WBAP Heritage Impact Statement

PART 2

3.4 Marine and Land Archaeology

3.4.1 Scope

This analysis refers to the archaeological studies and assessments conducted in the Walsh Bay Art Precinct and analyses and highlights the areas of relevance. A Complete report is attached in Appendix B.

3.4.2 Evolution of the Walsh Bay Shoreline

The following historical overview has been summarised by Clive Lucas in the *Walsh Bay Precinct Conservation Plan - Archaeological Assessment,* August 1997.

Phase 1 - Establishment (1788-1830s)

Phase 2 - Expansion (1830-1870s)

Phase 3 - Consolidation (1870-1900)

Phase 4 - Government Administration (1900-1980s)

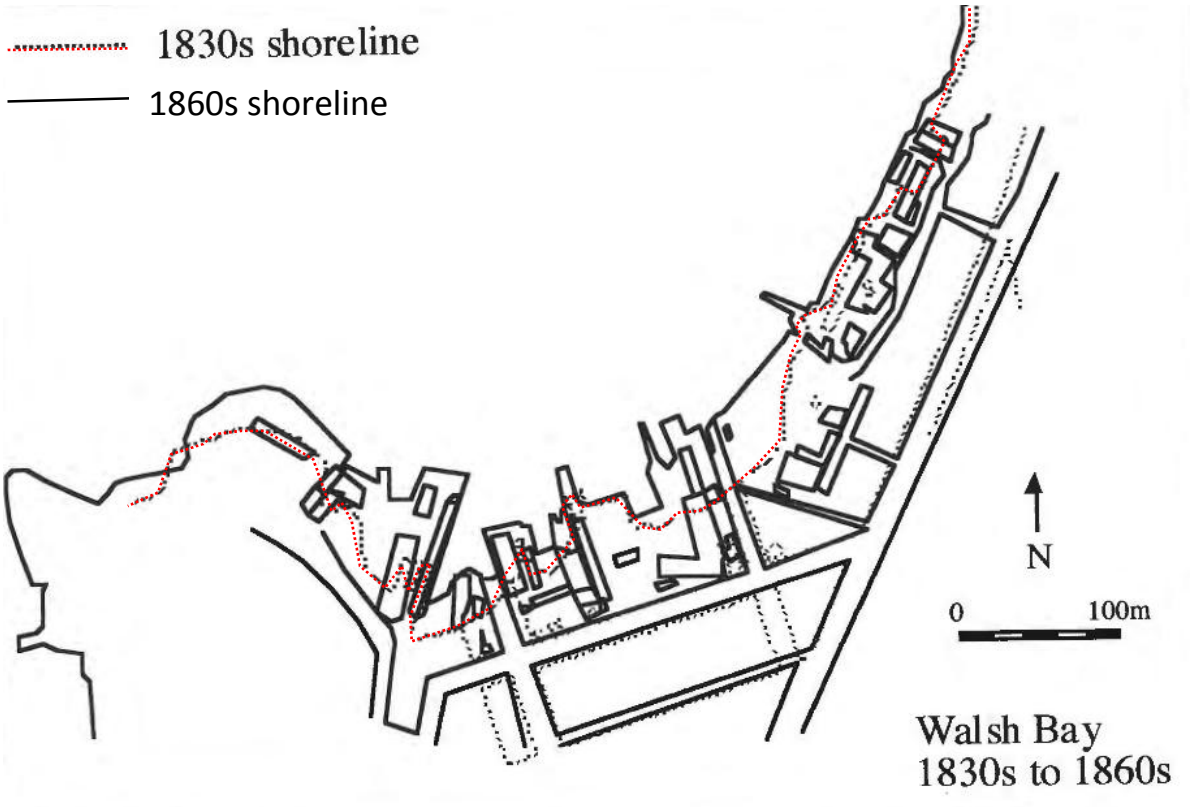


Figure 44: Walsh Bay 1830s to 1860s. From *Walsh Bay Redevelopment: Maritime Archaeological Assessment of Wharves 6/7 & 8/9,* by Coroneos, September 1997.

Phase 1 - Establishment (1788-1830s) - Based on Harper's plan of 1823

By this comparatively early date the foreshore of the area between Dawes Point and Millers Point has been modified to make a small number of longshore wharfs and jetties. A number of buildings, probably associated with the maritime trade, have also been built. Streets formed by this stage included Pottinger, Windmill, Kent and Lower Fort Street. Some building (probably residential) were located facing Windmill Street.

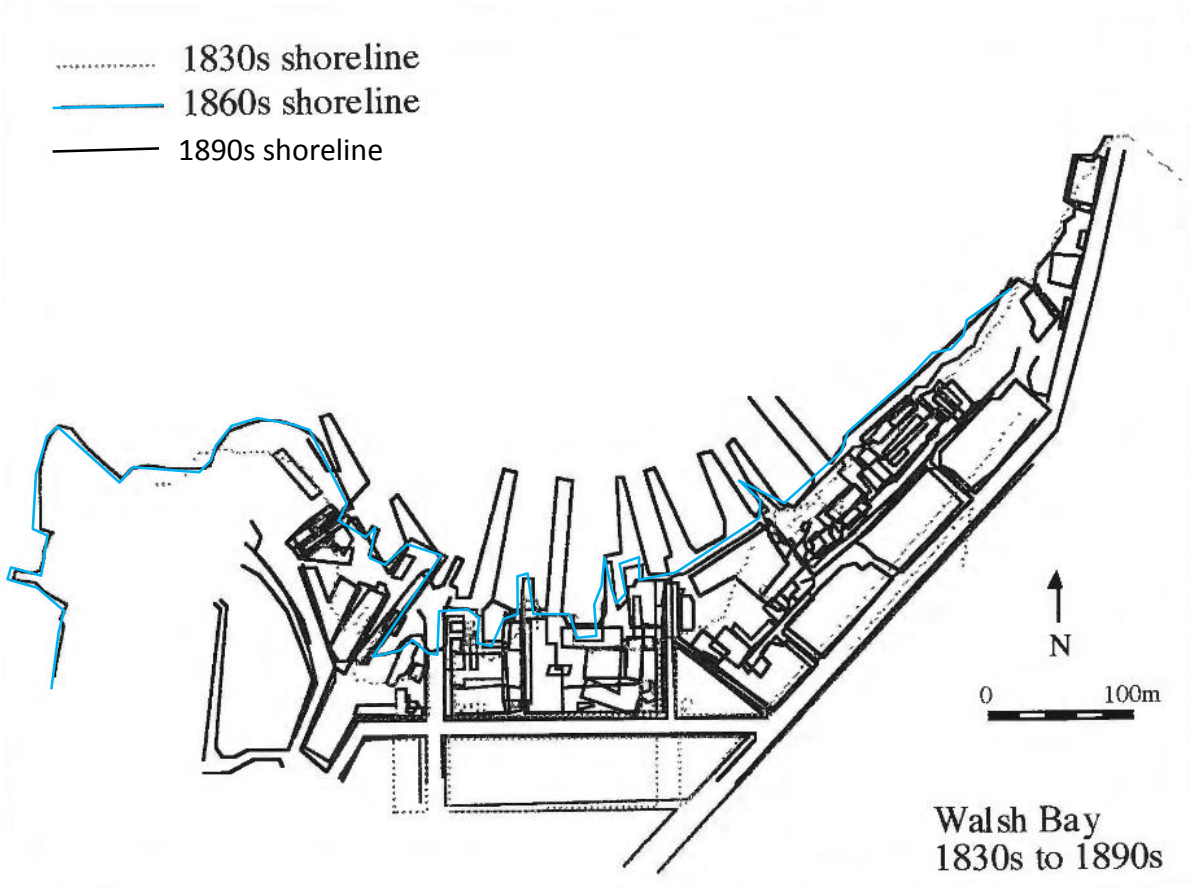


Figure 45: Walsh Bay 1830s to 1890s. From *Walsh Bay Redevelopment: Maritime Archaeological Assessment of Wharves 6/7 & 8/9,* by Coroneos, September 1997.

Phase 2 - Expansion (1830-1870s) - Based on the City of Sydney Trigonometrical Survey of 1865

Full development of the area was by this phase practically completed, and the natural shoreline had been largely modified to maximise maritime potential of the place through significant capital investment in the form of wharves and warehouses. Probably associated with this development were the large number of street reserves leading from the main thoroughfares such as Windmill and Pottinger Streets to the wharf front areas. While the number of residential buildings had

increased, they were localised to a handful of areas such as Windmill Street, Lower Fort Street and Dalgetty Road.

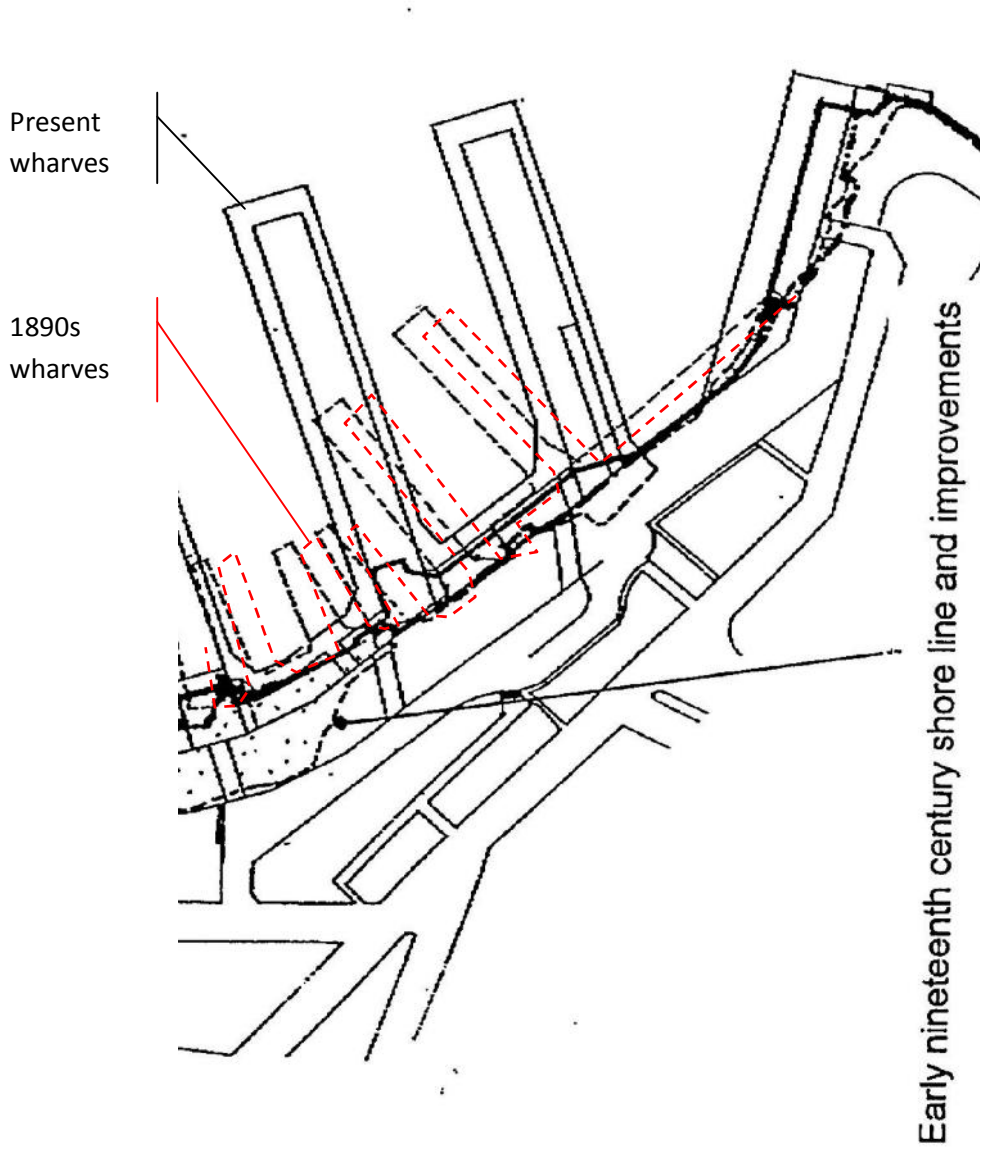


Figure 46: Overlay showing the relationship of the current wharves to the later nineteenth century wharves and shore, the early nineteenth century developments and the Sydney Harbour Trust wall. From *Archaeological Assessment Wharves 6/7 & 8/9 Walsh Bay*, by Wendy Thorp, 1997.

