

Blackwattle Bay
State Significant Precinct

Attachment 26:

Maritime Archaeological Assessment

June 2021





ARCHAEOLOGY – HERITAGE – MEDIATION – ARBITRATION

MARITIME ARCHAEOLOGICAL ASSESSMENT

A report to support the
Blackwattle Bay State
Significant Precinct Proposal

14 April 2021

Report to: Infrastructure NSW

Version: E.2020



DOCUMENT CONTROL

PROJECT NO.: UG332 STATUS: Final

REV	DATE	PREPARED BY	EDITED BY	APPROVED BY
A	07/09/2017	David Nutley	Dr Jillian Comber	Dr Jillian Comber
B	11/11/2020	David Nutley	Dr Jillian Comber	Dr Jillian Comber
C	23/12/2020	David Nutley	Dr Jillian Comber	Dr Jillian Comber
D	12/01/2021	David Nutley	Dr Jillian Comber	Dr Jillian Comber
E	14/05/2020	David Nutley	Dr Jillian Comber	Dr Jillian Comber

Comber Consultants has a certified integrated management system to the requirements of ISO 9001 (quality), ISO 14001 (environmental), ISO 45001 (health and safety) and AS/NZS 4801 (health and safety). This is your assurance that Comber Consultants is committed to excellence, quality, and best practice and that we are regularly subjected to rigorous, independent assessments to ensure that we comply with stringent Management System Standards.





EXECUTIVE SUMMARY

Objectives

Comber Consultants were engaged by UrbanGrowth New South Wales (now Infrastructure New South Wales) to undertake an assessment of the maritime archaeological potential of the Blackwattle Bay Study Area. The report includes an assessment of the potential presence of shipwrecks as well as former maritime infrastructure whether in the marine environment of the bay or under land fill. It also assesses the potential for presence of relics associated with those features and with the use of the bay since colonisation.

In addition to assessing the heritage significance of potential archaeological sites, it provides management recommendations to guide future development or planning to retain the assessed significance of features.

Methodology

The study reviewed existing literature and undertook original research to identify the evolution of the bay and the likely location and survival of archaeological evidence.

The recommendations in this report were developed to be consistent with the requirements of the New South Wales *Heritage Act 1977*. They are also consistent with the rules contained in the Annex to the 2001 UNESCO Convention on the protection of the underwater cultural heritage which has been adopted by the New South Wales Heritage Council for the management of underwater cultural heritage in this State.

This report includes assessment of the Blackwattle Bay Precinct Plan dated November 2020 prepared by FJMT as well as heritage assessment and impact reports by City Plan Pty Ltd and Artefact Heritage Pty Ltd.

Findings

The maritime archaeological assessment found that the survival of archaeological evidence in large sections of the bay have been compromised by the history of dredging. However, archaeologically significant submerged deposits are likely to be present at the southern end of the bay. In addition, significant maritime infrastructure sites are likely to be present under land fill along the eastern shore.

Recommendations

The findings of this maritime archaeological assessment are provided to guide future development or planning to retain the assessed significance of features:

1. *Shipwrecks:*
Due to the history of dredging within Blackwattle Bay and in the absence of any indication of shipwrecks being included within landfill at Blackwattle Bay, no additional historical research, remote sensing surveys or dive surveys are required to identify shipwrecks in the Study Area prior to rezoning and any Development Approval.
2. *Maritime infrastructure:*
 - a. The remains of the sandstone seawall at the former F Buckles & Sons site, and likely to be associated with the nineteenth century dock, should undergo conservation works and included in the presentation and interpretation of the eastern foreshore.
 - b. In view of the Blackwattle Bay Water Uses Plan, any proposed impacts on the existing sandstone seawalls or the stone foundations of the small wharf off the end of Cook Street should be subject to archaeological assessment in view of any specific proposed works in this area.



- c. Archaeological investigations should precede any construction or other ground disturbance works in the vicinity of:
 - i. The former dock at the end of Gipps Street
 - ii. The early wharf at the end of Miller Street
 - iii. Seabed impacts on heritage within the site of New Sydney Fish Market is part of the SSDA and is covered in the Maritime Heritage Impact Statement (Nutley 2019).
 - d. View corridors and setbacks should be retained to assist in interpretation of the location of items b(i) and b(ii) above.
 - e. Elsewhere in the bay, due to the history of dredging and the absence of proposed dredging in the current State Significant Precinct (SSP) Proposal study area:
 - i. No further investigation is required of jetties that extended into Blackwattle Bay subsequent to the phases of land fill.
 - ii. No further investigation is required of deposits of non-structural cultural material within the Study Area prior to rezoning and Development Approval.
3. *Unexpected finds:*
It is recommended that the Unexpected Finds procedure contained in Section 7.4 is adopted for the maritime archaeology of Blackwattle Bay.
4. *Interpretation:*
Blackwattle Bay's maritime history of evolution has considerable potential as an interpretation and educational resource. Supported by archaeological evidence, the story of its evolution from a natural wetland swamp to an area for waste disposal, to industrial wharves and shipping vital to the commercial development of Sydney and the State, to the home of Sydney's fishing fleet, dragon boats and many cruise boats. dredging works, wharves, jetties, coal loader and archaeological evidence would provide depth and character to the revitalised Blackwattle Bay. The interpretation of the maritime heritage of Blackwattle Bay should be guided by the advice provided in Appendix B of this report.



Contents

Objectives.....	1
Methodology.....	1
Findings	1
Recommendations	1
1.0 INTRODUCTION.....	6
1.1 Blackwattle Bay State Significant Precinct	6
1.2 The Proposal.....	8
1.3 Vision and Principles	9
1.4 Study Requirements	10
2.0 METHODOLOGY	12
3.0 LITERATURE REVIEW	13
3.1 New South Wales Maritime Heritage Database	13
3.2 Existing heritage impact assessment studies for the Bays Market District.....	13
3.3 Analysis of other sources of maritime heritage within the Bay	19
3.4 Clearance diving within the Bay	20
3.5 Strategies and plans	20
4.0 SITE INSPECTIONS.....	21
4.1 Introduction	21
4.2 Eastern shoreline	21
4.3 Southern shoreline.....	25
4.4 Western Shoreline.....	28
5.0 ARCHAEOLOGICAL POTENTIAL	32
5.1 Introduction	32
5.2 Shipwrecks	32
5.3 Maritime infrastructure	32
5.3.1 Early jetties – eastern shoreline.....	32
5.3.2 Early jetties – southern end of the bay	32
5.3.3 Early jetties – western shoreline.....	32
5.3.4 Dock/slipway	35
5.3.5 Summary potential of maritime infrastructure potential	40
5.4 Other potential relics within the waters of the Bay	40
5.5 Summary of Archaeological Potential	40
6.0 SIGNIFICANCE ASSESSMENT	41
6.1 Heritage significance	41
6.2 Criteria.....	41
6.3 Statement of significance	42



7.0	IMPACT AND MITIGATION	44
7.1	Historic shipwrecks	44
7.2	Maritime Infrastructure	44
7.3	Other archaeological deposits within Blackwattle Bay	45
7.4	Unexpected finds procedure	45
8.0	OPPORTUNITIES	47
9.0	RECOMMENDATIONS	48
10.0	APPENDIX A: ANNEX TO THE 2001 UNESCO CONVENTION ON THE PROTECTION OF THE UNDERWATER CULTURAL HERITAGE.....	50
11.0	APPENDIX B: HERITAGE INTERPRETATION STRATEGY - MARITIME	54

FIGURES

Figure 1:	Study area – Oblique view	7
Figure 2:	Study area – street plan	7
Figure 3:	Study area – aerial view	8
Figure 4:	The Precinct Plan.....	9
Figure 5:	Strides ship breaking works, labelled on the 1939 map	13
Figure 6:	Overlay of modern shoreline on c1930s map of Blackwattle Bay	14
Figure 7:	Overlay by Comber Consultants of study area over portion of a 1855 map.....	14
Figure 8:	1886 map, The Glebe	16
Figure 9:	1908 Sydney Harbour Trust Map of Port Jackson	17
Figure 10:	Parish map of Petersham showing reclaimed land along eastern shoreline	17
Figure 11:	Portion of the 1886 parish map of Petersham and Camperdown	18
Figure 12:	Water Uses Plan	29
Figure 13:	1886 Parish Map showing wharf at the end of Leichhardt Street.	33
Figure 14:	c1890 map (but likely earlier) by Pullen and Gubbins)	34
Figure 15:	Portion of 1910 map of City of Sydney. y.....	34
Figure 16:	Stylised 1915 oblique view of Blackwattle Bay showing shipping, wharfage and industry along western shore	35
Figure 17:	Portion of 1939 Glebe Municipality Map.....	35

PHOTOGRAPHS

Photograph 1:	Aerial view of seawalls depicted in photographs 1-8	21
Photograph 2:	Extent of sandstone seawall at former F Buckle & Sons site on eastern shore of Blackwattle Bay.	21
Photograph 3:	Detail of sandstone seawall near former wharves of A & E Ellis).	22
Photograph 4:	Recent (2020) addition of sandstone blocks to shore up embankment at northern end of sandstone wall.	22
Photograph 5:	2019 photograph of collapsing timber palings shoring up rubble fill.	22
Photograph 6:	‘Seawall’ on northern side of jetty near former F Buckle & Sons site.....	23
Photograph 7:	Stone rubble and remnants of former wharf structures	23
Photograph 8:	Former wharf pylon in vicinity of former A&E Ellis wharf.....	24
Photograph 9:	Ramp at dragon boats facility. View to south-east	24
Photograph 10:	Sandstone seawall on the southern side of the dragon boat slipway	24
Photograph 11:	Formalised sandstone seawalls run northwards from the Blackwattle Bay Marine Operatives marin.....	25
Photograph 12:	Sydney Fish Market boardwalk sits above sheathed and unsheathed timber pylons and layer of rock rubble.....	25
Photograph 13:	Stormwater outlets east of the coal loader	26
Photograph 14:	Remains of the coal loader on the northern side of Pyrmont Bridge Road.....	26
Photograph 15:	Reinforced concrete deck of the wharf east of the coal loader.....	26
Photograph 16:	Underside of the reinforced concrete deck of the wharf east of the coal loader	27
Photograph 17:	Blackwattle Bay Marina B2 showing timber pylons and bracing beams prior to demolition in 2020.	27
Photograph 18:	Hanson Heidelberg Cement wharf area prior to demolition in 2020.	28



Photograph 19: Demolition of Hanson Heidelberg Cement wharf (foreground) and Blackwattle Bay Marine wharves.	28
Photograph 20: Modern seawall south of the Sydney University Canoe Club/The Boathouse restaurant.....	29
Photograph 21: Seawall north of the Sydney University Canoe Club/The Boathouse restaurant	29
Photograph 22: Seawalls adjacent to the termination of Cook Street, Glebe.....	30
Photograph 23: Foreground: Stone block footings of a small former wharf at the end of Cook Street.....	30
Photograph 24: The approximately 3m ² base of the wharf.....	30
Photograph 25: Image from an interpretive sign on the Council Depot/Incinerator site in 1937.....	31

TABLES

Table 1:	Shipbuilding on Pyrmont Peninsula – all on eastern side of peninsula.....	19
----------	---	----



1.0 INTRODUCTION

Blackwattle Bay offers an extraordinary opportunity to reconnect the harbour, its surrounding neighbourhoods and the city; to showcase Sydney's living culture and stories of Country; to build an inclusive and iconic waterfront destination that celebrates innovation, diversity and community.

This Maritime Archaeological Assessment report has been prepared by Comber Consultants and on behalf of Infrastructure NSW, to form part of the Blackwattle Bay State Significant Precinct Study (SSP Study). The SSP Study seeks a rezoning for new planning controls for Blackwattle Bay, located on the south-western side of Pyrmont.

Blackwattle Bay presents a significant opportunity for urban renewal across 10.4 hectares of predominantly government owned land located approximately 1km from the Sydney CBD. NSW Government is also investigating the delivery of a Metro Station in Pyrmont and has recognised the potential to transform the Pyrmont Peninsula with a new 20-year vision and planning framework through the Pyrmont Peninsula Place Strategy.

