat directly on the modified natural sands (063/103). Context (093) is the earliest fill deposited above the natural sands in the northern half of House 3 and is associated with the construction of House 3.

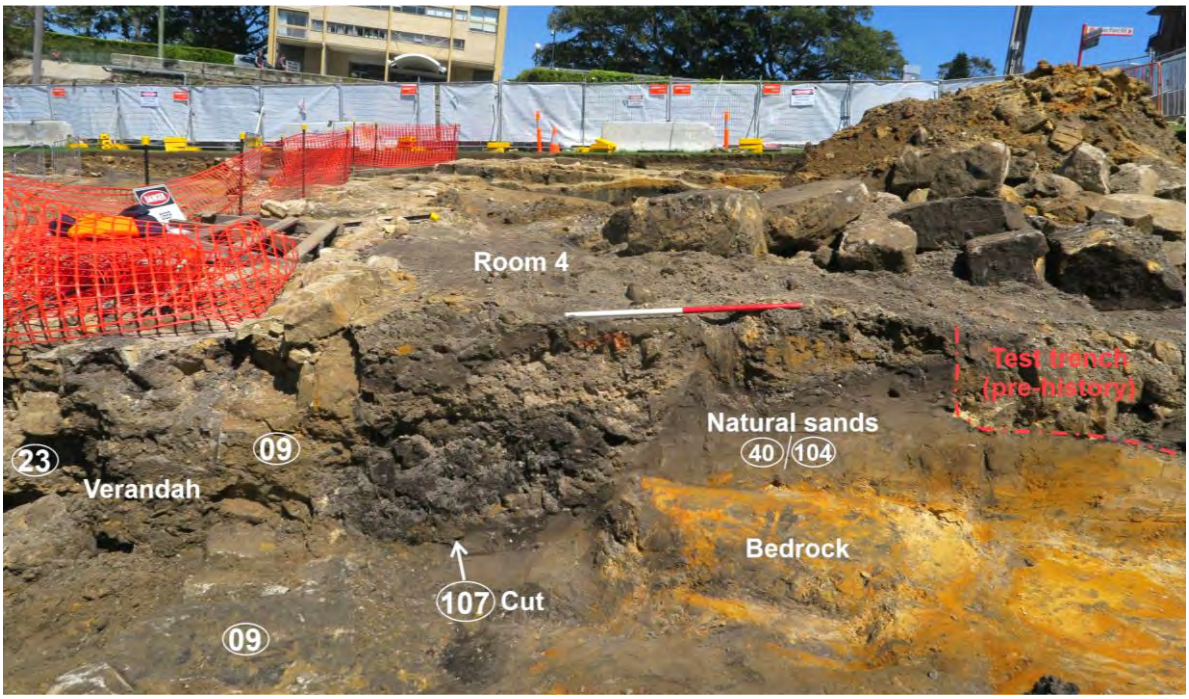


Figure 4.61: Southern end of TT 23, west-facing section showing the large cut (107) through upper fills and the natural sands for the construction of the south wall and verandah of House 3. View to west, scale 1m. IMG_0211.

[132] Context (058) was also recorded as context (010) in Room 4, both numbers are referring to the same black sandy fill.

4.3.4.3.2 House 2 and House 3 Footings

The sandstone footings of House 2 and 3 were built c.1869 as a single construction event and are discussed together. The 1869 Crown Plan did not depict an internal dividing wall between the two semi-detached houses but did show their original footprint with a front verandah running the full length along the front (south) of the building and a small addition to the rear (north) (Figure 2.10). These two houses were aligned differently to House 1, due to the angle of the rock shelf and steep slope. The archaeological remains showed each house with one large front room with a triangular corner fireplace and a shared chimney (Figure 4.52, Figure 4.53, Figure 4.62). The external footings were keyed into each other. The large room in House 2 was recorded as Room 3, while the adjoining room in House 3 was recorded as Room 4. The numbering of the rooms (Rooms 1 to 4) was assigned as each room was exposed from west to east during the machining stage before the house divisions were clearly evident. The room numbers are used on all artefact labels within these contexts.

Little survived of the early additional room or structure (097) built with stone in the rear yard to the north, as it was replaced with brick additions in the 1880s (Figure 4.63). Each of the two houses may have had a dormer upstairs room with a window on the southern side of the roof as there was no evidence of a dormer window on the north side (Figure 2.13). The large rooms (Rooms 3 & 4) were symmetrical and it is logical to assume that the configuration of the upper-floor would also have been the same. The house footings were all recorded as context (009) and were wider (500-570mm) than the verandah footings (450-470mm), (023). As the natural slope fell to the south, the foundations of the southern wall and verandah were considerably deeper than the north wall. RLs on the lower courses of sandstone footings of Houses 2 and 3 showed a drop from 6.66m along the north wall to 5.15m on the verandah wall, a fall in levels of 1.51m. Some buff-coloured sandy shell mortar was evident particularly on the upper courses of the footings (BM samples #4, #9). The only evidence for a wall trench (027) in House 2 and 3 was found within TT 04, on the interior of the south wall, Room 3, and on the exterior northwest corner of Room 4 (TT 02) through the modified topsoil and not through the levelling fills (Figure 4.62).

North wall of Houses 2 & 3

The north wall (009) of Houses 2 and 3 abutted the northeast corner of House 1 running in a northeast direction (Figure 4.63, Figure 4.64). It was built over the top of the rubble fill (033) at the western end (Figure 4.41, Figure 4.42) where it was two courses deep and sat on the bedrock at the eastern end where the wall was 600mm deep (TT 10). A footing trench cut (027) for the wall was only visible on the exterior northern side, near the northeast corner through the natural deposits, where the cut (027) extended 280mm from the wall. The north wall footings were 500-570mm wide, the lower course in the northeast corner was 700mm wide. The sandstone pieces used for the footings were all roughly cut or irregular shapes. The coursing was a mix of single large near square blocks laid side by side at the western end, then further to the east the wall was built with two rows of irregular rubble stones (stretcher bond) bonded with shell sand mortar.

© Sydney Metro 2018

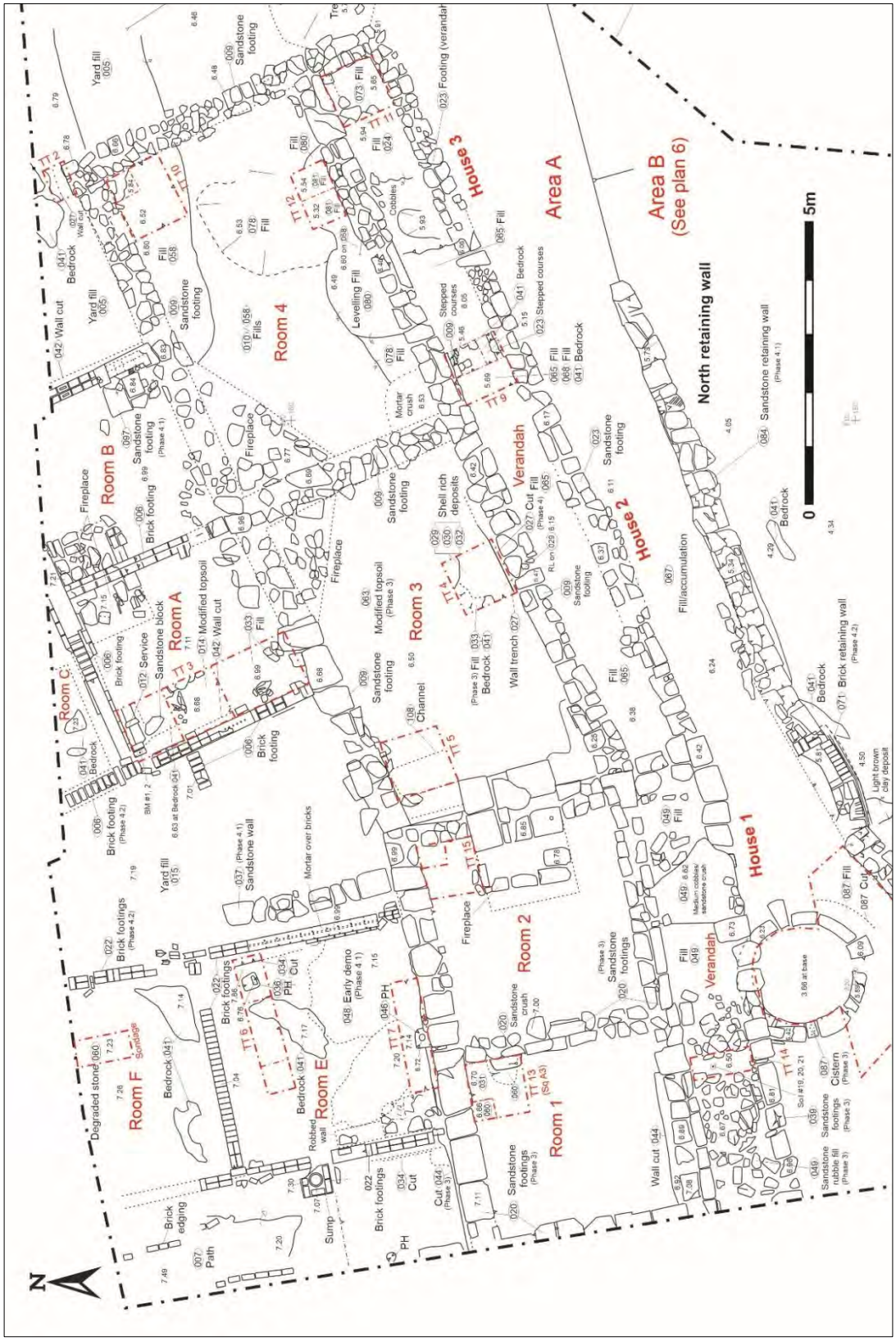


Figure 4.62: Detail plan of houses, Phase 4 including later brick additions (Phase 4.2). Extract from Plan 2, Volume 3.

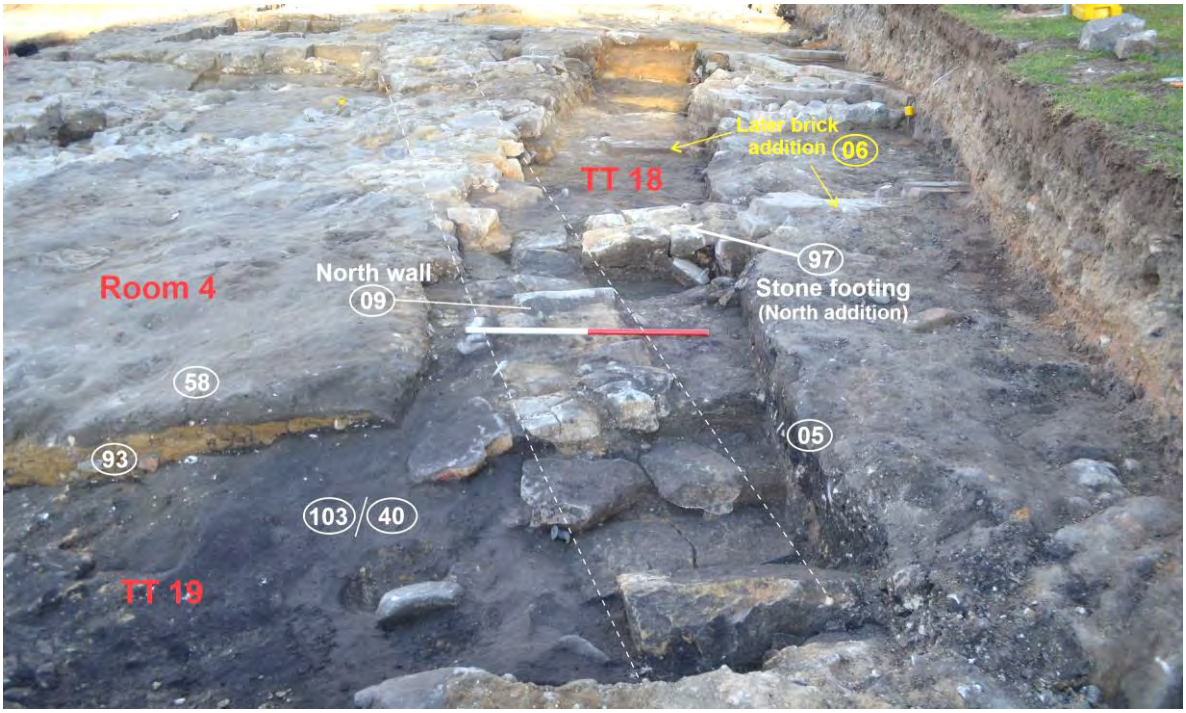


Figure 4.63: Northeast corner of House 3, Room 4 showing the alignment of the north wall of the houses also the remnant stone addition (097) to the north and the fills above the black sand deposits. View to west, scale 1m. DSC_4862.

South wall of Houses 2 & 3

The southern wall (009) of the houses was up to 1.7m deep (5 courses) with the full depth exposed in six of the test trenches (TTs 04, 09, 11, 12, 19 and 23). This wall abutted the eastern end of House 1. The coursing was mostly stones laid in two rows of smaller blocks with occasional larger cross stones (Figure 4.64). The southern (exterior) face of the wall was neatly vertical with larger more regular shaped blocks in the lower courses (Figure 4.64, Figure 4.53, Figure 4.58) while the upper course was rubbly and 500-550mm wide. TT 23 illustrates how this wall was built on a lower bedrock shelf downslope of the higher rock shelf (Figure 4.59), unlike most of the other footings which were shallower and on the higher rock shelf. The lower course of the south wall were large rectangular blocks, the foundations were built up from the natural deposits with fills dumped around the footings during construction to keep them stable (see Section 4.3.4.3.1).

© Sydney Metro 2018

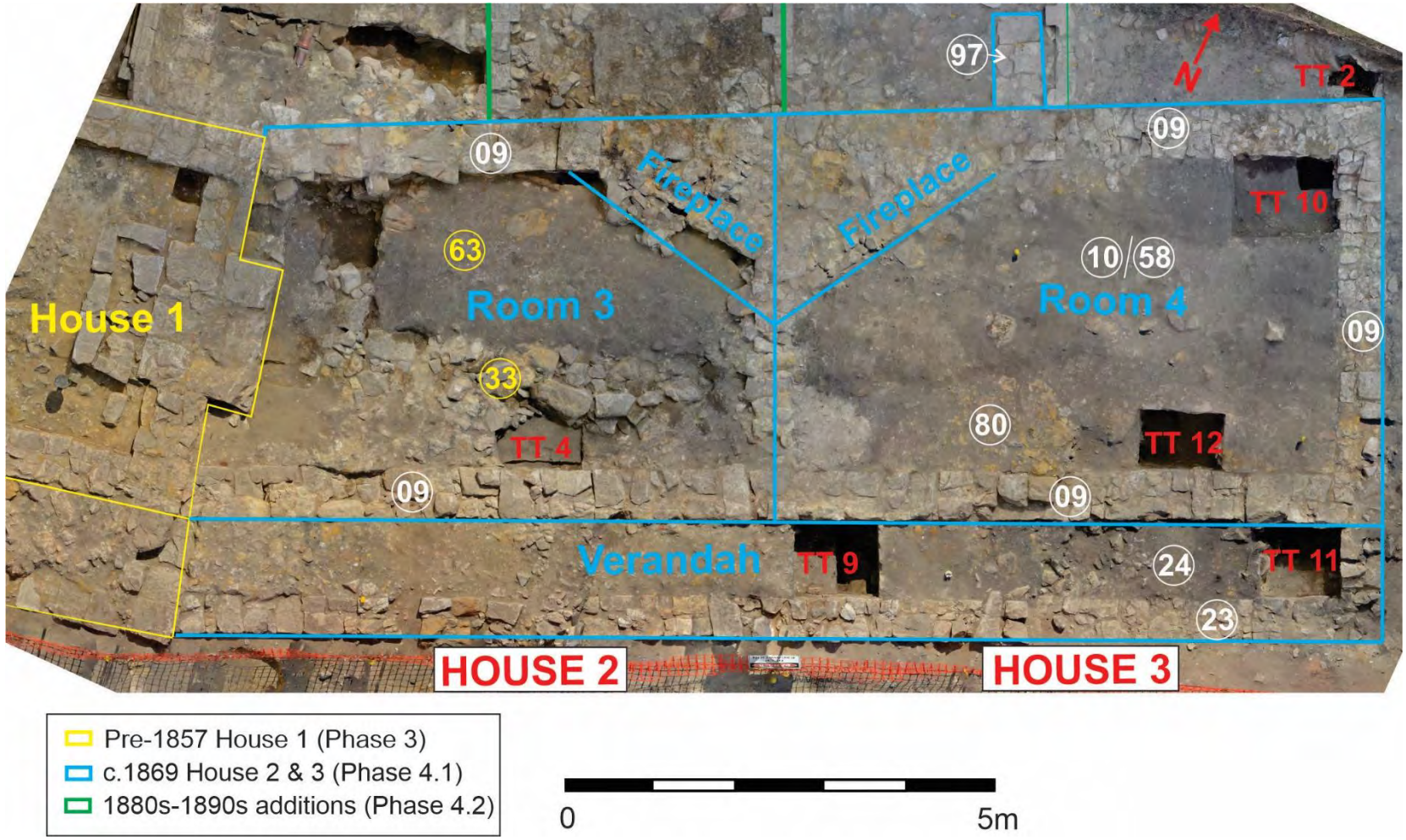


Figure 4.64: Detail of orthophoto of House 2 and House 3 (blue outline), Rooms 3 and 4. Arcsurv.

A cut for the footing trench containing the south wall (027) was only found within TT 04 in Room 3 on the interior (upslope) side of the wall. The foundation trench cut through dark shell-rich sandy deposits (029, 030 and 032) which was stratigraphically the same as context 063 (modified topsoil) and was 610-770mm wide. The footing trench fill (028) was a mix of dark sands, crushed stones and sandstone rubble.

East wall of House 3

The east wall of the House 3 (Room 4) was similar to the north wall, 500-570mm wide and built with rubble stones laid in two rows with occasional cross stones (Figure 4.64). There was no evidence of a wall cut and black sandy fills were butting up to either side of the wall. It was unexcavated aside from the northeast corner within TT 10 the footings were 600mm deep.

West wall of House 2

The western wall of Stevens' new houses was the original the east wall of House 1 with the north and south walls abutting the earlier house and therefore no new western wall was built for the two new semi-detached terraces (Figure 4.52, Figure 4.64). The original chimney in House 1, Room 2 remained and was incorporated into Room 3.

Internal partition wall of Houses 2 & 3

An internal north-south partition wall separated Rooms 3 and 4. The partition wall was the same width (500-550mm) and construction style as the external walls but was not excavated to show its depth.

4.3.4.3.3 Room Recording

Room 3, House 2

Room 3 measured 3.5m (north-south) by 6.31m (east-west). This room contained a large corner triangular fireplace in the northeast corner (Figure 4.52, Figure 4.53, Figure 4.64). The surviving fireplace had a single course of rubble stones and abutted the north wall and internal partition wall of the house. Black staining and charcoal flecks were found around the stones but there were no substantial deposits associated with the use of the fireplace. The fireplace stones were sitting on a buff coloured sandy lense, possibly a bedding or construction debris above the modified sands (063). There were no underfloor deposits or finishes within this room, which is indicative of the use of tongue-in-groove floorboards, consistent with the later date of construction (c.1869). The large channel filled with rubble stones (033) and the modified historic sands (063) within the room both pre-dated the building of the new houses (discussed above Section 0).

Room 4, House 3

Room 4, House 3 measured 3.67m x 6.18m. It too had a corner triangular fireplace (2.3m x 1.7m x 2.8m) built of a single course of rubble stones with no associated fills (Figure 4.64). The positioning of both fireplaces in the corner of their respective rooms indicates they shared a chimney. Room 4 did not have any underfloor deposits but contained a number of imported fills to raise the southern and eastern end of the room, above the steep drop caused by the rock shelf (Section 4.3.4.3.1).

Northern Addition

A small back room, possibly a semi-detached wet room or kitchen was shown on the 1869 and 1871 Crown plans at the rear of Stevens' new houses (Figure 4.44). The 1881 plan shows a larger rear room, by 1883 the rear addition is shaded pink and annotated 'brick' (Figure 2.15, Figure 2.17). A small segment of sandstone wall (097) ran north-south for a

© Sydney Metro 2018

length of only 1.15m and abutted the north wall of Room 4 (Figure 4.62, Figure 4.64). The footing was two courses deep, with the lower course set into the natural grey sandy subsoil (040). The wall was the same width (550mm) as the house footings and seemed contemporary with the houses construction phase as the walls were similar rough-cut stones and bonded with buff sandy shell mortar (BM sample #13). No other walls were found associated with this room which was replaced by a brick addition in either the 1870s or 1880s. This section of stone footing is likely to be a remnant of the original addition.

4.3.4.3.4 Verandah

The front verandah was contemporary with the construction of the houses (Phase 4.1) running the full length of the building (Figure 4.57, Figure 4.62, Figure 4.64). The front wall of the verandah was numbered separately (023) to the rest of the footings. It abutted the earlier House 1 at the western end and the southeast corner had been damaged by later events. The footing (023) was 450-470mm wide, narrower than the other footings but the same irregular shaped rubble sandstone blocks varying in size from 330 x 200 x 110mm down to 80 x 60mm. Large chunks of light beige shell sand mortar were visible, particularly on the upper courses (BM sample #3). This new verandah, unlike the one attached to House 1, this verandah had very deep footings (023) that sat on bedrock on the lower slopes below the rock shelf. The footing was over 1.5m deep when exposed in section in TT 23 (Figure 4.59). Further west in TT 09 the south wall of the house was 1.18m deep. The interior of the verandah was 980mm wide and contained a mix of fills (Section 4.3.4.3.1). Similar fills probably extended to the south, down to the northern retaining wall (061, 084).

4.3.4.4 House 1 Additions

A sandstone footing (037) running north-south extended northwards, near the eastern wall, across the rear yard from the north wall of House 1, Room 2 (Figure 4.52, Figure 4.53). Its construction pre-dated the brick additions (022) to the house. There was no north extension to House 1 shown on plan prior to 1881, by which time the additions were recorded as brick (Figure 4.65). This small segment of wall may be part of a short-lived addition to the house. The wall was 3.05m long and 420-470mm wide, consisting of a single course of stone cutting into the pre-house levelling fills (031). The stones were all roughly cut blocks of varying sizes with no visible mortar. No east-west return wall was found, although a posthole (036) with an oval shaped postpipe (050) was located near the northwest corner of the wall which may have been associated with an east-west return built of timber. Parallel to wall (037), further to the west (c.4m) within the wall trench (034) for the later brick wall there was evidence to suggest an earlier robbed footing (Figure 4.53, Figure 4.67) as a wall trench contained large stones displaced by a later brick structure (022). This earlier stone addition to the north of House 1 could have been a rear verandah or a small room/lean-to. A photo of the house c.1873 (Figure 2.13) shows a small chimney on the room addition at the rear of the house although no remains for a fireplace or chimney were found during excavation. The footprint of this stone extension aligned with the building depicted on the 1881 plan hence the machine-made brick additions (022) are of a later date.

© Sydney Metro 2018

4.3.5 Phase 4.2: 1880s-1890s House Additions, Land Reclamation and Maritime Activities

4.3.5.1 Overview

Phase 4.2 looks at the residential and commercial development of the study area in the 1880s and 1890s. This phase includes brick additions to Houses 2 and 3 (Stevens' houses), land reclamation along the southern boundary and the high-water mark, construction and modifications to retaining walls to manage the steep topography between the land and the harbour and the construction of an access road to Stevens' jetty.

The 1881 plan (Figure 2.15, Figure 4.65) confirms Stevens' houses as largely built of stone, with additions in brick construction attached to the rear of the house. It also shows the houses as three residences, each with its own outhouse or water closet. The 1881 plan has a boat shed to the east, leased by George Barnett since 1868, which was extended towards the harbour beyond the high-water mark with a slipway by this date, possibly suggesting reclamation had already occurred in this eastern area between the high and low water marks. This 1881 plan is linked to Stevens' application to purchase reclaimed land at the waterfront (highlighted in red). These are typical plans draws by government, noting that the reclamation usually happened considerably earlier than the plan. Two additional boat sheds are shown, the easternmost timber shed is on Glover's part of Lot 10. The boat sheds are likely to have been timber sheds with insubstantial footings, therefore it is unsurprising that no remains were found of these structures. The 1883 plan does not show the full extent of the northern addition but the pink shading on plan indicates brick additions rather than the stone (yellow highlights).