Phase 3 - Consolidation (1870-1900) - Based on the series of trigonometrical surveys made by the Public Works Department of the City of Sydney made in the late 1880s and early 1890s.

The plan indicates that within a comparatively short period of time further substantial capital investment had resulted in the large scale reclamation of the foreshore and construction of deep water jetties. The number and scale of warehouse type building had also increased. The demand for land to locate these new buildings had resulted in the rebuilding and enlargement of a number of the older structures. It is also evident that the natural topography (cliff faces) had been cut away to provide for additional suitable building sites. This was particularly so for the area between Pottinger Street and Dalgetty Road. Contrasting with this commercial development was the comparatively small number of new residential buildings which were generally located along Lower Fort Street.

Phase 4 - Government Administration (1900-1980s) - Based on the Sydney Harbour Trust drawing of 1922

The completion of the grand Sydney Harbour Trust works as implemented over a period of 16 years resulted in the Walsh Bay area very much as it remains today. Most of this development was associated with the improvement of maritime facilities. Substantial new features were the creation of Hickson Road, (Lower) Pottinger Street, Towns Place and the jetties and shoresheds. Not all pre-1900 fabric however was removed with the retention of some warehouse buildings fronting Windmill Street and the residential buildings of Lower Fort and Windmill Streets and Dalgetty Road.

"Plans first appeared in 1877 to extend some of the wharves into deeper water a trend which culminated in the next century in the massive works of the Sydney Harbour Trust. The principal catalyst for this change came from the vast wealth penetrated particularly by wool. The reconstruction of the area allowed for new methods and styles of wharf building to be introduced to Walsh Bay. The catalysts for the change were the owners of Town's Wharf but major extensions were planned for the entire shoreline. The former was extended towards the west giving it a characteristic L-shape. Several buildings occupied the land side including a mast-maker's shed."

Wendy Thorp *Archaeological Assessment Walsh Bay Wharves 6/7 & 8/9*, 1997.

3.4.3 The Potential Archaeological Resource

The following is an extract of Wendy Thorp *Archaeological Assessment Walsh Bay Wharves 6/7 & 8/9*, 1997. The subject of this investigation was that part of Walsh Bay encompassing Wharves 6/7

and 8/9 being both piers and shoresheds. The report addressed the European archaeological potential of the subject area. Archaeological relics generally are defined by the Heritage Act of NSW as structures, features, soils and deposits and portable artefacts relevant to the non-Aboriginal occupation of NSW and which are fifty or more years in age. Analysing the study area the report states:

"It is likely that the study area will contain:

- Some remnant piling from jetties and wharves of the nineteenth century. More of the later nineteenth century wharves are likely to be found under the existing wharves as a maritime resource than as land-based artefacts.
- Some remnant building elements although these are likely to be minimal and far more disturbed than the more deeply placed piles.
- Extensive layers of fill used for reclamation purposes. This is likely to encompass both soils and waste rock as well as domestic and industrial wastes brought from throughout Sydney for the purpose. This is likely to be the most substantial archaeological evidence within the study area.
- Some fragmentary evidence of the pre-European landscape might be found at depth.

It could be concluded that this resource will provide some evidence of the nineteenth century water-front but it is likely to have been substantially reduced and fragmented and, as such, its ability to more accurately document this area and its several activities has been compromised by the degree of destruction brought about, particularly, during the early years of the twentieth century."

Cultural Significance

"The potential archaeological resource associated with Wharves 6/7 and 8/9 at Walsh Bay contains evidence of those works and processes which were the principal catalysts for the development and prosperity of this part of Sydney and, by association, those factors which were important to the well-being or otherwise of Sydney especially during the boom years of the later nineteenth century and the plague years of the early twentieth century. The current appearance of the district owes much to the works undertaken by the Sydney Harbour Trust in association with the remodelling of these wharves. The wharves were associated with some of Sydney's most influential traders and companies and were one of the principal sources of employment for the local community. The many wharves built in this area are likely to demonstrate a diverse range of changing technologies and, in this as

well as their possible demonstration and documentation of the immediate environment, the archaeological evidence is a valuable scientific resource for the nineteenth century landscape. This resource is representative of a class of items located in Sydney and most ports in nineteenth century Australia. It should be noted, however, that the value of this potential evidence and its ability to realise it significance is likely to be severely compromised by the degree of disturbance and demolition which has occurred within the area making it, at best, a fragmentary resource."

Management

"Application for an Excavation Permit will need to be made to the Heritage Council of NSW prior to the commencement of any work in this area. Archaeological work will require monitoring and recording of all significant deposits, features and artefacts."

Status of the Site

"The wharves and the land surrounding them have been the subject of several investigations beginning in the later 1980s. In 1996 they were included in an archaeological assessment that encompassed the entire Walsh Bay area (Clive Lucas, Stapleton and Partners Pty Ltd 1996). The area also has been addressed by The Rocks and Millers Point Archaeological Management Plan prepared in 1991. This work determined that the entire wharf precinct from Wharf 1-9 and all of Hickson Road, Pottinger Street and Towns Place as well as several bond stores and other sites had archaeological potential. It recommended the preparation of a more detailed assessment prior to any work being undertaken in the area. The 1936 study and this assessment fulfil that requirement. At this time no physical investigation has been undertaken of possible archaeological sites within the study area. The closest site of archaeological investigation was the former Moore's Wharf which was partly investigated during 1978."

Wendy Thorp *Archaeological Assessment Walsh Bay Wharves 6/7 & 8/9*, 1997.

3.4.4 Factors Affecting Survival of Archaeological Evidence

All those sites and elements which are known to have occupied the waterfront area at Walsh Bay from its earliest years of development to the present day, does not take into account the fact that this was a cumulative development in a relatively small area of land.

"Jetties, walls, buildings and other features were built, demolished, built over or extended to make way for newer versions. It is a destructive as well as a constructive process; it contributes to the creation of a layered archaeological resource but also it reduces the evidence of each period having, usually, a patchwork of deposits, structures and artefacts from most phases. The following issues or processes need to be taken into account in determining what is most likely to remain within the ground in the study area."

Extract from Wendy Thorp Archaeological Assessment Walsh Bay Wharves 6/7 & 8/9, 1997.

"The activity that was perhaps the most destructive in terms of the integrity of the nineteenth century wharves and associated deposits is the large scale dredging that took place during and after the construction of the present day wharves. One of the major considerations that had to be taken into account when the Walsh Bay complex was being constructed was the water depth adjacent to the berths. The beginning of this century saw larger vessels coming into Sydney Harbour than ever before. The loaded draft of these vessels was in some cases 32 ft (1 O m) (Adams, 1915). This required a water depth in Walsh Bay of at least 35 ft. An 1836 plan of Sydney shows a water depth in Walsh Bay of 3 fathoms (18 ft or 6 m) (Plan of Sydney, 1836). Significant dredging must have taken place to bring the required water depth to over 32 ft. The Sydney Harbour Trust Annual Reports of 1911 and 1912 state that rock, clay and silt was removed from around the sites of Wharves 6/7 and 8/9. Most, if not all, of this dredging activity would have taken place in the waterways between, and towards the seaward end, of the wharves. It is unlikely that dredging took place on the site of the new wharves for the simple reason to allow for greater stability for the new piles. This statement is supported by two Sydney Harbour Trust plans drafted at the time of the construction of the wharves. Plan F5/14 showing a cross section at the landward end of Wharf 8/9 depicts a water depth on only 25 ft (7.6m) under the wharf. Plan F2/1 shows a cross section of Wharf 2/3 with a water depth of 11 ft (3.4 m). Therefore, it can be expected that the remains of the nineteenth century wharves and associated cultural deposits under the existing wharves would be more intact than those remains in the waterways between the wharves."

Extract from *Walsh Bay Redevelopment: Maritime Archaeological Assessment of Wharves 6/7 & 8/9,* by Coroneos, September 1997.

Reclamation

"From almost the beginning of European use of this area portions of the shoreline, the mud flats and rock ledges, have been covered over, fill has been added and jetties extended further into the bay. It has been a constant process culminating in the massive reclamation works undertaken by the Sydney Harbour Trust at the beginning of this century which included the excavation of part of the cliff face to provide a greater area for development. The latter emphasises the relatively narrow portion of land that was available for use even after nearly a century of development. The depth of cumulative reclamation essentially is the entire area between the cliff and the wharves; the earliest high water mark being slightly forward of the cliff. The superstructure of most of the later nineteenth century Wharves in now a maritime resource; only the very shore ends would be contained in the land at the edge of the bay.

The principal result of this process may have been the preservation in the reclaimed deposits of those elements. Remnants of jetties, buildings, the shoreline and associated deposits could be found under Hickson Road depending on how much survived the original process of demolition and excavation."

"It is inevitable that this period of development, and particularly the construction of the sea wall, greatly contributed to the removal or, at best, the great fragmentation of what traces remained of the nineteenth century landscape. The most likely survivors of this process were the jetty piles and those elements at greatest depth in the accumulated fill."

The Predictive Resource

"A predictive resource is an authoritative statement based on all available evidence of what is likely to be contained within the ground within a nominated area. In this case it maybe said that the archaeological resource will be that of the nineteenth century landscape and it is likely that the study area will contain:

- some remnant piling from jetties and wharves of the nineteenth century. More of the later nineteenth century wharves are likely to be found under the existing wharves as a maritime resource than as land-based artefacts.
- some remnant building elements although these are likely to be minimal and far more disturbed than the more deeply placed piles.

- extensive layers of fill used for reclamation purposes. This is likely to encompass both soils and waste rock as well as domestic and industrial wastes brought from throughout Sydney for the purpose. This is likely to be the most substantial archaeological evidence within the study area.
- some fragmentary evidence of the pre-European landscape might be found at depth.

It could be concluded that this resource will provide some evidence of the nineteenth century water-front but it is likely to have been substantially reduced and fragmented and, as such, its ability to more accurately document this area and its several activities has been compromised by the degree of destruction brought about, particularly, during the early years of the twentieth century."

Wendy Thorp *Archaeological Assessment Walsh Bay Wharves 6/7 & 8/9*, 1997.

3.4.5 Maritime Structures

"...remains of subaqueous piles may remain in the water area between Piers 2/3 and 4/5, Piers 4/5 and 4/5 and 6/7 and 8/9. Historic documentation is available for the finger jetty located between Pier 2/3 and 4/5 (the former Parbury's wharf), built c.1880s. It was 350' long with 60' beam. Some of the piles for this wharf were 120' in length".

"Advice received from the Heritage Office indicates that there is an known instance of a potential twentieth century wreck (the tug 'Undine') at Wharf 4".

"These sites provide a regionally rare insight into the pre-1900 European development of a maritime centre. It is likely that this site possesses archaeological potential in the form of revealing new information for the following:

1. early land improvement (reclamation c.1823-1890s)

2. nineteenth century wharf structure construction technology".