In 2015 the NSW Government recognised The Bays Precinct as one of the highest potential urban transformation sites in Australia with the release of The Bays Precinct, Sydney Transformation Plan. Following this, the Minister for Planning identified the renewal of Blackwattle Bay and the broader Bays Precinct as a matter of State planning significance and to be investigated for rezoning through the State Significant Precinct (SSP) process. Study Requirements for the Blackwattle Bay (formerly known as 'Bays Market District') investigation area were issued by the Minister on 28 April 2017.

A critical part of Blackwattle Bay's revitalisation and vision has been the NSW Government's decision to relocate the Sydney Fish Market (SFM) from its existing location on Bank Street to the head of Blackwattle Bay. This was sought through a State Significant Development Application (SSDA) process and approved in June 2020. The new SFM was designed alongside the baseline Blackwattle Bay studies to ensure that key aspects of the project are consistent with the vision and principles for Blackwattle Bay.

The outcome of the Blackwattle Bay State Significant Precinct process will be a new planning framework that will enable further development applications for the renewal of the Precinct, connected to the harbour and centred around a rejuvenated SFM. The framework will also provide for new public open spaces including a continuous waterfront promenade, community facilities, and other compatible uses.

This report provides a comprehensive investigation of maritime archaeological heritage to address a part of the Study Requirements and support the development of a new planning framework for Blackwattle Bay.

1.1 Blackwattle Bay State Significant Precinct

The Blackwattle Bay SSP Investigation Area ('Study Area') encompasses the land and water area, known as Blackwattle Bay, between Bank Street and the Glebe foreshore shown in Figures 1 to 3. The land is located within the City of Sydney local government area (LGA).

The land within the Study Area is approximately 10.4 hectares (ha) in size. It is largely government owned land containing the SFM (wholesale and retail), recreation and boating operations and facilities. There are three privately owned sites including a concrete batching plant operated by Hymix, seafood wholesaler Poulos Brothers and private developer Celestino which owns further wholesaling facilities. The Blackwattle Bay land area wraps around the southern and eastern edges of Blackwattle Bay and is bounded by Bridge Road to the south and Bank Street to the east. The Western Distributor motorway / Anzac Bridge viaduct is located adjacent to the eastern boundary before traversing over the northern section of the site. The water area of Blackwattle Bay is approximately 21 hectares.



Figure 1: Study area – Oblique view (Source: INSW)



Figure 2: Study area – street plan (Source: FJMT)



Figure 3: Study area – aerial view (Source: INSW)

1.2 The Proposal

The SSP Study is proposing to rezone Blackwattle Bay with a new planning framework and planning controls to enable its future urban renewal.

The rezoning proposal is based on the Blackwattle Bay Precinct Plan ('Precinct Plan') which provides a conceptual layout to guide the development of planning controls for the precinct and has informed this report. The Precinct Plan is shown in Figure 4 below. The Precinct Plan provides overarching guidance about how the area should be developed based on community and stakeholder input, local character and place, current and future demographics, economic and social trends, cultural and environmental considerations, and urban renewal aspirations and needs regarding land use, community recreation, transportation, housing, and jobs. Key characteristics of the Precinct Plan that are relevant to this assessment include:

- A continuous waterfront promenade – the missing link in an otherwise 15km foreshore walk from Woolloomooloo to Rozelle
- New active transport connections to bring the neighbourhood closer to the harbour through new and improved pedestrian and cycling links
- Improved public transport options and minimised vehicle usage strategies including:
 - Ferry wharf
- An authentic, and world class new SFM at the heart of Blackwattle Bay

- An authentic place that builds on Indigenous and industrial stories and celebrating the local character.

Once the Study Area is rezoned and the new planning controls are in place, future development will need to seek development approval through the relevant approval pathway. This will include detailed development proposals and further associated environmental, social and economic assessments.

The rezoning proposal responds to the Study Requirements issued for Blackwattle Bay (formerly Bays Market District) by the Department of Planning and Environment in April 2017.

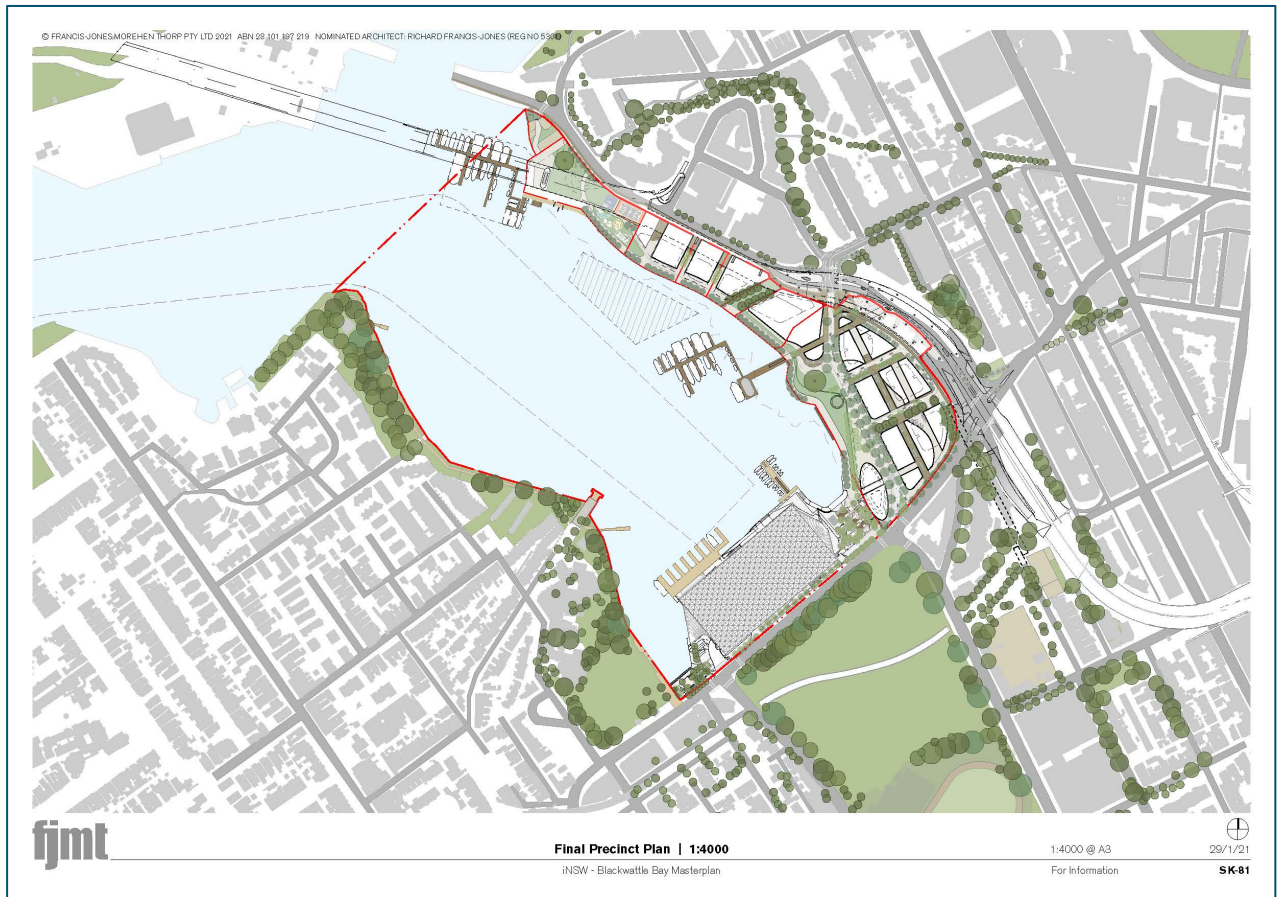


Figure 4: Blackwattle Bay Precinct Plan (Source: FJMT)

1.3 Vision and Principles

Principles for a future Blackwattle Bay were formed through extensive community consultation in August 2017. These were further developed in 2019, together with a vision for the precinct. Both are provided below. These have guided the development of the Precinct Plan and will continue to guide future development proposals within the Study Area.

Vision:

“Blackwattle Bay offers an extraordinary opportunity to reconnect the harbour, its surrounding neighbourhoods and the city; to showcase Sydney’s living culture and stories of Country; to build an inclusive and iconic waterfront destination that celebrates innovation, diversity and community.”

Principles:

1. Improve access to Blackwattle Bay, the foreshore and water activities for all users
2. Minimise additional shadowing to Wentworth Park and Glebe Foreshore (in mid-winter) and create new places with comfortable conditions for people to enjoy.



3. Pursue leading edge sustainability outcomes including climate change resilience, improved water quality and restoration of natural ecosystems.
4. Prioritise movement by walking, cycling and public transport.
5. Balance diverse traffic movement and parking needs for all users.
6. Link the Blackwattle Bay precinct to the City, Glebe Island and White Bay and other surrounding communities and attractors.
7. Mandate Design Excellence in the public and private domain.
8. Integrate housing, employment and mixed uses to create a vibrant, walkable, mixed use precinct on the city's edge.
9. Maintain and enhance water uses and activities.
10. Allow for co-existence and evolution of land uses over time.
11. A place for everyone that is inviting, unique in character, socially inclusive and affordable.
12. Expand the range of recreational, community and cultural facilities.
13. Plan for the future community's education, health, social and cultural needs.
14. Deliver development that is economically, socially, culturally and environmentally viable.
15. Embed and interpret the morphology, heritage and culture of the site to create an authentic and site responsive place.
16. Foster social and cultural understanding and respect to heal and grow relationships.

1.4 Study Requirements

On 28 April 2017 the Minister issued Study Requirements for the Precinct. Of relevance to this study are the following requirements which are in italics. Each of these are followed by the report author's note on how they are addressed in this report:

11. *Heritage*

- 11.4. *A detailed Maritime Archaeological and Heritage Assessment (desktop and possible underwater survey) is to be undertaken that assesses the significance of buried or submerged maritime heritage sites (e.g. shipwrecks both archaeologically located and known from historical records, anchors or other historic maritime infrastructure sites including piers, seawalls and other maritime industry components, and associated relics), which may exist underwater, under the seabed or under areas of reclaimed land (especially at the fish markets site and behind the Blackwattle Bay Coal Loader site, and Rozelle Bay Parkland).*

Note: Requirement 11.4 is addressed through the preparation of this report.

- 11.5. *The Maritime Archaeological and heritage assessment should be undertaken by a suitably qualified and experienced specialist maritime archaeologist who has an understanding of the effects of dredging and reclamation process on former submerged maritime infrastructure sites and other submerged maritime heritage sites.*

Note: This report has been prepared by a specialist maritime archaeologist with extensive experience in the processes of dredging and reclamation.

- 11.6. *Provide recommendations for the management of heritage significance – to guide future development or planning to retain the assessed significance of features, including features to retain and re-use, treatment of specific spaces and fabric of significance, view corridors, setbacks and heights for new development in the vicinity, photographic archival recording or oral histories.*



Note: Requirement 11.4 is addressed through the recommendations in section 10 of this report and arise from the investigations undertaken in its preparation.

- 11.7. *Prepare the required design provisions, in collaboration with CoS and DPE, which are able to be integrated into Sydney DCP 2012 if required.*

Note: Comber Consultants had input into the Bays Market District Coordination Meeting in October 2018. The Minutes of that meeting record the following advice:

Item 3.10: Comber Consultants advised that given the lack of archaeology being physically present within the marine zone, there should be an emphasis on interpreting the cultural heritage as per the opportunities listed in Item 3.8 (Interpreting past activities of BMD).

Item 3.11: Comber Consultants also flagged potential for dock remnants at the end of Gibbs Street and Miller Street (albeit in landfill). Prior industrial items and indigenous artefacts may also be present.

- 11.8 *Provide an interpretation plan having particular regard to the precinct's relationship with nearby heritage items in accordance with Interpreting Heritage Places and Items Guidelines.*

Note: Comber Consultants provided maritime heritage input into the Heritage Interpretation Strategy prepared by City Plan Heritage (2020a). That maritime heritage input is based on the findings of this Maritime Archaeological Assessment (see Appendix B).