Stevens' houses were positioned a considerable distance from the low water mark which provided an incentive for reclamation along the Lot 10 waterfront boundary. His applications for land reclamation began in the 1880s although annotations on the 1881 plan (which included annotations to 1884) supports the reclamation predating Stevens' application. It is probable the informal reclamation had already occurred on the southern boundary by 1881. Title to 19¾ perches was issued to John Stevens in February 1885 for a payment of £25 (Figure 2.15). The 1871 plan (with notations up to 1890s) is annotated 'lease for jetty granted to John Stevens' with a dashed line marking the location of what later became known as Stevens's jetty (Figure 2.12, Figure 4.44).

Records indicate Stevens's application to construct a jetty on piles at the front of his property was accepted in May 1885 and the jetty was on plan by 1891 (Figure 4.65) and annotated with a 'pile jetty' and timber wharf extending from the shoreline into the harbour. During the 1870s Stevens' primary business interest was in the operation of a pearl-shelling station in the Torres Strait[133] but by 1880 John Stevens and his wife Mary Ann Alicia Madden had moved to Blues Point and were living in a house in West Crescent Street further north and outside the study area.[134]

From c.1885, Stevens operated as a timber merchant from the site and is thought to have been transporting timber and fuel from the wharf to the southern side of the harbour. The timber yard operated near the pile jetty. A weighbridge was positioned along the western boundary of the site adjacent to Blues Point Road (Figure 4.65). Fencing enclosed the houses, water closets and yards to the north, separating the commercial and residential parts of the site. Between 1890 and 1898 surveys and construction began on the North Sydney

[133] *Queenslander* 22 Jul 1876, 14; ATCJ 26 Jul 1879, 24; ATCJ 28 Feb 1880, 23.

[134] *Sands* Schedule; Marriage Reg No 145/1866 NSW BDM.

Sewerage System. Prior to this time sewage, surface drainage and other 'liquid refuse' ran into the harbour.[135]

In October 1896 John Stevens died a wealthy man. At the time of his death, his Blues Point 'Wharf Property' was commonly known as Stevens's wharf and included a jetty 'cottages, buildings and erections' extending over part of Lot 10 and the reclaimed allotments. He left a family of two sons and five daughters.

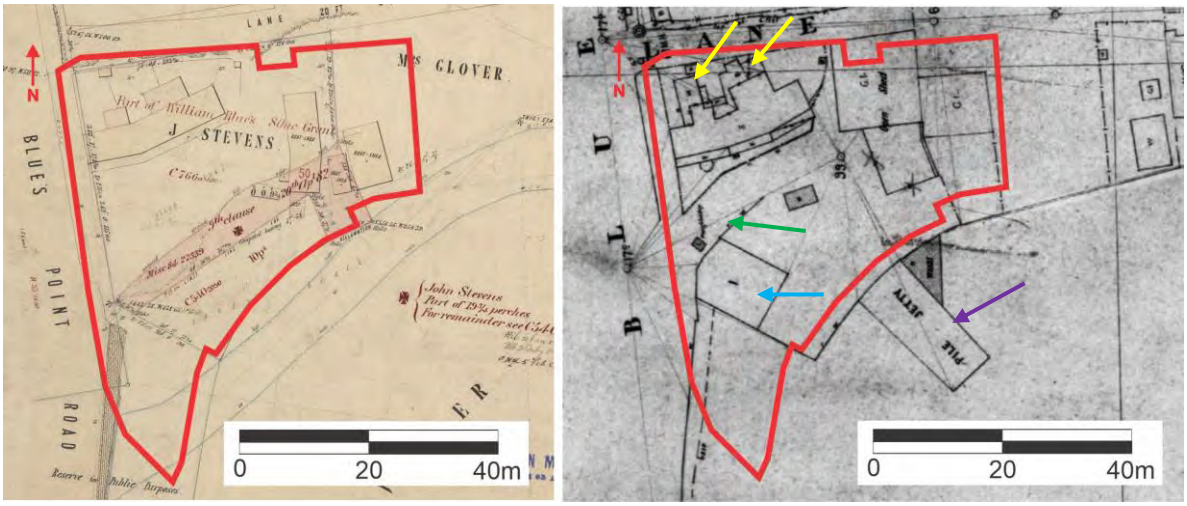


Figure 4.65: 1881 (left) and 1891 plan (right) showing the development of the site during the 1880s and 1890s (Phase 4.2) including the additions to north side of Stevens' houses (yellow arrows), reclamation fills, retaining walls (green arrow), boatsheds (blue arrow) and a new piled jetty (purple arrow). CP 359-230 LPI and PWDS 1544-S901 Sydney Water.

The archaeological evidence from Phase 4.2 is represented by both residential and commercial development. Two phases of brick additions were found to the north of each house. These additional rooms extended beyond the limit of excavation and were most likely laundries, kitchens or bathrooms consistent with common house layouts of the period. This interpretation is further supported by the presence of plumbing and sewerage across the additions (see Phase 5). The brick footings cut through earlier fills and stone additions and sat on the natural rock. Further to the south of the north retaining wall a second east-west retaining wall was found below the late 20th-century bulk fills. This south wall was built using a combination of stone and brick. Brick repairs were made to the north retaining wall during this phase. Between both retaining walls was an access road from Blues Point Road down to Stevens' jetty which had multiple resurfacing events. Along the western boundary of the site, next to Blues Point Road were remains of the base of a weighbridge (shown on 1891 plan) cut into bedrock. Below the southern retaining wall were bulk reclamation fills. These fills were exposed during excavation but not removed below the required RL of 2.8m. Segments of three north-south seawalls were uncovered along the western edge of the site near the south retaining wall. A row of bricks abutting the south retaining wall may be

[135] W. V. Airds, The Water Supply, Sewerage and Drainage of Sydney, MWS&DB, Sydney 1961, 154-8.

associated with a large iron shed on the 1891 plan. No evidence was found of the boat sheds or timber yard.

4.3.5.2 Brick Additions to Stevens' Houses

Two phases of additions were made to the north of all three houses. The earlier stone addition to Houses 2 and 3 (Phase 4.1) was contemporary with the original construction of the houses (context 097). The stone addition was replaced with a larger brick addition by 1881 (Figure 4.65, Figure 4.42). No additions were evident on plan to the north of House 1 until 1881, although sandstone footings suggest there was a structure to the north pre-dating the brick additions. By 1891 the brick additions were extended even further north of all the three houses (Figure 4.65). The brick footings found to the north of House 1 do not all correspond to the layout shown on the 1891 plan and may have built later than 1890 as the 1891 plan contains additions from surveys in 1892 and 1930.

Figure 4.66: Interpretative plan of the layout of the later additions to the houses based on the archaeological evidence and the historic plans. The dark green outlines the extent of additions on the 1891 plan while the lime green shows the layout of the brick rooms found during excavation. The brick rooms were labelled Rooms A to F with some extending beyond the limit of excavation.

© Sydney Metro 2018

To distinguish the brick rooms to the north of the houses from the original stone rooms they were recorded with letters (Rooms A to F) in the order in which they were exposed during excavation (Figure 4.66, Figure 4.62). Cesspits and property boundary fences for all three houses were marked on historic plan from 1881 (Figure 4.65). A double cesspit was shared between House 1 and 2 with a single cesspit for House 3. The most northerly parts of the brick extensions and cesspits associated with the three houses were not excavated as they were below the existing live services that ran along the northern boundary of the site and would not be impacted by the temporary works. On the 17th and 18th of October 2018 a number of auger holes (c.300mm in diameter and 1.2m deep) were excavated along the southern edge of Henry Lawson Avenue, north of the study area as part of the civil works. The excavation of these auger holes was monitored by an archaeologist. Within the holes machine-made brick footings were found that aligned with the brick additions to the houses within the study area.

4.3.5.2.1 House 1, Rooms E and F

The remains of brick foundations to the north of House 1 show the structure at the rear of the house was divided into two rooms. The brick foundations of both rooms were recorded with one context number (022). The room adjoining the house was named Room E, the northernmost room was recorded as Room F. The northern extent of Room F footings extended beyond the limit of excavation (Figure 4.67, Figure 4.68). The brick foundations were built of machine-made dry-pressed brick (manufactured from c.1880 onwards), the walls were one brick wide (230mm) with the lower or base course 1½ bricks wide (330mm). The coursing was mostly a stretcher bond with bricks laid in rows end to end and bonded with compact mid-light grey cement mortar. Most of the interior partition wall between Room E and F was constructed of bricks laid on their sides.

Room E measured 3.65m x 3.76m. The footings were deeper (3 courses) towards the south where the bricks abutted the sandstone wall of House 1 (020). A large wall cut (034) for the western brick wall was found in the southwest corner of Room E where it was up to 650mm wide (Figure 4.67). Wall trench (034) contained redeposited dark grey sands and yellow sandy clay with rubble sandstone inclusions (35). The width of the trench and the rubble stone in the backfill may correspond with the location of an earlier stone footing from Phase 4.1 (the same as wall footing 037). No occupation-related deposits were found in Room E. In the southeast corner sandstone rubble (048) covered and area c.2m x 2.3m to a depth of 220mm. The rubble was cut by the brick footings (022) which was probably demolition debris from the earlier stone addition (037) or used as levelling fill, more likely the former. Levelling fills (031) similar to the pre-house levelling fills (102) were found below the stone rubble extending southwards under House 1, there was also some bedrock recorded within the room. A brick sump (Figure 4.69) abutted the exterior west wall of Room E and was built form whole and broken brick and stone and contained a large ceramic pipe. There was a cut through the brick wall probably for a service pipe associated with the sump that was likely a later addition to the house during the installation of plumbing in the mid to late 1890s.

Room F was the same width (3.7m) as Room E but only 2m of its length was exposed within the excavated area. The machine-made brick footings were the same for both rooms suggesting a contemporary construction date which suggests they were built later than 1881 as only the smaller stone extension was shown on the 1881 plan. The northern addition on the 1891 plan is annotated as a timber structure with an 'L' shaped verandah to the east, therefore these brick additions may be even later than 1891 (Figure 4.65).[136] The walls of

[136] Overlaying the archaeological remains onto the historic plans shows that the archaeological remains of the additions to the north of the houses do not fit exactly with the historic plans. The excavation exposed two phases

Room F had some slate damp proof coursing and cut through the natural yellow coloured degraded stone (060). There were some shallow sandy fills, no occupation deposits and pieces of bedrock jutting through. Service trenches and later pits (Phase 6) cut through this area.

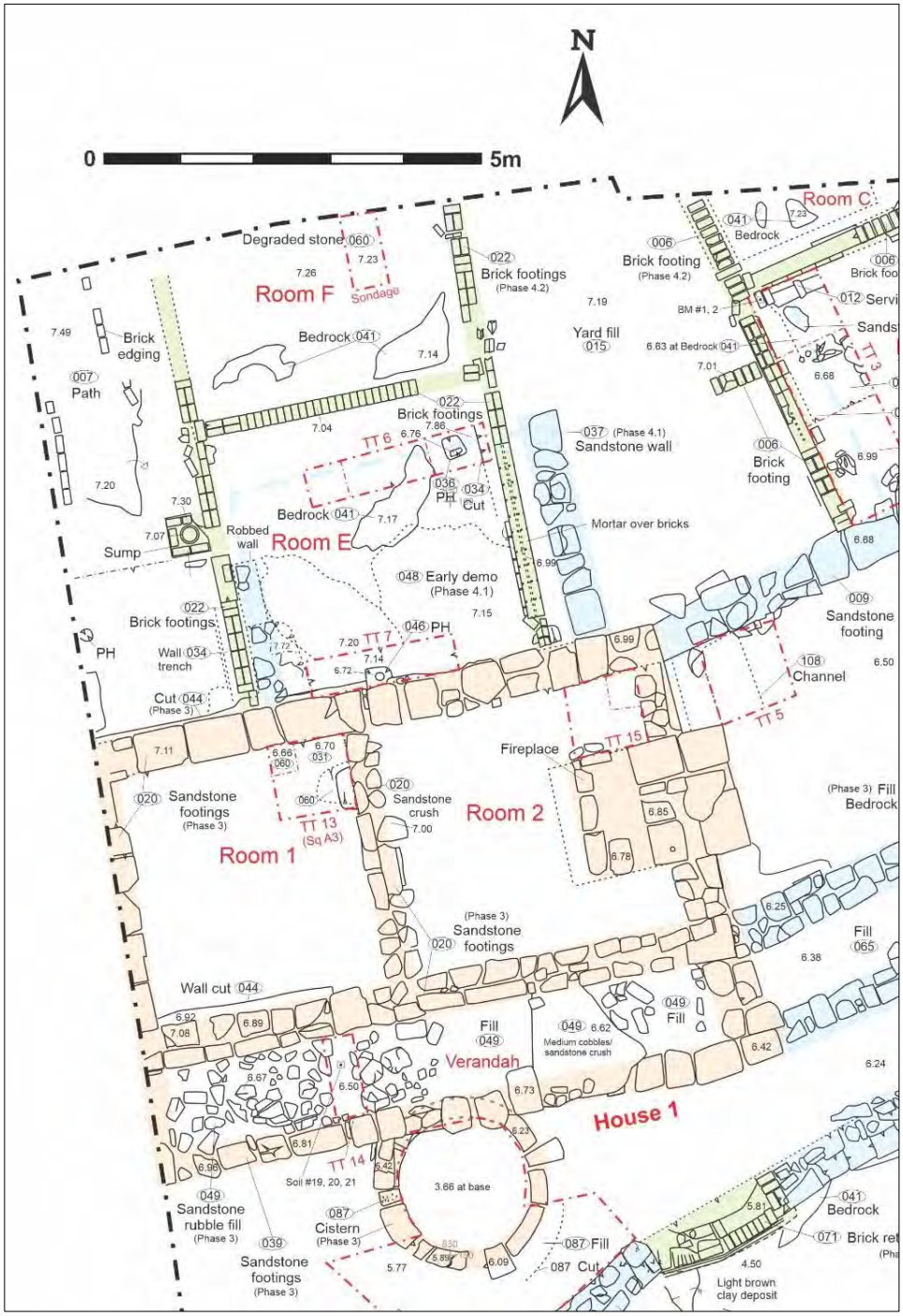


Figure 4.67: Detail of brick additions (022), Rooms E and F to the north of House 1 and bitumen path (007). Extract from Plan 2.1, Volume 3.

of construction for the additional rooms, stone footings replaced with brick footings while the plans suggest a third phase.

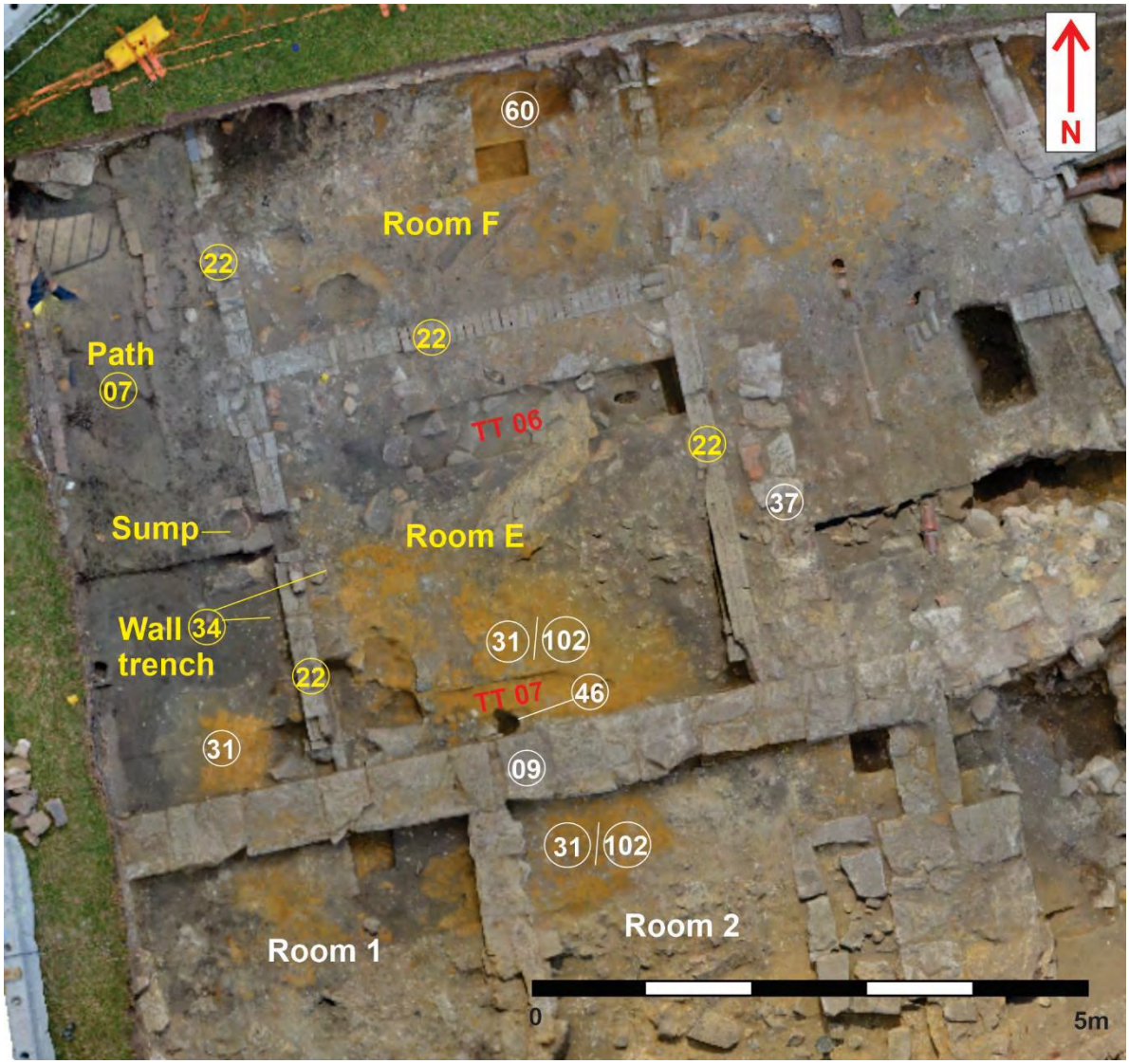


Figure 4.68: Orthophoto of brick addition (022) behind House 1 and the path (007) along the western side of the brick addition. Arcsurv.

Path – Back Yard, House 1

A 4.2m long north-south bitumen path (007) ran along the western side of the brick additions (Figure 4.68, Figure 4.69). Two different layers of bitumen were visible. The upper bitumen layer was 30-40mm deep in an area 830mm wide with sandstock brick edging brick edging along the eastern side. The bricks were a reused mix of sandstock frogged bricks and machine-made bricks laid end to end with no mortar. The brick edging sat on an earlier bitumen surface that was wider (1.35m) abutting the walls of Rooms E and F. The lower bitumen was quite loose and crumbly and sat above the pre-house levelling fill (031) a mix of black sands and yellow clays sands, which were above the black historic A horizon (103). This bitumen path appears to have remained in use throughout the early 20th century.

© Sydney Metro 2018

Figure 4.69: Bitumen path (007) to the west of House 1 abutting the brick additions (022). View to the north, scale 1m. DSC_4788.

4.3.5.2.2 House 2, Room A and C

The brick additions to the north of House 2 and House 3 replaced an earlier stone addition depicted on the 1869 plan (Figure 2.10, Figure 4.66). The brick addition on the 1881 plan corresponds to the footprint of Rooms A and B adjoining the rear (north) wall Houses 2 and 3 (Figure 4.65). Additional rooms (Room C and potentially a Room D) further to the north were not shown on plan until 1891. Although the historic plans indicate Rooms A and B were added first, and Rooms C and D at a slightly later date; the surviving brick footings of the additional rooms, including the brick type used, the coursing and bonding were identical in all rooms which could suggest this entire phase of brick additions were all built at the same time in the 1890s. The footings (006) were all a standard sized dry-pressed brick (BM samples #1 and #2) bonded with mid-grey cement mortar (Figure 4.70, Figure 4.71). As with the brick additions to House 1, the walls were one brick wide (230mm), laid in a stretcher bond with a wider lower course (350mm wide). The western wall of Room A was excavated to the base within TT 03 (Figure 4.70, Figure 4.71). In TT 03 the footings were six courses deep with the lower two courses 1½ bricks wide and sitting on the bedrock. There was evidence of slate damp proof coursing in the partition wall between Rooms A and C. Brick pads to support the timber joists for the floor (2 brick wide) were keyed-into the footings in both Rooms A and B (Figure 4.71). A foundation trench (042) for the brick additions was recorded in TT 03. The wall trench was a minimum of 450mm to 500mm wide. The wall trench was backfilled with yellow, brown and grey sands and small stone rubble pieces (043).

Room A (House 2) measured 3.1m x 3.07m and mirrored the layout of Room B (House 3). It contained a fireplace in the northeast corner of the room and was keyed-into the east wall, the party wall shared with Room B (Figure 4.71). The base of the fireplace consisted of rubble

sandstone pieces and measured 1.1m x 600mm. A patch of remnant underfloor deposit (082) was found in the centre and north end of the room and is discussed below in Phase 5. A deep ceramic service pipe (012) running east-west cut through the footings of Room A indicating it was installed later than the brick rooms (Phase 5, Figure 4.111) with a small section of the west wall rebuilt after the pipe installation (Figure 4.71). Levelling fill (059) was within Room A footings, above an earlier rubble fill (013) which pre-dated the additions. The cut (042) for the brick walls was not visible through the mixed sandy fill (059) which may have been introduced to raise the ground below the floor after the brick additions were built.

Only a small triangular portion of Room C (2.06m x 1.15m) was located within the area of excavation. The brick footings were shallower (2 courses) sitting on bedrock with some bedrock jutting through in the centre of the room. There were no occupation deposits associated with this room.

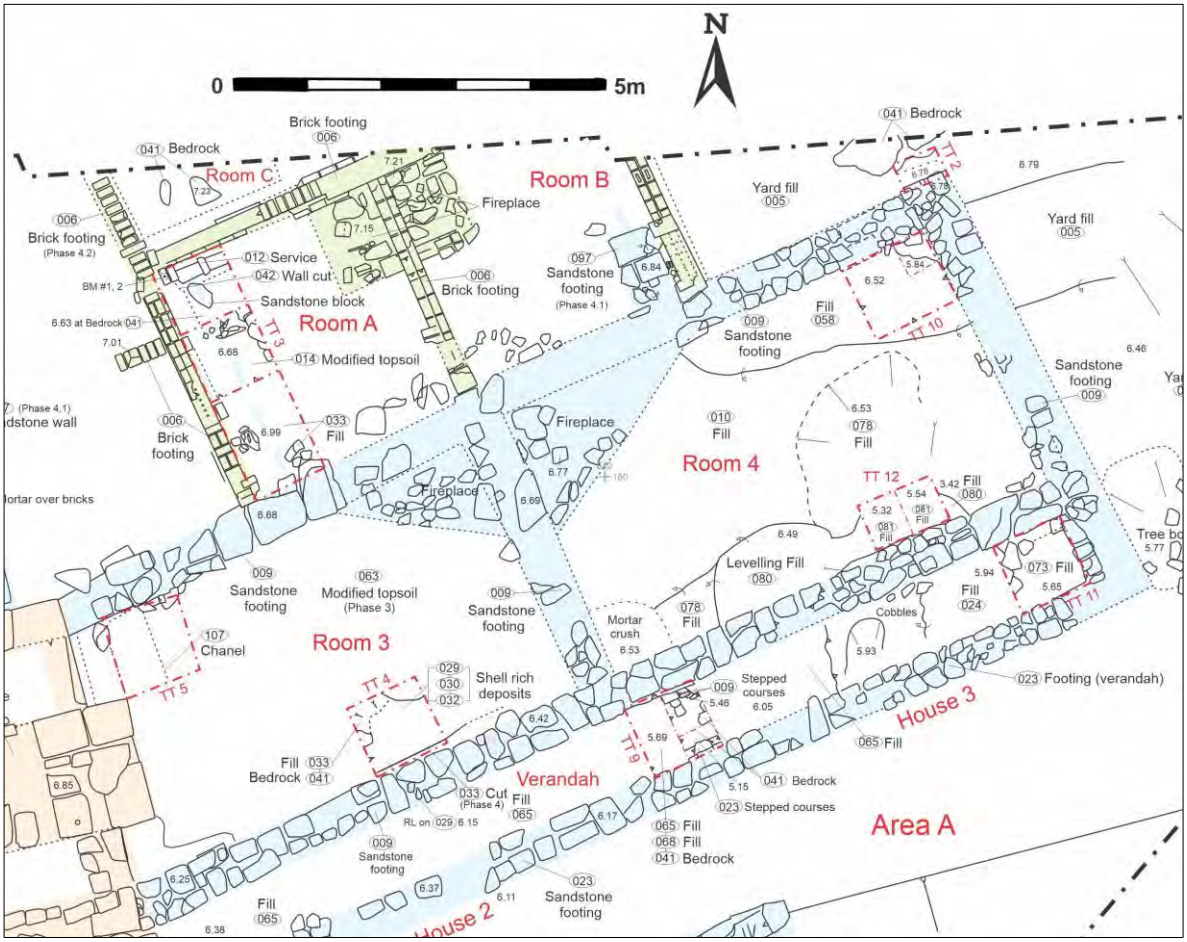


Figure 4.70: Detail of brick additions, Rooms A, B and C to the north of House 2 and 3 (Phase 4.2). Room C extended to the north beyond the limit of excavation and the project area. Phase 4.1 (blue), Phase 4.2 (green). Extract from Plan 2.1, Volume 3.