From Clives Lucas, *Walsh Bay Precinct Conservation Plan - Archaeological Assessment,* August 1997.

3.4.6 The Loss of the Tug *Undine*

"Early on the morning of 28 December 1936 whilst the steam tug Undine was slipping its moorings at Walsh Bay No.4 an explosion from the engine room literally blew the vessel to pieces (The Sydney Morning Herald, 29/12/1936). The Undine sank almost immediately."

> "It is unclear at present whether the wreck was raised or salvaged in situ. Given its position, next to a working wharf, its presence would have hindered any vessel moored alongside Beth 4. It is most likely that the vessel would have been removed, intact or in pieces. As the vessel was lost outside the study area no more research has been undertaken so as to determine its ultimate resting spot."
>
> "The vessel has a registered tonnage of 37 tons net (54 tons gross). It measured 64.7 ft (19.7 m) in length, 15.5 ft (4.7 m) in width and 9 ft (2.7 m) in depth. Built of wood, it was single decked with a rounded stern."

Extract from *Walsh Bay Redevelopment: Maritime Archaeological Assessment of Wharves 6/7 & 8/9,* by Coroneos, September 1997.

3.4.7 The Sea Wall

The wall was built by the Sydney Harbour Trust as part of the reconstruction of Sydney ports, their function being to retail fill. A new concept in sea wall construction, the wall, of pre-cast reinforced concrete, was held in place by L-shaped trestles. The concept offered major advantages in the construction of sea walls, because the only work conducted under water would be the preparation of the foundations.

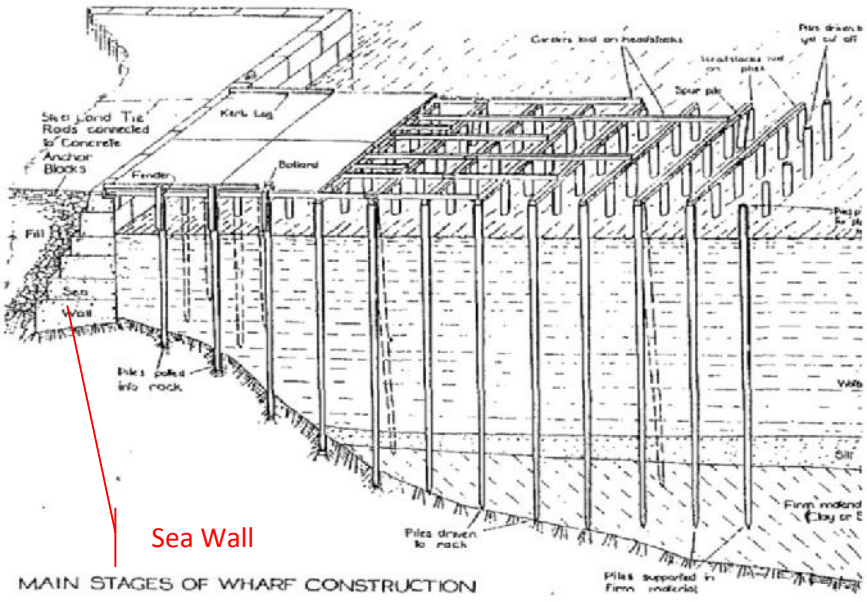


Figure 47: Drawing issued by The Maritime Services Board of NSW Sydney showing the Sea Wall, from *Pier 2/3 Walsh Bay Maintenance Plan,* by Tropman Architects. This is probably a drawing study because the Sea Wall illustrated is different from the realisation. Refer to fig. 49.

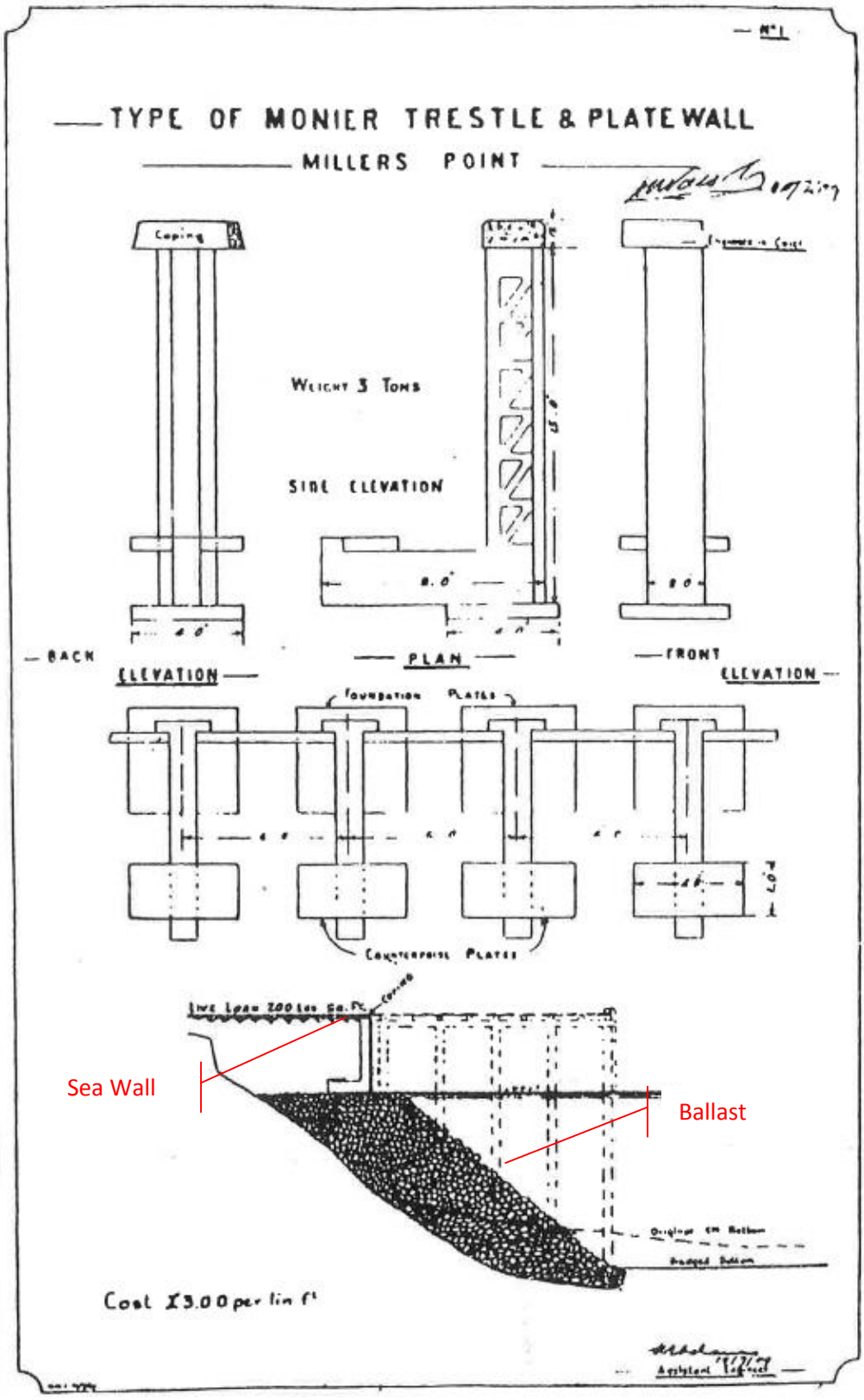


Figure 48: Section showing 'Rat proof' Monier pre-cast Concrete Sea Wall and the ballast, from *Walsh Bay Wharf Structure*, by ARUP.

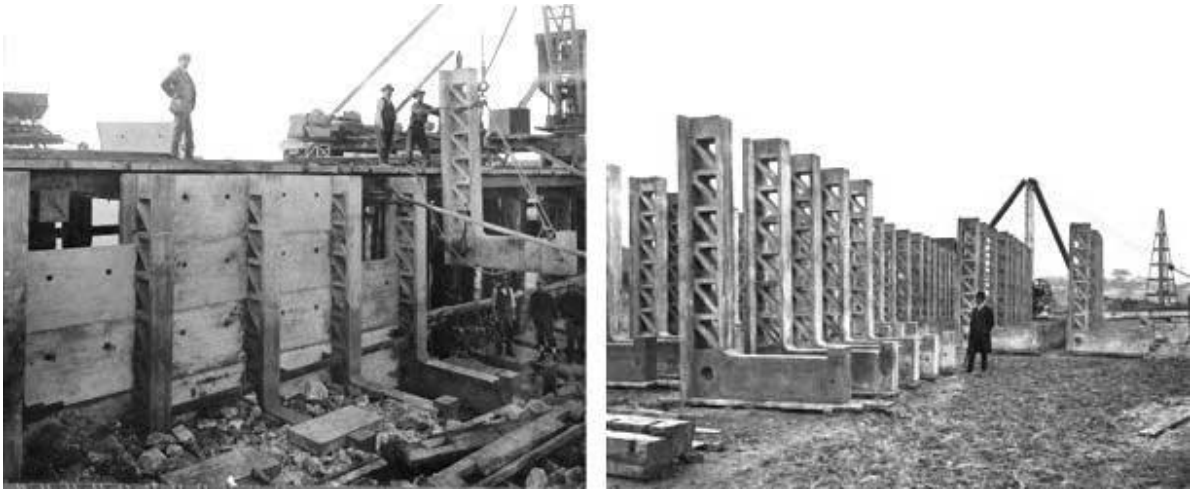


Figure 49: 'Rat proof' Monier pre-cast Concrete Seawall. Photos from www.visitsydneyaustralia.com.au

3.4.8 The Ballast

During the construction of the Wharves, tonnes of ballast were dumped under the Piers covering completely the sea bottom and losing any chance to find traces of archaeological remains.

Angle of repose of stone gravel is 45 degrees. This angle is reduced by the wave motion and it has enlarged the area covered by the gravel.

> "The possible presence of basalt ballast toward the landward end of Wharf 6/7 may require dredging to take place (Ove Arup & Partners, 1996:4). This will have a detrimental impact on the cultural deposits associated with the nineteenth century wharves. Ballast was dumped around the piles of Wharf 6/7 to prevent movement of the piles (Sydney Harbour Trust, 1917:15). A recent dive inspection under the Wharf observed no ballast on the sea bed and hand probing to a depth of 1 metre did not reveal the presence of any obstruction (Peddle Thorp & Walker Architects, pers. comm.). On the other hand ballast was observed toward the landward end of the wharf during an earlier sea bed inspection (Ove Arup & Partners, 1996: 2). Based on this information the consultant assumes that ballast is likely to be present at some depth below the present sea bed."

Extract from *Walsh Bay Redevelopment: Maritime Archaeological Assessment of Wharves 6/7 & 8/9,* by Coroneos, September 1997.

Note: the same applies to Pier 2/3 and 4/5.

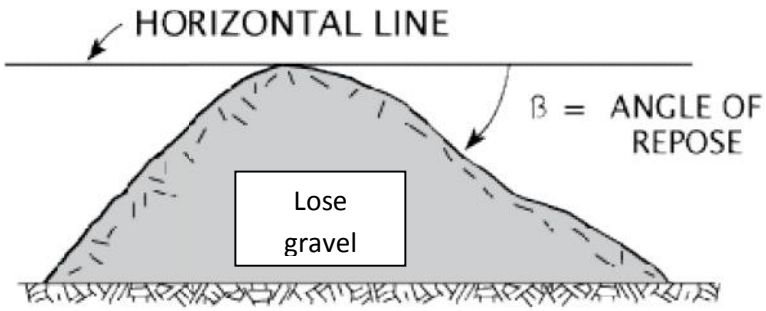


Figure 50: Generic example of Angle of Repose.