2.0 METHODOLOGY

This report has been informed by:

- Reference to the relics and historic shipwreck provisions contained in the New South Wales *Heritage Act 1977* (see Chapter 10)
- The investigation, assessment and management recommendations have been prepared in accordance with the principles contained 2001 UNESCO Convention on the protection of the underwater cultural heritage and the rules described in the Annex of that convention. Australia is moving towards ratification of this Convention through the new Commonwealth *Underwater Cultural Heritage Act 2018*. However, the principles and annex have been adopted for the conduct of underwater cultural heritage management in this State by the New South Wales Heritage Council.
- A literature review of studies, plans and strategies to understand context and identify key findings. The literature review included an examination of:
 - the Maritime Heritage database held by the heritage section of the Community Engagement Division of the Department of Premier and Cabinet, including:
 - Relevant underwater reports held by the heritage section of the Community Engagement Division
 - Reviewing the New South Wales Shipwrecks Atlas, New South Wales Maritime Heritage Database and State Heritage Register and Inventory
 - A search and examination of archival and published records held by the Port Authority of New South Wales, New South Wales State Library and New South Wales State Archives and Records Authority. A gap analysis was conducted of previous work, (including those commissioned by Infrastructure New South Wales for this project), strategies and plans to understand the geophysical and historical context of the Study Area;
 - Interview with a commercial diver who has undertaken a seabed survey in the Study Area.
 - Blackwattle Bay Precinct Plan – Urban Design Statement November 2020 (FJMT)
 - The Bays Market Precinct Rezoning - Aboriginal Cultural Heritage Assessment Report. (Artefact Heritage 2017)
 - Heritage Significance Assessment incorporating Heritage Impact Assessment, Terrestrial Archaeology, Blackwattle Bay Maritime Precinct. (City Plan Heritage 2013)
 - European Heritage Assessment. Report to Infrastructure. (City Plan Heritage, 2020a)
 - Heritage Interpretation Strategy: Blackwattle Bay State Significant Precinct Study. (City Plan Heritage, 2020b).
- Site inspections conducted on 28th August 2017 and on 10 November 2020. The inspection of the Study Area focussed on the land-water interface along the shores of Blackwattle Bay. The seawalls were inspected to identify their nature and for any evidence of previous wharves or jetties.

The findings of the literature review and site inspections were used to:

- Determine the strategic implications of maritime archaeology within Blackwattle Bay;
- Identify the challenges, opportunities and key issues to be addressed by the State Significant Projects (SSP) Proposal;
- Create a program identifying tasks, milestones, roles and responsibilities to complete any identified gaps.

3.0 LITERATURE REVIEW

3.1 New South Wales Maritime Heritage Database

The New South Wales Maritime Heritage Database maintained by the Heritage Division of the Office of Environment and Heritage contains a comprehensive listing of reported instances of shipwrecks and/or reported locations of ‘ship graveyards’ or other abandoned hulks that have been found to date. Ships were abandoned due to being obsolete, surplus to requirements or no longer seaworthy. These instances of abandoned shipwrecks often went unreported in media or official records. Such vessels could be left in backwaters, deep water (where they would not interfere with shipping movements) or under landfill.

The New South Wales maritime heritage database, (Accessed 11 July 2017), does not record any shipwrecks within Blackwattle Bay. It does reference Strides shipbreaking yard in regard to the dismantling of the tug Bustler before that vessel was towed to sea and scuttled. The database refers to Strides of Blackwattle Bay. Strides, established in 1858, was on the western end of what is now Blackwattle Bay Park and faced Rozelle Bay rather than Blackwattle Bay itself (Figure 2). That location is outside of the current Study Area (Figure 1; EDAW 1999:6).

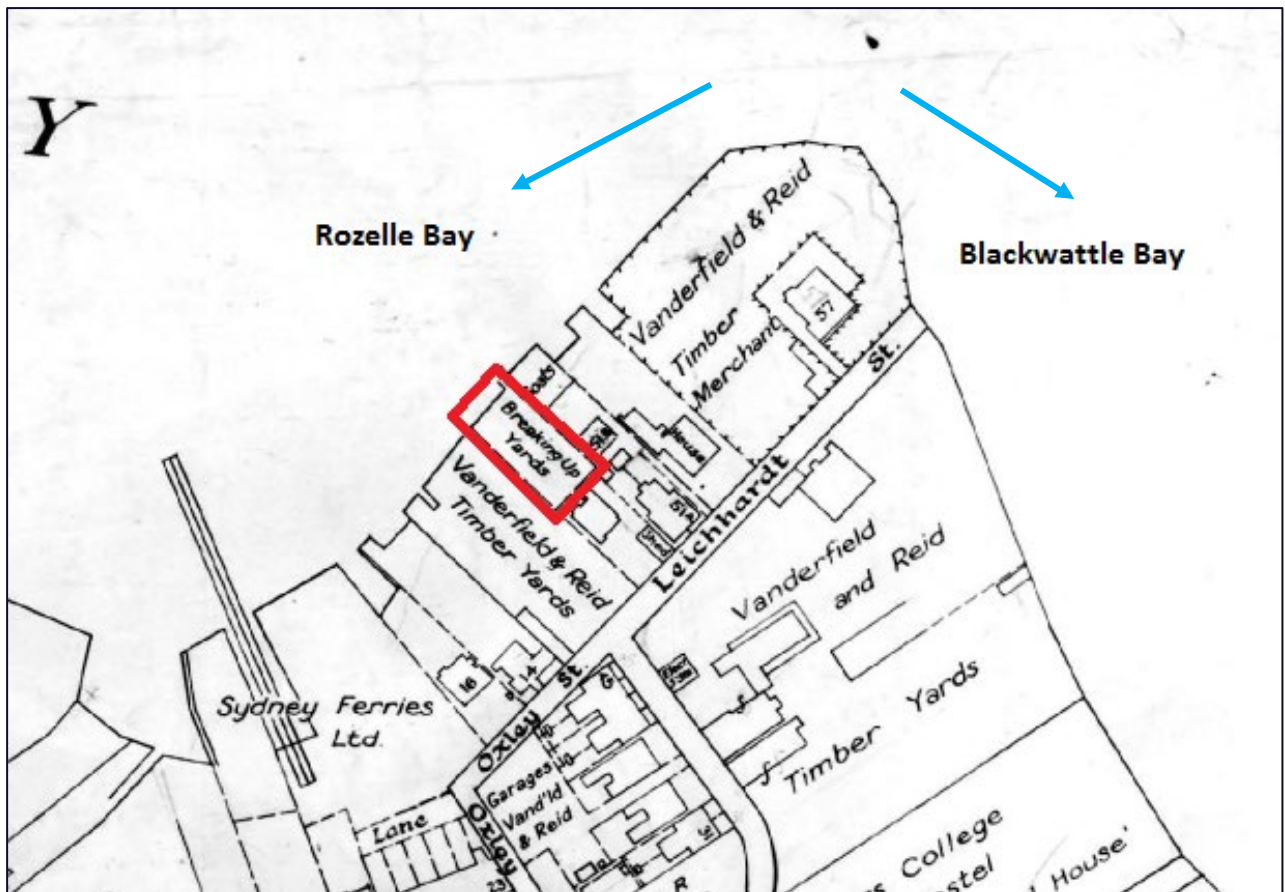


Figure 5: Strides ship breaking works, labelled on the 1939 map above as ‘Breaking up Yards’ (outlined in red). Glebe Municipality 1939 Drawn by W. T. Evesson – March 1939. (Source: City of Sydney’s Historical Atlas of Sydney accessed online 19-19-2017)

3.2 Existing heritage impact assessment studies for the Bays Market District

Shipwrecks

A review was undertaken of the history of Blackwattle Bay within heritage studies previously undertaken for the Bays Market District (City Plan Heritage November 2020a and 2020b, Artefact Heritage 2017). These histories indicate that Blackwattle Bay began as a swamp. A c1930s Parish Map of Petersham shows what is now Blackwattle Bay as ‘Black



Wattle Cove Swamp' (City Plan Heritage 2020b:50). The extent of the swamp in the 1930s is even clearer in an overlay of the modern shoreline on another circa 1830 map (Artefact Heritage 2017:17). The Study Area is still labelled as 'Black Wattle Bay Swamp Coe' (sic) in Spence & Gardiner's 1855 map of Sydney and Suburbs, as 'Black Wattle Swamp' in an 1857 map by Hutchinson et al.

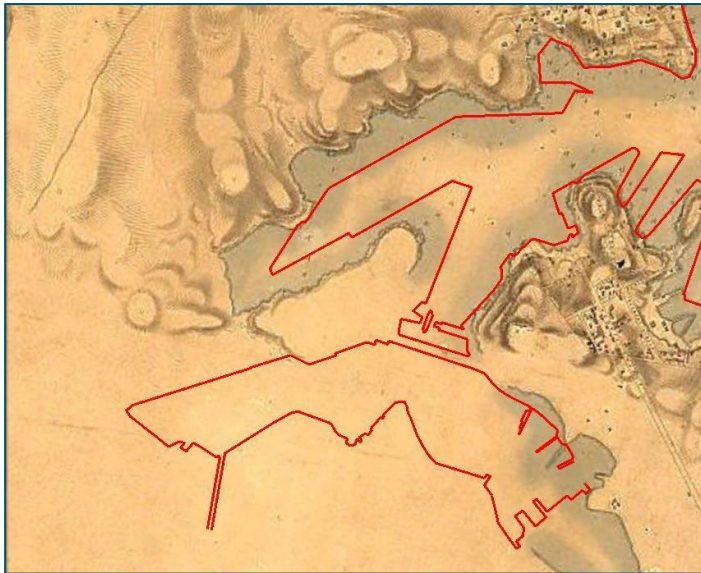


Figure 6: Overlay of modern shoreline on c1930s map of Blackwattle Bay

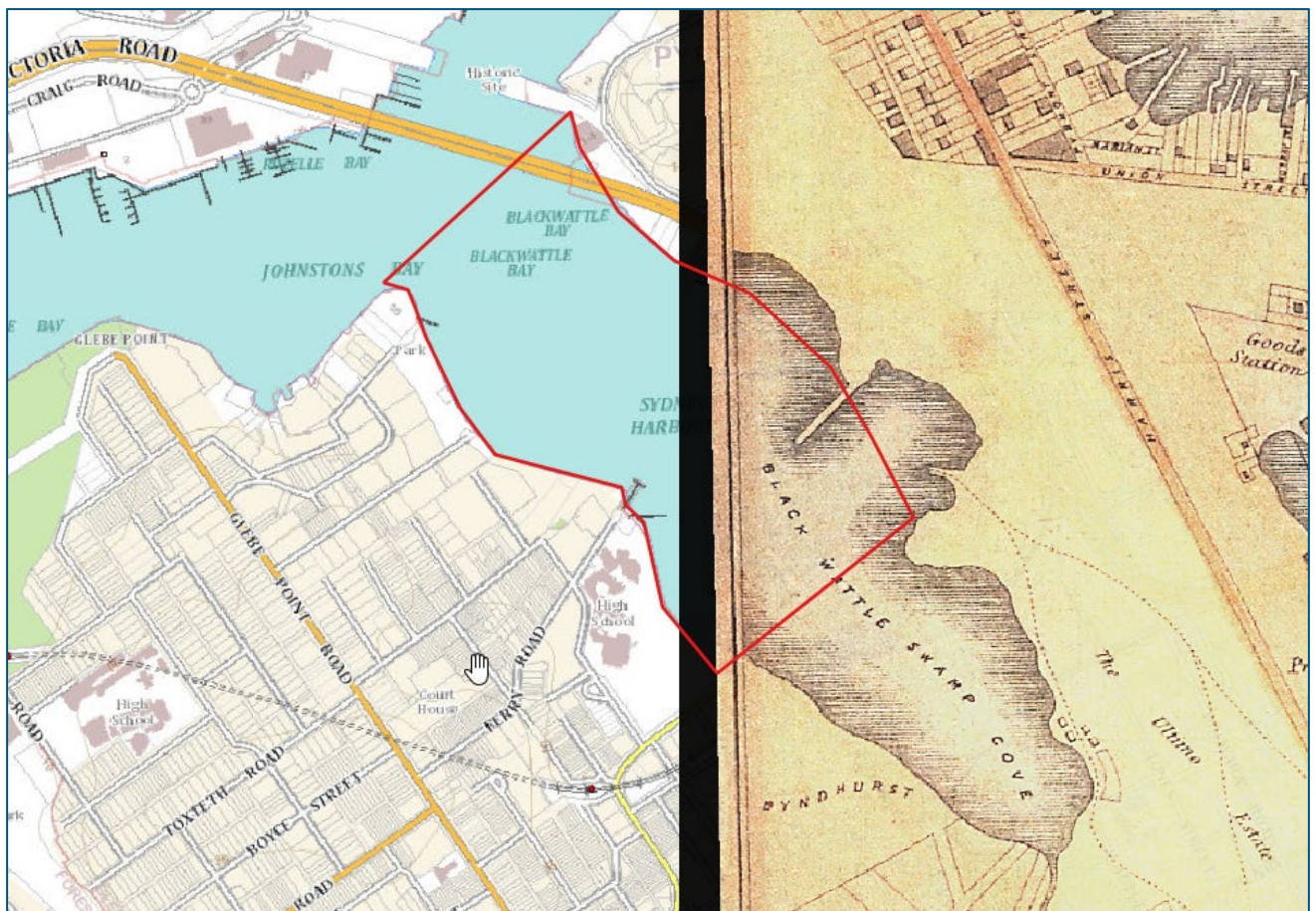


Figure 7: Overlay by Comber Consultants of study area over portion of a 1855 map (Spence & Gardiner – right hand side of Figure)