Figure 4.71: Brick additions (006) to House 2 and 3 including back-to-back fireplaces, with stone footings of the houses in the background. The ceramic pipes were a later addition cutting through the brick foundations. A brick return (blue arrow) to the north in Room C may have been the edge of the room or perhaps another fireplace. View to south, scale 1m. IMG_9923.

4.3.5.2.3 House 3, Rooms B

Rooms B shared continuous walls with the adjoining Rooms in House 2 discussed above. Room B measured 3m x 3m with a brick fireplace in the northwest corner keyed into the footings, both Room A, House 2 and Room B, House 3 had back-to-back fireplaces and a shared chimney. The interior space of the fireplace measured 1.07m x 600mm and was lined with brick and stone rubble (Figure 4.71). There were no underfloor deposits in this room. Remains of an earlier stone addition (097) survived in the southeast corner (Phase 4.1). A small brick divide north of Room B suggests another room to the north of Room B which was provisionally named Room D although no archaeological remains from this room were exposed as it was outside the limit of excavation.

4.3.5.3 Reclamation Fills

In 1885 John Stevens application to reclaim land and construct a pile jetty was accepted, although it appears reclamation was underway before this date. Bulk reclamation fills were found in the southern portion of the site (Area B) below the 19th-century high-water mark (Figure 4.74). A second retaining wall was constructed c.6.5m to the south of the north retaining wall most of which was built on top of the reclamation fills (Figure 4.54, Figure 4.72). Between the two retaining walls were a number of compacted surfaces forming an access road from Blues Point Road to Stevens pile jetty and waterside sheds/stores. A seawall was built along the foreshore south of the reclaimed land. By 1884 (Figure 2.16) the southern extent of reclamation corresponded with the current seawall. The current seawall along the foreshore was not impacted by the civil works and remains *in situ*.

© Sydney Metro 2018

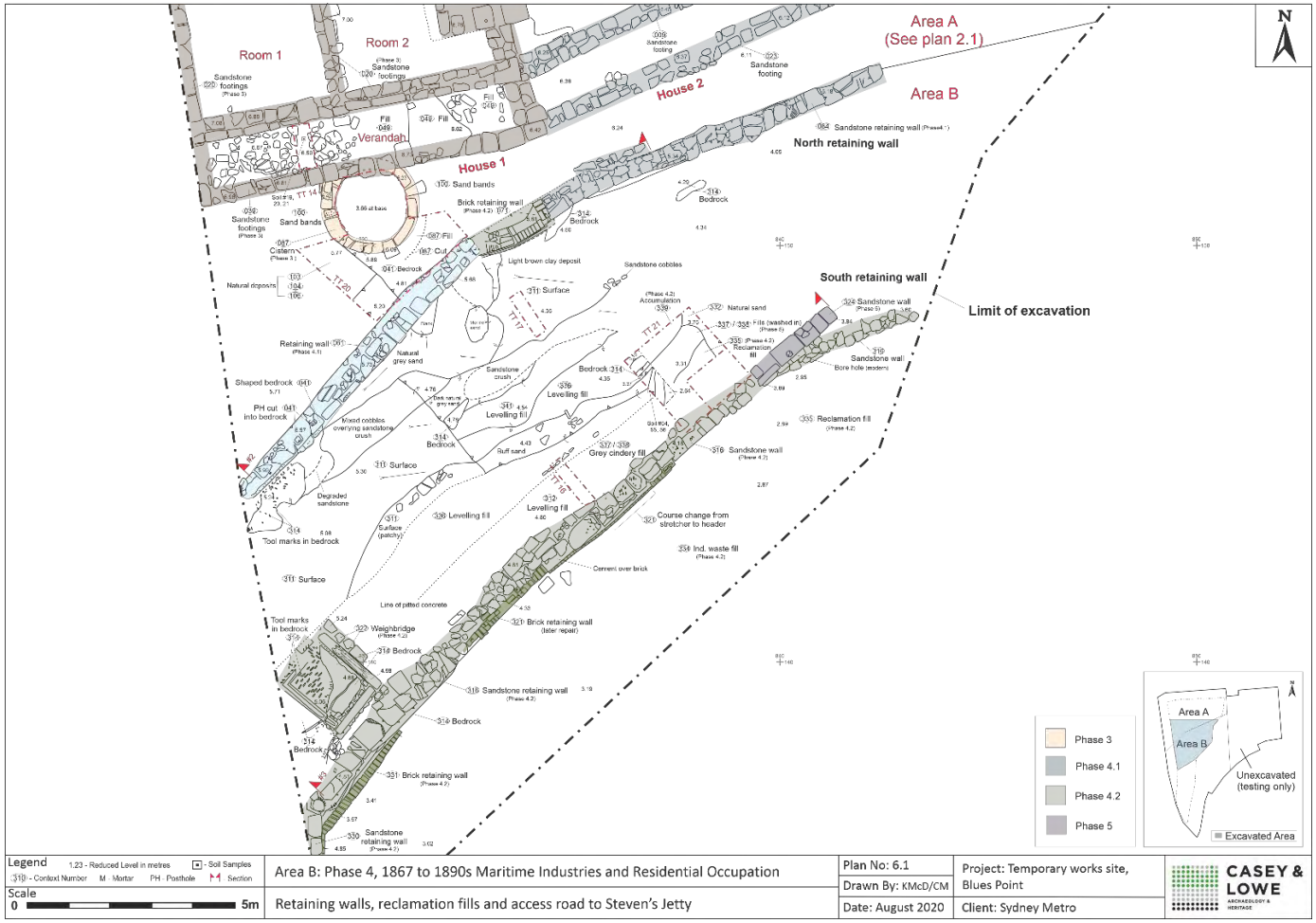


Figure 4.72: Plan of the retaining walls to the south of Stevens' houses. Between the walls was a road to Stevens' jetty and a weighbridge at the intersection with Blues Point Road. Plan 6.1, Volume 3.

© Sydney Metro 2018

Figure 4.73: Reclamation of the beach between the high and low water marks. A second retaining wall was built to the south. An access road between the two retaining walls curved down slope towards the newly reclaimed foreshore and Stevens' jetty. Below the south retaining wall excavation ceased at the top of the reclamation fills at RL of 2.8m. View to northwest, scale 1m. IMG_1302.

The reclamation fills extended up to the edge of the stepped rock shelf between the two retaining walls. Two bulk reclamation fills were recorded during excavation (334 and 335). Below the south retaining wall excavation ceased at RL2.8m, leaving only the top of these bulk fills exposed as the civil works did not require any deeper excavation below RL 2.8m. Context (334) was a loose grey-black industrial waste fill mixed with dark brown sand with frequent cinders, slag and coke inclusions and abutted the south face of the south retaining wall (321) although loosely compacted it may have been a base for a surface suggesting it post-dated the retaining wall. Below (334) was another bulk fill of crushed stone, sand and chunks of sandstone rubble (335). The bulk rubble fill was a yellowish-brown colour, compacted on the surface, looser with depth (Figure 4.75). The eastern end of the south retaining wall (316) was built on the stone rubble reclamation fill. The same two fills, cindery industrial fill and bulk rubble fill was found further south in TT 01 (Figure 4.76).

TT 01 was a machine excavated trench closer to the current foreshore adjacent to the entrance of the study area along Blues Point Road (Figure 4.76, see Figure 3.2). It was excavated through modern fills and reclamation fills to the top of the marine sands (305) to determine the extent of the reclamation fills. Below the 1960s fills was a bitumen surface (302), 100mm thick and probably from the early-20th century (Phase 5). Under the bitumen were layers of blackened sawdust and industrial waste fill (303). The sawdust (sample #53) was not found further north or east and given its location may be associated with Stevens' timber yard which operated along the western part of the site from c.1885. Below the sawdust was black cindery industrial waste fills similar to (334). The marine sands in TT 01 were a dark grey colour with some small shell inclusions and large timber pieces unlike the clean yellow-brown marine sands found further east. The dark colour sand in TT 01 may be due to staining from the reclamation fills.

© Sydney Metro 2018

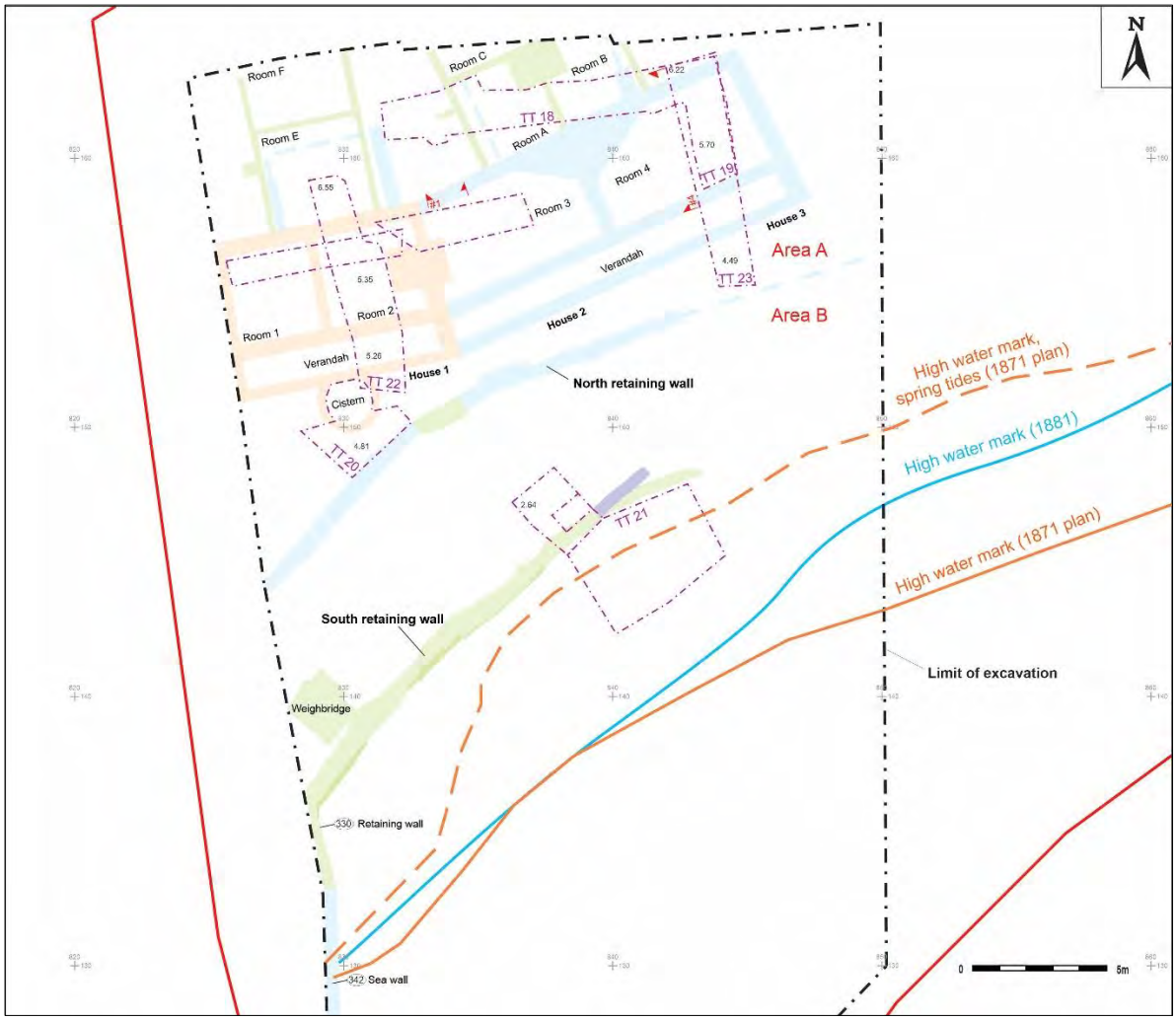


Figure 4.74: Schematic plan showing the location of the high-water marks from the 1881 plan (light blue) and the 1871 plan (purple) with Area B, south of the retaining walls. The dashed purple line represents the high-water mark of the spring tides also from the 1871 plan. Extract from Plan 11, Volume 3.

© Sydney Metro 2018

Figure 4.75: Yellow-brown sandy reclamation fill (335) with sandstone rubble. The eastern end of the south retaining wall (316) was built directly on top of the compacted bulk fill. Some remnant black industrial fill (334) to the right. View to north, scale 1m. IMG_1442.

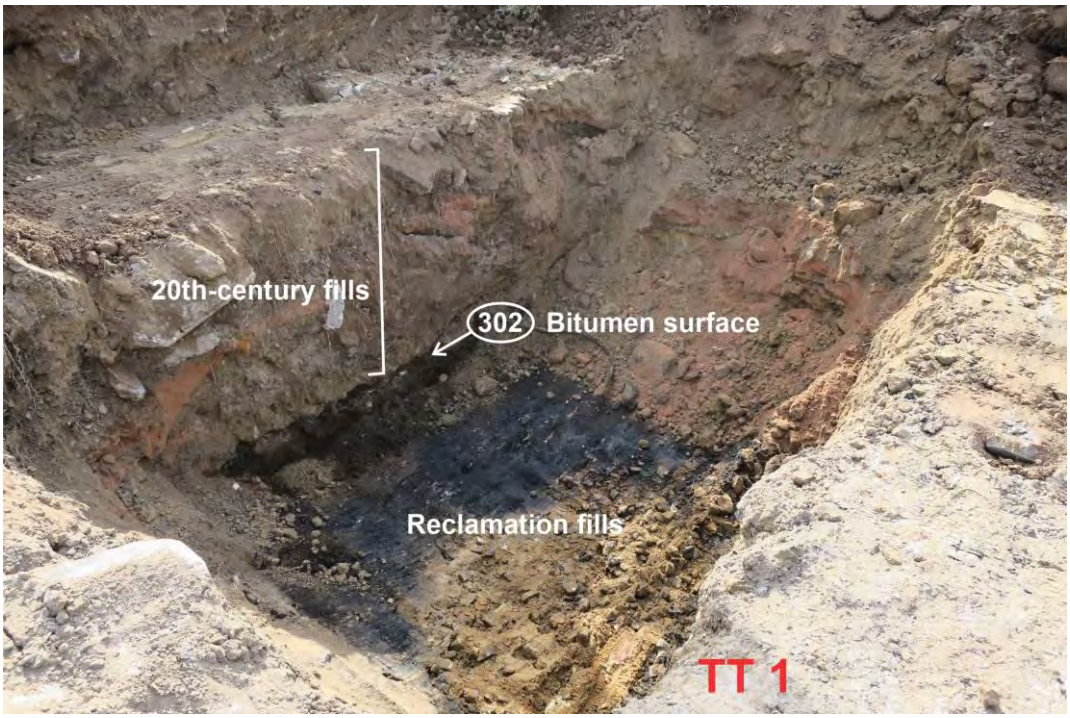


Figure 4.76: Machine excavated TT 01, below the modern (post-1960) fills was a bitumen surface (302) sitting above two reclamation fills, a black industrial waste fill and below it yellow-brown sandy rubble. View to northwest. IMG_1153.

© Sydney Metro 2018

4.3.5.4 Maritime Associated Infrastructure

During the 1880s and 1890s Stevens' Blues Point property was developed on a larger scale. As well as additions to his cottages and reclaiming land along the foreshore, Stevens expanded his commercial and maritime activities, by operating as a timber merchant, building a new pile jetty, a weighbridge and a number of waterside stores and sheds. In 1900 some of the North Sydney assets of Stevens' Estate were put up for sale. An advertisement placed by Richardson and Wrench described the waterside property:

> SYDNEY HARBOR [sic], at BLUE'S POINT. 105 FEET frontage to deep waters of Harbor [sic], 113 feet to Blue's Point-road, rear line to lane is 128 feet. It has a solid stone sea wall, JETTY with overhead tramway, three stone cottages, two large stores of iron, etc., office, weighbridge. A VALUABLE WATER FRONTAGE for Coal, Timber Merchants, or Shipping Companies.[137]

4.3.5.4.1 South Retaining Wall

A second retaining wall to the south was associated with Stevens' 1880s reclamation and expansion of his property. The south retaining wall was 16.8m in length and was given three different context numbers to distinguish the different phases of construction and modification to the wall (Figure 4.72, Figure 4.73, Figure 4.75, Figure 4.78). The earliest phase of the wall was built in of sandstone (316). As with the north retaining wall the bedrock (314) was incorporated into the western end of the wall (Figure 4.78, Figure 4.79). Here the bedrock jutted out forming another step in the rock shelf (at RL 4.76m) towards the foreshore. The bedrock was cut vertically with large fissures and tool marks suggesting quarrying, possibly for local construction, possibly for this wall. The location of this lower rock shelf and retaining wall almost aligned with the high-water mark. The 1857 plan has a fenceline in the same location as the bedrock and western end of the retaining wall which may just be defining the edge of the property boundary or could suggest the western portion of this retaining wall was in this location since the 1850s and acted as a seawall as well as retaining the land to the north (Figure 4.77).

The western section of the retaining wall (316) measured 4.7m in length and was constructed from three courses of large irregular sized sandstone blocks to a height of 1.3m bonded with a coarse light grey sandy lime mortar (BM sample #11), (Figure 4.79). The mortar appears to be associated with a repair to the wall. The width of the wall ranged between 500-600mm. Some of the stones were dressed on their south face. A large central section of the wall (7.9m in length) was replaced with machine-made bricks (321), (Figure 4.78). Cement mortar was used to bond the stone wall and bricks together. Some of the bricks were bevelled to try and key them into the stone wall and smaller stones used as packing to backfill the voids (Figure 4.80). If the stone wall was built earlier than the 1880s, as we think is unlikely, then the brick repair may have occurred in this phase (Phase 4.2) or possibly the next phase (Phase 5). For ease of discussion the brick repair to the south retaining wall will be discussed here.

[137] *Daily Telegraph* 5 May 1900, 3; *Evening News* 16 May 1900, 5.

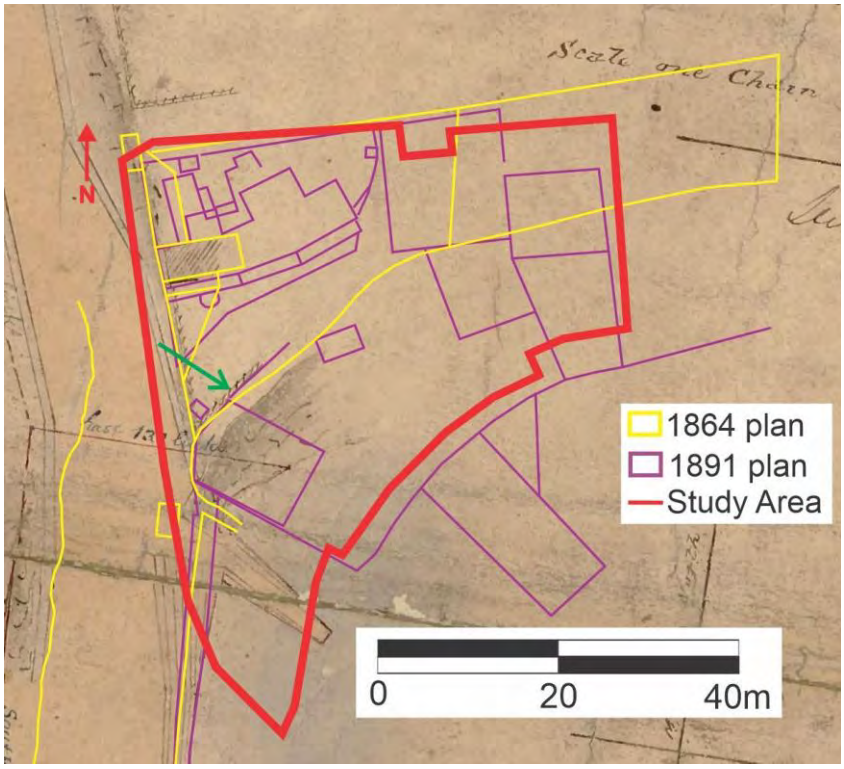


Figure 4.77: 1857 plan of the study area with overlays from 1864 (yellow) showing the edge of the property adjacent to the high-water mark and 1891 (purple) after reclamation. The green arrow indicates a fenceline or possible wall on 1857 plan which corresponds to the location of the cut bedrock and western end of the south retaining wall. A similar fenceline is also shown to the north of the study area along the eastern edge of Blues Point Road. Crown Plan 7-1990 LPI. Annotations C&L.

© Sydney Metro 2018

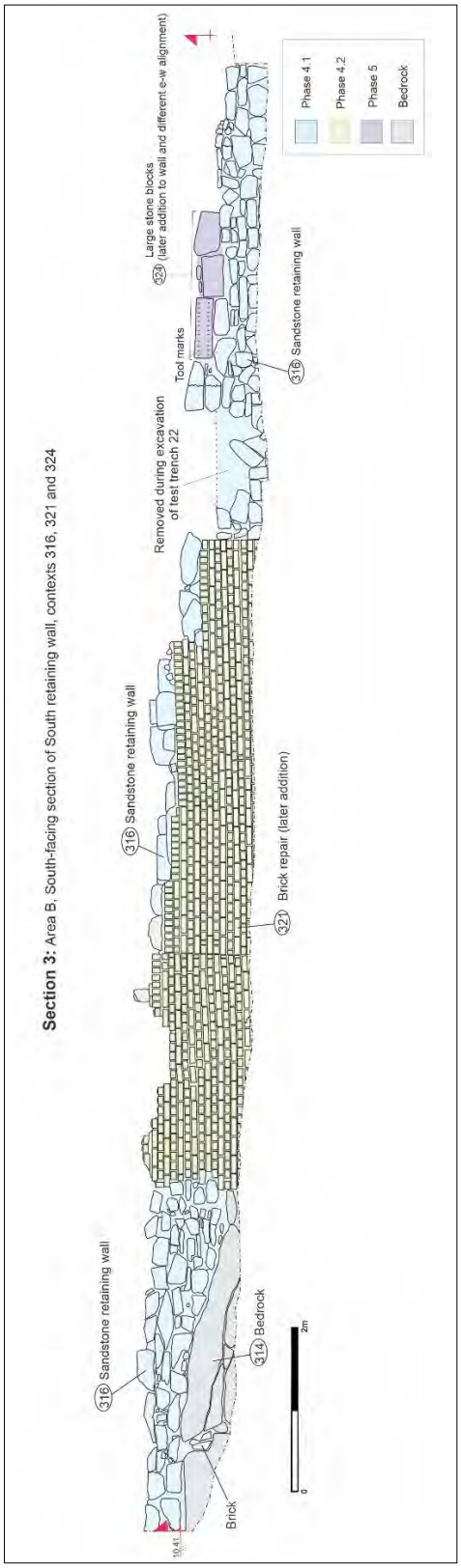


Figure 4.78: Section drawing #3 showing the south face of the south retaining wall including later repairs and additions to the wall. Plan 8, Volume 3.