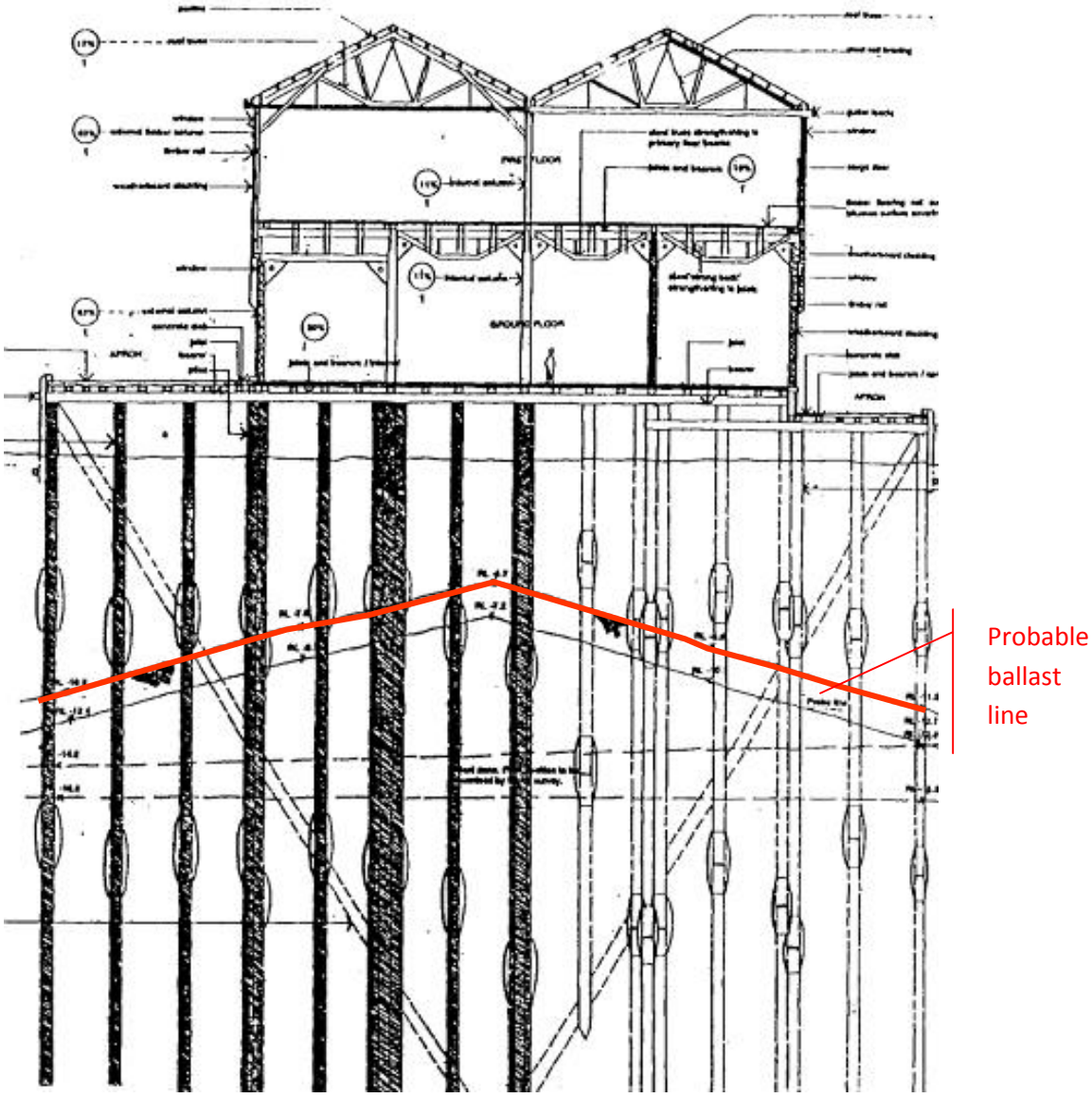


Figure 51: Drawing showing the ballast under and aside the Piers. From *Wharf 2/3 Walsh Bay Precinct CMP*, by Tropman Architects, November 2000.

3.4.9 Archaeological Summary and Significance

An historical analysis provides the context for assessing significance and is made by applying standard evaluation criteria to the facts of the item's development and associations.

The four basic criteria used in the **nature of significance** category are those of Evolution and Associations (Historic), Creative and technical accomplishment (Aesthetic), Community Esteem (Social) and Research Potential (Scientific). **Comparative significance** is assessed according to rarity or representative values.

The predictive archaeological resource has **historic significance**. It contains evidence of those works and processes which were the principal catalysts for the development and prosperity of this part of Sydney and, by association, those factors which were important to the well-being or otherwise of the city. The wharves of Walsh Bay were associated with both the prosperity of the nineteenth century boom years and the plague years of early twentieth century Sydney. The wharves also were associated, throughout the years, with some of Sydney's most influential traders and companies including Captain Towns, Dalgettys, Berry and Wollstonecraft and Burns Philp and Co. Their close association and contribution to the development of Millers Point also contributes to social significance. Many of the residents were directly employed on the wharves or in the companies which owned the wharves. The current appearance of the area owes much to the work of the Sydney Harbour Trust in remodelling it during the early years of the twentieth century as part of the great redevelopment project at Walsh Bay.

The wharves also have significance for their demonstration of technical accomplishment particularly in the several changing technologies employed in their construction.

The principal value of the predictive archaeological evidence, however, is as a scientific resource which, through its identification and recording, is capable of providing information and examples of those several historical, social and technical values of the nineteenth century cultural landscape.

These wharves and the community which surrounded them are representative of a class of items which were located not only in Sydney but in most ports of the various colonies during the nineteenth century.

It should be noted, however, that the value of this potential resource and its ability to realise its significance is likely to be severely compromised by the degree of disturbance and demolition which has occurred within the area making it, at best, a fragmentary resource.

3.4.10 Procedure

The following procedure is recommended by Clive Lucas in his *Walsh Bay Precinct Conservation Plan - Archaeological Assessment*.

Level	*Intervention Guideline*
Ranking 1 Intervention	If this area is the subject of a future development that would result in the disturbance or concealment of the archaeological resource by building or other works, then the following procedures should be follows: (a) Engage an archaeologist recognised by the relevant professional body (b) Excavate the area by initial mechanical excavation of the upper non-significant deposit under supervision of archaeologist. Follow by manual area excavation. (c) Record evidence uncovered and collect and catalogue finds.
Interpretation	Provision should be made in resources, planning, and management for the following conservation of the archaeological remains: <u>Option 1</u> (a) Retain and conserve in situ items such as the remains of original and early buildings by covering up, or retain in an interpretative framework created by landscaping and/or new building works and/or <u>Option 2</u> (b) Conserve excavated remains in statutory depository and allow for post-excavation analysis Implementation of Option 1 is very much dependent on the scale and quality of the archaeological remains revealed. The decision to conserve the remains in situ would therefore have to be made during the excavation process. As a minimum, Option 2 should be undertaken.
Ranking 2 Intervention	If this area is the subject of a future development that would result in the disturbance or concealment of the archaeological resource by building or other works then the following procedures should be followed: (a) Engage an archaeologist recognised by the relevant professional body (b) Archaeologist to make preliminary assessment prior to work, which may extend to test excavation of the area by initial mechanical excavation of the upper non-significant deposit under supervision of archaeologist of selected sample area/s Followed by manual area excavation of selected sample area/s. (c) Record evidence uncovered and collect and catalogue finds.

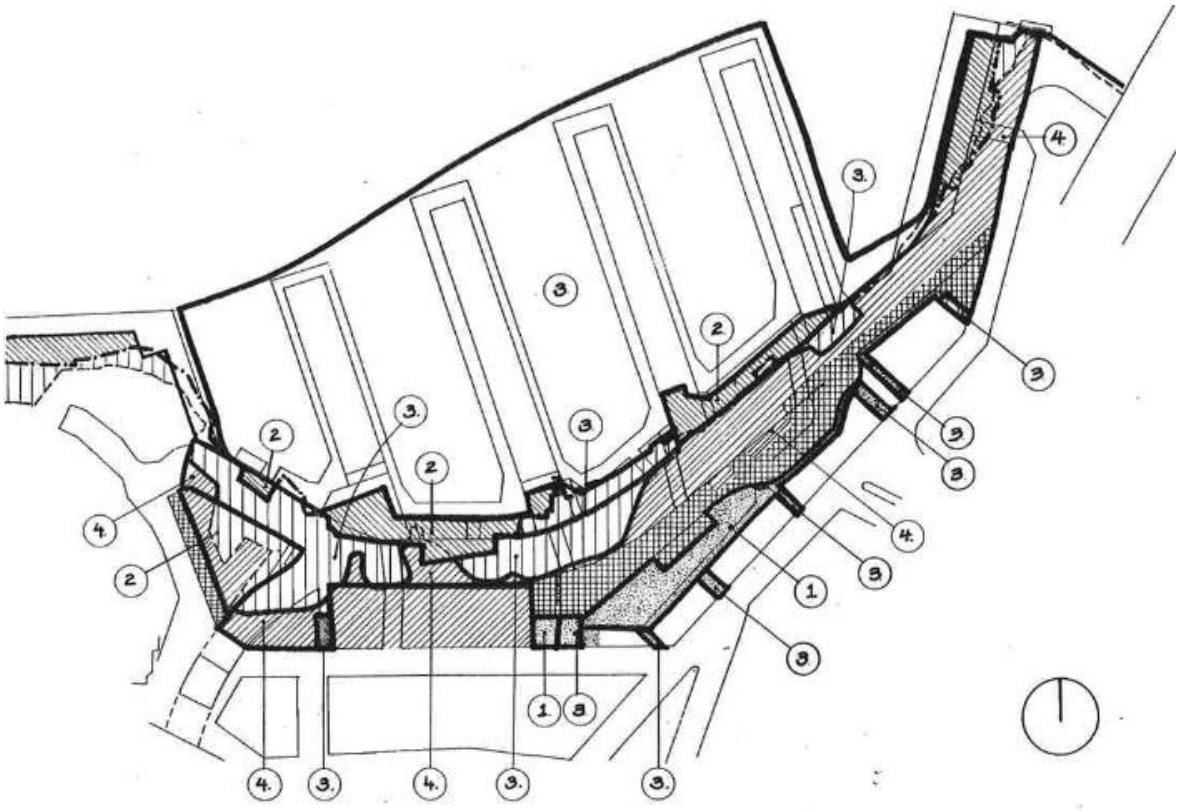
Interpretation	Provision should be made in resources, planning, and management to conserve excavated remains in statutory depository and allow for post-excavation analysis. Depending on the extent and type of remains revealed, in-situ preservation may be an option.

Ranking 3 Intervention	If this area is the subject of a future redevelopment that would result in the disturbance or concealment of the archaeological resource by building or other works, then the following procedures should be followed: (a) Engage an archaeologist recognised by the relevant professional body (b) Archaeologist to make preliminary assessment prior to work, which may extend to a watching brief for duration of ground disturbance - this may necessitate manual archaeological excavation, recording and collection of finds.
Interpretation	Provision should be made in resources planning, and management to conserve excavated remains in statutory depository and allow for post-excavation analysis. Depending on the extent and type of remains revealed, in-situ preservation may be an option.
Ranking 4 Intervention	This area is negligible archaeological potential. No archaeological works are required, but due diligence should be observed.