The swamp area was of little use as a navigable waterway but the freshwater of Black Water Creek that fed into the swamp provided an opportunity to relocate slaughterhouses that had become a bane to the inner-city area. It was assumed that the creek water and tides would flush the waste out of the Bay but this did not occur and the creek and swamp became fouled and a public health risk (City Plan Heritage 2013:24-25). The slaughterhouses were relocated to Homebush Bay by 1860 but raw sewerage and other industrial waste continued to be discharged into the southern end of the Bay (City Plan Heritage 2013:25-26, 2020a:32). A stone causeway with a timber bridge in the centre (now Pymont Bridge Road) was built in 1859 and was accompanied by discussion of reclamation of the swamp, south of the causeway. The reclamation progressed after completion of the causeway in 1875 with silt dredged from the Bay (City Plan Heritage 2017:16; 2020a:29) and surplus rubbish from Pymont and other quarries (City Plan Heritage 2013:27).

On the eastern shore immediately north of the causeway, there was a small bay on the eastern shore (Figure 7). This remained unreclaimed during the 1860s. This area covers the location of the existing Sydney Fish Market as well as a dry dock or slipway that appears in maps from 1888 to the early 1900s. While no records have been found that indicate ships or other watercraft were scuttled in this area, there is potential for undocumented shipwreck remains to be present. This is particularly so given the proximity of ironmongers and shipbuilding firm D and W Robertson's Iron Works just to the north of the structure.

The origin of the current navigable waters of Blackwattle Bay, precludes the presence of areas of excessive depth within which shipwrecks could be scuttled without impacting on shipping movements. In addition, given the proximity to industrial activities and to numerous workers and residents in the area, any shipwreck events (eg, through explosions, fire, storm events etc) would have been reported as newsworthy items. The absence of any reported shipwreck events makes the presence of shipwrecks from such sources highly unlikely. In addition, any vessel that foundered within the Bay would need to have been removed to maintain the waterway.

As the history of the Bay includes land reclamation, the potential for decommissioned or unseaworthy vessels to have been included in landfill is considered in the Gap analysis in Section 3.3 below. Such occurrences are generally associated with a vessel that has already been abandoned on or near the original shoreline or which has been towed to the area to act as a seawall to shore up the area to be reclaimed. Such inclusions may not be formally recorded and subsequent reclamation can remove any indication of the site. Due to the proximity of Strides shipbreaking yard (Figure 2) north-west of the Study Area and the concentration of shipbuilding activities on the eastern side of Pymont Peninsula, the potential for shipwrecks to be present from that source is also considered in Section 3.3.

Conversion of the swamp to an area useful for shipping required considerable transformation of Blackwattle Bay. In addition to dredging to provide a navigable waterway and berthing facilities, (ie wharves and jetties), modification to the shoreline was also needed to provide suitable areas for unloading, stockpiling and transshipment of goods and materials. Prior to reclamation, land along the eastern shore consisted of steep cliffs and small springs with little room for wharfage. Areas where land reclamation have occurred within the Bay since the 1870s include the eastern, southern and western shorelines where the reclaimed land was used for industrial purposes. These include extensive areas for timber merchants and the southern shore which was used variously for the transshipment of coal, blue metal and other materials.

A 2013 study of Berrys Bay (Nutley 2014) refers to the torpedo boat Avernus which is reported to have been included in landfill 'at Glebe' in the 1940s. Consideration is therefore given to this vessel due to the southern and western shores of Blackwattle Bay being within the suburb of Glebe. The Avernus, along with the Acheron, was based at the Berrys Bay Torpedo Depot from 1879 under the control of the New South Wales Torpedo Corp (Nutley 2014:18; Gillett 2003). The Corp was renamed the New South Wales Torpedo and Signalling Corp in 1879 – the same year that two torpedo launches were completed by the Atlas Engineering Company at Pymont. For their time, they were of a design that had only recently been developed for the Royal Navy (Nutley 2013; Gillett:2003). Although no further details are available about the location of the Avernus, the 1940s date for its inclusion within reclamation works at Glebe post-dates reclamation works within the Study Area.

Wharves and jetties and seawalls

The earliest indication of wharves extending into Blackwattle Bay are shown on an 1865 Trigonometrical Survey (City Plan Heritage 2017:28). These predate land reclamation on the eastern shoreline and any surviving evidence of those structures would be within reclaimed land. The pre-reclamation portions of these wharves may be present beneath the

1886 western extent of Miller Street and Gipps Street (Figure 3). The 1886 the parish map of Petersham and Camperdown (Figure 3), shows short and apparently insubstantial wharves extending from those streets in much the same location as those. There are no other details of these items to indicate the industries with which they were associated or whether they were timber or stone structures.

The Blackwattle Bay Maritime Precinct study by City Plan Heritage in 2013 provides a detailed history of the development of the wharves and seawalls at the head of the Bay, (with the exception of the Howard Smith Ltd Coal Depot and wharf, formerly occupied by Hanson Heidelberg Cement concrete batching plant). The 1886 map (Figure 8) shows the initial Government wharf that was built along the seawall on the northern side of Pyrmont Bridge Road (this section now known as Bridge Road) (Figure 8). The 2013 study notes that the seawall and wharf were constructed in 1885-86 (City Plan Heritage 2013:5) and the wharf consisted of two rows of timber piles extending about 9.14m beyond the seawall. The Sydney Harbour Trust initiated improvements to this wharf in 1904 to allow their use as coal and metal depots. The wharf along Bridge Road was reconstructed in 1910-1911 'when a seawall of close piling and Monier plates was erected 4.71m further out' and 13.7m from the original seawall (City Plan Heritage 2013:29). The area was then backfilled to extend the coal depot area and provide a stable surface for other material including blue metal (City Plan Heritage 2013:29).



Figure 8: 1886 map, The Glebe, (NLA MAP RaA 40 Plate 198)

The Trust also undertook further dredging works in the Bay, 'removing thousands of tons of rock, clay, sewerage and "found objects"', (City Plan Heritage 2013:29). This second phase of dredging would have therefore removed a considerable amount of any cultural deposits that had accumulated in the Bay to that point in time.

The reclamation works along the western shore of Blackwattle Bay are shown in the parish map of Petersham (1899). The map also shows an indent on the reclaimed eastern shore which may be a dock for shipping or a slipway. A subsequent parish map of Petersham provides details of the reclamation works on the eastern shore along with a number of jetties extending into the Bay (City Plan Heritage 2020:29) (Figures 9-10). These reclamations appear to have been made by private concerns such as the Harris family and F. Buckle. F. Buckle's reclamation is of particular interest

in terms of the section of sandstone seawall that survives along the eastern shore of Blackwattle Bay. His reclamation was limited to a very narrow strip that encompasses the extent of the current sandstone seawall. It would appear that this was specifically related to his family's commercial interests. A 1908 Sydney Harbour Trust map of Port Jackson (Figure 9) shows a narrow wharf at the southern end of this structure labelled F. Buckle & Sons. It aligns with the northern side of the original alignment of Gipps Street and what appears to be a slipway for Saxton and Binns Timber Yard (City Plan Heritage 2017:Figure 13:23). The F. Buckle frontage is now adjacent to the current Fish Market parking lot and Saxton and Binns is now the Sydney Fish Market.



Figure 9: 1908 Sydney Harbour Trust Map of Port Jackson. Note representation of moorings against seawalls around perimeter of bay.



Figure 10: Parish map of Petersham showing reclaimed land along eastern shoreline (Source: City Plan 2020:29)

The 2020 City Plan Heritage report includes a 1924 Sydney Harbour Trust map showing the Howard Smith wharf – at that time the only structure extending northward into the Bay from those owned by Public Works Department and the State Metal Quarries (City Plan Heritage 2020b:56). No further information on the construction and subsequent modifications to this structure has been found to date.

Redeposited materials from stormwater channels

Stormwater has fed into Blackwattle Bay through a system of stormwater channels that commenced in 1850 (City Plan Heritage 2013:28). The stormwater channels are likely to have carried cultural items into the Bay and deposited these adjacent to the outlets of those channels. In July 1992, archaeological investigations in Parramatta River adjacent to Queens Wharf, Parramatta, have shown the potential for a wide variety of such material to be redeposited adjacent to stormwater drains (Nutley 2005; Bower and Staniforth 1993).

In Blackwattle Bay, dredging works for land reclamation in the latter part of the nineteenth century and continued into the early part of the twentieth century (City Plan Heritage 2013:27). These dredging programs will have removed much of the early deposits of cultural material that had flowed down the stormwater channels.

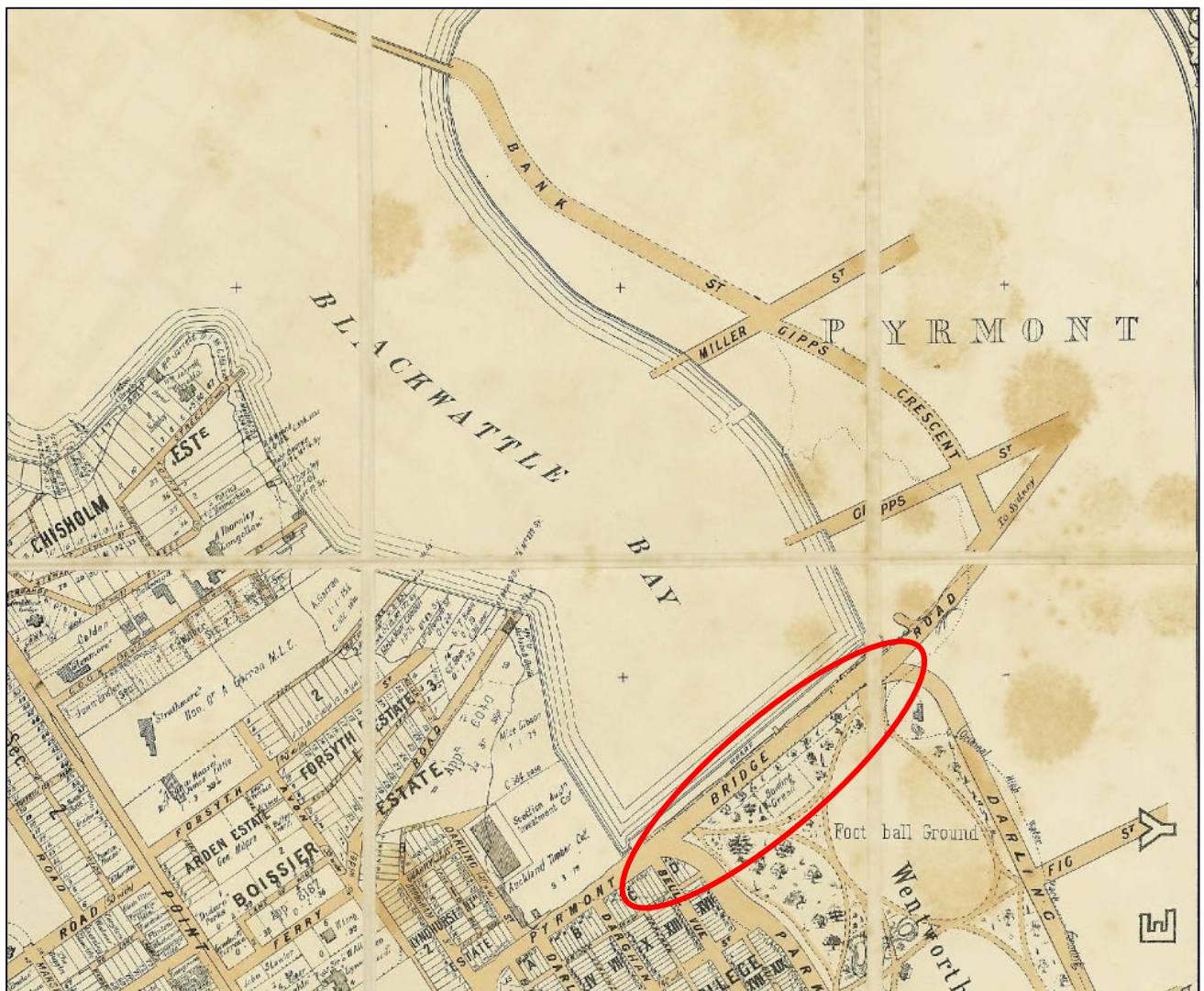


Figure 11: Portion of the 1886 parish map of Petersham and Camperdown showing the post-reclamation wharves on the eastern side of Blackwattle Bay extending from Miller Street and Gipps Street and the 9.4 wide wharf at the head of the Bay on the northern side of Pyrmont Bridge Road (circled).