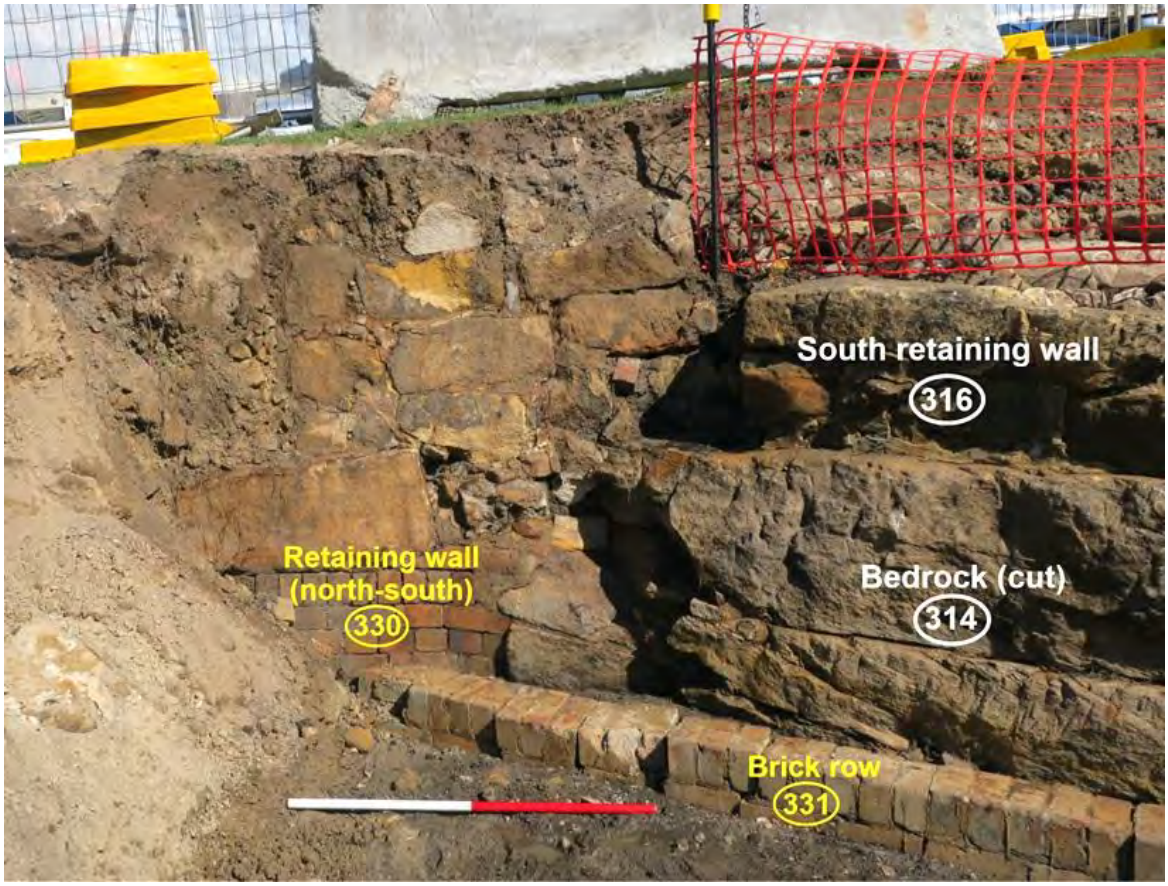


Figure 4.79: Western end of south retaining wall (316) near Blues Point Road incorporating bedrock (314) into the wall. In front of the bedrock was a later shallow brick addition (331) and a brick repair (330) to a north-south wall. View to northwest, scale 1m. IMG_1407.

Figure 4.80: The bricks (321) were bevelled to key into the earlier sandstone wall (316) with smaller stones packed in to fill the voids. View to north, 50cm and 1m scales. IMG_1282.

© Sydney Metro 2018

The eastern portion of the south retaining wall (also context 316) was built with irregular shaped blocks 2-3 courses deep which sat directly on the reclamation fill (Figure 4.75). This portion of the wall was 4.2m in length and curved gently to the south (Figure 4.81, Figure 4.72). A later section of wall (324) erected with large rectangular blocks extended over the top of wall 316 and continued on a straighter east-west alignment, it did not curve to the south (Figure 4.81). Wall (324) was only 2.55m in length an 460mm wide. It was constructed of large well-dressed rectangular blocks but was only one course deep (300mm) and more likely associated with the later road surfaces (Phase 5). A brick repair (321), was probably contemporary with these modifications (Phase 5) (c.1860s onwards) suggests it could also have been repaired earlier (Phase 4.2). The 1891 plan shows a small rectangular timber structure near the eastern end of the south retaining wall (Figure 4.65). No evidence for this structure was found during excavation.

Figure 4.81: Detail of the eastern end of the south retaining wall (316) including the later modifications (321 and 324). View to northwest, scale 1m. IMG_1306.

Brick Repair to South Retaining Wall (321)

A section of brick wall (321) replaced part of the stone wall, probably a repair. The brick wall was 7.9m in length, 12 courses in height were initially exposed at the western end (1.05m) and four courses on the eastern end with a row of sandstone blocks capping the bricks (Figure 4.78, Figure 4.82). The bricks were extruded semi plastic bricks with a rectangular frog and measured 220 x 105 x 76mm (1860s onwards) bonded with a light yellowish-grey sandy lime mortar (BM sample #10) similar mortar was found on the upper portion of wall (316). The bricks were laid in alternate rows of header and stretcher bonding capped with a course laid in rowlock (laid on edge) on their long edge (105mm wide). The dating of the bricks from wall (321) could suggest the repair took place in the latter part of the 19th century, not long after it was built but also possible in the early 20th century (Phase 5) as extruded bricks remained in use for some time. The eastern portion of the wall was stepped further to the south by 70mm, and the western end of the wall had cut/bevelled bricks to key into the stone wall (Figure 4.80). The repair to the retaining wall was most likely due to seasonal stormwater channelling down slope to the foreshore which undermined the wall and created a weakness or collapse of this section. A similar brick repair was found directly to the north along the north retaining wall, supporting our interpretation of a weakness caused by channelled stormwater along this north-south alignment (see Section 4.3.5.4.2).

© Sydney Metro 2018

Monitored machine excavation to the south of the retaining wall took place on 10th October 2018 to ensure the RL of 2.8m was reached in this area. During machining more courses of the brick wall (321) were exposed, along with mixed clay fills and a grey-black industrial waste fill with slag and cinder inclusions (Figure 4.83). These were probably a levelling fill or potential surface above the reclamation fills, similar to what was found in TT 01.

Figure 4.82: Portion of south retaining wall replaced with a later brick wall (321). View to north, scale 1m. IMG_1281.

Figure 4.83: Machine excavation exposed more fills abutting the brick portion (321) of the south retaining wall. View to northwest, scale 1m. IMG_0057.

Brick Row South of Retaining Wall (316)

A row of east-west aligned bricks (331) lay directly south of the south retaining wall (316) at its western end (Figure 4.72, Figure 4.79,). The bricks were similar to those used in the main retaining wall repairs (321). This section of wall (331) was 3.3m in length and 224mm wide. The upper course of bricks was laid on their sides (row lock) while the courses below were laid in a stretcher bond, seven courses were exposed. Two different mortar types were present. The upper course of bricks was bonded with a very hard compacted light grey lime cement while the lower courses were bonded with a sandier yellow-brown cement mortar (BM sample #15). The bricks measured 225 x 75 x 100mm with a shallow rectangular frog. At the western end the corners of the bricks were bevelled to fit against wall (330) while at the eastern end the brick row abutted the face of the cut bedrock (314) below the south retaining wall (316). The bricks may have acted as a buttress or support where the retaining wall joined the north-south wall (330) or given its location and alignment it corresponds with a large structure on the 1891 plan (Figure 4.65). The large rectangular structure (shed) is annotated as iron which may suggest a timber/iron frame and was probably part of the timber yard operated by Stevens from the 1880s. The brick row (331) may have been part of this large iron store, no other brick walls or structural remains were found in this area. There was no requirement to dig any deeper digging, allowing for the retention *in situ* of lower deposits. A large gable-roofed store/shed on the same orientation remained in this location into the 20th century (Figure 2.27).

© Sydney Metro 2018

4.3.5.4.2 Repairs to North Retaining Wall

A portion of the north retaining wall (2.33m in length) was built from dry-pressed bricks (071) and was a later modification or repair to the original stone walls (Figure 4.56). The repairs to the wall may have coincided with Stevens' construction of an access road to his waterfront sheds and jetty (c.1885-1890). The bricks (c.1880s onwards) were bonded with a compact cement mortar with an attempt to key the bricks into the stone blocks using broken and smaller packing stones. The depth of coursing increased towards the east as the wall followed the natural slope with a maximum of 16 courses sitting on bedrock (Figure 4.84). The lower five courses all stepped out 40-50mm with each course for added stability. The adjoining stone wall (084) to the east sat on the natural deposits and did not sit on the bedrock (Figure 4.84). The wall was (530mm) 2½ bricks wide. The bricks measured 224 x 109 x 76mm (BM sample #19) and were laid uniformly. Some of the upper courses were laid in rowlock on their long edge the rest of the courses were laid in alternate rows of header and stretcher bond visible on the south face of the wall. Some sandstone blocks had been cemented onto the top of the bricks.

This segment of brick wall (071) appeared curved or bulged in plan in order to join together two segments of stone wall (Figure 4.72). The dry-pressed bricks used in the construction of this segment of the retaining wall (071), were similar to those used in the north additions to Steven' houses and may have been contemporary construction events. The need to repair this segment of the retaining wall is thought to be due to seasonal water channelling through this area from upslope, causing collapse or weakness in the wall (Figure 4.5). The narrow segment of wall (071) aligns with the brick rubble filled channel (108) further north. The natural deposits adjoining the eastern end of wall 71 were the same as the olive-brown natural sandy clays found to the north in TT 22, this change in subsoil was indicative of water movement. At the base of wall (071) was a cut (context 076, 077), 250mm wide initially thought to have been associated with the wall but was later confirmed to be associated with a service pipe than rang along the south face of the wall. Behind the wall to the north were accumulated fills (067) near the surface, the lower fills were not excavated.

Figure 4.84: Detail of the brick segment (071) of the north retaining wall. View to northwest, scale 1m. DSC_4883.

© Sydney Metro 2018

4.3.5.4.3 Seawalls (north-south)

Seawalls are vertical or near vertical structures running parallel to the shore which separating land and water areas and are designed to prevent upland erosion by tidal waters. Seawalls can also have a curved or stepped face. The term seawall is commonly used to describe a variety of shoreline armouring structures including revetments.[138] Unlike seawalls the purpose of a retaining wall is to hold soil behind them. Their function is to separate land into different levels so it does not slide, fall or wash down a slope. Different phases of seawalls and retaining walls were identified during excavation along the western edge of the site. Prior to reclamation events (c.1870s/1880s) the walls below the high-water mark at Blues Point functioned as seawalls, with a stepped profile to protect from tides and allow access down to the water's edge (Figure 4.86, Figure 4.87). The walls, further north, were supporting or retaining the ground level of Blues Point Road. As more of the waterfront was reclaimed and development on the site expanded modifications were made to the earlier seawalls and new sections of retaining wall were added to existing walls. The archaeological remains in conjunction with the historic plans further our understanding of the seawalls along the western edge of the study area.

Historic plans show a seawall at the southern end of Blues Point Road where it joined the wharf, the wall ran north-south along the foreshore (Figure 4.85, Figure 4.86). Different construction phases of this seawall were found near the southwest corner of the study area. The seawall shown on the 1857 plan (Figure 2.5) was quite wide at its northern end and located directly south of a small jetty. A photograph of the wharf taken before Stevens built the two cottages (Figure 2.11) shows this seawall which was wide due to its stepped nature. By 1869 (Figure 2.10) the seawall along the eastern foreshore at Blues Point was extended further north and changed to a narrower near vertical seawall with some stepping outwards of the lower courses. Modifications were made to the wharf further south in the 1870s when a new timber wharf was built. The seawall on plan c.1869 remained the same width and in the same location on the 1881 and 1891 plans. Photographs of the wharf from the 1870s and 1880s show this seawall (Figure 2.13, Figure 2.14, Figure 2.18). By 1891 the plan shows the northern part of the wall was extended to join the western end of the south retaining wall (Figure 4.85, Figure 4.90) this addition may correspond with the reclamation events of the 1880s. Further alterations to this wall took place in the early 20th century and were evident below the Blues Point footpath (context 328, Phase 5) near the entrance to the site.

Archaeological remains of three different phases of additions to the north-south seawall were exposed during monitored machine excavation along the western edge of the study area, to the south of the south retaining wall. Each phase of the wall corresponded with structures on historic plans and the 1943 aerial (Table 4.2).

[138] https://beachapedia.org/Seawalls. Accessed on 05/04/2022.

Table 4.2: Context numbers of the different phases of seawall and wall additions along the western boundary of the study area (see Figure 4.87).

Context No.	Phase	Description	Figure
333, 342	Phase 4.1 and Phase 4.2	Seawall that pre-dated land reclamation (1869 and 1881 plans).	Figure 2.10, Figure 2.15
330	Phase 4.2	Small segment of angled wall joining earlier n-s seawall (333 & 342) to south retaining wall (1891 plan).	Figure 4.87, Figure 4.88
328	Phase 5 and Phase 6	Seawall/ retaining wall incorporated into footpath along east side of Blues Point Road evident on the 1943 aerial.	Figure 2.29, Figure 4.87

The earliest seawall found during excavation was given two separate context numbers (333 and 342) as was initially exposed in two separate stages but was later found to align and form part of the same wall. It's location and alignment corresponded with the western side of the seawall on the 1869, 1881 and 1891 plans (Figure 4.85). To the north it was bound by a later addition (330) in the 1880s which was constructed of both brick and stone. Section (330) then joined the south retained wall (316) which ran east-west (within the study area) (Figure 4.88). To the south wall (342) was renumbered wall (333) (Figure 4.87, Figure 4.88). Within the study area the length of the wall (342) exposed was c.5m. Wall (342) was constructed of large rectangular sandstone blocks (average size 560 x 360 x 300mm) laid end to end with each course slightly stepped in (80-100mm) from the course below, very different to the vertical coursing on wall (330). There was no mortar visible in the construction. Six courses of stone were exposed, the lower course was concave in shape. At the southern end of the exposed section of wall were three dressed sandstone blocks with tool marks forming steps to the water's edge (Figure 4.88).

Further to the south, below the Blues Point Road footpath, evidence of an earlier seawall was exposed on the same northeast-southwest alignment as (342). This section of wall (333) was built with the same construction technique and block sizes used in (342) with both following the same alignment. Only a 1.6m length of the wall was exposed due to its location below the footpath no more would be disturbed (Figure 4.89). At its southern end the seawall joined up with a later sandstone wall (328, Phase 5, Figure 4.89, Figure 4.115) which ran on a different north-south alignment and was evident on the 1943 aerial photograph. The changes in wall alignments reveal how as more land was reclaimed southwards in the late 19th century and early 20th century the position of the seawall would inevitably have to be adjusted.

© Sydney Metro 2018

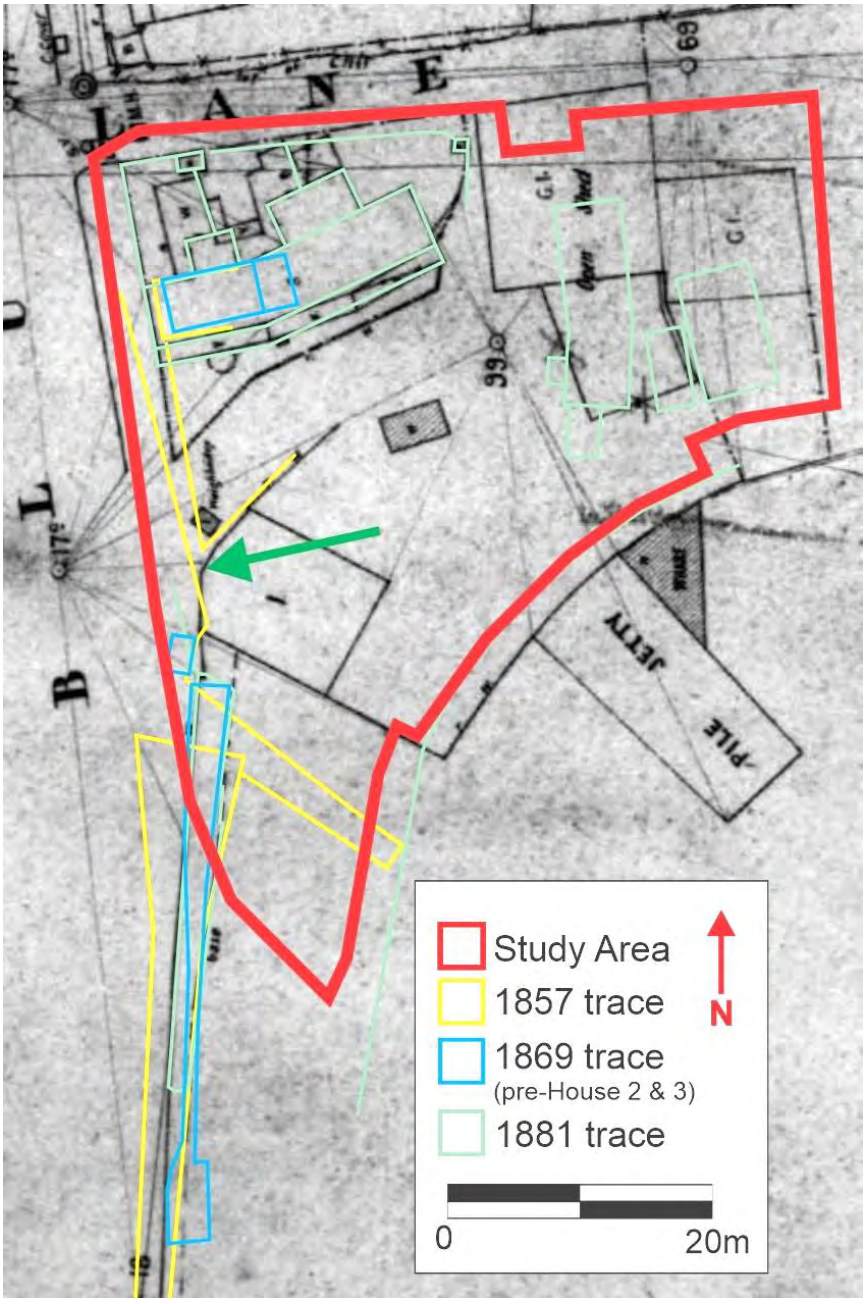


Figure 4.85: 1891 plan showing the north-south running seawall in the southwest corner of the study area with overlays from earlier historic plans. The 1869 and 1881 plans show a narrower wall to the 1857 plan (yellow) and by 1891 the wall was extended further north and curved to meet the south retaining wall (green arrow) and form the northern end of an iron store. PWDS 1544-S901 Sydney Water, overlays C&L.

© Sydney Metro 2018

Figure 4.86: An overlay of the archaeological remains of seawalls and retaining walls (black) along the western edge of the site. The 1850s seawall (yellow) was replaced by 1869 (blue). Further additions to the north were made to the wall in the 1880s and 1890s to join the south retaining wall. Different phases of walls were found during excavation.

© Sydney Metro 2018

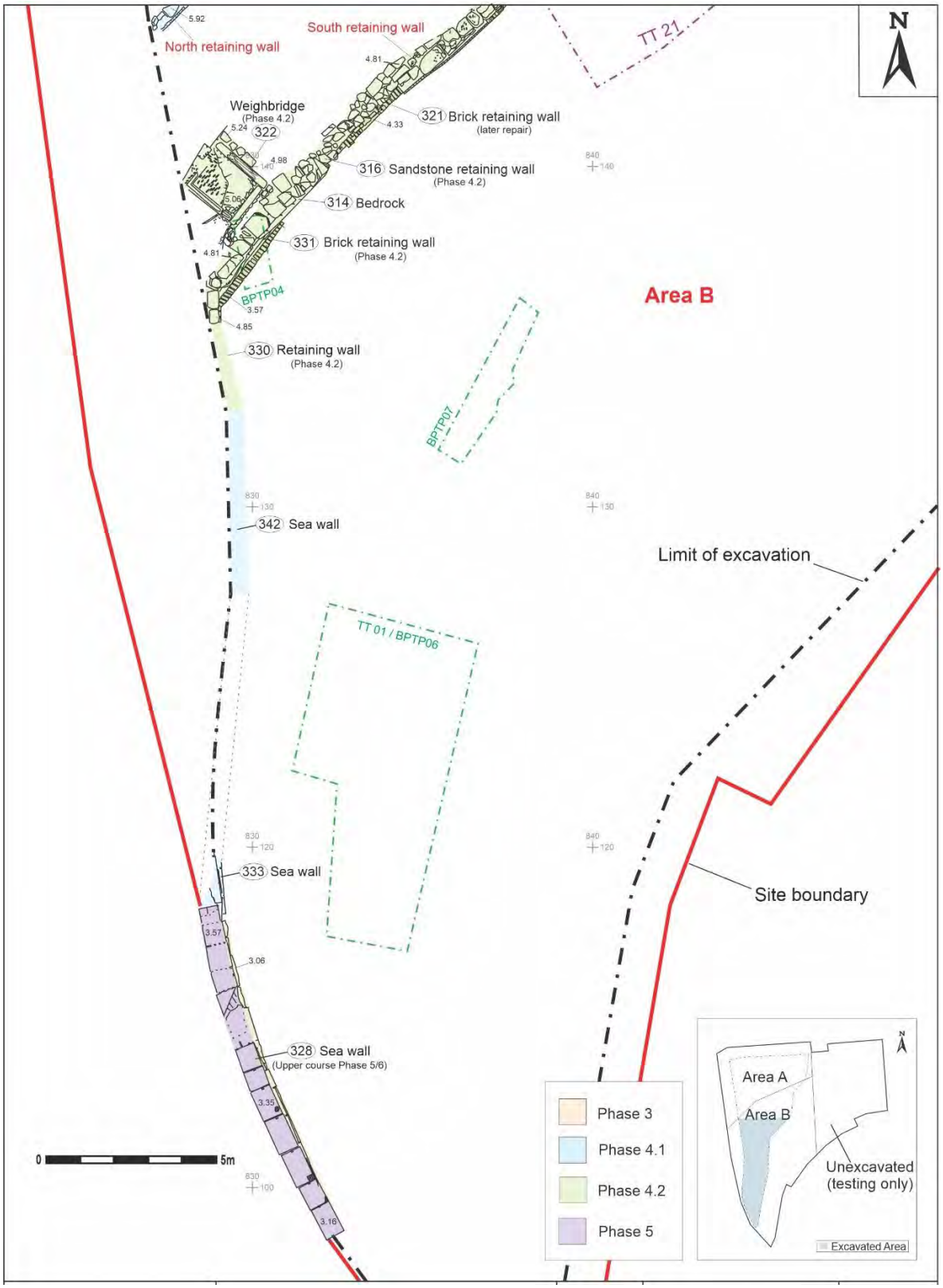


Figure 4.87: Different phases of seawalls along the western boundary of the study area. Plan 10, Volume 3.

Figure 4.88: Different phases of north-south seawall and retaining wall (342 and 330) along the western edge of the site with steps in the foreground. View northwest, scale 1m. IMG_5603.

Figure 4.89: A small portion of seawall (333) below the footpath of Blues Pont Road but joined wall (342) above. A later wall (328) ran south on a different alignment. View to northwest, scale 1m. DSC_4911.