The engagement of an archaeologist is recommended, as well, by Coroneos for Pier 6/7 & 8/9. The same principal applies for Pier 2/3 & 4/5 :

> "In the event that any further disturbances of the seabed, within the four zones, are required to take place during the course of the development, apart from those detailed in this report, a maritime archaeologist is to be engaged to assess the impact of the proposed disturbances on the submerged cultural resource and to make appropriate recommendations."

Extract from *Walsh Bay Redevelopment: Maritime Archaeological Assessment of Wharves 6/7 & 8/9,* by Coroneos, September 1997.



Legend

1	Archaeological Excavation
2	Test Excavation
3	Archaeological Monitoring
4	No Further Action

Figure 52: From *Walsh Bay Precinct Conservation Plan - Archaeological Assessment*, August 1997, Clive Lucas and Partners.

This indicates some moderate possibility of an Archaeological fund. But as no excavation except for trenching is proposed, monitoring is all that is required immediately in front of Pier 2/3 Hickson Road. Test excavation may be required in front of the Shore Sheds 2/3.

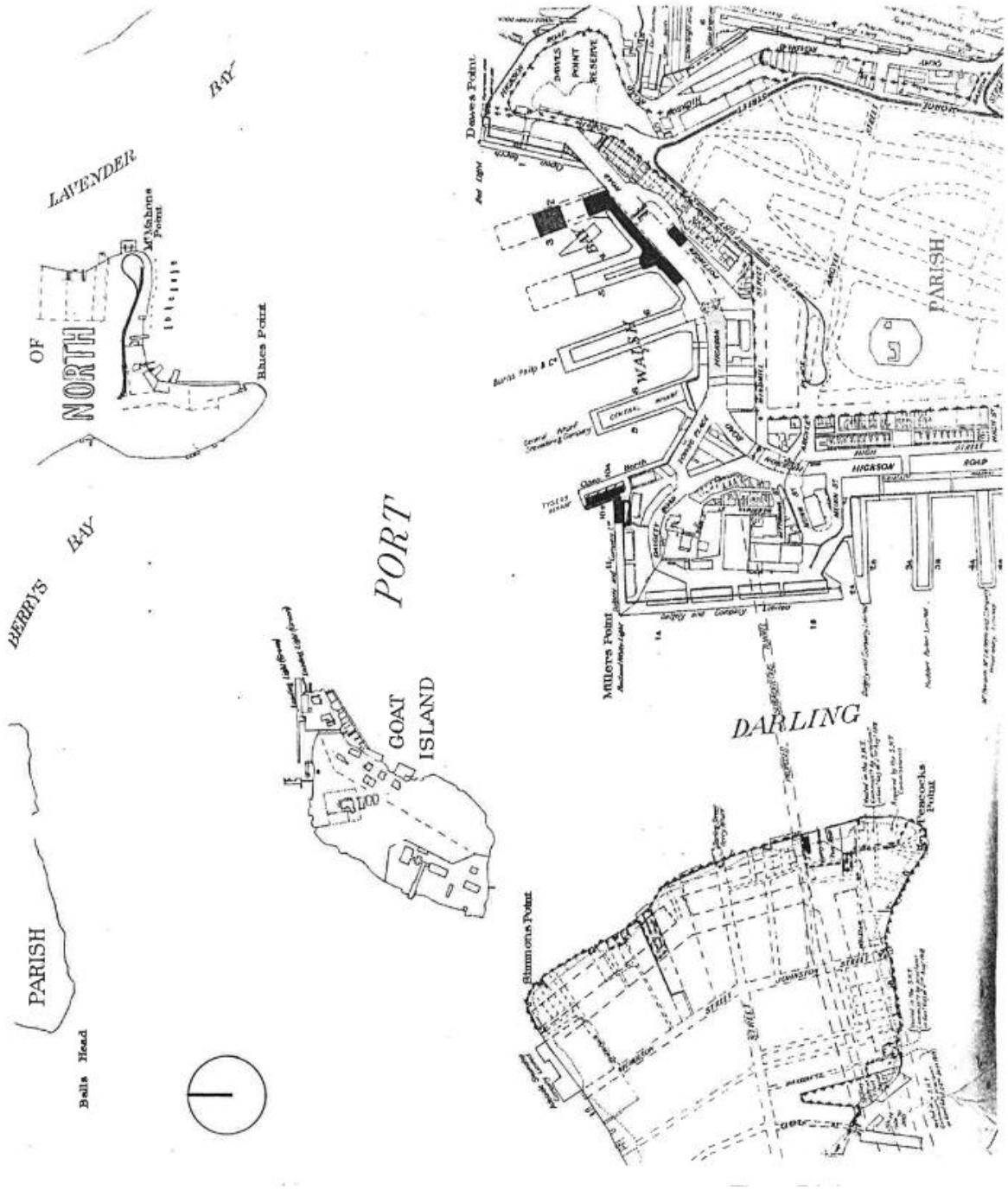


Figure 53: Detail from the plan reproduced in the Sydney Harbour Trust Annual Report of 1919.

Source: Office of Marine Safety and Port Strategy

3.4.11 Recommendations

The *Walsh Bay Redevelopment Maritime Archaeological Assessment of Wharves 6/7 & 8/9*, by Cosmos Coroneos, September 1997, applies equally to Pier 2/3 and Wharf 4/5. The zones do not refer to Pier 2/3 & 4/5. It states:

"Recommendation 1

A dive team under the supervision of a maritime archaeologist should undertake an underwater visual survey within Zone 4 to locate and record structural features associated with the nineteenth century wharves. Remote sensing equipment, such as a sub-bottom profiler or any other suitable technology, is to be employed to supplement the findings of the visual survey.

Recommendation 2

The visual and remote sensing survey outlined in Recommendation 1 should be extended to incorporate Zones 2 and 3.

Recommendation 3

During the construction of the coffer dam wall and the new wharf, care should be taken to avoid the structural features associated with the nineteenth century wharves. In the event that this is not possible an application must be made for an excavation permit under Section 139 of the Heritage Act 1977.

Recommendation 4

In the event that dredging to remove ballast has to take place within Zone 4 a maritime archaeologist is to be engaged to monitor the material being removed and to supervise a visual underwater inspection once dredging is completed.

Recommendation 5

In the event that any further disturbances of the seabed, within the four zones, are required to take place during the course of the development, apart from those detailed in this report, a maritime archaeologist is to be engaged to assess the impact of the proposed disturbances on the submerged cultural resource and to make appropriate recommendations."

3.4.12 Overlay of information based on the various sources

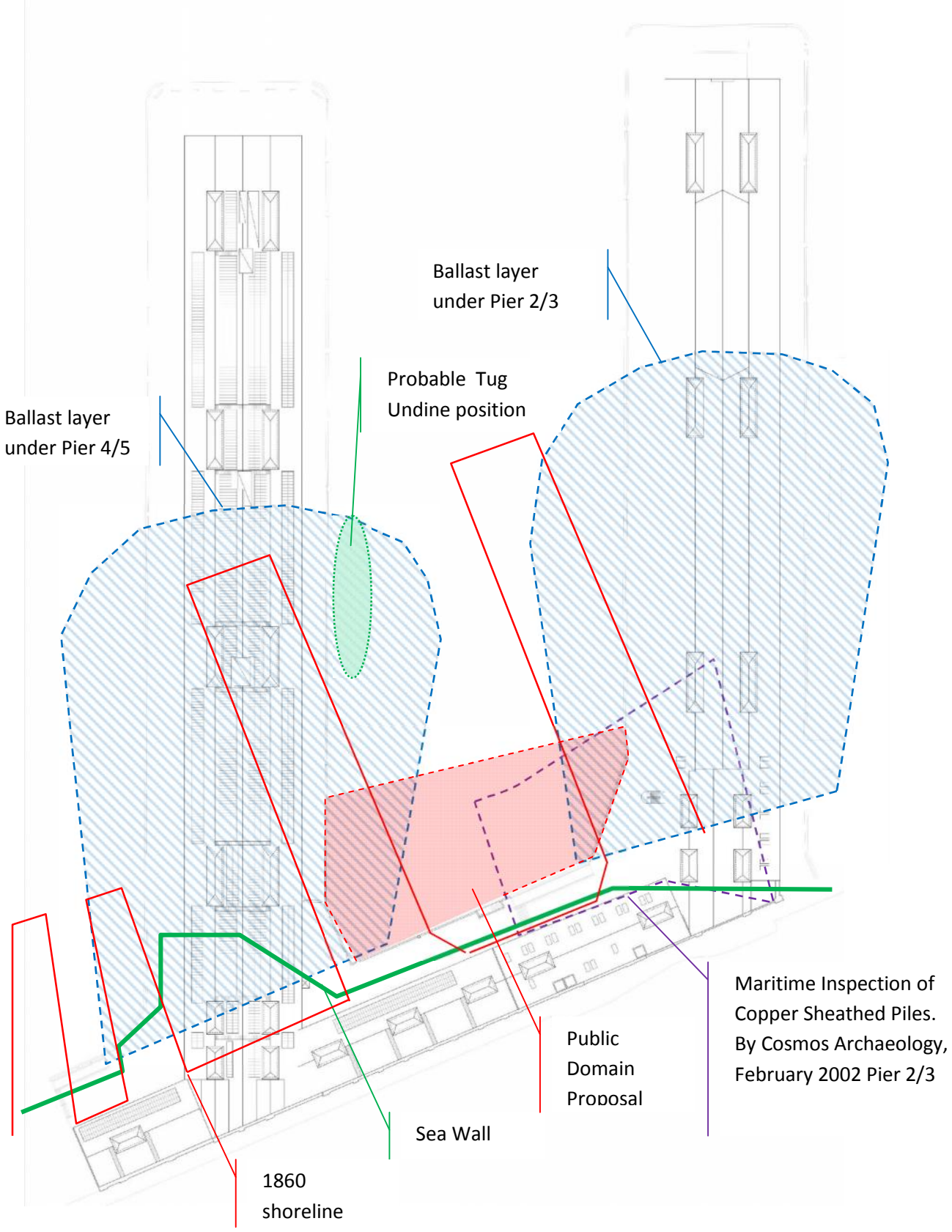


Figure 54: Overlay of maps and information. Reconstruction by Tropman Architects.

Potential Underwater Archaeological Remains	Density	Significance
• Cultural deposits prior to wharf development	Negligible – higher densities towards the southern part of the study area	Not assessed
• Wharf elements from Pitman's Wharf (later Alger's Wharf) • Cultural deposits from Pitman's Wharf (later Alger's Wharf) and/or moored vessels	Low – higher densities within the footprint of Pitman's Wharf decreasing with distance from the wharf. Also lower densities in the berths of Pier 3 and Wharf 4.	State significance
• Wharf elements from Hoffnung's Wharf (later Parbury's Wharf 3) • Cultural deposits from Hoffnung's Wharf (later Parbury's Wharf 3) and/or moored vessels	Low to medium – higher densities within the footprint of Hoffnung's Wharf decreasing with distance from the wharf. Also lower densities in the berths of Pier 3 and Wharf 4.	State significance
• Wharf elements from Pier 2/3 and Wharf 4/5 during the operational years of the wharves until the 1970s • Cultural deposits from Pier 2/3 and Wharf 4/5 during the operational years of the wharves until the 1970s	Medium – higher densities from the final operational years closer to Pier 3, Wharf 4 and the timber apron linking the two. Lower densities from early and middle years of operation due to dredging.	Local Significance
• Shipwreck material from the tug Undine	Low – higher towards Wharf 4 although the exact location of the wrecking event is not known.	Local significance

Summary of identified potential underwater archaeological remains, density and significance. Extract from Maritime Archaeological Assessment and Management Plan by Cosmos Archaeology, October 2016.