3.3 Analysis of other sources of maritime heritage within the Bay

Shipbuilding yards:

If there had been a presence of shipbuilding yards in the Study Area there would be potential for underwater archaeological remains to be present in the form of slipways, construction tools and other equipment as well as discarded structural components. The New South Wales maritime heritage database – (Accessed 11 July 2017) includes references to a number of shipbuilding yards at Pyrmont on the eastern side of the peninsula. No references have been found to shipbuilding yards in Blackwattle Bay (Table 1), either in the Heritage Office maritime heritage database or the Sands Directory. In addition, a compilation of New South Wales Shipbuilders and Boat Builders from the Register of Australian and New Zealand Vessels, (Flapan 2008 http://www.boatregister.net/New_South_Wales_Builders.htm - accessed 29/08/2017), does not include any reference to shipbuilding in Blackwattle Bay. In the absence of any known shipbuilding yards within Blackwattle Bay, it can be assumed that vessels listed as being built at Pyrmont, New South Wales were not built within Blackwattle Bay.

Name	Date range	Location	Source
John Sands	1884	Pyrmont	http://www.environment.nsw.gov.au/maritimeheritageapp/ViewSiteDetail.aspx?siteid=872
Russell, John William & Bourne, W.; also Russell, John William	1831-1853	Pyrmont	Sands Directory
James Bower & Co; also Bower & Drake; Bower & Duke	1873-1875	Pyrmont	http://www.boatregister.net/New_South_Wales_Builders.htm
James Underwood	1798, also 1800-1807	Pyrmont	http://www.australiaonnet.com/economy-business/industries/ship-building.html
Davey & Co.	1879	Pyrmont	Sands Directory
Fenwick, Andrew & family	1871	Pyrmont	Sands Directory
Holdsworth	1856	Pyrmont	Sands Directory
Jeffery, H.E.	1870	Pyrmont	Sands Directory
Thomas Chowne	1840-1863	Johnstons Bay, Pyrmont	Listing for Former CSR Tablet House Including Interiors
John William Russell	1843	Pyrmont Bay	Listing for Former CSR Tablet House Including Interiors
Drake, David; also Drake, David Ltd.	1879-1934	42 Mill Street Pyrmont	Sands Directory
H. E. Jeffery	1870	Pyrmont	http://www.environment.nsw.gov.au/maritimeheritageapp/ViewSiteDetail.aspx?siteid=1432

Table 1: Shipbuilding on Pyrmont Peninsula – all on eastern side of peninsula



3.4 Clearance diving within the Bay

In 2012, Manly Hydraulics Laboratory of the former Department of Public Works, undertook a survey of the southern section of Blackwattle Bay (pers comm, Colin Browne 11 July 2017). A Waterways Construction Group report contains the results of that survey and subsequent clearance diving undertaken on behalf of Roads and Maritime Services (Waterway Construction Group Seabed:2012). This report includes a list of sixty-nine objects identified in the initial survey and the results of the subsequent clearance diving. Ten of the surveyed items could not be relocated - either due to being no longer present, (eg, washed away by tides/currents), or buried deeper within the silt. Most of the identified features consisted of miscellaneous items such as shopping trolleys, plastic chairs, wheelie bins, and assorted pieces of metal. Various types of timber were also located. These included a couple of wharf timbers, and a timber pylon. No significant structures or objects of archaeological value were identified.

3.5 Strategies and plans

The Blackwattle Bay Precinct Plan establishes planning and design principles and vision statements for the renewal of Blackwattle Bay. Those which inform the management of the maritime archaeological potential of the Bay include:

- Principle 15: Embed and interpret the morphology, heritage and culture of the site to create an authentic and site responsive place.
This principle is addressed in this report through an documentation of the history of the maritime aspects of the bay in terms of the marine environment and archaeological remains under reclaimed land.
- Principle 16: Foster social and cultural understanding and respect to heal and grow relationships.
This principle is addressed through the maritime heritage input into the Heritage Interpretation Strategy for Blackwattle Bay. (See Appendix B)

4.0 SITE INSPECTIONS

4.1 Introduction

Inspections of the Study Area were conducted on 28th August 2017 and updated and on 10th November 2020, focussed. These focused on the proposed developments along the water interface along the shores of Blackwattle Bay. The seawalls were inspected to identify their nature and for any evidence of previous wharves or jetties.

4.2 Eastern shoreline

The eastern shoreline consists of seawalls and remnants of seawalls, composed of a variety of materials. This includes stone rubble, concrete and a short section of sandstone block. The section of sandstone blocks is located along the frontage of F Buckle and Sons' former property at the northern end of the current Sydney Fish Market car park and just south of the lightweight marina jetty (Photograph 1-4). The southern extremity of this wall is consistent with the entrance to the nineteenth century dry dock/slipway.

The sandstone wall is separated from the marina jetty by a section of rotting timber paling and pylon seawall in front of rock rubble (Photograph 4-5). A portion of this frontage has been shored up with large sandstone blocks during 2020 (Photograph 4).



Photograph 1: Aerial view of seawalls depicted in photographs 1-8. (Six Maps accessed 22/12/2020)

- Yellow line: sandstone (Photographs 1-3)
- Orange: palings (Photographs 3-4)
- White: collapsed concrete retaining wall (Photographs 6 & 8)
- Red: large timber pylon (Photograph 7)
- Blue: remnant jetty pylon and palings (Photographs 5-6)
- Green: line of large horizontal timbers and rubble fill (Photographs 5-6)



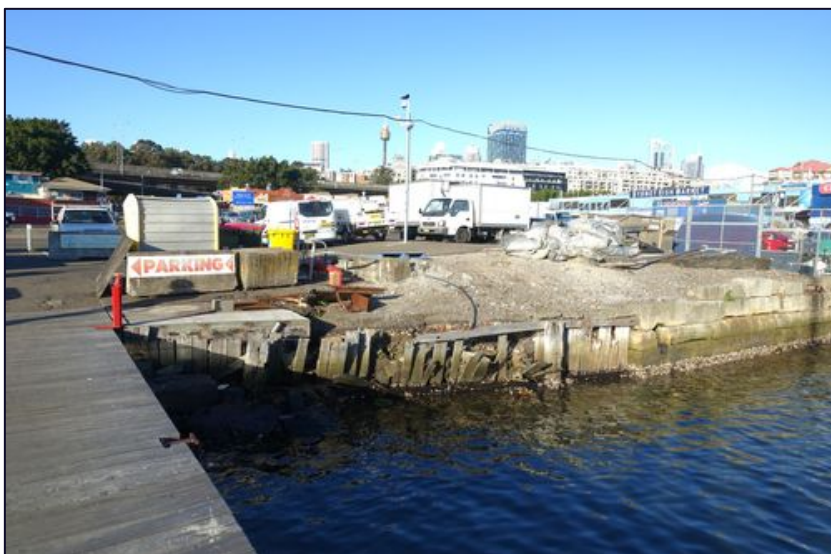
Photograph 2: Extent of sandstone seawall at former F Buckle & Sons site on eastern shore of Blackwattle Bay. View to north.



Photograph 3: Detail of sandstone seawall near former wharves of A & E Ellis (see Figure 9).



Photograph 4: Recent (2020) addition of sandstone blocks to shore up embankment at northern end of sandstone wall opposite A & E Ellis's former wharf. Compare to Photograph 5 taken in 2019 showing collapsing timber shoring.



Photograph 5: 2019 photograph of collapsing timber palings shoring up rubble fill at northern end of sandstone block seawall on southern side of Sydney Fish Markets' jetty.

Immediately north of the mooring jetty, the 'seawall' is at the site of the former A&E Ellis wharf/jetty shown in the 1908, 1913 and 1924 Sydney Harbour Trust maps of Port Jackson. This is comprised of assorted rubble including broken asphalt, loose concrete slabs, a line of large horizontal timbers (that run north towards the Hymix cement facility), a timber pylon from a former wharf and a line of vertical rotting palings ending with a lightweight pylon that run at right-angles to the shoreline. These may have been part of a former wharf (Photographs 6-7). In this area are also the remains of a stone and concrete bounded wharf with an asphalt surface that extended approximately 5-6m into the Bay that may be part of F Buckle's reclamation and/or the A&E Ellis wharf/jetty.

North of 1 Bank Street is the dragon boat compound and slipway (Photograph 9). Along this section the seawalls are primarily sandstone block (Photograph 10).



Photograph 6: 'Seawall' on northern side of jetty near former F Buckle & Sons site showing former piles and large horizontal timbers extending towards Hymix cement works site



Photograph 7: Stone rubble and remnants of former wharf structures



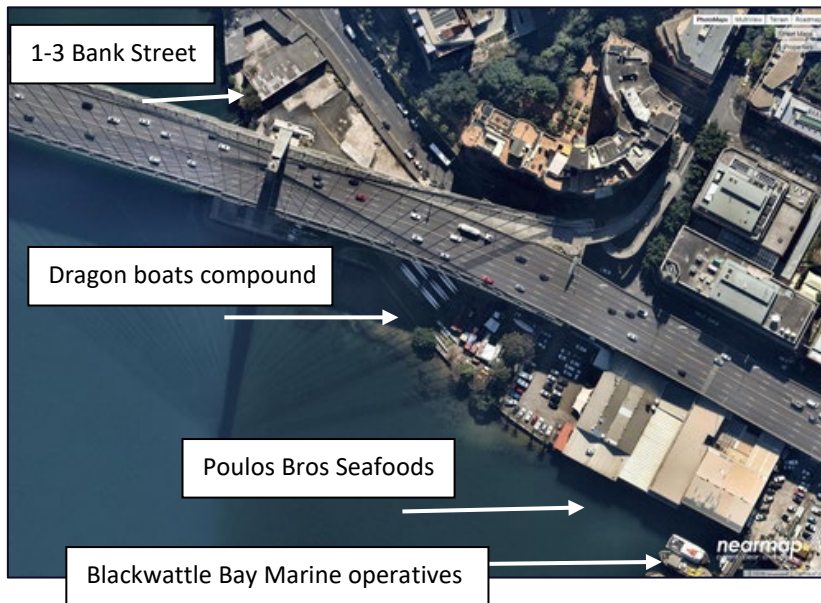
Photograph 8: Former wharf pylon in vicinity of former A&E Ellis wharf



Photograph 9: Ramp at dragon boats facility. View to south-east



Photograph 10: Sandstone seawall on the southern side of the dragon boat slipway



Photograph 11: Formalised sandstone seawalls run northwards from the Blackwattle Bay Marine Operatives single marina arm near Poulos Bros Seafoods property, past the dragon boat compound to 1-3 Bank Street.

Further north, the seawall becomes increasingly formalised with formed sandstone blocks or concrete on a rubble rock base. (Photograph 9).