The 1891 plan (Figure 4.85) shows the north-south seawall and the south retaining were joined together. This would have corresponded with Stevens' land reclamation events in this area. A small segment of wall c.4m in length was distinctly different to the earlier stone wall (342) and was recorded as context (330) (Figure 4.90, Figure 4.91). The wall was constructed of both sandstone and machine-made bricks and reached up to 2.3m in height. At the northern end, where it joined the east-west end of the south retaining wall (316), it was irregularly built with machine-made bricks and rubble sandstone bonded to the south retaining wall (316) with a hard, dense grey lime sand (cement) mortar (BM samples #18, 20). Moving south the wall was more regularly constructed predominantly of sandstone blocks with occasional half sized dry-pressed bricks between the courses and bonded with a pale beige cement. Nine courses were visible. A large piece of cut bedrock separated wall (342) from wall (330) (Figure 4.90).

Figure 4.90: Different phases of wall construction, the earlier stepped seawall (342) and retaining wall (316) were joined with a short wall (330) constructed of bricks and stone. View to west, scale 1m. IMG_5620.

On the 25th October 2018 the stone walls (330 and 342) along the western limit of the site were removed by machine and was monitored by an archaeologist to look for potential remains of the predicted earlier seawall. In the area behind wall (330) was a bulk yellow-brown sandy fill with sandstone rubble. At the base of the sandy fill were large sandstone boulders (c 900mm-1.2m in length) acting to retain lower fills. Gaps between the bedrock were filled with beach sands and occasional artefacts, all part of the reclamation event of the 1880s. Also, behind wall (330) was more cut bedrock. The cutting of bedrock to shape it was an earlier event while the wall in front of it was a later construction stage (Figure 4.92).

A small segment of an earlier seawall running northwest-southeast was exposed during machining behind wall (342) at a depth of 1.3m below the footpath along Blues Point Road (Figure 4.93). This earlier portion of wall pre-dated wall (342) and was only visible for a length of c.2m. It was on a completely different alignment to the other walls and could be associated

with a small jetty or slip (Figure 2.5, Figure 2.6). Insufficient evidence of the wall remained and we were unable to confirm this interpretation.

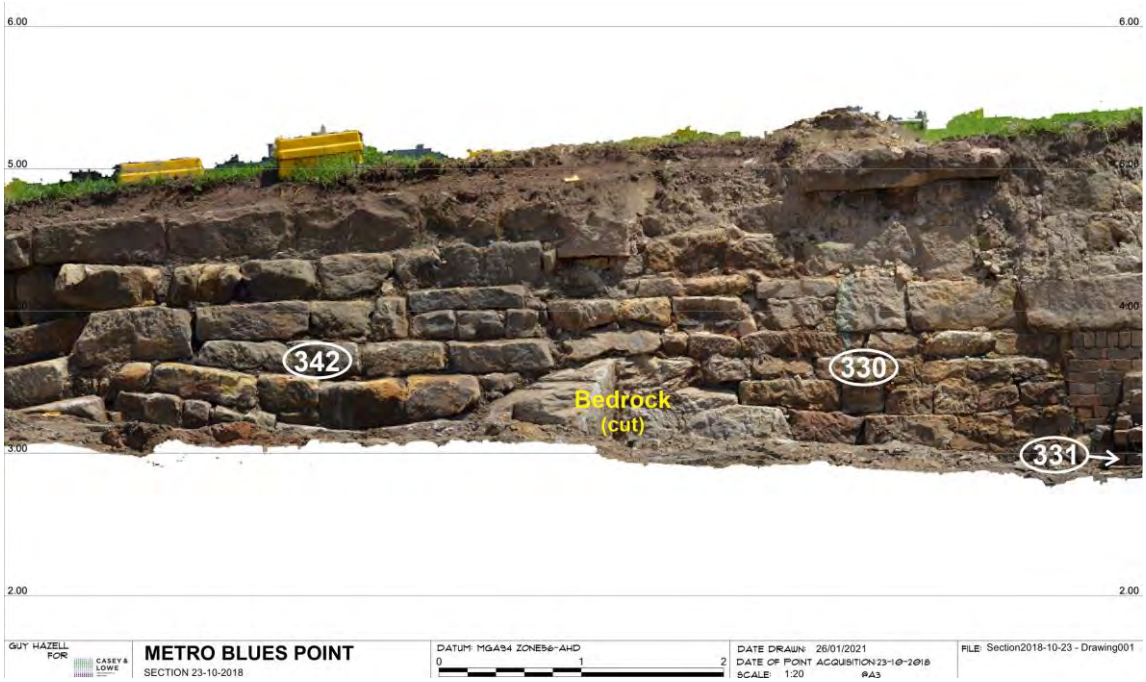


Figure 4.91: Scaled orthophoto of the east-facing section of seawalls along the western edge of the site including RLs between 3m and 5m. Arcsurv 2021.

Figure 4.92: Cut bedrock, associated with the south retaining wall, continued to the southwest behind the wall (330) confirming this portion of the wall was a later addition. View to northwest, scale 1m IMG_5685.

Figure 4.93: Small section of stone wall running northwest-southeast behind seawall (342). Only a small portion of wall survived but it continued to extend northwards below the Blues Point footpath. View to northwest, scale 1m. IMG_5651.

4.3.5.4.4 Access Road to Stevens' Jetty between North and South Retaining Walls

A winding roadway was built between the two retaining walls it followed the downward slope to the east then curved towards the foreshore providing access to Stevens' jetty and timber yard (Figure 4.85). Stevens was granted permission to build his pile jetty in 1885. Different phases of compacted surfaces were found between the two walls suggesting this area was continually used as a road throughout the late-19th century up to the mid-20th century. The road surfaces sat on remnant natural deposits and bulk fills behind (north) the south retaining wall to raise the ground level and remove the steep drop from the stepped bedrock. The levelling fills also supported the south retaining wall which sat on reclamation fills.

Raising & Levelling Fills

Most of the levelling fills below the roadway were deposited on the southern side abutting the brick portion (321) of the south retaining wall to remove the steep drop-off of the bedrock and create a level surface. These fills were investigated within TT 21 (Figure 4.94, Figure 4.95). Context (336) was a light beige-brown sandy fill with frequent large rubble stone inclusions which deepened towards the south as the ground sloped towards the harbour (Figure 4.74,

© Sydney Metro 2018

Figure 4.94). Context (336) extended (east-west) for c.6m and north for c.2.7m-3m, butting up to the cobbled road surface (311). Fill (336) was not found on the eastern side of TT 21 suggesting it was contemporary with the brick addition (321) to the retaining wall. Shallower pockets of levelling fills (312, 313) were found below the cobbled surface (311) further to the north and overlying the bedrock. Fill (312) was a mixed red sandy clay fill and directly below it was mottled grey-brown sands with sandstone inclusions (313). The eastern section of TT 21 (Figure 4.95) showed different fills (341) behind the stone retaining wall yet serving the same purpose as fill (336). Bulk fill (341) was a mixed fill of olive-brown sands with yellow sandy clay mottles and small crushed stone fragments (<30mm). It sat below the surface (311) and sloped steeply towards the south. It was not evident on the southern side of the retaining wall and there for was associated with the construction of the south retaining wall and ground raising for the road surface.

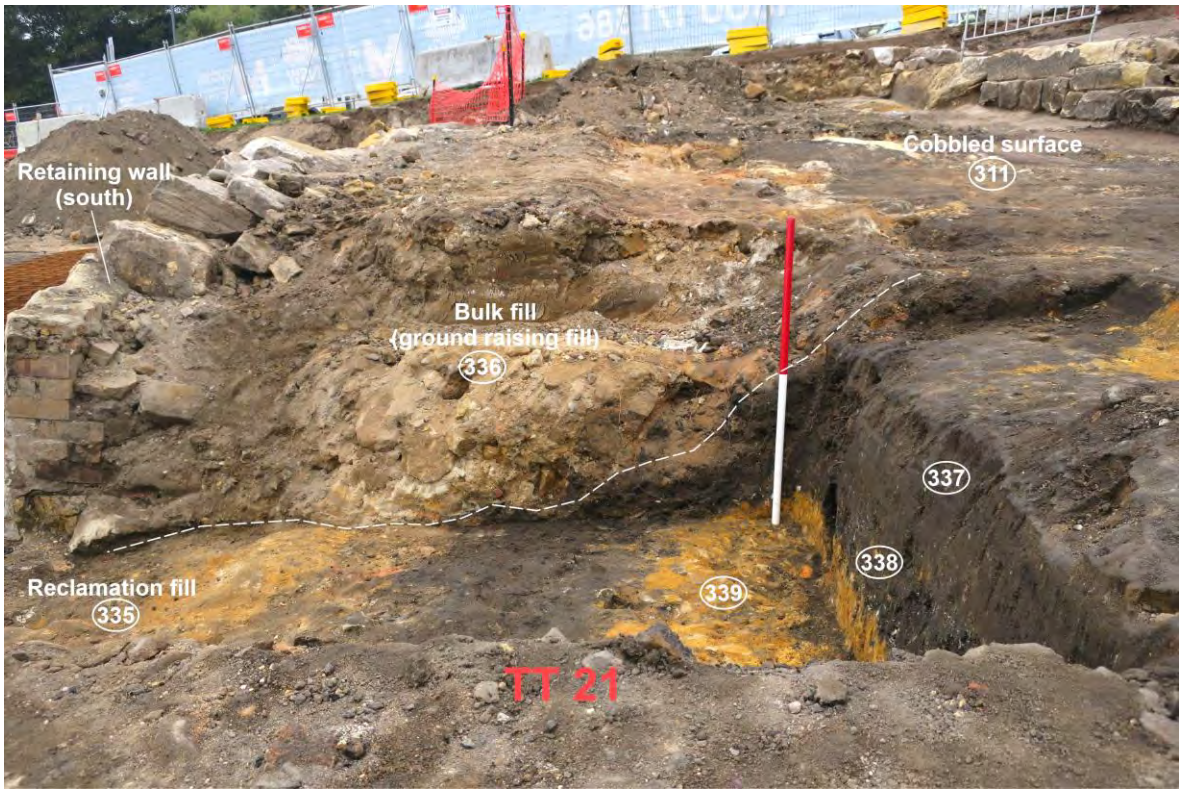


Figure 4.94: East-facing section of TT 21 showing bulk fill (336) dumped behind the sloping brick portion of the south retaining wall and above reclamation fill (335). The fills helped raise the ground level between both retaining walls to create a level road surface. View to west, scale 1m. IMG_1436.

Bedrock and Accumulated fills

Test trench 21 was excavated below the road surfaces to Stevens' jetty to help understand the nature of the slope in this area between the two retaining walls and identify where the reclamation fills began. The rock shelf continued its stepped effect from below Stevens' houses right down to what was originally the high water-mark. The bedrock was exposed below the road surfaces at RL 4.51m and within the base of TT 21 the bedrock was evident

at RL 3.37m (Figure 4.54, Figure 4.3). The irregular shape of the bedrock in TT21 was clearly naturally occurring from coastal erosion. In the southern end of TT 21 it was evident where the point of overlap between the reclamation fills and the natural foreshore occurred (Figure 4.94, Figure 4.95). The south retaining wall was built on reclamation fills with a series of ground raising/levelling fills dumped behind the wall to level the ground for the roadway. Within TT 21 were fills (337, 338, 339 and 340) some of which may have been dumped as part of in filling a natural depression or more likely they were washed down into this area from further up slope and accumulated over time. The location of these fills and accumulated sands were on a similar north-south alignment to the brick repair of the north retaining wall (Figure 4.5) suggesting water may still have flowed regularly along this route, a path of least resistance. The construction of the retaining walls still failed to inhibit sands accumulating on the edge of the foreshore. The uppermost fills (337, 338) were both dark grey-black silty sand fills rich in charcoal flecks, shells (both whole and broken) and frequent artefacts, 91 MIC (Section 5.4.3.2). Context (337) was 400-500mm deep and contained quantities of household rubbish probably washed down through a channel or from further to the north. These fills extended over the natural bedrock of the high-water mark.

Artefacts included bone, nails, ceramics, glass bottles, metal, fish scales and shell and dated to both the 19th and 20th century. Soil samples were collected for pollen analysis (samples #54-56 and #84-86) which (sample #85) concluded the environment was consistent with weed-infested waste ground. The absence of casuarina and high diversity of herbs (including one exotic species) strongly suggests the deposit dates to the late 19th or 20th century when the site was devoid of native vegetation and being heavily impacted by human activities.[139]

Fill (338) was below (337), it was almost identical but only 50-70mm deep and with more shell inclusions, indicating shell had settled down through the sandy fills to the base. These two fills are phased to the early 20th century (Phase 5) based on preliminary dating of the artefacts. It is possible these fills are part of a single event coinciding with torrential rain or flooding which caused the collapse of a portion of the retaining wall and erosion of the roadway and therefore changing the date of the brick wall (71) to a 20th-century date.

[139] Macphail 2020, Pollen Report: Section 3.3, Volume 2.

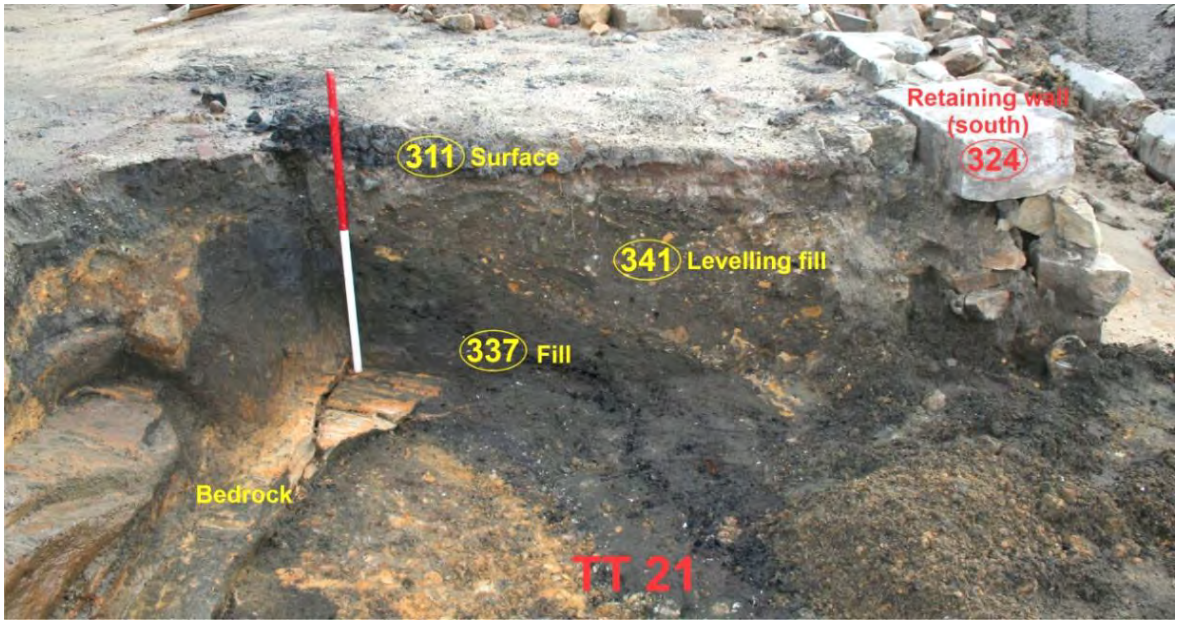


Figure 4.95: Fills in the west-facing section of TT 21 below the road surfaces were quite different to the bulk sandy fill (336) exposed behind the later brick wall (321). View to east, scale 1m. IMG_5573.

Road Surfaces

Different phases and types of road surface were present between the retaining walls and followed the slope down to the east and then turning to the south (Figure 4.96). This access road was in use from the 1880s until the 1940s. The 1943 aerial shows both the retaining walls and roadway still extant as was Stevens' jetty, the western boundary wall and some structures on the reclaimed land close to the jetty (Figure 2.27). The three houses further north were demolished by this date and the vacant land was overgrown. The earliest cobbled surface (311) was a grey-black coarse sand compacted with angular stones (basalt) up to 70mm in length with small patches of bitumen in places (Figure 4.94). It abutted the light brown sand rubble fill (336) towards the south. Fill (336) was only found alongside the replacement brick wall (321) and may have post-dated or removed the cobbled surface in that area, further east where the roadway curved to the south, the cobbled surface (311) continued. Above the cobbled surface was 300mm of levelling fills (308, 309) laid in preparation for the later bitumen surface (307) (Figure 4.96) (see Phase 5). Context 323 was given to any unstratified fill and artefacts collected above the cobbles (311) but below the later levelling events for the next surface.

© Sydney Metro 2018

Figure 4.96: Different phases of road surfaces (311, 307) separated with levelling fills between the two retaining walls. The upper surface and fills were removed by machine. The roadway was still evident on the 1943 aerial (Figure 2.29) indicating it remained in use for at least 60 years. View southeast, scale 1m. IMG_1272.

4.3.5.4.5 Weighbridge

A small rectangular structure was located just north of the southern retaining wall along the western edge of the site. The 1891 plan shows a small structure in this location which was annotated 'weighbridge' (Figure 4.54, Figure 4.65). Weighbridges began in England in the 19th century as a way of charging tolls based on the weight of vehicles using roads, with their popularity quickly growing for commercial purposes. Along the Blues Point harbour foreshore the weighbridge was used to weigh vehicles/carts and goods being loaded on and off boats and vehicular ferries, although the structure recorded in Area B is unusually small and could not have accommodated anything but a very small vehicle or small amounts of goods. Historically weighbridges were designed to be installed over a pit which housed leavers and other mechanical components with a platform flush with the roadway. They were constructed almost entirely out of wood with a system of leavers and knife edges, often connected to a steelyard balance for weighing the vehicle or goods on the weighbridge. This technology, aside from becoming more efficient and accurate did not change until the mid-20th century with steel platforms replacing timber.[140]

The archaeological remains associated with the weighbridge (322) consisted of a regular rectangular cut measuring 2.3m x 1.7m externally with a concrete frame measuring 1.7m x 1.2m internally. The base of the structure was below the level of the roadway and carved into

[140] https://www.solentscales.co.uk/blog/A_Brief_History_of_Weighbridges.html

bedrock (Figure 4.97, Figure 4.98). The perimeter walls of the structure were a combination of sandstone, concrete, timber and lead sheeting. The eastern edge was formed with rubble sandstone. The eastern half of the structure was backfilled with two different fills (325, 326) sitting above the bedrock (Figure 4.97), at RL 5.06m. The uppermost fill (325) was a fine yellow sand with no inclusions or artefacts (30-240mm deep). The lower fill (326) was loose dark grey sand, gravelly inclusions and occasional artefacts up to 250mm in depth.

Figure 4.97: Remains of a weighbridge (322) close to Blues Point Road. This was labelled on the 1891 plan. View to east, scale 1m. IMG_1250.

© Sydney Metro 2018

Figure 4.98: Base of weighbridge (322) cut into the bedrock with a concrete and timber frame. South retaining wall in the background (behind the safety fence). View to east, scale 1m. IMG_1310.

4.3.6 Phase 5: 1900s-1930s Vehicular Ferry, Upgrades, New Businesses

4.3.6.1 Overview

The turn of the century saw changes to the buildings and infrastructure at Blues Point and within the study area. Larger-scale business replaced the privately owned land and a vehicular ferry service was established. By 1898 the sewer line was operational in North Sydney and in 1899 was transferred to the Sydney Metropolitan Board of Water Supply and Sewerage. After the death of James Stevens in 1896 some of his waterfront assets at Blues Point were put up for sale in May 1900 including the jetty, three stone cottages, two large iron stores, an office, a weighbridge and valuable water frontage for merchants or shipping companies.[141] The Stevens' Estate 'wharf property' was passed in at £2,000. In 1902 an Order for Foreclosure was made on the mortgage and Stevens' Wharf was again advertised for Public Auction in February 1902 as comprising of '3 Cottages and Stores'.

In 1897 the Minister for Public Works approved £7,000 for the construction of a vehicular or 'horse ferry' service, including a 'dock and landing' for ferries between Dawes and Blues Points.[142] The North Shore Ferry Service, including a vehicular ferry, was in service by February 1902 and the timetable was considered 'not the most convenient' which meant it did not receive as much traffic as the Milson's Point service. Despite upgrades to the facilities, the construction of the Sydney Harbour Bridge in 1932 reduced the demand for a vehicular ferry and the ferry service at Blues Point was terminated. The vehicular ferry was not located within the study area.

In November 1902 the New South Wales Fresh Food and Ice Company Limited announced the proposed establishment of a North Shore distribution branch on the waterfrontage known as Stevens' wharf, the western part of Lot 10 Section E. The company proposed to construct 'a depot, with ice-house and other cool storage premises' at the Blues Point site to supply fresh fruit and milk to the northern suburbs.[143] In November 1926 the Harbour Land and Transport Company Limited, a subsidiary of the Sydney Ferries Ltd associated with their properties, purchased the western portion of Lot 10, Section E and the adjacent reclaimed land. By 1934, the waterfront between Blues Point Road and Milsons Point had for some years been utilised by Sydney Ferries Ltd 'as a depot for the company's idle ferries'. An aerial photograph c.1937 (Figure 2.26) shows the ferry dock and pile jetty in use. The three cottages to the north of the site were still extant in the 1930s, as were a number of sheds/stores both on the reclaimed land and to the east of the houses. Cliff Avenue (or Lane) is shown as widened to accommodate the tramline between Blues Point Road and the McMahons Point Ferry Wharf. The *Sands Directories* from 1915 to 1933 (Table 2.2) lists occupants on the corner of Blues Point Road and Cliff Lane although it is difficult to accurately identify which tenants lived in the cottages. The houses were demolished c.1942 (Phase 6).

The archaeological evidence from this phase includes installation of services to the houses as well as repairs to the floors in Rooms 1 and 2, House 1 and artefact-rich underfloor deposits excavated in both of these rooms. Although underfloor deposits can accumulate throughout the lifespan of the house they are dated with the later phase of occupation and were excavated in spits. Artefacts collected from these deposits can provide information about the occupants of the houses. Some additions were made to the south retaining wall and the access road to the foreshore was raised with new services added and bitumen.

[141] *Daily Telegraph* 5 May 1900, 3; Evening News 16 May 1900, 5.

[142] *Evening News* 20 Jan 1897, 3.

[143] *Daily Telegraph* 10 Nov 1902, 9; LPI Schedule.

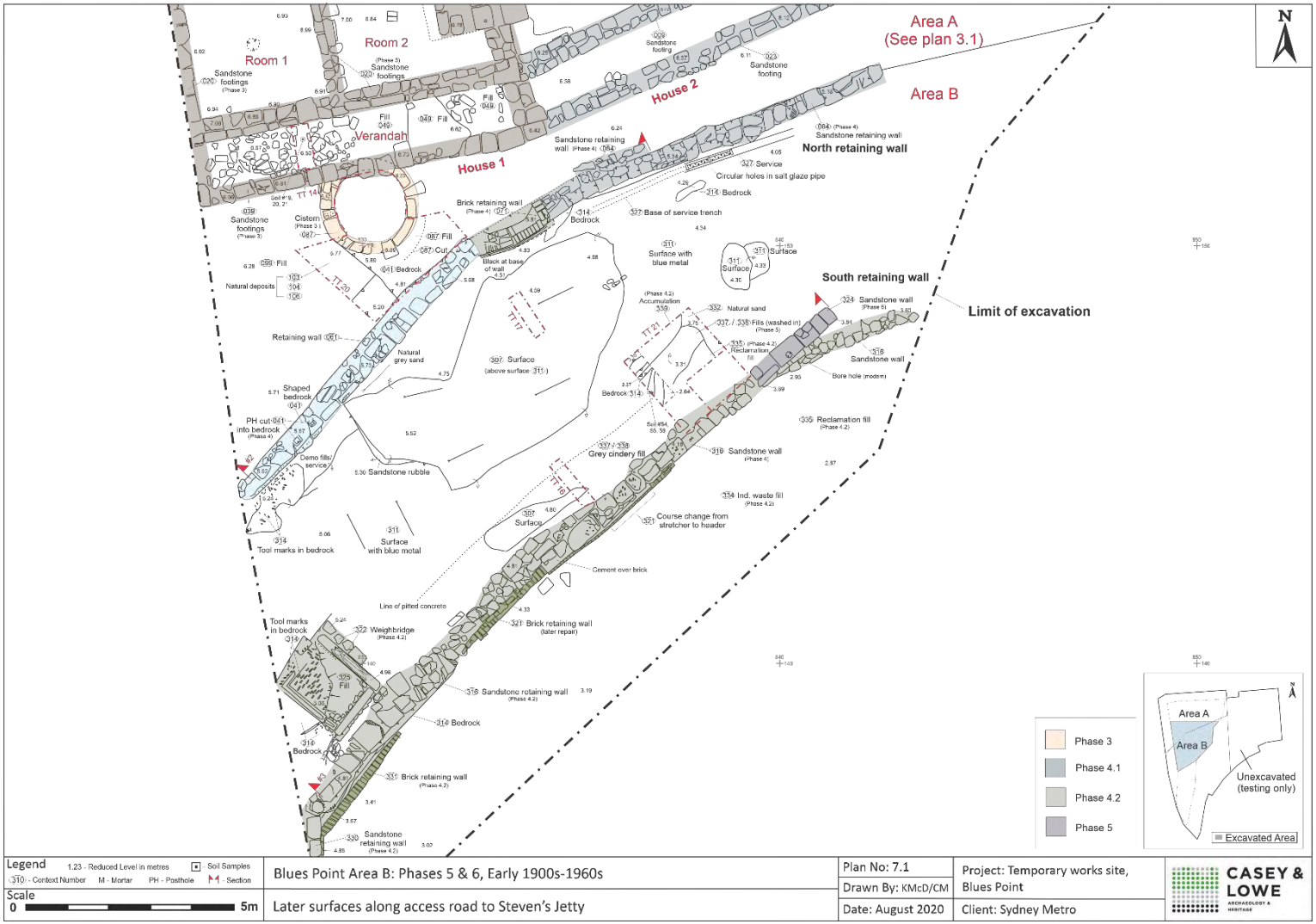


Figure 4.99: Area B, Phase 5 and Phase 6 plan showing the upgrades to the road surfaces and retaining wall within the study area. Plan 7.1, Volume 3.

surfaces replacing the earlier cobbled surface. Later phases of the north-south seawall along the western boundary of the site were also exposed below the footpath along Blues Point Road. No evidence was found for any later buildings associated with the NSW Fresh Food and Ice company.