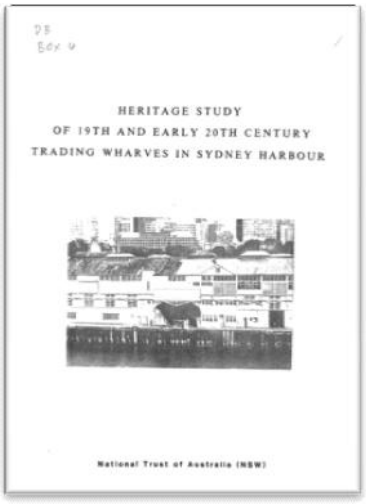
A number of potential relics have been identified in this Marine Archaeological Assessment. The detailed engineering subsurface works that is piling and any other services which may affect the sea floor in the area of the proposed extended or existing wharf apron design should be assessed in accordance with the Heritage Branch Guidelines to determine the potential impact on the relics identified in this report.

Prior to any construction works proceeding an Archaeological Research Design and Method report should be prepared in accordance with the Heritage Branch Guidelines.

3.5 Review of Important Documents

This section aims to review, analyse and summarise documents that have been consulted.

3.5.1 Review of "Heritage Study of 19th and Early 20th Century Trading Wharves in Sydney Harbour"



This document examines the port facilities in a greater context of the Development of the Harbour Port Facilities and puts the Walsh Bay finger wharves into the broader context. It was written at a time when it appeared that all the finger wharves would be lost to new development. It is an exceptionally valuable resource in understanding the history of the Port of Sydney Harbour.

Below are reported significant passages of the study:

The report fulfills the stated objective of the project which was

"to provide a survey and assessment of the 19th and 20th Century wharf structures remaining in Sydney Harbour, and from the physical remains and historic context, identify the cultural significance of these structures."

Preamble

Sydney's heritage of culturally significant trading or "finger" wharves is the remnant of a great building period that commenced at the end of the 19th century and lasted through the first three decades of the 20th century. These wharves were created in response to greatly expanded wool production, the new wheat export trade, and to handle imports. They are now largely obsolete for most maritime purposes although they were once extremely modern. Their designers drew upon knowledge of prevailing world technology and the experiences of Sydney's earlier private wharf firms to resolve maritime needs and the particular physical characteristics of Sydney Harbour. Those that remain are a remnant of what has been built over the long period of 200 years since Sydney was founded as a European settlement and are only a sample of all the wharves that the Sydney Harbour Trust worked upon during its short life.

Nevertheless they were built when nationalism was being strongly pursued in its first flush after Federation and belong to one of the great periods in Australian political history and to a period of great economic expansion in New South Wales. They have many beautiful features which echo the innovative domestic architecture of the Federation period and they provide both homogeneity and some individuality to form an outstanding set of industrial buildings.

Historic

The Walsh Bay wharves group is the best surviving set of early 20th Century wharves in Sydney. The complex contains some of Sydney's earliest surviving maritime structures, particularly the bond stores behind the wharves. The wharves provide important physical evidence of the magnitude of the major building program undertaken during the first years of the Sydney Harbour Trust. Walsh Bay wharves, and the technology they represent and display, were instrumental in Australia's development of efficient cargo turn-around and the nation's emergence as a prominent international trader, particularly in the wool industry.

Scientific/Technological

Walsh Bay wharves display the earliest example of wharf design which incorporates the use of revolutionary modular technology. The provision of two levels of access to the wharf complex also takes full advantage of the natural amphitheatre between Dawes Point and Millers Point and is therefore noteworthy as an adaptation of technologies to suit local conditions and topography. This integration with the surrounding urban environment represents an important civil engineering achievement of the early 20th Century, and an early urban rejuvenation/waterfront redesign program. Innovative double-storey sheds, with access independently at two levels, were deliberately designed to facilitate rapid shipping turn-around. All the wharves contain significant elements of fabric and artefacts which demonstrate their working uses. Wharves 8 and 9 contain an hydraulic accumulator, together with rams, hoists and a complete hydraulic system, which remain in working order and which are unique in Sydney.

Social

The Walsh Bay wharves group is an integral element of the character of the Millers Point/Rocks area. The surviving wharves and bond stores represent a major government initiative which had far reaching ramifications for Australia's overseas trade. The industrial character of the area, and the workers employed, have directly influenced the character and development of the surrounding community.

The following recommendations were devised in the face of the threat of wholesale demolition of the finger wharves of Sydney Harbour. They are very well considered recommendations and demonstrate the authors' foresight and understanding of the value of these relics.

RECOMMENDATIONS

This report has clearly established the outstanding heritage significance of the few late 19th and early 20th Century finger wharves which remain in Sydney Harbour. Recent proposals for the redevelopment of these wharves at Walsh Bay and Wooloomooloo Bay have demonstrated that, despite commercial pressures, the wharves are able to fulfill economically available functions if appropriately adapted and re-used. In the context of the redevelopment of the Walsh Bay wharves which is now proceeding, and the continuing uncertainty of the future of Wharves 19 - 21 at Pyrmont and the Woolloomooloo Finger Wharf, the following recommendations are made:

The following items should be included in the Register of the National Estate:

* The Walsh Bay Wharves Group, including wharves, sheds, shore sheds, bond stores, roads and bridges,

* Wooloomooloo Finger Wharf, including its shore sheds,

* Wharves 19 - 21, Pyrmont, including sheds and shore sheds.

Each of these wharves should be retained and should be conserved in accordance with the Burra Charter of Australia ICOMOS.

Development consent authorities considering proposals for the redevelopment of these wharves should be cognizant of their special heritage value and particularly the visual quality of the group, albeit spread amongst several separate sites. The external treatment of all remaining wharves should be considered, in relation to each of the others, so that the repetition and continuity of the modular design and the relationship between the wharf form and fabric, the waters of the harbour, and the development of the shore beyond, is maintained.

Any redevelopment program should take care to conserve the following significant attributes:

* the linear form of the "fingers"; additions or accretions to the wharf form should be minimised.

* the modular design; where it is necessary to introduce new fabric, this should be done by replacement of panels within the existing structure; new infill forms should be avoided.

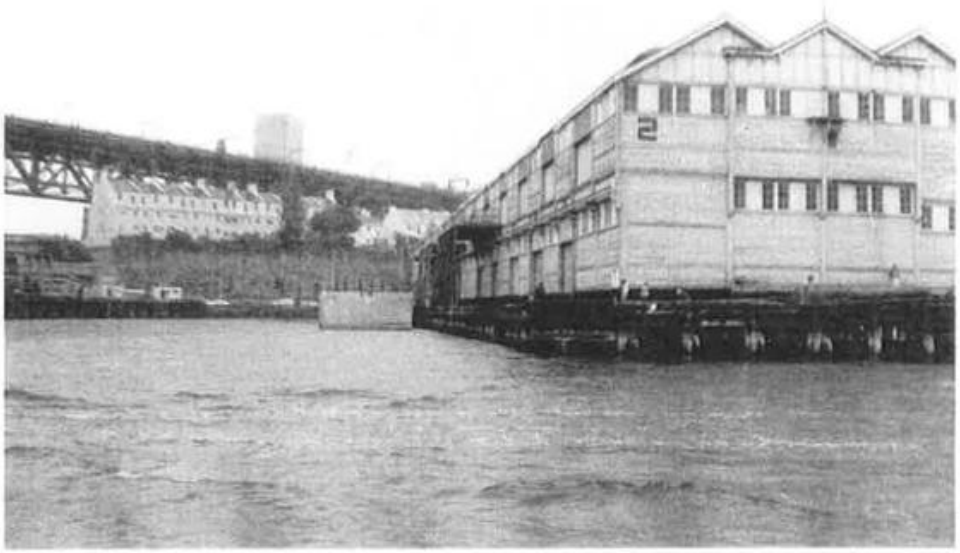
* the interior configuration of the wharves, and the working relationships between their interior spaces.

* historic artefacts, both those which are integral to the wharf fabric and those which are moveable; these should be retained in operating order and in situ.

* the maritime/industrial nature of wharf usage; new uses should preferably be of an appropriate maritime/industrial nature.

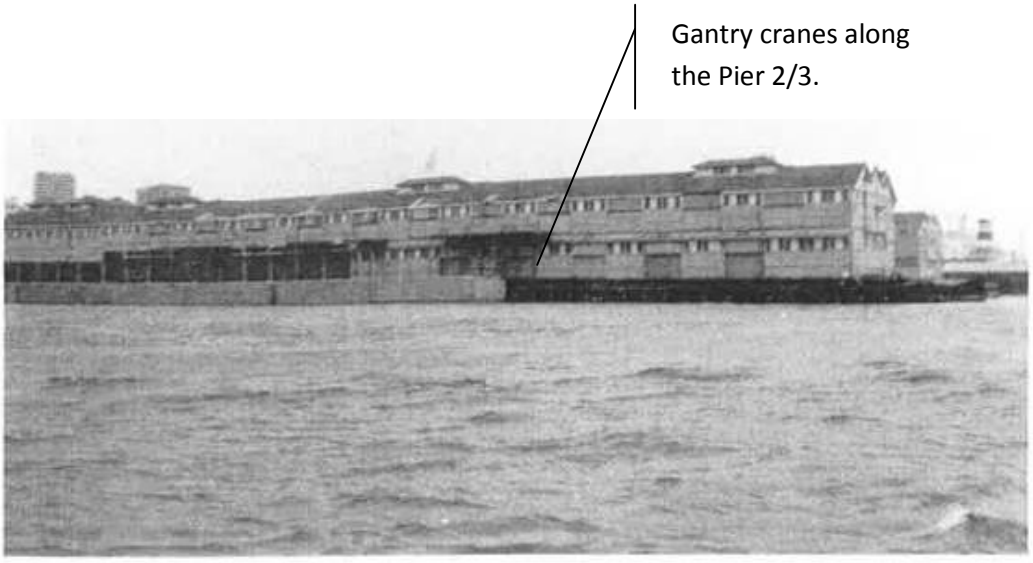
WALSH BAY 1: Prior to the redevelopment of this building as a market building, it was painted a light grey with contrasts in white. All of these wharf buildings were similarly coloured. The verandahs on the north end of Pier One, prior to the construction of the Harbour Bridge, would have had an uninterrupted view up and down the Harbour.

WALSH BAY 1: Pier One was constructed from the outset as a grand wharf, the verandahs, the decorative triangular pediments and the central transverse gable combining with the symmetry of the regular roller shutters and groups of windows to create an appearance of balance and purpose befitting its intended role as the government wharf. All of the other wharves were leased to private shipping companies.