In front of the main Sydney Fish Market building a modern boardwalk supported by timber pylons runs along the seaward frontage of the building. Beneath the wharf is loose rock rubble (Photograph 12). The timber pylons along the waterline show signs of decay and some have been encased in protective sheathing. The Fish Market includes a main jetty for unloading, refuelling and maintenance of fishing vessels, a mooring jetty to the north and a floating pontoon extending from the boardwalk for casual use by visiting boats and customers.



Photograph 12: The Sydney Fish Market boardwalk sits above sheathed and unsheathed timber pylons and layer of rock rubble

4.3 Southern shoreline

In the south-east corner of the Bay, north of the former coal loader are four stormwater outlets set in concrete facing along the northern side of Pyrmont Bridge Road (Photograph 13).

The remains of the coal loader stand on 1953 era reinforced concrete beams and concrete columns cast within steel tubes and with seaward walls of concrete plating (Murphy 1997:21). (Photograph 14). Along the north-east frontage are the remains of close-set timber pylons of the former jetty that extended northwards.



West of the coal loader, concrete Monier plates form a seawall on the southern side of the decking of the concrete wharf extension (Photograph 15 and 16). The wharf, set over the waters of the Bay, is supported on steel pylons (Photograph 16). The reinforced concrete deck overhangs a seawall that runs the length of the site about 20m from Bridge Road. This wharf was being demolished at the time of this report as part of the early works for the new Sydney Fish Market.



Photograph 13: Stormwater outlets east of the coal loader



Photograph 14: Remains of the coal loader on the northern side of Pyrmont Bridge Road



Photograph 15: Reinforced concrete deck of the wharf east of the coal loader showing seawall that runs the length of the site about 20m from Bridge Road.



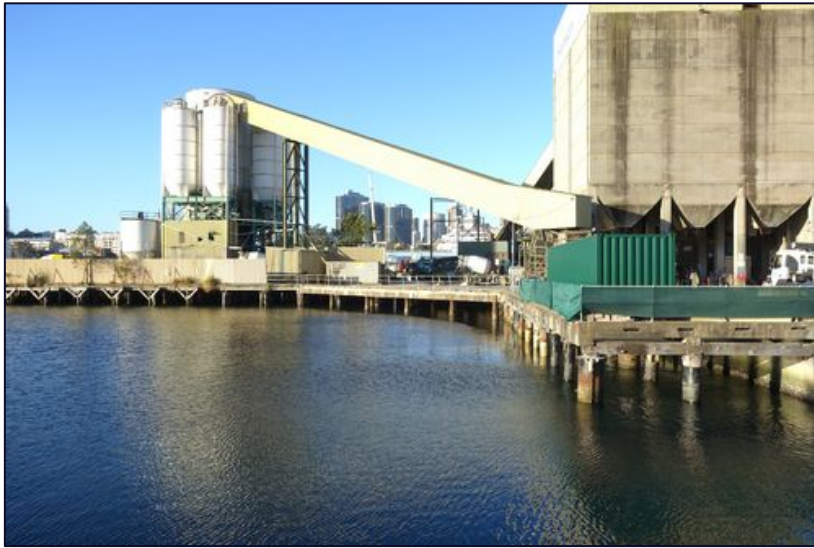
Photograph 16: Underside of the reinforced concrete deck of the wharf east of the coal loader showing seawall that runs the length of the site about 20m from Bridge Road.

The Blackwattle Bay Marina wharf, to the east of Hanson's cement works, is set on pylons in various stages of decay (Photograph 16). This wharf and the pylons are being removed as part of the Early Works for the new Sydney Fish Market. (Photograph 17)

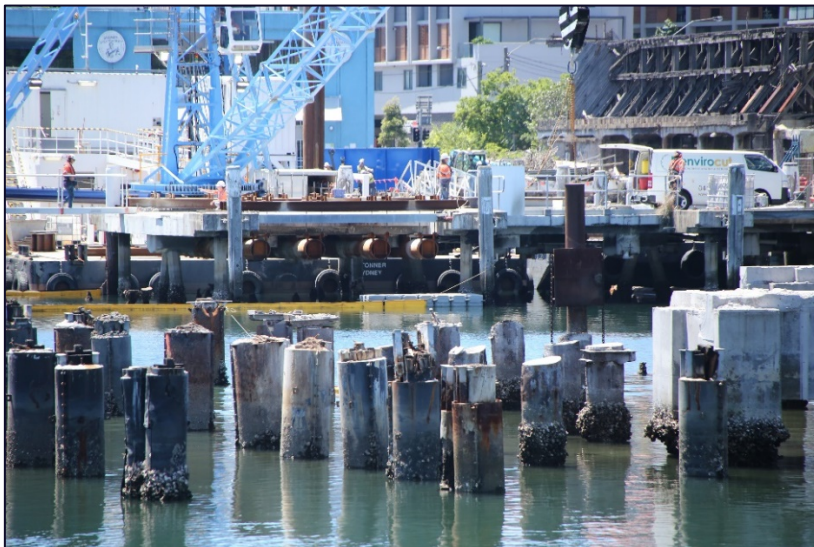
Further west is the former site of the Hanson Heidelberg Cement concrete batching plant (Photograph 18), now demolished for the site to become part of the new Sydney Fish Market complex. Maps of the Study Area indicate that wharfage in this location has been present since the 1920s. All pylons on this wharf that could be observed during the site inspection appear to have been replaced and/or sheathed.



Photograph 17: Blackwattle Bay Marina B2 showing timber pylons and bracing beams prior to demolition in 2020.



Photograph 18: Hanson Heidelberg Cement wharf area prior to demolition in 2020.



Photograph 19: Demolition of the Hanson Heidelberg Cement wharf (foreground) and Blackwattle Bay Marine wharves in November 2020.

4.4 Western Shoreline

Item E5 in the Water Uses Plan, (Figure 12) flags the potential for a future living seawall and tidal pools north of the existing rowing craft launch site (R4) and up to the entrance to the bay. An inspection of the western shore confirms that the seawall south of the Sydney University Canoe Club and The Boathouse restaurant, (former Glebe Rowing Club site) is a modern concrete structure. To the north are seawalls made from sandstone blocks. The living wall and tidal pools that are considered as potential future developments would occupy this stretch of the foreshore.

To the south of the former Glebe Rowing Club site is a modern seawall (Photograph 21).. To the north, the seawalls along this stretch of Blackwattle Bay are sandstone (Photograph 22-23).

The stone foundations of a small wharf were observed to be present adjacent to the seawall at the end of Cook Street. No other items of maritime infrastructure were observed in the waters adjacent to the seawall (Photographs 23-24).

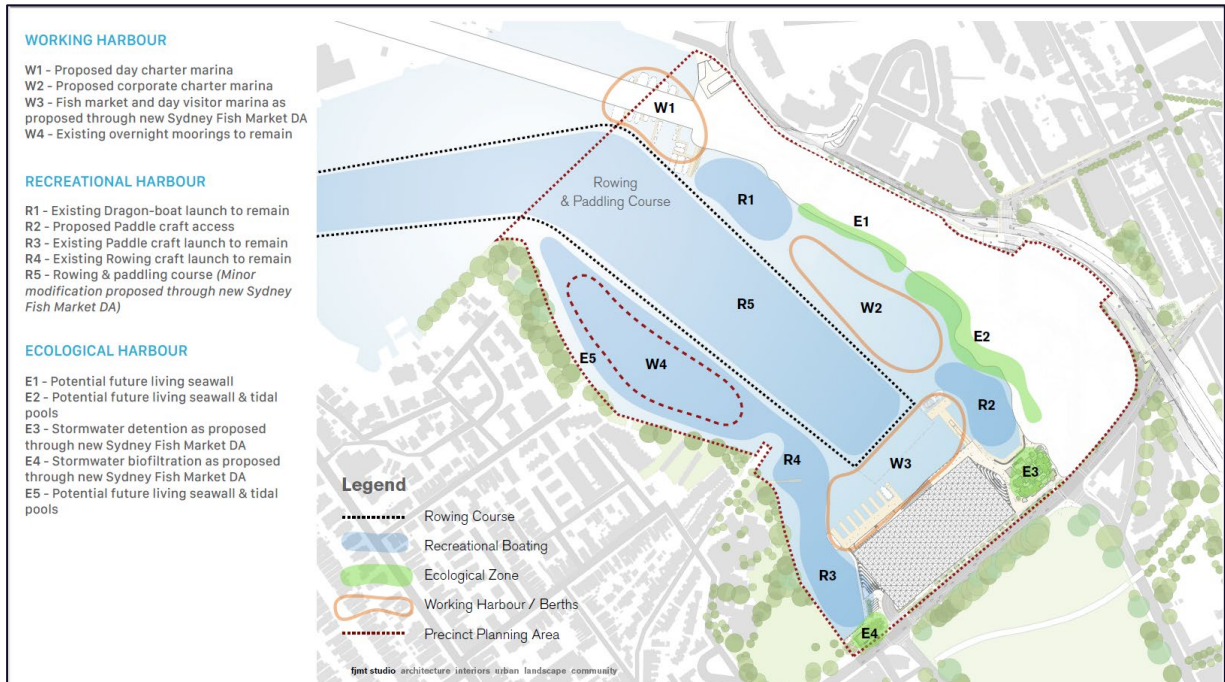


Figure 12: Water Uses Plan (Source: FJMT)



Photograph 20: Modern seawall south of the Sydney University Canoe Club/The Boathouse restaurant (Former Glebe Rowing Club).. View to south-west.



Photograph 21: Seawall north of the Sydney University Canoe Club/The Boathouse restaurant



Photograph 22: Seawalls adjacent to the termination of Cook Street, Glebe. The sandstone blocks are either side of the concrete seawall which spans the termination of Cook Street. The location of the stone foundations of a wharf are circled in red. View to south-west.



Photograph 23: Foreground: Stone block footings of a small former wharf at the end of Cook Street.

Background: The former engineering works were immediately south of this feature. The unoccupied timber yards and Council Depot/incinerator in the 1939 map were adjacent to the straight line of modern sandstone seawall circled in red., a portion of which are labelled as Daniel Sheehy in the 1910 map at Figure 16.



Photograph 24: The approximately 3m² base of the wharf.

The presence of short wharves is evidence in maps dating from the late nineteenth century



During the site inspection an interpretive plaque was inspected at the site of the former Council Depot and incinerator and contained a photograph of the site in 1937 (Photograph 25). Photographs 21-24 depict various elements of the seawalls at the time of this report.



Photograph 25: Image from an interpretive sign on the Council Depot/Incinerator site in 1937. Labelled as courtesy of Max Salling.



5.0 ARCHAEOLOGICAL POTENTIAL

5.1 Introduction

The literature review has been supplemented by additional examination of early maps and plans of Blackwattle Bay as well as additional Sands Directory information.

5.2 Shipwrecks

The analysis of the history of Blackwattle Bay concludes that there is little likelihood of shipwrecks within the current waters of the Bay and only a small potential for historic shipwrecks to be located within landfill in the areas of proposed redevelopment of on the eastern shores of the Bay. No remote sensing surveys is required in that area.

Reclamation works within the Study Area pre-date the reported burial of the torpedo boat *Avernus* under land fill at Glebe in the 1940s. It is not considered that this vessel will be within the proposed renewal of Blackwattle Bay.

Although there are no documented instances of historic vessels being buried under landfill in Blackwattle Bay, there is potential for the remains of ships or other vessels to be present in the c1850s-1960s bay that enclosed the area now occupied by the existing Sydney Fish Market.

5.3 Maritime infrastructure

5.3.1 Early jetties – eastern shoreline

The existing studies include documented evidence of wharves and jetties within the Study Area. Maps depict a jetty on the eastern shore depicted in 1855 and 1857 maps (Figures 18 and 19). The depiction of this jetty suggests a lightweight, ephemeral, timber structures similar to the existing jetties along this shoreline. This and the clearing of the waterfront for twentieth century shipping and new wharves and jetties will have removed any evidence of this structure.

An early jetty is also depicted at the end of Miller Street. The sites of this structures have archaeological potential.

Elsewhere along the eastern shoreline, any surviving evidence of other post-land reclamation jetties on the sea bed is likely to be limited to cut-off pylons. The structures shown in the parish maps of parish Petersham in the first half of the 20th century depict lightweight structures similar in scale to the modern jetties along this shoreline. Any surviving pylons are unlikely to provide any significance advancement of knowledge of the form of these structures or their function.