4.3.6.2 Underfloor Deposits within the Houses

Occupation deposits accumulate over the lifespan of the house, building up under the timber flooring and are commonly referred to as underfloor deposits.[144] Most items fall between the cracks of the floorboards, a common occurrence when butt-boarded floorboards were used, prior to the introduction of tongue-and-groove flooring (1870s). Often these artefacts were small, such as beads and pins, fish bones and scales, buttons and coins or fragmentary pieces of larger items such as broken glass or ceramics. All these occupation deposits were found below the demolition debris and sitting above either remnant construction debris, sandy levelling fills or historically modified natural deposits. Underfloor deposits within House 1 were found in Rooms 1 (021) and Room 2 (066, 069). Context (066) contained 4,472 small items (Volume 2). A small area of occupation-related material was also found in the brick addition, Room A within House 2 (082).

The underfloor deposits in Rooms 1 and 2 were excavated in 1m x 1m grid squares and the deposit removed in 50mm spits. Each grid square was given an alpha-numeric reference beginning with A1 in the northwest corner of each room (Figure 4.100). The grid was not used in Room A, House 2 as the deposit was only found in a small area in the northern part of the room, close to the fireplace (**Error! Reference source not found.**). The deposit was 100% wet sieved. The absence of an underfloor deposit in most of the rooms of House 2 and 3 most likely relates to their later date of construction and the use of tongue-and-groove floorboards and/or floor coverings.

The majority of artefacts within House 1 were household items, such as fragments of ceramics, glassware, pudding dolls, sewing equipment, buttons, marbles and modest jewellery with many of the items dating from the mid to late 19th-century (Figure 4.101, Figure 4.103). In Room 1 were found 12 pins, 11 buttons and 392 beads while Room 2 had 1780 pins, 401 buttons and 598 beads. The underfloor deposits are discussed in Section 5 which provides a general overview of the artefacts found within the underfloor deposits while a detailed analysis of the artefacts can be found in Section 4.3 and specifically Volume 2.

A number of artefacts suggest children resided within House 1, such as, porcelain toy tea sets, dolls, lead soldiers, marbles, writing slate and pencils (Figure 4.104, Figure 4.105). Only a few items of personal grooming and hygiene were found (Figure 4.105) which all post-dated the 1850s. Other 19th-century artefacts are hand-carved and turned bone items: a thread winder, a nipple guard from a baby's feeding bottle, a buckle and several buttons (Figure 4.103.

Evidence for maritime activities included British naval buttons and merchant marine button, as well as copper nails, sheathing tacks, roves and other fastenings post-dating 1836 (Figure 4.106, Figure 4.107). These items suggest the residents of the cottage were possibly associated with the manufacture and repair of boats moored at nearby jetties and shores. The hardware may have also been used by the occupants of the house to make furniture. Further details on dating these buttons and their associated ships and rank can be found in Volume 2. The *Sands Directory* for the corner of Blues Point Road and Cliff Lane between 1915 and 1933 (Table 2.2) lists a number of male and female tenants who were thought to

[144] Casey 2004

be linked to the study area although they cannot be tied specifically to a particular house or work premises. The occupations of these tenants included a launch proprietor of Langford's Boat Shed, a blacksmith and a marine engineer (Volume 4).

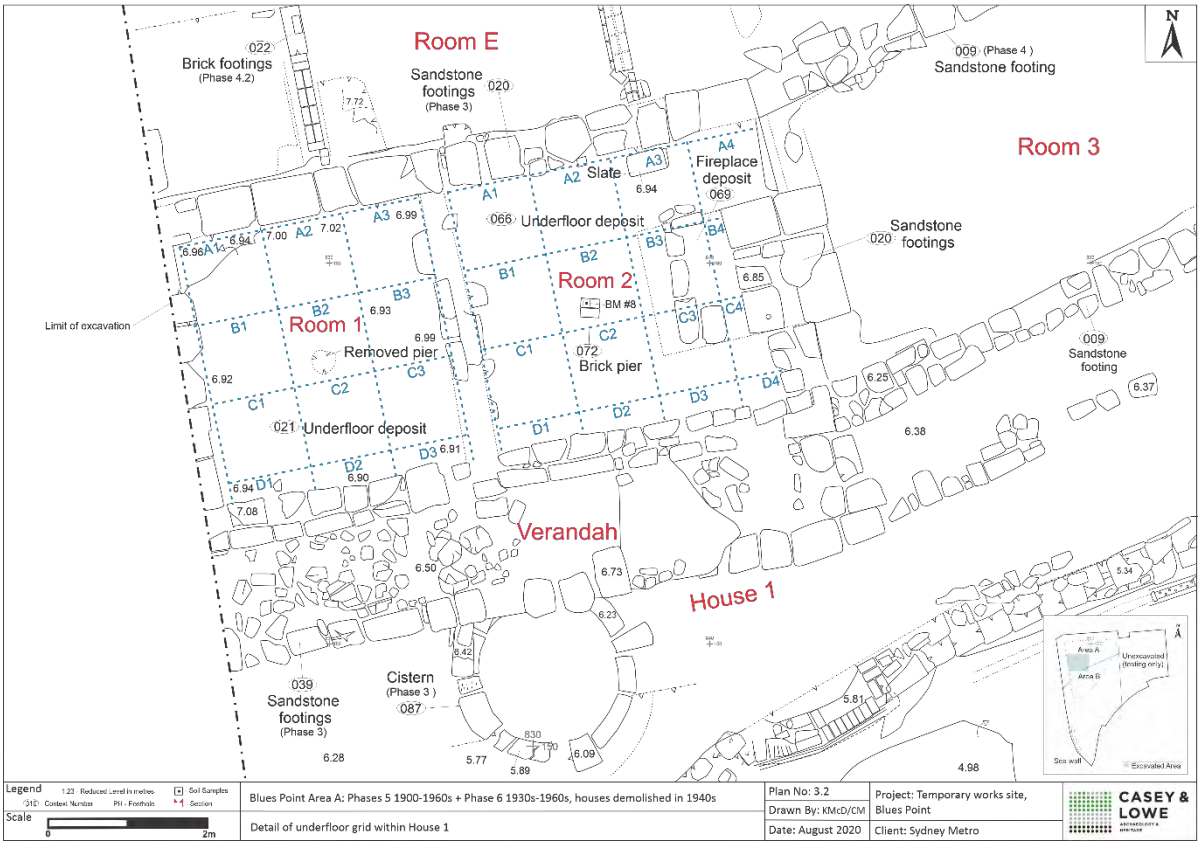


Figure 4.100: Detail plan of the underfloor grid within Rooms 1 and 2, House 1. Extract from Plan 3.2, Volume 3.

Figure 4.101: Left: a range of jewellery items and buttons retrieved from the underfloor deposit (066) within House 1. 100mm scale. DSCN_9601. Russell Workman.

Figure 4.102: Selected examples of sewing items from underfloor deposits, predominantly context 066 (l-r). Top row: thimbles #20966, #20964, #20967, 021/#20063, bone container #21311. Second row: pins #20434 (4), #20540 above #20334, #21306 (4), bone stopper #21111, bone container #21320. Third row: lacemaking bobbin #20997. Bottom row: crochet hook #20431, bone/ivory stopper for needle case #20998. 100mm scale. DSC_4387. Russell Workman.

© Sydney Metro 2018

Figure 4.103: Selected examples of children's items from underfloor deposits, predominantly context 066 (l-r). Top row: marbles, stonie #20421, handmade clay #20979, pop alley #20798, Benningtin brown #20632, glass alley #20981. Second row: bisque figurine/doll foot #21272. Bottom row: bisque figurine/doll face #21115 joins #20842, frozen Charlotte #20284, #21273, hand #21119, foot #21117, 082/#21590. 100mm scale. DSC_4384. Russell Workman.

Figure 4.104: Representative sample of pencil cuts from context 066 (l-r). Top row: slate pencil #21541, lead pencils #20960 (10). Second row: slate pencils #20489 (2), lead pencils #20962 above #20794 and #20792. Third row: slate pencils #20959, #20658, #21569. Fourth row: slate pencils #20488 (3). Fifth row: slate pencils #20485, #20652, pencil #20657, slate board #20970. Bottom row: slate pencil holders #20990, #20988 (2). 100mm scale. DSC_4187. Russell Workman.

Figure 4.105: Personal grooming items (001, 066, 079) included a bone toothbrush handle and segments of black vulcanite hair combs all post-dating the 1850s. The 'faux tortoiseshell' comb was made of celluloid (post-1869). 100mm scale. DSCN_9602. Russell Workman.

Figure 4.106: The button in the centre is a merchant marine button (021), while the other two buttons are British navy uniform buttons (066). 100mm scale. DSCN_9567. Russell Workman.

Figure 4.107: Boat nails, sheathing tacks, roves and other fastenings made from copper, lead and iron used in boat building and repairs, and possibly (re)used in furnishings within the houses (066). 100mm scale. DSCN_9525. Russell Workman.

© Sydney Metro 2018

There was evidence to suggest the timber floors within Rooms 1 and 2 of House 1 were replaced during its lifespan. The base course of a square brick pier (072) was found in the centre of Room 2 which would have supported a timber floor. Although no brick pier was found in Room 1 there was a regular sized oval depression left behind in the centre from a robbed-out pier (Figure 4.100). The brick pier (072) was square and constructed from two large sandstock bricks (230 x 110 x 75mm) with rectangular frogs laid side by side and dated 1850-1900 (BM sample #8). The bricks appeared to be reused as there was remnant brownish-grey lime sand mortar on the base and sides of the bricks not associated with its function as a floor pier. The underfloor deposit (066) in Room 2 abutted the brick floor pad but was also sitting pressed in to earlier underfloor material suggesting the floors were replaced during the lifespan of the house and the deposit continually accumulated over a long time.

4.3.6.2.1 House 1, Room 1

The underfloor deposit within Room 1, House 1 was a dark brown sandy silt (021), it was patchy in places, varying in thickness from 3mm up to 100mm (Figure 4.108). In the northern half of the room the deposit sat above pre-house levelling fills (031, 083) which were either a black gravelly sand or mottled yellow-brown sand. Room 1, at the front of the house did not contain the same concentration of artefacts as found in Room 2 (rear). Along the southern edge of the room was a small concentration of finds, notably coloured beads probably from the same piece of broken jewellery. A large amount of rubble material including brick fragments and sandstone blocks were found in the southeast corner of the room, the stones were probably collapse from the internal partition wall. In both rooms below the underfloor deposits was patches of remnant construction debris (075).

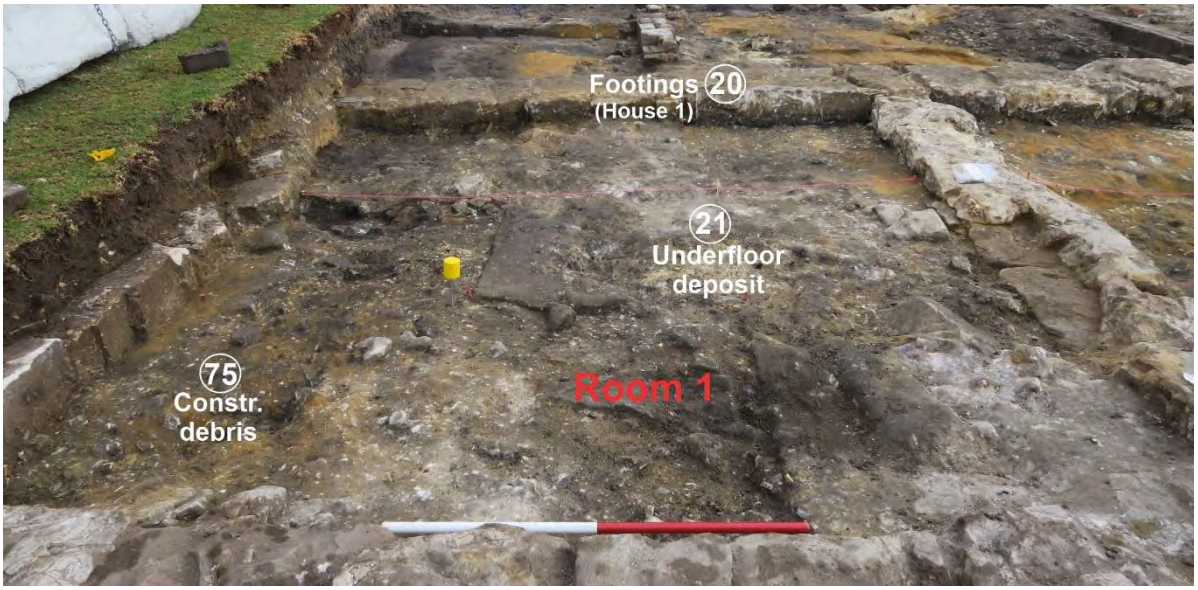


Figure 4.108: Room 1, House 1 in the foreground. This photo is a mid-excavation working shot showing the removal of the dark brown silty underfloor deposit (021) in 50mm spits within a 1m x 1m grid. View to north, scale 1m. IMG_9832.

4.3.6.2.2 House 1, Room 2

The underfloor deposit within Room 2 was mid-brown silty sand (066), moderately compacted with inclusions of charcoal flecks, small sandstone chunks, rare brick fragments and degraded patches of metal (Figure 4.109). The depth of the deposit was varied and undulated, ranging from 30mm to c.200mm in depth (4 spits). In places the underfloor deposit was mixed through with stone, brick and mortar fragments. Along the southern edge of the room were large chunks of rubble sandstone (300 x 300mm), broken sandstock bricks and fragments of stoneware pipe mixed in with the underfloor material. This provides evidence supporting a renovation and the replacement of the timber floors during its occupation which caused disturbance of the underfloor deposit. The deposit (066) was deepest in the centre of the room and around the fireplace. Unlike Room 1, Room 2 was rich with artefacts and was clearly the more lived-in room of the house. Soils samples were collected from the deposit (soil samples #13, 14 & 15 from sq B2, Spit 1). It is thought that due to the presence of the fireplace this was the original kitchen for the house. The larger underfloor deposits are found in kitchens.

Of the shell assemblage, 92% of all the shell taxa identified from the historic Blues Point excavation were from the underfloor deposit (066) of Room 2 and the dominant species was Sydney rock oyster which was mostly fragmentary.[145] The shell assemblage in context (066) is interpreted to provide evidence of mostly subsistence discard spanning the period of occupation of the house.[146] Other species of shell identified from the underfloor deposit (066) can be interpreted as aesthetically attractive or 'exotic' shells with the former including small periwinkles, Moon shells, Auger and Turrid shells, while Tiger cowry, Pearl shell, Scallop and Pearly Nautilus shells are often considered 'exotic' due to their distinctive physical features and association with reef and tropical habitats.[147] These more exotic shells may have been brought to the site from distant habitats such as coral reefs. The presence of attractive locally available shells and tropical 'exotic' shells suggests they may have been collected by children in the households.

As with the shell, 79% of the bone assemblage came from context (066) in Room 2. The most frequent remains (36.2%) were from fish and included two tail barbs from sting rays, a jaw fragment from a sparidae and a fragment of cranium from a red snapper. Two fragments of cuttlebone from cuttlefish were also identified.[148] Both the shell and fish bone demonstrate the importance of the marine resource at the site, and the variety of species utilised by the occupants of the house. Domestic mammal bones from context (066) were predominantly from sheep (30.3%), a high proportion of which were butchered and some were burnt to varying degrees. A few cattle bones (2.6%) were identified but domestic birds, rabbit and hare were represented. Rodents were also evidenced with a high proportion of bone fragments displaying rodent gnawing.[149] Not uncommon close to the foreshore and nearby movement of shipping.

A separate context number (069) was given to the fireplace fill in Room 2 which was also excavated with the subfloor deposits. The interior of the fireplace measured 1.4m x 540m. The deposit was 170mm deep and was excavated in three spits. The two upper spits were mixed grey sand and occasional yellow sand lenses, loosely compacted with a high charcoal

[145] Gibbs 2020: Section 3.1, Volume 2.

[146] Gibbs 2020: Section 4, Volume 2.

[147] Gibbs 2020: Section 4, Volume 2.

[148] Roberts 2021 Bone Report: Section 3.1.2.3, Volume 2.

[149] Roberts 2021 Bone Report: Section 3.1.2.3, Volume 2.

© Sydney Metro 2018

concentration. The lower spit came down onto construction debris (075). The fill was (100) per cent wet sieved and contained bone, nails, ceramics, glass and metal artefacts.

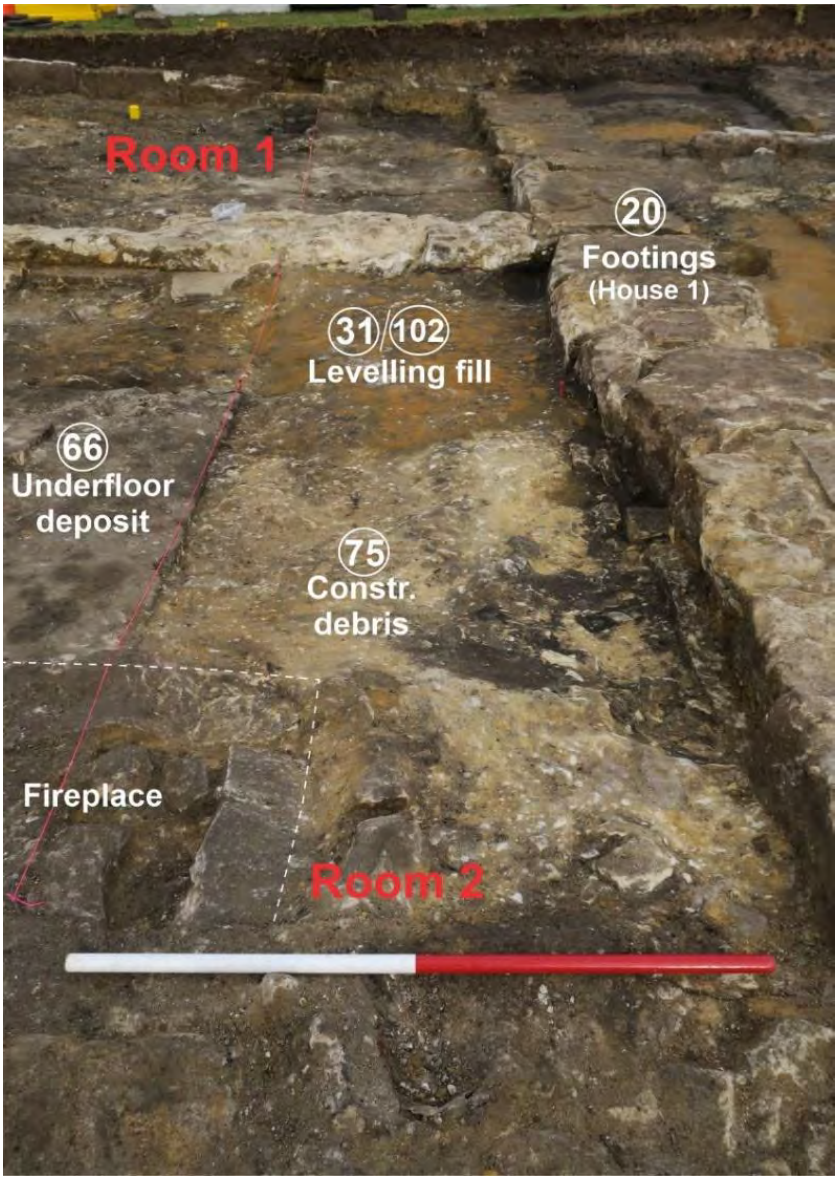


Figure 4.109: Removal of underfloor deposit (066) from the northern portion of Room 2 (grid squares A1, A2, A3). Below the underfloor deposit was pale yellow construction debris (075) and orange-yellow pre-house levelling fills (031, 102). View to west, scale 1m. IMG_9830.

© Sydney Metro 2018

Figure 4.110: Detail of the fireplace in Room 2, House 1 after the fireplace fill (069) was removed in spits. View to west, scale 1m. IMG_9871.

4.3.6.2.3 House 2, Room A

A small area of occupation deposit was found in the northern part of Room A abutting the north wall and directly west of the fireplace (**Error! Reference source not found.**). The deposit (082) was dark brown sandy silt with some clay mottling covering an area 370 x 960mm and varying in depth from 2-70mm. It contained small fragments of machine-made brick and artefacts included ceramics (tea cup fragments), pins, bone nails and shell. This is discussed in Section 5.4.3.

4.3.6.3 Addition of Services

With the installation of the sewer line to the North Sydney area from the 1890s there was clear evidence of houses within the study area being plumbed into the mains. A large salt glazed clay pipe (012) ran in an east-west direction cutting through the brick foundations (006) of the north additions to the houses (**Error! Reference source not found.**, Figure 4.111). The pipe was 180mm in diameter with cement used to seal the collars. The trench for the pipe was 500mm deep below the top of the brick footings (006) cutting through the lower courses of brick and was 300mm wide. It also cut into the bedrock, presumably to achieve an adequate fall (Figure 4.111). The same pipe was evident further west cutting the brick foundations (022) associated with Room F to the north of House 1. The extent of this pipe further to the east was not exposed.

A number of clay service pipes (064) ran north-south in the yard area between House 1 and House 2 (Figure 4.112). These pipes branched off from the larger east-west pipe (012) and were 130mm in diameter and bonded with the same cement mortar was found on pipe (012). The trench was 430mm wide following a similar alignment to a possible natural gully or channel (108) in this part of the site. Although the two pipes were within one trench, they were servicing separate houses.

Figure 4.111: East-west service pipe (012) cutting through the brick footings of Room A, House 2 and into the bedrock, within TT 03. View to west, scale 1m. IMG_9504.