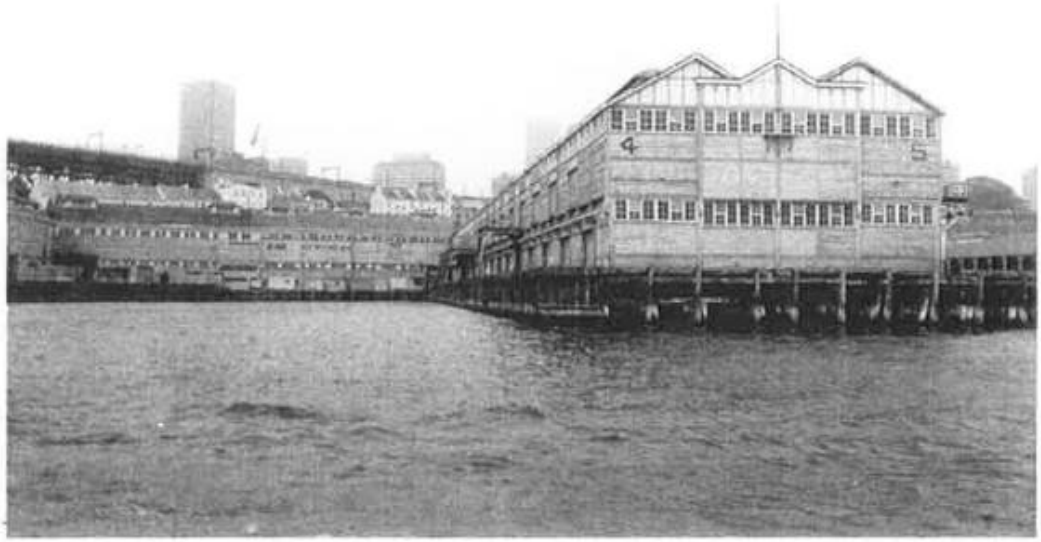


WALSH BAY 2: Interrupted by the First World War, this wharf was not completed until 1921. It shows a similar basic format to Pier One but is far more functional in its detailing. Travelling gantries, sliding doors and six-pane windows are the prominent features. A lower deck level on the wharf apron on this side enabled loading directly from waggons and trucks into the lower floor of the shed.

WALSH BAY 3: The lack of access to the upper floor on this wharf indicates the functional division of the wharf shed - the upper floor serviced Wharf No 2 whilst the lower floor serviced Wharf No 3.



WALSH BAY 2/3: This view of Wharf No 2 shows the regular pattern of windows and doors that characterises the modular wharf design. The first lessee of this wharf was the Adelaide Steamship Company. (1983)



WALSH BAY 4/5: Also completed in 1921, this wharf is largely symetrical around its central long axis, with upper level doors and travelling gantries on both frontages and a single level wharf apron. The shore-shed behind shares a common wall with the shore shed of No. 2/3 wharf adjacent. (1983)

Note: Travelling gantries in both frontages.

WALSH BAY 2/3 and 4/5: Dwarfed by the Sydney Harbour Bridge, the similarities between wharves 2/3 and 4/5 are apparent. The travelling gantries on Wharf 5 have all been parked together on the harbour end of the wharf. (1983)

Note: Large travelling gantries taken up to the front of the apron.

10.1

MILLERS POINT (Town or District)	WALSH BAY WHARVES	Hickson Road,
Post Code 2000 Local Govt Area City of Sydney	Wharves 1 to 9 including wharf sheds, store sheds and overpass bridges, Windmill Street Bonds incl. Parbury's Bond, Hickson Road incl. escarpments.	
Author of Proposal B. LITTLE S. CLARKE W. WHITTAKER	PART OF WEST ROCKS CLASSIFIED CONSERVATION AREA	
Date of Proposal 15/9/76 amended FEBRUARY 1979	(Name or Identification of Listing)	(Address or Location)
Suggested Listing Category CLASSIFIED	Bibliography Liskowski, Spira & Turpin, Report on Walsh Bay Wharves Sydney Harbour Trust Reports 1902-1927 Walsh H.D. "The Gateways of Prosperity" Building Dec 1911, p9-46 Freeland Cox & Stacey Rude Timber Buildings in Australia	Owner and Address Maritime Services Board of New South Wales
Committee (Trust Use) IAC		
Council (Trust Use) APPROVED CL 25/6/79		advised: 6/7/79

Description — Briefly cover the points on the following check list where they are relevant and within your knowledge.

Style
Construction
Use
Architect/s
Builder/s
Date of Construction
Present Condition
History
Owners
Boundaries of proposed listing

The four finger wharves and one long shore wharf at Walsh Bay were built between 1907 and 1922 on the site of earlier, mostly privately owned, wharves, which dated from the 1830's onwards. By 1882, the early wharves had become obsolete, access had become increasingly congested, new stores were needed and improvements were planned. However, the final impetus for redevelopment was an outbreak of Bubonic Plague in 1900 which led to the closure of the old wharves and their resumption by the government. Pressure for state ownership of wharfage led to the formation in 1901 of the Sydney Harbour Trust with responsibility for the management of the Port of Sydney. It planned a major scheme of channel dredging, new wharves and reconstructed roadways in Walsh Bay, Darling Harbour, Circular Quay and Wolloomooloo Bay. H.D. Walsh, Engineer-in-Chief to the Sydney Harbour Trust, supervised the design and construction possibly basing his ideas on wharves in Liverpool and New York. Walsh designed an improved sea wall, built of "L" shaped precast reinforced concrete trestles, and erected it at Walsh Bay between 1907 and 1910. It proved to be rat-proof. He developed a standard modular timber design for wharves, wharf sheds, and shore sheds which could easily be adapted to the requirements of individual sites. Walsh Bay wharves are an

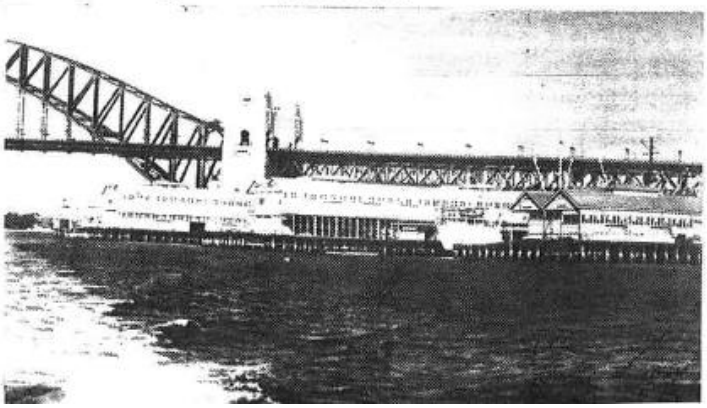
continued overleaf:

Reasons for listing

Of all the large wharves built in Sydney for the export-import trade just before and shortly after World War I, Walsh Bay Wharves are probably the best example. The adjacent topography has been adapted to full advantage, creating two levels of access to each wharf, and the whole probably represents one of the first examples of major road-separation planning in Sydney. Visually, the wharves have a strong distinctive character created by the logical use of heavy timber construction and the regular grid layout of piles, columns, beams and infill cladding. Possibly, their functional design is best appreciated from the water, where each wharf is seen to have an individual character created by variation in detail, but the whole group is unified by regular spacing of structural elements and repetition of similar forms. Today, ships have increased in size,

Sketch plan and photos Attach additional photos if any.

there have been changes in the packaging of cargo and methods of cargo handling have changed. Walsh Bay Wahrves continue to be used, but for a smaller volume of cargo, and by ships such as the Island Traders, and other vessels requiring temporary berths or minor repairs. Other uses must be found so that this example of early 20th century port technology can be preserved.



This is a 1976-1979 assessment of the Walsh Bay Finger wharves prepared by the National Trust.

Wharves 2/3. The National Trust agrees with Travis Partners Pty Ltd that it is highly desirable to include a mixture of commercial and residential accommodation facilities within the overall development. In view of the potential fire hazard presented by the wharf fabric, the Trust requests that further details on the proposed fire protection measures be provided, so that the effect on the wharf structure can be fully assessed. It is also recommended that when more detailed plans are prepared, serious consideration should be given to providing a range of different types of accommodation.

Wharves 4/5. The National Trust has already expressed its wholehearted support for the establishment of the wharf theatre on wharves 4 and 5. The National Trust considers that this redevelopment is a sensitive re-use of the original fabric. Compared with the treatment of Pier One, Pier 4/5 illustrates clearly how adaptive re-use can respect the integrity of the strucutre without prejudicing the viability of the overall proposal. The introduction of permanent awnings is considered to be an unfortunate component of this project.

This is part of the National Trust Assessment of wharves 2/3 & 4/5 redevelopment proposed by Travis Partners recommending albeit politely that other uses rather than residential would be appropriate.

Pedestrian Access

The National Trust considers that maximized provision of public pedestrian access is a vital component of the proposal. To this extent it is considered highly desirable that the existing access through the shore sheds to each wharf be maintained. It is also considered desirable that a walkway be established along the shore line at the shore ends of the wharves, parallel to Hickson Road. From recent inspections of the wharves the Trust considers that the implementation of this shoreline walkway will not require major structural alterations as openings on the ground floor at the base of each wharf already exist (with some minor obstructions).

The proposal to maintain public access around the waterfront at each wharf is considered by the Trust to be a highlight of the proposal and is strongly supported by the Trust.

Note: The National Trust recommends that all the wharves maintain public access.

3.5.2 Wharf 2/3 Walsh Bay Conservation Management Plan, by Tropman Architects, November 2000

This is the endorsed official CMP for Pier and Shore Shed 2/3 prepared by Tropman & Tropman Architects for the Walsh Bay Partnership. The CMP was in response to the precinct CMP by CLSP which required CMPs for each phase of the redevelopment.

The Design 5 Heritage Impact Assessment is sometimes at odds with the recommendations in this report. All the policies are relevant and included in this report.

3.5.3 Wharf 4/5 Walsh Bay Conservation Management Plan, by Graham Brooks and Associates, March 2007

The Walsh Bay redevelopment approval did not include Pier 4/5, which had been redeveloped in 1984 and converted to a cultural performance complex.

The Graham Brooks and Associates CMP fills the gap in the heritage CMP library for Walsh Bay. The CMP acknowledges the occupation by the STC, SDC, ATYP and BDC, but does not draw the conclusion that the new use is for all intents and purposes a permanent change to the function of the building. There is a tacit acknowledgment under 5.3 criteria.

Criteria (b) An item has strong or special association with the life or works of a person, or group of persons, of importance in NSW's cultural or natural history (or the cultural or natural history of the local area);

The site is associated with the works of H.D. Walsh, Engineer in Chief of the Sydney Harbour Trust who was responsible for the design of the Walsh Bay Wharves, Jones Bay Wharves and Woolloomooloo Bay Wharf. It is also associated with Robert Hickson, President of the Sydney Harbour Trust.

The site was redeveloped for the Sydney Theatre Company and other performing arts groups by Vivian Fraser, the joint winner of the 1985 Sulman Award.

The rehearsals and performance spaces within Wharf 4/5, are associated with leading performing arts organisations and artists who are renowned both nationally and internationally.

The Policies are observations and may have some effect on the proposed redevelopment of some aspect WBAP and STC50.

There will be a need to be a response directly to policies which forbid alterations and changes which may be permanent.

3.5.4 Walsh Bay Arts Precinct Heritage Impact Assessment, by Design 5, June 2014

This important assessment relates to the Final Business Case design proposed by Bates Smart.

- SSDA - The approvals require that its recommendations be adopted and informs the future design. These are included in this report.

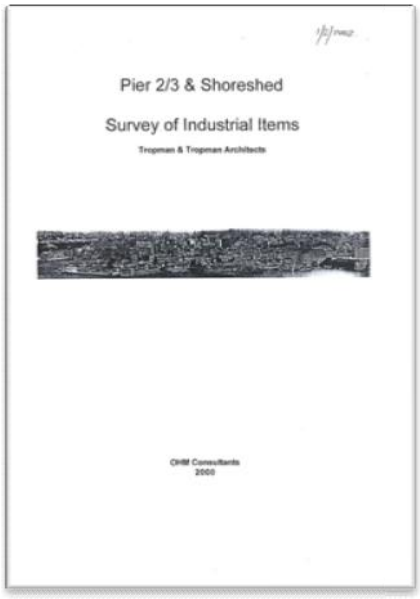
The Tropman & Tropman and Graham Brooks CMPs are the official documents and may be considered to be of higher value than the Design 5 Heritage Impact Assessment.