5.3.2 Early jetties – southern end of the bay

At the southern end of the Bay, studies to date have included details of the evolution of the wharf complex. The footprint of the new Sydney Fish Market development sits over the footprint of the 1885-1886 wharf which was constructed along the seawall on the northern side of Pyrmont Bridge Road (this section now known as Bridge Road) (City Plan Heritage 2013:28. The 2013 study notes that the wharf extended 9.14m beyond the seawall.

5.3.3 Early jetties – western shoreline

The industries that once occupied the northern half of the western shoreline were supported by wharfage and short jetties. The presence of such wharves is indicated in late nineteenth and early twentieth century maps (Figures 13-17). The presence of the stone footings of a small wharf at the end of Cook Street is (Photographs 23-24) is the only observed example of surviving structural remains within the waters along the western side of the bay. Its presence, close to the late nineteenth century boat sheds near the end of Cook Street helps to confirm the location of those entities that are no longer visible in the terrestrial landscape but has limited archaeological potential.

The western shoreline underwent extensive fill in the late nineteenth century and the reclaimed land is held behind subsequent seawalls (Figures 13-15). The c1890 map (Figure 14) shows the western shoreline prior to or possibly during

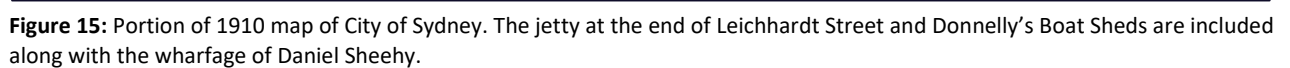
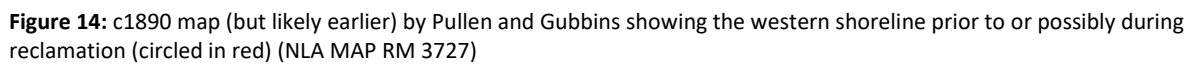
reclamation and a stylised 1915 oblique view of Blackwattle Bay (Figure 16) shows shipping, wharfage and industry along the western shore of Blackwattle Bay at that time.

The stone foundations of a small wharf are located within the waters of the bay at the end of Cook Street. The functions of this wharf have not been determined but the timber yards, engineers and Council depot would all have utilised the waterway for some form of loading and unloading facilities. This is confirmed in the 1886 Parish Map (Figure 13) which shows a jetty at the end of Leichhardt Street and a boat shed at the end of Cook Street. This, or a replacement boat shed is labelled as 'Donnelly's Boat Sheds' in a 1910 map of the City of Sydney (Figure 15) at the south eastern corner of 'Langollan'). The 1910 map also shows the extent of reclamation and a wharf frontage owned by Daniel Sheehy at the frontage of what were to become timber yards.

Industries in this area in 1939 are shown in the map at Figure 17. They include, from north to south, (a) the former Vanderfield and Reid timber yards, (b) the Glebe Engineering Works, (c) unoccupied former timber yards and (d) the Council Depot and incinerator on the eastern side of the Forsyth Street and Griffin Place. The Council Depot and the Walter Burley Griffin Reverberatory incinerator as shown in a 1937 photograph (Photograph 19).



Figure 13: 1886 Parish Map showing wharf at the end of Leichhardt Street (circled in red.). A boatshed is also shown at 'Langollan' on the northern side of the termination of Cook Street (circled in yellow).



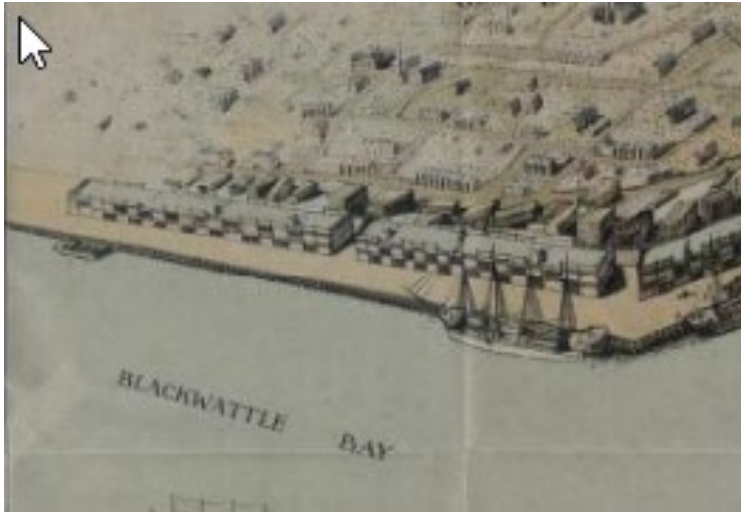


Figure 16: Stylised 1915 oblique view of Blackwattle Bay showing shipping, wharfage and industry along the western shore of Blackwattle Bay (NLA MAP F 273-5)

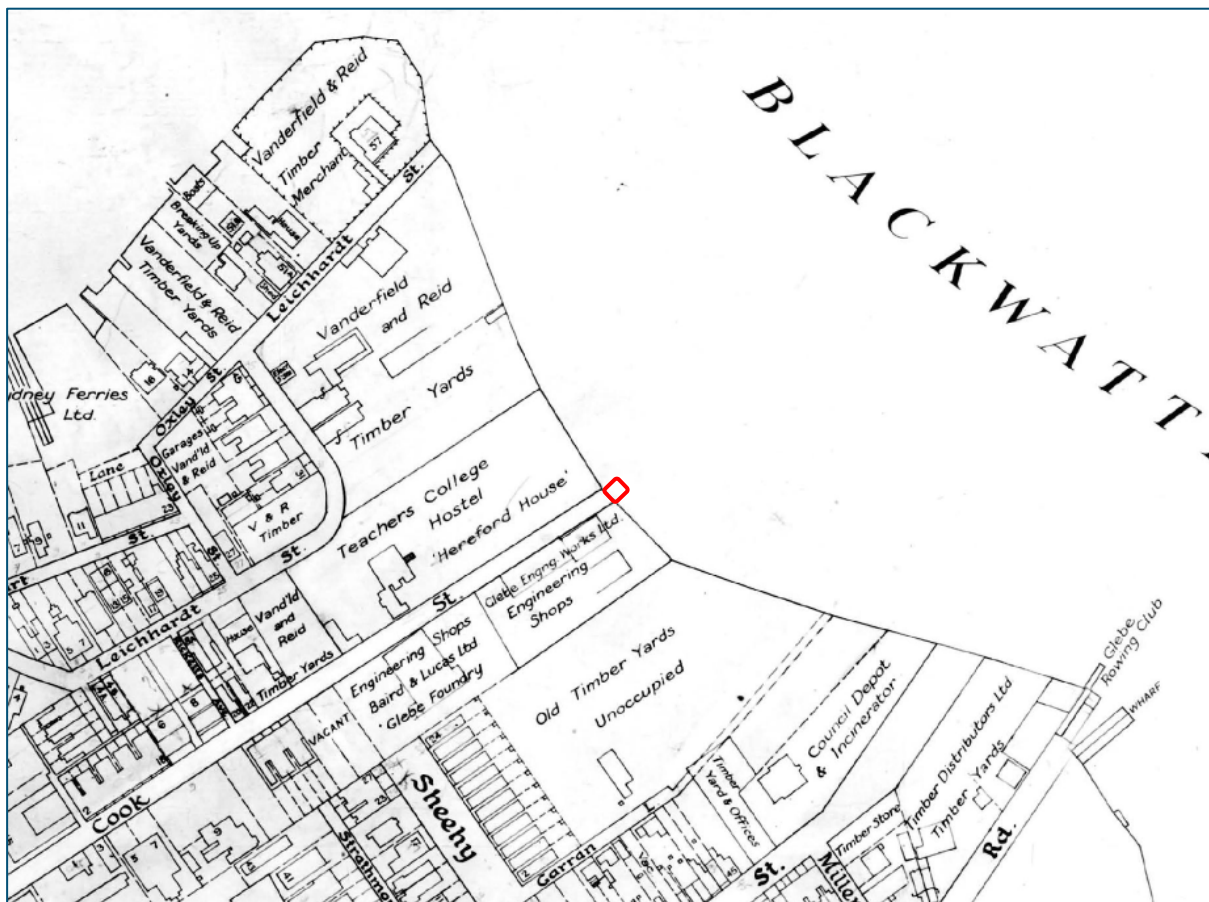


Figure 17: Portion of 1939 Glebe Municipality Map. The map show industries along the western shore of Blackwattle Bay north of the Glebe Rowing Club. The location of the remains of a wharf is outlined in red.

5.3.4 Dock/slipway

A dock, or possibly a dry dock or a slipway, is shown in an 1888 map of the south-east corner of the Study Area, (within the now property occupied by the Sydney Fish Markets) (Figure 18), This was a substantial structure and, potentially survives under landfill. The overlay on the 1855 Parish Map (Figure 19) shows its location to be centrally located in the

deeper portion of the small bay in this area. It is south of the long jetty, that also appears in the 1855 and 1857 maps (Figures 19-20) and north and a small jetty/roadway on the southern bank (Figure 19).

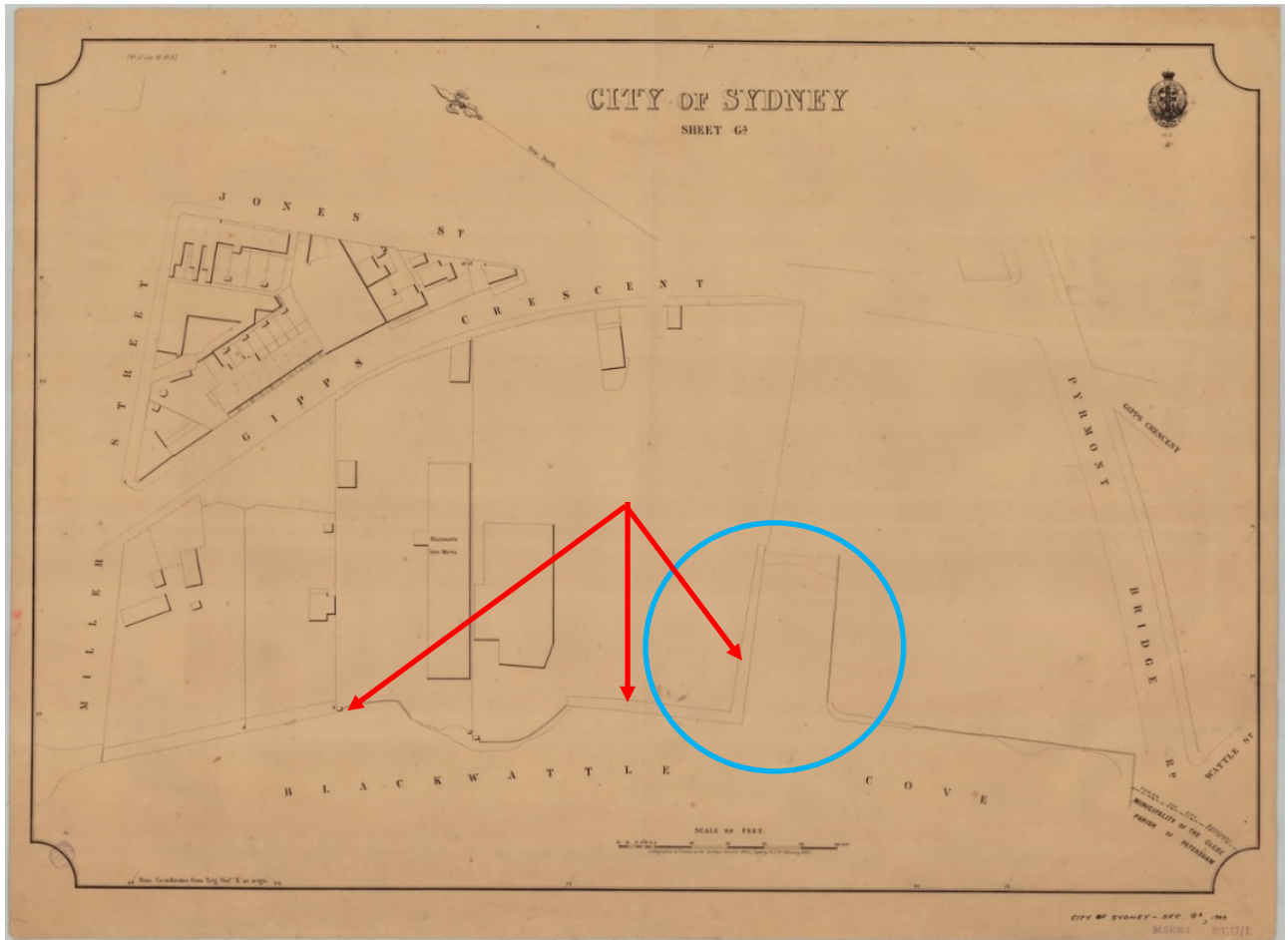


Figure 18: 1888 map showing the presence of either a dock or slipway (circled) and depiction of the original extent of seawalls (red arrows) (Source: City of Sydney Sheet G3 – SLNSW M Ser 4 811.17-1 IE4379048 FL 4379095)

The dock appears not only in the 1888 plan (Figure 19) but also in an 1899 plan (Figure 21). The dock may be associated with D and W Robertson, Blackwattle Bay ship builders and iron and steel merchants (listed in Sands 1885). This structure was located partially under the north-west corner of the existing Sydney Fish Market. The nearby dressed sandstone seawalls mark the northern approaches that feature.