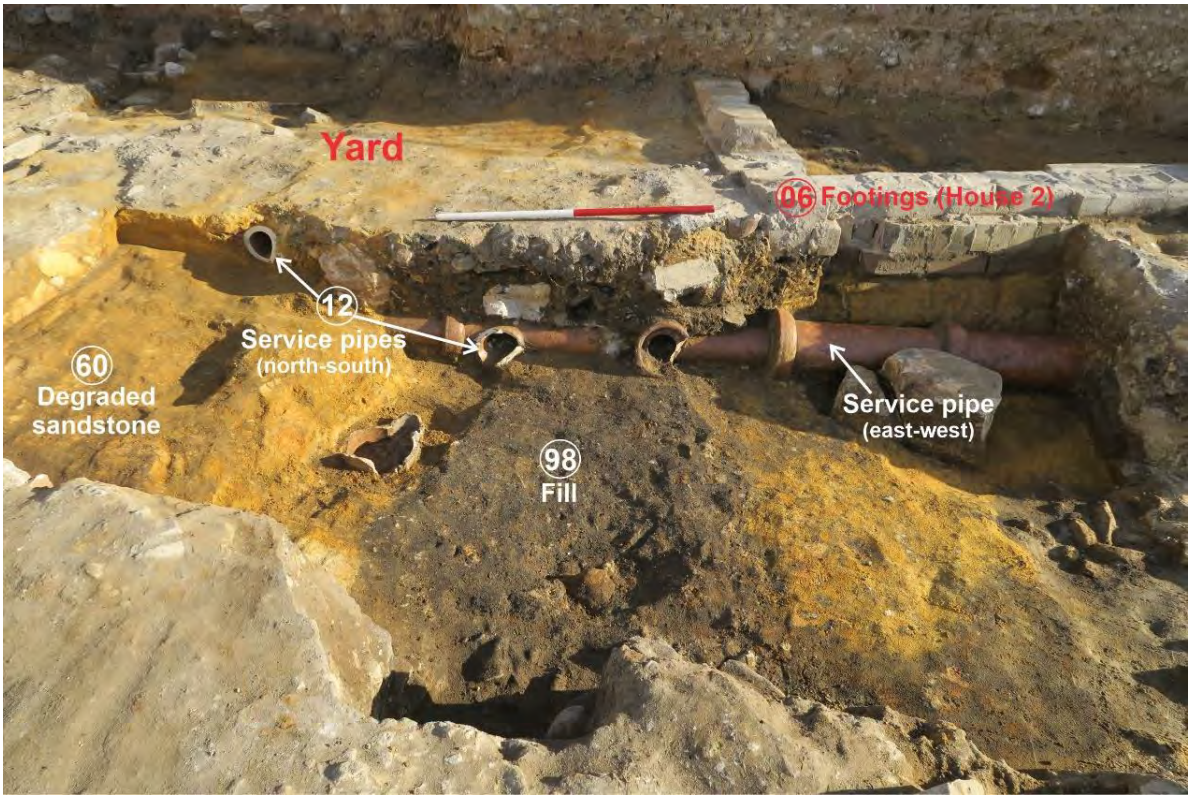


Figure 4.112: East-west service pipe (012) and north-south pipes (064) in the yard area between House 1 and House 2 (within TT 08). View to north, scale 1m. IMG_9974.

A service trench with an unusual ceramic pipe (327) was found below (south side) the north retaining wall running east-west along the edge of the access roadway to Stevens' jetty (**Error! Reference source not found.**). The pipe trench (076) cut through the levelling fills (308, 309) above the cobbled road surface (311) and continued into the top of the natural deposits. It initially became visible in the area of the brick repair (071) to the retaining wall

and continued to the east with c.5m of it exposed in length. The ceramic pipe (185mm diameter) was drilled with two rows of small circular holes running the length of the top of the pipe (Figure 4.113). These holes were 95-120mm apart. The glaze on the pipe was visible within the holes indicating they were intentional and part of its manufacture and not a later addition. Each segment was joined with a firm yellow-orange sand packed in around the collar. These holes apparently were made to assist with surface drainage or runoff from higher up the slope to catch excess water and help prevent erosion of the roadway. Above the pipe and in the backfill of the pipe trench was a loose, gravelly purple-red industrial waste fill (320) with frequent slag inclusions (<30mm). This would have aided drainage and free flowing water.

Figure 4.113: Segment of pipe with holes (327) running along the access road below the north retaining wall. Scale 500mm. IMG_1366.

4.3.6.4 Maritime Infrastructure Upgrades

4.3.6.4.1 Upgrades to Access Road

The 1943 aerial shows the access road built by Stevens in the 1880s down to the jetty and foreshore was still extant (Figure 2.27. Figure 5.84). During excavation different phases of

road surface and ground raising events were exposed along this roadway (Figure 4.96). The earliest cobbled surface (311) is discussed in Phase 4.2. Above the cobbled surface and between the retaining walls were two fills used to raise and level the ground for a later bitumen surface. The lower fill (309) was coarse grained sand with frequent rubble sandstone inclusions (c.150 x 150mm in size). The fill was 180-200mm deep. Directly above (309) and below the bitumen was a finer black-brown silty sand (308) with iron staining and small sandstone inclusions (<20mm), 100-130mm deep (Figure 4.96). Both of these fills were cut by the pipe trench (327) (Figure 4.113). Sealing the fills was a road surface (307). The top 10-20mm was compact asphalt sitting on 40-50mm of coarse blue aggregate road base. Directly above the asphalt surface were imported bulk levelling fills (315, 317) suggesting this surface remained exposed during the 1940s and 1950s until the site was changed into a public park.

4.3.6.4.2 Addition to South Retaining Wall

Wall (324) is discussed in Section 4.3.5.4.3 .

4.3.6.4.3 Seawall/ Retaining wall (north-south)

In the southwest corner of the site, a row of sandstone blocks were incorporated into the current footpath on the eastern side of Blues Point Road. Excavation of part of the footpath (to create a new access to the site) showed that the sandstone blocks were the top of an earlier seawall or retaining wall. This wall (328) ran for a distance of c.22m (Figure 4.87, Figure 4.115, Plan 9, Volume 3). The wall curved to the southeast where it eventually terminated and formed a right angle with a contemporary east-west wall. Wall (328) and the short return wall were both evident on the 1943 aerial (Figure 2.29). A 1926 survey plan (Figure 2.22) shows a similar change to the southern end of Blues Point Road to accommodate access to the vehicular ferry dock. The 1926 plan is annotated with a shed in the corner of the study area and concrete kerbing along the street front. The upper course of wall (328) was a later addition and incorporated into the modern-day footpath. The sandstone blocks of the upper course were all smooth, well-dressed rectangular blocks ranging in size from 520 x 610 x 290mm to 110 x 620 x 290mm. The blocks were capping stones, rounded along the western edge (kerb edging) (Figure 4.116, Figure 4.117). The wall/kerb was 620mm wide. A series of square postholes (c. 2.45m apart) were cut into the upper course. The postholes measured 180 x 190mm while the pipe cut was 120 x 120mm and were now filled with concrete. Similar sized square fenceposts were found cut into the bedrock of the north retaining wall (061).

The second course of wall (328) was slightly wider (700-730mm). These blocks were shaped and squared but not dressed. Tool marks were visible on the sides and lifting holes on the sides and ends for carrying the blocks. The upper two courses of the wall included a lot of hard grey cement between the stones, suggesting they had been reset or repaired to ensure stability. The third course of the wall was even wider, extending out 160mm beyond the second course and the stones were also different, being large and unevenly cut blocks. There was no cement (mortar) present. The 1960s bulk levelling fills (329) abutted the wall (Figure 4.114, Figure 4.115). At the north end the wall joined an earlier wall (333, Phase 4) while at the southern end it continued towards the vehicular ferry dock joining an east-west return wall. Only a small segment (700mm wide) of this east-west return was found below the footpath during monitored machine excavation of a service trench in November 2018 (Figure 4.118). The curved wall (328) with a right-angled return to the east is evident in the 1943 aerial photograph (Figure 2.29).

© Sydney Metro 2018

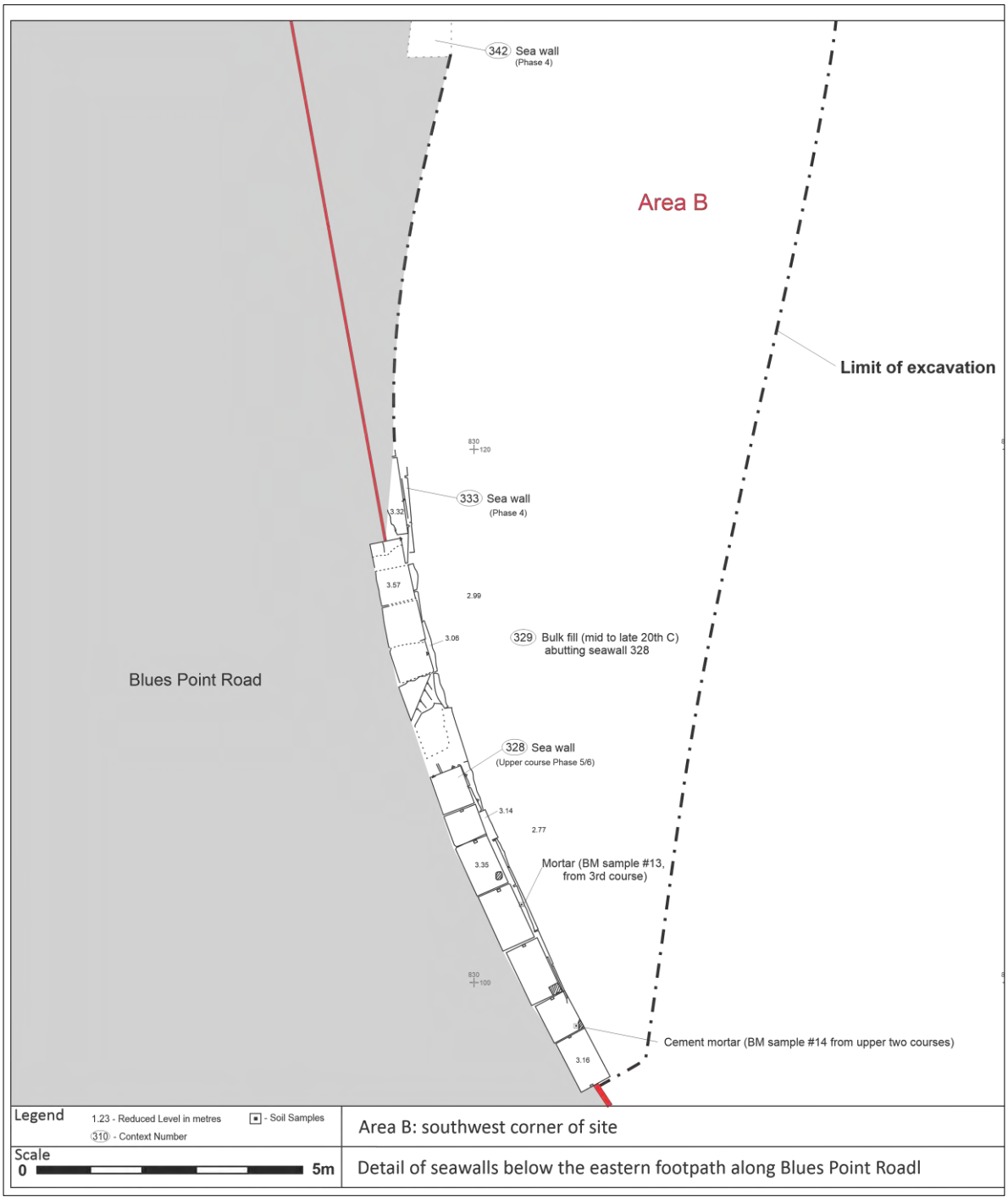


Figure 4.114: Detail of the curved wall (328) which formed the edge of the footpath of Blues Point Road. Extract from Plan 9, Volume 3.

Figure 4.115: Different phases of sandstone seawall along the edge of Blues Point Road. The upper row of dressed blocks formed the edging of the present-day footpath and was bonded with concrete to the lower courses. The grey sandy rubble fill abutting the wall to the east is context (329). View to northwest, 1m scale. DSC_4921.

Figure 4.116: Wall (328) formed the edge of the kerb along the Blues Point Road footpath. Small square postholes (arrows), from an earlier fenceline were evident along the sandstone blocks, now filled with concrete. View to south, scale 1m. IMG_1323.

Figure 4.117: Upper courses of the seawall (328). The top row of dressed blocks was built into the footpath. View to east, 1m scale. IMG_1393.

Figure 4.118: Eastern return to wall (328) within a modern service trench. The walls formed a right angle. Both walls contained large dressed sandstone blocks. View to south, scale 1m. IMG_5720.

4.3.7 Phase 6: 1940s-1960s Demolition of Houses and Ferry Wharf

4.3.7.1 Overview

An aerial photograph from 1943 confirms the demolition of Stevens' houses with the vacant land overgrown with bushy vegetation (Figure 2.29). North Sydney 'Rates and Valuation Books' indicate that the house or 'cottage' at No 1 Blues Point Road was demolished in 1942, or soon after, with only a stone wall remaining.[150] The rates also show the adjacent site with a workshop (demolished 1942-43), thought to relate to the galvanised iron structure on the north eastern corner of Stevens' western part of lot 10, east of the houses (Figure 2.28). No

[150] North Sydney Council Rates Schedule.

evidence of this structure was found during test excavations in that area. The retaining walls and access road to Stevens' jetty were still extant in 1943 but not visible on the 1949 aerial (Figure 2.30). Sheds on the reclaimed part of the allotment were still extant in 1943 but were not the same sheds as surveyed on the 1891 plan and shown on the early 20th-century photo (Figure 2.27). The use of the study area from the late 1940s to the 1960s is not known but might be linked to building works or to a building material storage depot or salvage yard. Owners at this time include the Harbour Land and Transport Company Limited and the Sydney Harbour Trust.

Archaeological evidence from this phase mostly relates to demolition fills within the footprint of the stone houses and later additions. Demolition debris often provides information on building materials and finishes, including plaster types, wall and floor tiles and paint colours used within the houses. It can also contain occupation-related artefacts from the occupants. Three small rubbish pits were also excavated at the rear of House 1 associated with this later phase and likely post-date the demolition of the houses along with some yard fills.

4.3.7.2 Demolition of Houses

All three houses were demolished down to ground level c.1942. Most of the footings remained intact, with few modern impacts to the site after that date (Figure 4.24). Rubble from the houses was pushed into the sub-floor spaces of a number of rooms and also covered the surrounding footings. During excavation where the demolition material was found within a room it was given a separate context number and recorded individually. Separate numbering was done for ease of recording and to ensure any significant artefacts could be located within a particular room. The demolition fills from each different room are recorded in detail in Table 4.3. Not all rooms had demolition debris present, there was no demolition debris recorded in the front rooms (Rooms 3 and 4) of House 2 and House 3 or the brick additions of House 1. Contexts numbers (025 and 038) were given to the general clean-up within the footprint of the front verandahs but there was little demolition fill in these areas. Some of the artefacts from the demolition material give an insight into the finishes in the houses.

Table 4.3: Summary of demolition fills within Houses 1, 2 and 3. *DP brick =dry-pressed brick.

House	Room	Context	Description	Depth	Samples
1	1	019	Compacted mustard-yellow sand and stone crush with DP brick, mortar and slate inclusions.	250mm	#6, #7
	2	026	Compacted mustard-yellow sand and stone crush with DP brick, mortar and slate inclusions.	c.150mm	-
2	A	011	Moderately compact light brownish-grey sands inclusions of lime mortar, DP bricks, stone rubble, fireplace rubble	40-150mm	-
	C	016	Moderately light grey-brown sandy loam with yellow mottling, DP brick inclusion	80-150mm	
3	B	011	Moderately compact light brownish-grey sands inclusions of lime mortar, DP bricks, stone rubble, fireplace rubble	40-150mm	-

© Sydney Metro 2018

The demolition debris in the brick additions (Rooms A and B) to Houses 2 and 3 were given one context number (011) as we were unaware there was a partition and two houses. The demolition fill was quite shallow, 40-150mm deep, and a moderately compacted light greyish-brown sand with occasional yellow sand mottling inclusions of grey sandy lime and cement mortar (Figure 4.119). Although this fill was shallow there were some rubble stone pieces and broken machine-made brick fragments within the fill particularly within the fireplaces. The same demolition material was found in Room C but was recorded as context (016) (Figure 4.119). Only a small corner of this room was within the limit of excavation. Only four artefacts were recovered from the demolition debris (016).

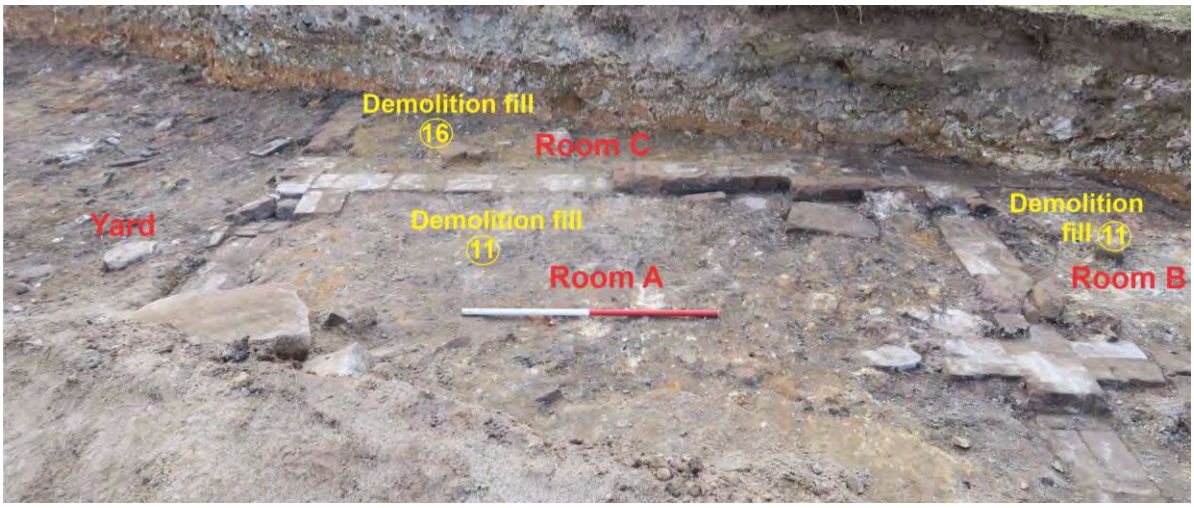


Figure 4.119: Demolition fill (011) in Rooms A and B and demolition fill (016) in Room C. View to north, scale 1m. IMG_9463.

Within the front rooms of House 1 the demolition debris was more abundant and averaged 120-250mm in depth throughout both rooms. It was recorded as context (019) in Room 1 and context (026) in Room 2 but was the same material. A mix of compacted mustard-yellow coloured sand, crushed sandstone, stone rubble of varying sizes and both sandstock and machine-made bricks (Figure 4.120). Mortar fragments were also common. A sandstock brick (236 x 111 x 71mm) with a rectangular frog (c.1860s-1870s) had pale yellow-brown sandy lime mortar within the frog and was similar to the bricks used in the floor support pads (072). Fragments of slate were also common in the demolition fill including roofing slate, which was often used for damp proof coursing and dressed slate pieces which may have come from a fireplace mantle (Figure 4.121). Samples of slate and mortar were collected (BM samples #6, #7). There were few artefacts within the demolition debris and there was no evidence of tiles, painted plaster or finishes to the houses.

© Sydney Metro 2018

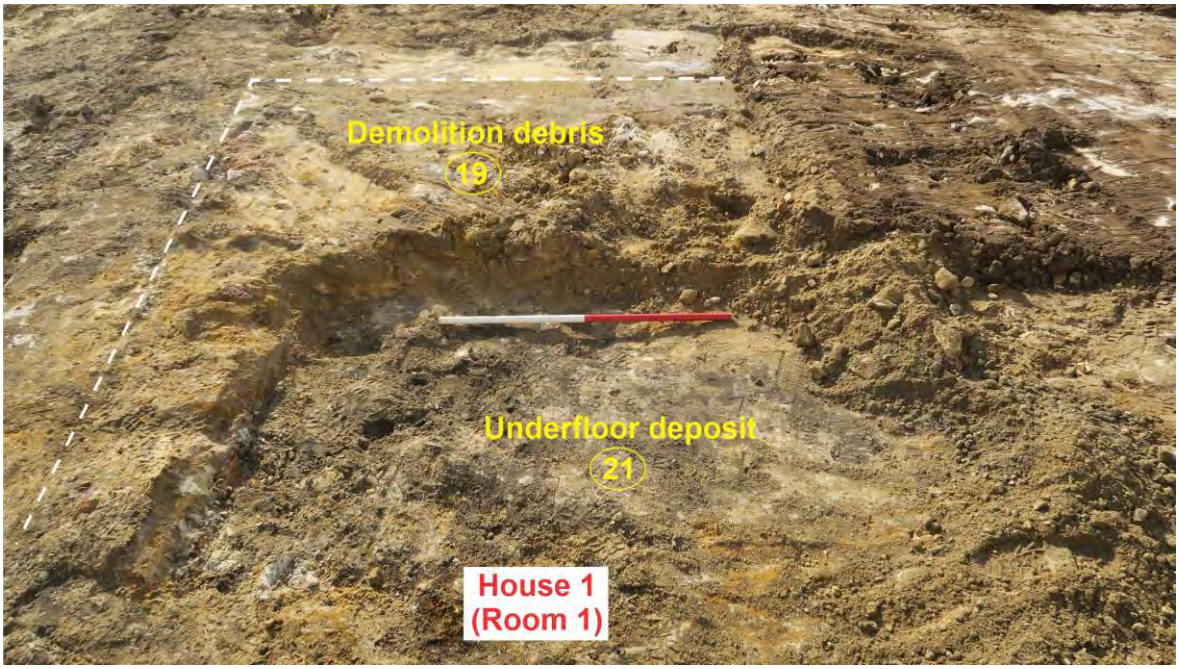


Figure 4.120: Working shot during machine excavation of demolition debris (019) from Room 1, House 1 which sat directly above the underfloor deposit (021). View east, scale 1m. IMG_9532.

Figure 4.121: Detail of the dressed slate fragments recovered from the demolition debris (019) in Room 1. The thickness and finish to the slate suggests it may be from a mantlepiece. Scale 1m. IMG_9534.

4.3.7.3 Post-Demolition Fills and Pits

A number of fills were found in the northwest corner, above the brick footings of House 1 and 2 yet below the bulk ground raising fills of the 1960s dating these fills to the use of the site post-demolition of the houses (c.1942) up to the 1960s. Each of the fills were quite similar dark grey-black sands but were given different numbers in different locations. Context (008) was a loose blackish-brown silty sand above the bitumen path (007) at the rear of House 1 which may have accumulated on the path after it was no longer used. It was 10-100mm deep and contained some glass, ceramic artefacts all dated to the latter 20th century. Above (008)

and extending eastwards was a bulkier dark brown sandy mixed fill (015) with some stone rubble and dry-pressed brick inclusions (Figure 4.123). This fill covered the brick footing of Rooms E and F but petered out towards Rooms A and B. It was evident in the northern section of the site where it extended further to the north, beyond the limit of excavation (Figure 4.124) and was deepest in the northwest corner (350mm). In the yard area, between Rooms E/F and Room A, were pockets of black industrial waste fill (017) containing compacted chunks of cinder. It was not clear if these pockets of waste fill were remnant yard material from the late phase of occupation of the houses or a post-demolition event as they were directly below context (015).

Three rubbish pits (051, 053 and 055) were excavated in the northwest corner of the site within Room F (Figure 4.122, Figure 4.123). The fills and artefacts within these pits date to mid-late 20th century, confirming the pits post-dated the demolition of House 1, in particular the brick additions to its rear. Context (055) was a sub-circular pit with irregular sides and uneven base (530 x 460 x 200mm). It was filled with very loose dark brown silty sand (056) similar to the sandy fill (015) directly above it and contained modern plastic and glass. North of (055) was another small circular cut (051) which measured 400 x 350 x 180mm. Protruding out of the cut was a circular metal cylinder (230 x 240 x 220mm) that was still intact with a mixed brown and yellow sandy fill (052) packed around it. It appeared like the pit was intentionally dug to hold/dump this metal cylinder. The third feature (053) was quite shallow and overlying the degraded bedrock (060) along the northern limit of excavation (Figure 4.122). The shape was irregular measuring a maximum of 490 x 270 x 60-100mm and may have been a natural depression in the bedrock that was filled in with loose grey-black sandy cindery fill (054) similar to the overlying fill (017) which may have been remnant yard fill. The fill (054) contained some 20th-century glass and metal artefacts.