The phase 1 design by TZG reflects design development of the design brief and a reconciliation of the recommendations and policies with the current design will be required in the final phase 2 Heritage Impact Assessment.

3.5.5 Maintenance Plan: Heritage Building Fabric & Heritage Technology Items, by Tropman & Tropman, July 2004

This plan was prepared at the inception of the project to repair and develop Pier 2/3. The maintenance schedules are relevant and should be adopted. Generally after the design has been finalised a new maintenance plan should be developed which acknowledges the new uses and extent of the redevelopment proposed in the WBAP.

3.5.6 Pier 2/3 & Shore Shed Survey of Industrial Items, by Tropman & Tropman, 2000

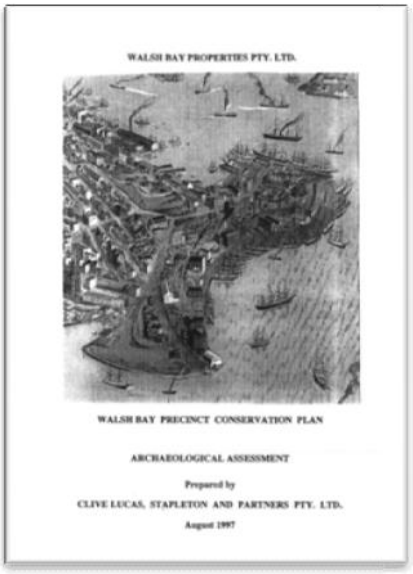


This document looks at both officially recognised industrial relics of State Significance and other numbered industrial heritage items as well as fabric that has value as part of the industrial heritage. It is of potential value in addressing any changes proposed. It should be noted that Design 5 document does not make any reference to this survey by Tropman & Tropman.

3.5.7 Walsh Bay Precinct Heritage Technology Conservation Management Plan, by Tropman & Tropman, May 1999

This is a global document which describes the Heritage Technology in two volumes and it is based on the Godden Mackay Logan earlier study which in turn was based on the work of James Kerr. It is important to note that only 3 items in Pier 2/3 are on the register.

3.5.8 Walsh Bay Precinct Conservation Plan Archaeological Assessment, by Clive Lucas and Partners, August 1997



This is the Archaeological assessment which has proposed a general document for the Walsh Bay Partnership by Clive Lucas and Partners and dated August 1997.

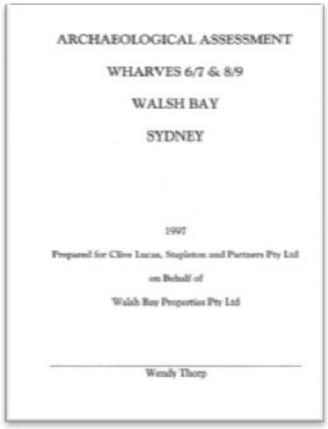
This report is a Archaeological Assessment of the Walsh Bay Precinct. The aim of the report is to guide intervention, and conserve the prehistory and historical archaeological values of the area.

Generally the archaeological potential of the precinct is limited as much of the land has been excavated and/or is occupied by historic structures. The report however identifies areas with research potential and recommends appropriate levels of intervention control. See Figure 6.1 and Section 6.2.2.

The recommendations of the report are incorporated into Sections 7.0 and 8.0 of the *Walsh Bay Precinct Conservation Plan* prepared by Clive Lucas, Stapleton and Partners Pty. Ltd., August 1997.

The report is of considerable value in understanding the history and cultural history of the site. There is no copy of this document in the Office of Environment and Heritage Archives or in the Mitchell Library. It may not be the final edition as the official documents are dated December 1997 and later 1998 editions of the Clive Lucas and Partners CMPs appear. It includes the Aboriginal Archaeological and Cultural Assessment. Of importance is the charting of the site potential around Wharf 2/3 and 4/5.

3.5.9 Archaeological Assessment Wharves 6/7 & 8/9 Walsh Bay, by Wendy Thorp


ARCHAEOLOGICAL ASSESSMENT

WHARVES 6/7 & 8/9

WALSH BAY

SYDNEY

1997

Prepared for Clive Lucas, Stapleton and Partners Pty Ltd

on Behalf of

Walsh Bay Properties Pty Ltd

Wendy Thorp

This is a study directed at the Pier 6/7 & 8/9 redevelopment. It also has general historical and archaeological information which is similar information found generally throughout the library of documents.

The dates on documents can be misleading as the pre-DA stage lasted from 1996-1998 and some material while in the public domain was not "officially submitted".

3.5.10 Underground Services Walsh Bay Heritage Impact Statement, by Tropman & Tropman, December 1998


TROPMAN & TROPMAN ARCHITECTS

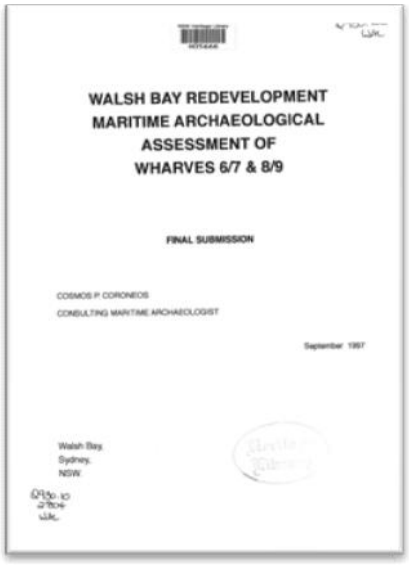
APPENDIX A

Phase M Infrastructure Heritage Impact Assessment

- Appendix A - Phase M Infrastructure Heritage Impact Assessment
- Appendix E - Archaeological Assessment of Areas Associated with the Development of Pottinger Street and Adjacent Areas

This document is directed at the Pottinger Street dig and while having general historic relevance takes a secondary place in the available information library.

11.11 Walsh Bay Redevelopment Maritime Archaeological Assessment of Wharves 6/7 & 8/9, by Cosmos Coroneos, September 1997.


WALSH BAY REDEVELOPMENT
MARITIME ARCHAEOLOGICAL
ASSESSMENT OF
WHARVES 6/7 & 8/9

FINAL SUBMISSION

COSMOS P. CORONEOS
CONSULTING MARITIME ARCHAEOLOGIST

September 1997

Walsh Bay
Sydney
NSW

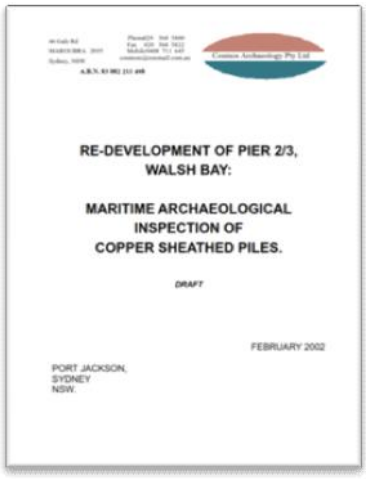
This report, while exclusively directed towards wharves 6/7 & 8/9, illustrates the extent of Harbour work undertaken during European occupation of the foreshore of Walsh Bay/Port Jackson.

Of importance is the statement regarding dredging and stone ballast.

The outlines of the sea wall are shown with clarity. The cross section defines the angle of repose of the ballast fill generally which would obliterate the wharf remains of past structures.

Coroneos suggests past dredging would limit any small findings. Only one wreck is recorded and it is presumed that was removed for safety and shipping reasons. A further marine study will be required.

3.5.12 Re-development of Pier 2/3 Walsh Bay: Maritime Archaeological Inspection of Copper Sheathed Piles



RE-DEVELOPMENT OF PIER 2/3,
WALSH BAY:

MARITIME ARCHAEOLOGICAL
INSPECTION OF
COPPER SHEATHED PILES.

DRAFT

FEBRUARY 2002

PORT JACKSON,
SYDNEY
NSW.

This is a small study regarding a physical intactness of piling and as such is of little consequence in understanding historic context, archaeology or cultural heritage beyond the technique of copper sheeting. This technique protected the piles at the tidal zone.

3.5.13 Walsh Bay Interpretation Node - Bannyan Wood

This is a design museology document which describes the Walsh Bay Precinct Interpretation Center/Node. This area is not part of the WBAP. Any alteration or addition will require an Integrated Development approval.

Approval - The display contains a number of artefacts from the various archaeological digs at Pottinger Street and Town Place.

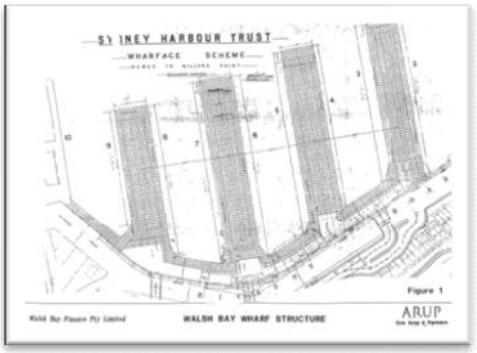
3.5.14 Walsh Bay Pier 2/3 Movable Heritage Use & Interpretation Plan, by City Plan Heritage, June 2011

This report describes what was found by City Plan Heritage when they reviewed the content of Pier 2/3 for RMS in May-June 2011.

It makes observations as to how other displays in Walsh Bay have been designed. The items were already identified in the Tropman report Pier 2/3 & Shore Shed Survey of Industrial Items, Tropman & Tropman + OHM, 2000, but this has been ignored and new numbering has taken place which adds to confusion.

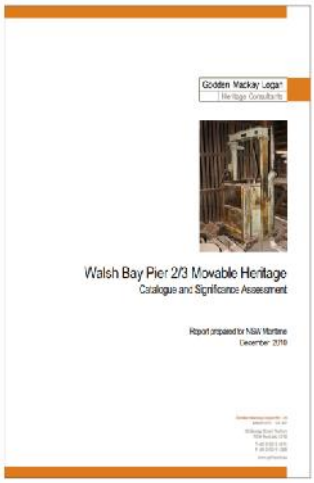
The items are simply placed in Pier 2/3 for safe keeping as required by the original DA for the Master Plan. The shipping container contains the Walsh Bay digs relics. While the report makes a number of recommendations these are not necessarily directed to the WBAP.

3.5.15 Walsh Bay Wharf Structure, by ARUP



This is a graphic/illustrated survey of Pier 6/7 & 8/9 and contains key information of deck construction and is of general value and importance.

3.5.16 Walsh Bay Pier 2/3 Movable Heritage, by GML, December 2010



This is a catalogue which assess the significance of the heritage movable items stored in the Pier 2/3. Since the publication of this catalogue, more items have been added and removed.

A new updated catalogue is part of the Movable Heritage Strategy report prepared by Tropman & Tropman Architects.

3.5.17 Other Documents Sighted

Tropman & Tropman have provided a full set of the available plans prepared by the Sydney Harbour Trust for the construction of the Walsh Bay wharves from 1906-1922. This collection was provided by the Office of Marine Holding to Walsh Bay Properties between 1995-1996. They are of value as design drawings and can guide any interventions in the design.

3.5.18 Proposal for extended foyer performance space by TZG

The Phase 1 Design proposes a stage to the foreshore public space which is not considered by Design 5 in the Heritage Impact Assessment. This extended arm takes the development into deep water and may have some effect on marine archaeology in so far as there is evidence that a wharf structure extended across the path of the new design.

There is less impact at the shoreline in this proposal.

The visual character of the new stage in its setting will need to be assessed in relation to the policies in the CMP by Brooks and Tropman & Tropman. The nature of construction in the initial design indicates that it is removable at some future date, which means it conforms with the CMPs and Design 5 document. The concept is an improvement on the initial proposal as less shore wharf is affected.

WBAP Heritage Impact Statement

PART 3