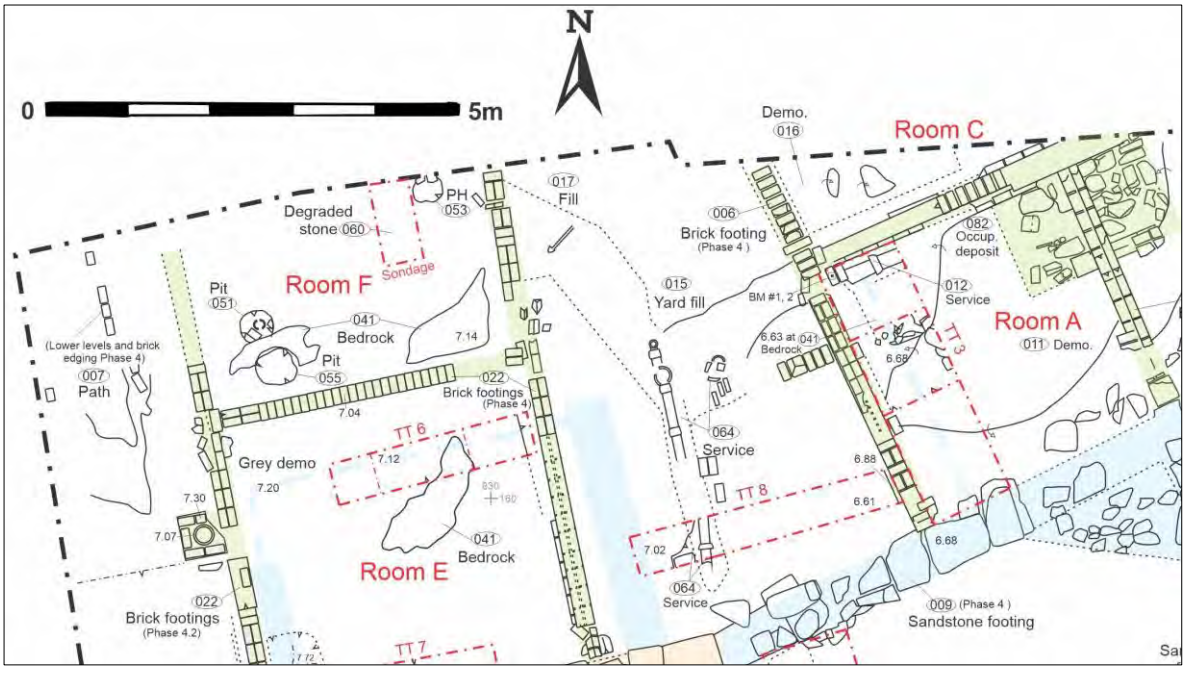


Figure 4.122: Pits (051, 053 and 055) within the footprint of Room F also yard fills between the brick additions to the houses. Extract from Plan 3.1, Volume 3.

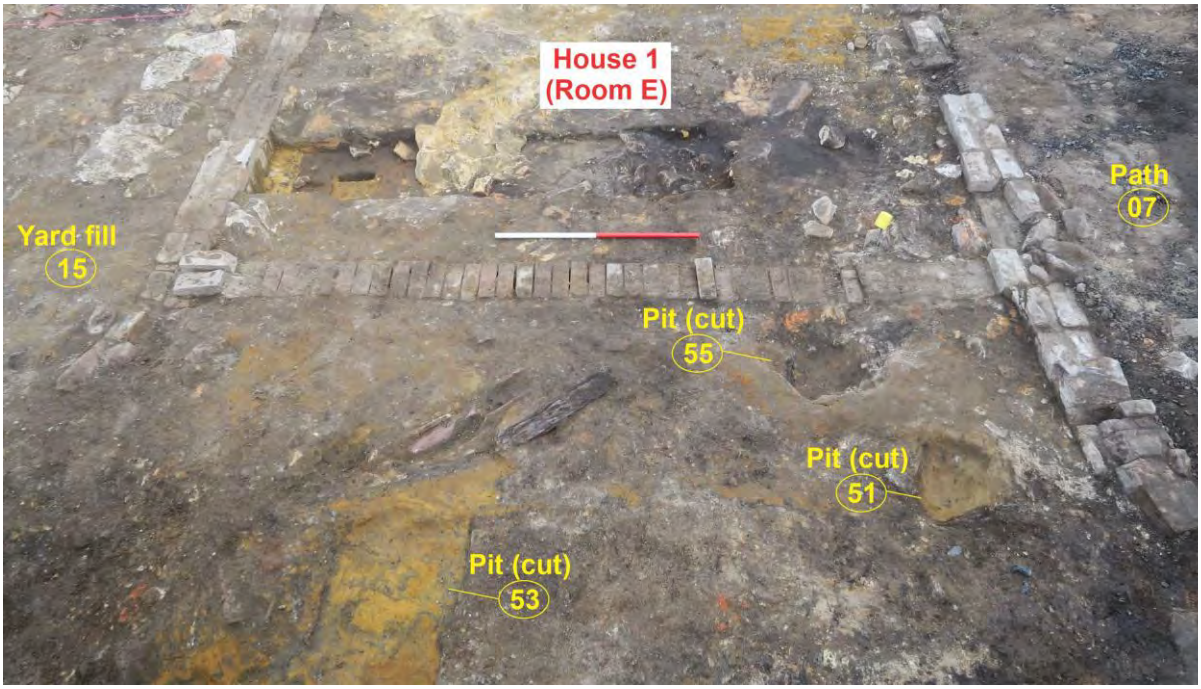


Figure 4.123: Phase 6 rubbish pits in northwest corner of the study area, House 1, Room E brick addition. View to south, scale 1m. IMG_9674.

4.3.8 Phase 7: 1960s-2018 Public Park

Phase 7 refers to the development of the site into a public park which began in stages from the 1960s onwards. The Cumberland County Council acquired the western portion of Lot 10 Section E and the reclaimed portions to the south in June 1960 following extensive co-ordination responsibilities for town planning in the County of Cumberland between 1945 and 1963.[151] During the late 1940s and 1950s the use of the study area is unclear but was most likely limited to a storage depot or salvage yard. The 1949 aerial (Figure 2.30) does not show any extant buildings on site but does show storage of large quantities of loose timbers. The vehicular ferry dock was also demolished by this time, as it had become redundant with the opening of the Sydney Harbour Bridge in 1932. In 1971 the State Planning Authority placed Lot 2 DP 230594 (a subdivision of the eastern part of Glover's Lot 10) under the control of North Sydney Council for use as a public park, reserve or recreation space. Council carried out site modifications and maintenance from this date. Other allotments in the reserve include Lot 1 DP 902933 and Lot 1 DP 1159898 (linked to Stevens' part of Lot 10 and reclaimed land), and areas of Crown Land. Between 1976 and 1977 Cliff Lane or Avenue was renamed Henry Lawson Avenue.[152] A bus shelter was built fronting the former Cliff Lane in 1984.

During the excavation program a number of mid to late 20th-century bulk fills were identified and recorded and are summarised in Table 4.4. The depths of these fills were greater towards the shoreline with the intention of reducing the stepped effect from the site and creating the gentle slope observed in the park scape of Henry Lawson Reserve prior to

[151] LPI schedule.

[152] NSW Government Gazette 23 Jul 1971, p2727; Sht 15, North Sydney Block Plans 1977, Stanton Library.

© Sydney Metro 2018

commencing works (Figure 1.3). Above the bulk fills was 200-300mm of mid-dark brown loamy garden soil (002, 319) covered with grass (Figure 4.124, Figure 4.125). Different context numbers were given to bulk fills in both Area A and Area B but the stratigraphy was similar across both areas (see Table 4.4). The modern fills were removed by machine excavation and 139 artefacts were collected during the machine excavation and clean-up process (context 301).

Table 4.4: Summary of mid-late 20th century fills directly above the archaeological remains associated with ground raising and levelling prior to the use of the site as a public park.

Context (Area A)	Context (Area B)	Type	Depth (mm)	Description
002	319	Garden soil	170-350	Grass turf and dark brown imported loamy topsoil
003	-	Levelling fill	250-650	Loosely compacted light grey-brown fill, contains broken concrete, sandstone., NW corner of site.
004, 057	315, 318	Bulk fill	200-1m+	Bulk ground raising fill, loosely compacted reddish-pink and orange sandstone crush with frequent stone rubble inclusions (up to 1m in length), occasion timber and concrete.
(similar to 003)	306, 329	Bulk fill	200-650	Mixed white grey and yellow sandy fill with frequent rubble stone, broken concrete and glass bottles in southwest corner of site abutting wall (328) and above seawall (333).
-	317	Localised fill	100-600	Black coarse silty sand with mid 20th-century artefacts, localised dump against north retaining wall
-	310	Fill/ accumulation	50-80	Mid-brown sand above gravel road surface, runoff or levelling fill.

© Sydney Metro 2018

Figure 4.124: Northwest corner of the study area showing the garden soil and fills in the south-facing section above House 1 post-1860s. These fills got a lot deeper towards the south and east, as the ground level sloped away from this corner. View to north, scale 1m. IMG_9450.

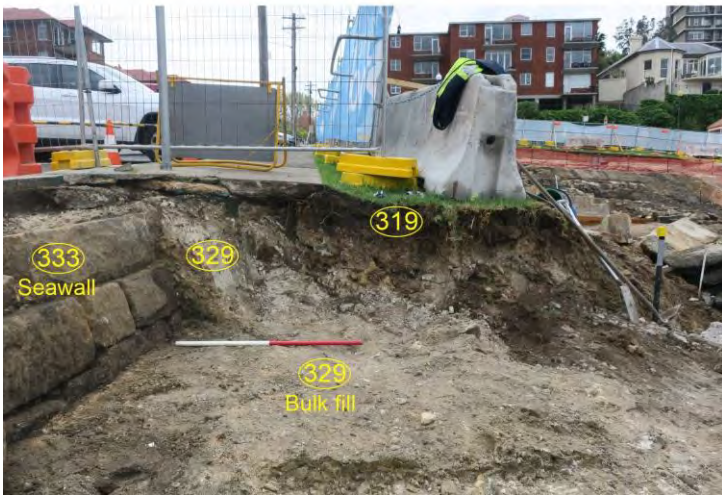


Figure 4.125: Excavation of the 20th-century bulk fills within the study area.

Top: Removal of fills (315 and 318) from the centre of the site above the retaining walls. View east. IMG_1242.

Bottom: Light grey bulk fill (328) above seawall (333) and extended eastwards. The garden soil was recorded as context (319). View north, scale 1m. IMG_1398.

© Sydney Metro 2018

Below the imported garden soil were two main ground raising fills. They were given different context numbers in each area. The uppermost fill (003, 329) was mixed whitish-grey sand and yellow sand with rubble stone, some broken pipes, broken concrete and timber pieces. In the southwest corner of the site this bulk fill (329) extended under the current footpath and covered an earlier seawall (333). During machining a large number of amber coloured beer and wine bottles were found in this fill (329) and marked “the property of the NSW Bottle Co Pty Ltd” with a 1968 date confirming the deposition date of this fill to the late 1960s or early 1970s. Other types of 20th-century refreshment bottles were also found and photographed but not retained (Figure 4.126).

The largest levelling fill across the site was a mixed orange and pinkish-red sandy fill that sat directly above the archaeological remains (Figure 4.125). The fill contained sandstone rubble of varying sizes with some boulders as large as 1.5m x 1m. It was only 250mm deep in the northwest corner of the site (004) but extended in depth as it continued towards the south (315, 318), (Figure 4.124). Within TT 01 the same two fills were found above a bitumen surface, a mix of loosely light grey sandy fill and a red-pink sandy fill both containing large rubble stones and were recorded together as context (306) (Figure 4.76). To the south of the north retaining wall was an isolated 20th-century fill (317). This localised fill or dump (317) varied in depth from 100-600mm and pressed up against the retaining wall in places and was above the c.1940s road surface (307). It was black silty sand with small sandstone rubble inclusions and contained whole brown beer bottles with 1955 dates, fragments of timber and rusted tin cans and may have been dumped while the site was used for storage or the beginning of backfilling to make a park. A similar localised sandy fill (310) was found in the northwest corner of Area B above the roadway to the jetty. The sand was fine and relatively clean and may just be a runoff accumulation from the slope above prior to the bulk levelling fill events.

The study area will return to being a public park again once the temporary civil works are completed for the Sydney Metro project.

© Sydney Metro 2018

Figure 4.126: 1960s bottles from the bulk ground raising fills, discarded on site. IMG_1378, 1385.

4.4 Summary of Results of the Archaeological Excavation

4.4.1 Main Archaeological Findings

Several historical construction phases from the 19th and early 20th centuries were identified buried beneath a thick layer of imported fill used to create the park/reserve from the 1960s (Section 3.3). The following section presents a summary of the main archaeological findings from each phase:

4.4.1.1 Natural Environment (Phase 1) and Landscape Modification

- The original shoreline consisted of a steep rock outcrops above the intertidal zone.
- Harbour sands in the intertidal zone were only exposed in a test trench (TT 01) as excavation through the reclamation fills in the southern portion of the site below RL 2.8m was not required for the civil works leaving potential for *in situ* archaeology in this southern area below the 1870s high-water tide mark.
- A natural soil profile was evident across the northern part of the site along with modified historic sands/topsoil.
- Pollen analysis of naturally deposited sands in the northwest corner of the site showed the prehistoric vegetation on Blues Point in 1788 or before British settlement at Blues Point was casuarina scrub/heath in which other species were rare.

© Sydney Metro 2018

- Historic artefacts and frequent shell inclusions were found in the modified sands associated with the sites early historic occupation (pre-1860s). The shell remains were all interpreted to be associated with the 19th century occupation either for consumption or use in mortars.
- A natural drainage channel/gully carved through the bedrock and ran north-south across the study area draining down towards the harbour.

Landscape Modifications

- Impacts of water movement resulted in modifications to the natural water channel throughout the occupation and development of the site to manage and redirect the flow of water. This included an L-shaped channel dug to the east of House 1 (Phase 3) to divert the flow of the water away from the house to the east. Also, two large retaining walls built across the flow path of the channel had to be strengthened with later brick repairs (Phase 4.2).
- Evidence of quarrying of the underlying bedrock shelves, to incorporate the bedrock into later structures including the retaining walls and the base of a weighbridge along Blues Point Road.

4.4.1.2 Aboriginal Occupation (Phase 2)

- A total of 459 cultural lithics were recovered during the Aboriginal excavations, notable as the assemblage was dominated by raw material types not available in the local area. The most frequent material type was silcrete (71%), and the few available age determinations suggest a date of between 5000 cal BP and 2400 cal BP.
- Six flint artefacts were identified, which are of particular interest as flint does not occur on the eastern coast of Australia, but was commonly used as ballast on ships coming from Britain or Europe in the historic period. The presence of flint shows Aboriginal visitation of the site during the early historic period, interaction with the early British colony and evidence for continuing traditional practices of Aboriginal people in Sydney post-1788. To date, this is the only known Aboriginal flint site on the northern side of Sydney Harbour.

4.4.1.3 Residential Occupation and Structures

Preserved in the northwest corner of the site were the sandstone footings of three small cottages. The earliest house (House 1) was built on the Blue Estate (Phase 3) in the 1840s-1850s by the Blue family, while two later houses were built by John Stevens in 1869 (Phase 4.1).

4.4.1.3.1 House 1 pre-1857 (Phase 3)

- The westernmost cottage (House 1) was a small two-roomed cottage and verandah on plan by 1857 but which may have been built in the 1840s and was part of the Blues Estate. The house was built in the northwest corner of the site on a rock shelf and shallow fills used to level the ground prior to construction. As the cottage was on land granted to William 'Billy' Blue it was probably erected by the Blue family but probably after the death of Billy in 1834. The Blues had lived close by in a separate house on higher ground (Figure 2.3). By 1867 the western part of this allotment (Lot 10, Section E) including the cottage, was purchased by John Stevens who in 1869 built two adjoining cottages (House 2 and 3).

© Sydney Metro 2018

- The early cottage had 2-rooms with a fireplace and a verandah to the south, offering views over the harbour. There was a large rock cut and partially stone-lined cistern at the front of the house (Figure 4.22 to Figure 4.24, Figure 4.37, Figure 4.39).
- Historic plans indicate and adjoining room/ lean-to along the eastern end of the house but no evidence of a room was found during excavation.
- East of the house was an 'L'-shaped channel, backfilled with sandstone rubble and used to redirect the flow of stormwater away from the early cottage over the rock shelf to the east.
- A deep circular cistern located partially below the front verandah cut into the bedrock and was contemporary with the construction of the house. Artefacts from the backfill of the cistern show a deposition date of early 20th century.
- A posthole with a circular postpipe, abutting the north wall of House 1, aligned with the location of a partition fence in the backyard of the house shown on the 1864 plan. Its function may have been to enclose small livestock (chicken or ducks). Faunal analysis also suggests chicken may have been kept on site.
- There was evidence to suggest the floors were replaced during the lifespan of the house with reused brick pads in place to support timber floors.
- Within both rooms of the early cottage were the remains of an underfloor deposit. This deposit was spatially excavated and 100% sieved. It contained artefacts typically associated with domestic occupation and use. The bone assemblage also showed evidence of rodent activity in the house. The eastern room with the fireplace contained the majority of artefacts.
- Analysis of the underfloor deposits contained artefacts indicating the presence of children in the house along with evidence of maritime activities, notably copper nails associated with boat building, suggesting the residents were possibly associated with the manufacture and repair of boats moored at nearby jetties and the foreshore. The underfloor deposits offer insight into the daily lives of the occupants. Most copper boating nails on the site were associated with a domestic context rather than with boat-building activities. Though it does indicate the availability of these maritime-related artefacts.
- Room 2 of House 1 contained an underfloor deposit (066) with a large quantity of miscellaneous or small artefacts and other items which fell through the floor boards. A MIC total of 4472 items were recorded (Table 5.11). This type of deposit builds up during the life of the house and for this reason the deposit is included in Phase 5. This underfloor included nine coins with date range of the first 75 years of the 19th century (Table 5.12).
- House 1 survived into the 1940s based on the date of artefacts phased to the later occupation phase of the house (Phase 5, early 1900s-1930s) although many of the items dated from the mid-late 19th century and accumulated throughout it's near 100-year occupation.

4.4.1.3.2 House 2 and House 3 c.1869 (Phase 4.1)

- After John Stevens purchased the western part on the study area in 1867, he developed the site for both residential and commercial use by adding two additional

cottages (Houses 2 and 3) adjoining the eastern end of House 1. All three houses were demolished c.1942.

- Aligned with the houses to the south was a stone retaining wall (referred to as the north retaining wall). Its close proximity to the houses and the steep drop-off of the rock shelf necessitated some form of retention to provide a secure construction platform for erecting of Stevens' new houses and to prevent a landslide and the collapse of the buildings.
- House 2 and House 3 were built at the same time, their location on the edge of a rock shelf required the ground to be raised and levelled as the foundations were laid to ensure their stability. A number of levelling fills were imported to build up the steep slope to the south. Between the fills was remnant construction debris confirming the building of the footings and the stabilising and raising of the ground were contemporary events. Some of the southern footings were as deep as 1.7m.
- The two new houses were smaller than the early cottage, with each house consisted of a single room with a corner fireplace and a front verandah looking over the harbour (Figure 4.22, Figure 4.62, Figure 4.64). Minimal remains survived of the original stone addition in the rear yard. It was replaced by brick footings in the 1880s. There were no underfloor deposits within these original rooms suggesting tongue and groove floorboards and possibly floor coverings, both of which inhibit the build-up of such deposits.
- At this time Steven's land still had a sandy beach front which included a boatshed along the high-water mark which he leased to George Barrett. By the 1880s the beachfront had been reclaimed with Stevens extending his property between the high and low tidal marks.

4.4.1.3.3 Additions to Stevens Houses 1880s-1930s (Phases 4.2 and Phase 5)

- By the 1880s additional rooms were added to the north of all three houses. Machine-made brick additions (c.1890s) replaced earlier stone additions (1870s/80s).
- The brick additions associated with House 2 and 3 had back-to-back fireplaces. A small area of underfloor deposit was found in the brick addition to House 2, near the fireplace but not in any other rooms.
- No evidence of a fireplace was found in the House 1 brick additions. A north-south bitumen path with brick edging abutted the western wall of the brick additions.
- With the installation of the sewer line to the North Sydney area from the 1890s there was clear evidence that the houses within the study area were plumbed into the mains. A number of ceramic pipes cut through the brick additions and ran through the yard area between House 1 and House 2.
- The *Sands Directory* (1915-1933) lists a number of male and female tenants who were thought to be linked to the study area along the corner of Blues Point Road and Cliff Lane although they cannot be tied specifically to a particular house or work premises. The occupations of these tenants included a launch proprietor of Langford's Boat Shed, a blacksmith and a marine engineer.

© Sydney Metro 2018

4.4.1.3.4 Demolition of Houses (Phase 6)

- An aerial photograph from 1943 confirms the demolition of Stevens' houses with the vacant land overgrown with bushy vegetation (Figure 2.29). Demolition fills were found within the footprint of House 1 and in the brick additions to House 2 and 3.
- Within the demolition fill were machine-made bricks, fragments of mortars and plaster, roofing slate (also used for damp coursing) and broken pieces of dressed slate, possibly from a fireplace mantle.
- The use of the study area from the late 1940s to the 1960s is not known but might be linked to building works or to a building material storage depot or salvage yard. Owners at this time include the Harbour Land and Transport Company Limited and the Sydney Harbour Trust. There were no remains from this period.

4.4.1.4 Land Reclamation and Maritime Activities (Phase 4.2)

- Stevens' houses were positioned a considerable distance from the low water mark which provided an incentive for reclamation along the Lot 10 waterfront boundary. By the 1880s the southern boundary extended below the high-water mark and included a pile jetty which extended from the shoreline into the harbour. From c.1885, Stevens operated as a timber merchant from the site and is thought to have been transporting timber and fuel from the wharf to the southern side of the harbour. The timber yard operated near the pile jetty. Stevens never lived on this property.
- Bulk reclamation fills were found in the southern portion of the site (Area B) below the 19th-century high water mark. A second retaining wall (south retaining wall) was constructed c.6.5m to the south of the north retaining wall, most of which was built on top of reclamation fills. Bulk sand and rubble reclamation fills were recorded at RL 2.8m but were not excavated below this depth. Very few artefacts were observed and recovered from these bulk fills due to its limited excavation. There is potential for *in situ* archaeological remains in this southern portion of the site below RL 2.8m.
- At their western end both retaining walls were incorporated into bedrock. Between the two retaining walls were a number of compacted surfaces forming an access road from Blues Point Road to Stevens pile jetty and waterside sheds/stores. This access road was in use up to the mid-20th century and was shown on the 1943 aerial photograph. The retaining walls and access road to the jetty, separated the residential part of the site in the north from the commercial activities in the south.
- Later modifications and repairs were made to both retaining walls to repair weaknesses in the structure by water movement. The location of these repairs related to the course of the natural channel which collected stormwater and then flowed into the harbour. Repairs to the retaining walls were brick walls keyed into the earlier stone walls.
- Structural elements of a small weighbridge were found positioned along the western boundary of the site adjacent to Blues Point Road and at the entrance of the access road to Steven's pile jetty. This weighbridge was cut into the bedrock and was annotated on the 1891 plan (Phase 4.2).
- Remains of different phases of seawalls were found along the western edge of the site and corresponded with structures on historic plans. The changes in wall alignments reveal how as more land was reclaimed southwards in the late 19th century and early 20th century the position of the seawall would inevitably have to be

© Sydney Metro 2018

adjusted. New sections of retaining walls were added to existing seawalls in the later 19th century to allow for new structures to be built on the higher reclaimed land. Further alterations to these walls took place in the early 20th century and were evident below the present-day Blues Point footpath near the entrance to the site.

4.4.1.5 Public Park (Phase 7)

In 1971 the site was placed under the control of North Sydney Council for use as a public park, reserve or recreation space. Between 1976 and 1977 Cliff Lane or Avenue was renamed Henry Lawson Avenue. Deep bulk sandy rubble fills were brought in to raise the ground for the construction of a public park, removing the stepped landscape and creating the gentle slope observed in the park scape of Henry Lawson Reserve prior to commencement of civil works. The study area will return to being a public park again once the temporary civil works are completed for the Sydney Metro Project.

© Sydney Metro 2018