The dock features in plans for about 30 years, from the mid-1886 to 1910. D and W Robertson, (who were shipbuilders as well as iron and steel merchants owned by James and William Robertson), had its 'Works' at Abattoirs Road, Blackwattle Bay from 1885. 'Blackwattle Iron Works' is shown on the 1888 plan of 'Gipps Crescent' (formerly Abattoir Road) (Figure 18). This is likely to have been D & W Robertson's premises. No identification is given as to the occupancy of the adjacent, recently reclaimed land to the south. However, this area, which includes the dock, if not owned by D & W Robertson, would certainly have been useful for the launch and recovery of ships they were constructing or maintaining.

By 1916, the dock has been filled in to form a further extension Gipps Street but still features in outline on this map (Figure 22). This small bay enclosed the area where the dock was built. This is most likely to have occurred during the process of land reclamation that filled the bay and was to become the site of Saxton and Sons timber yard and, later the existing Sydney Fish Market. The relationship of the dock to the current configuration of Blackwattle Bay is shown in the overlays at Figures 23 and 24.

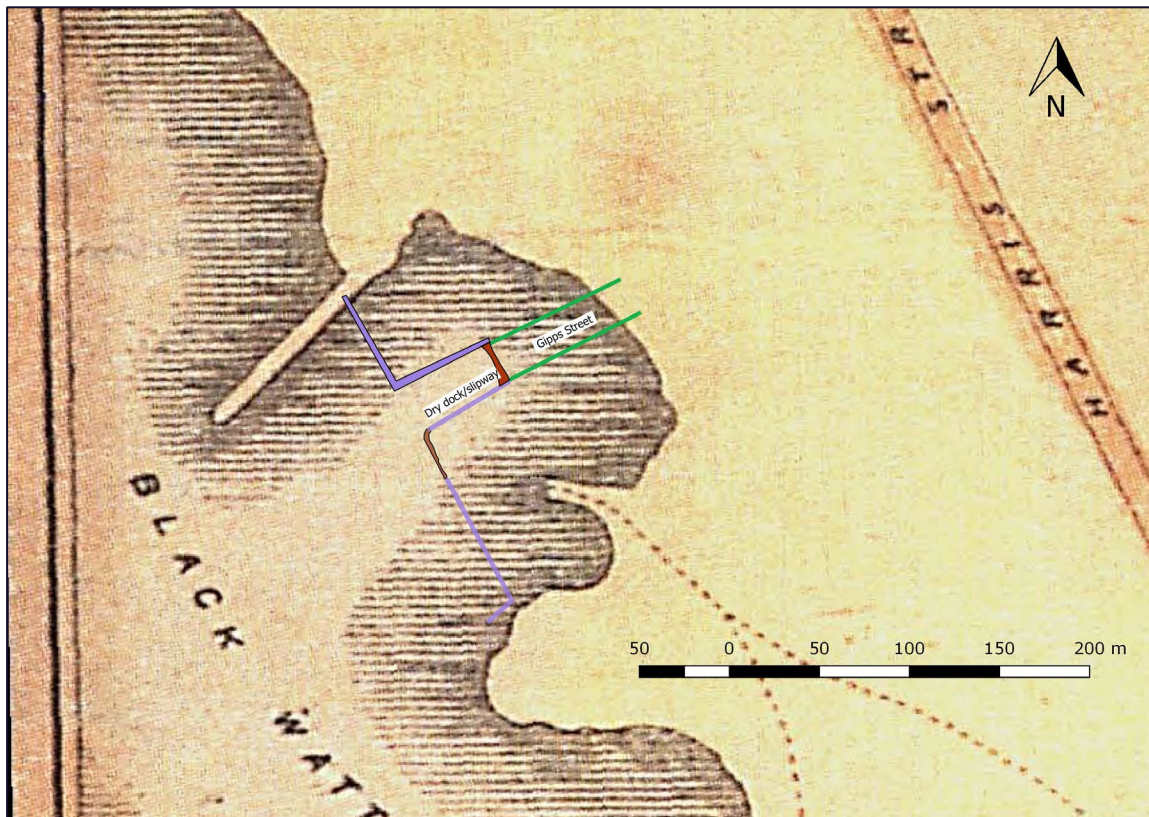


Figure 19: 1855 Petersham Parish map with georeferenced overlay of the dry dock/slipway.



Figure 20: 1857 plan overlaid on current map of the Study Area and showing a wharf or jetty extending into Blackwattle Swamp from the eastern shoreline (arrow). (Source: National Library of Australia – Hutchison et al: MAP British Admiralty Special Map Col/33. Georeferencing – Comber Consultants)



Figure 21: 1899 Parish Petersham map showing the dry dock/slipway with notation dated November 1907 stating that an adjacent area had been resumed as a public park.

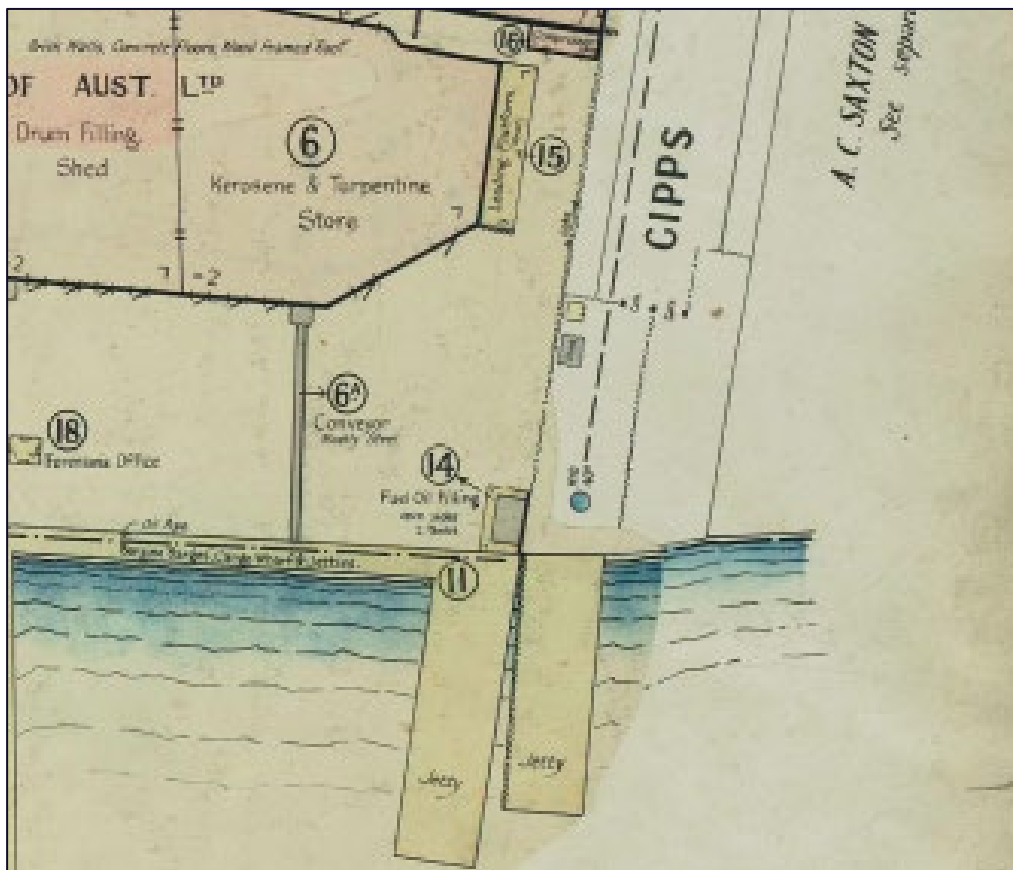


Figure 22: Section of a 1917 Fire Underwriters Association survey map showing the outline of the former dock filled in to provide access to a jetty.

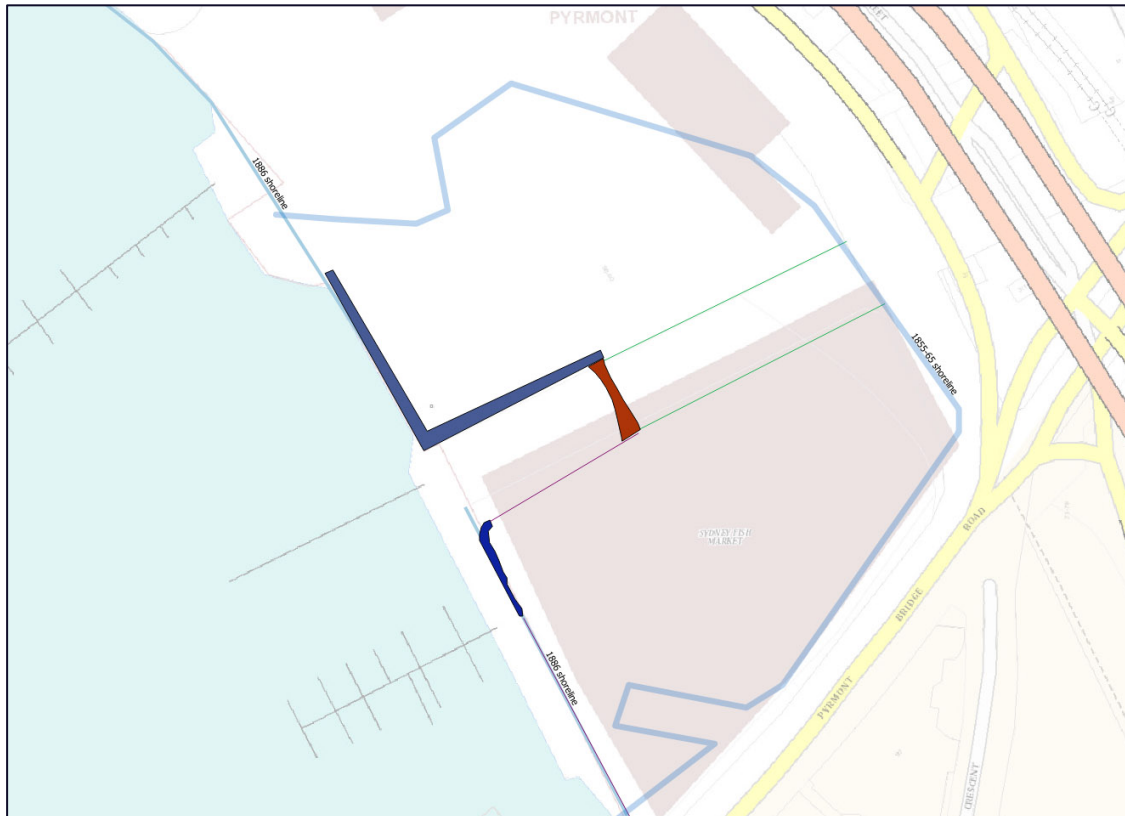


Figure 23: Overlay of 1855-1865 shoreline on modern showing the bay that occupied the area currently containing the Sydney Fish Market and the c1888 dry dock/slipway. (Source: Google Maps – Georeferencing by Comber)

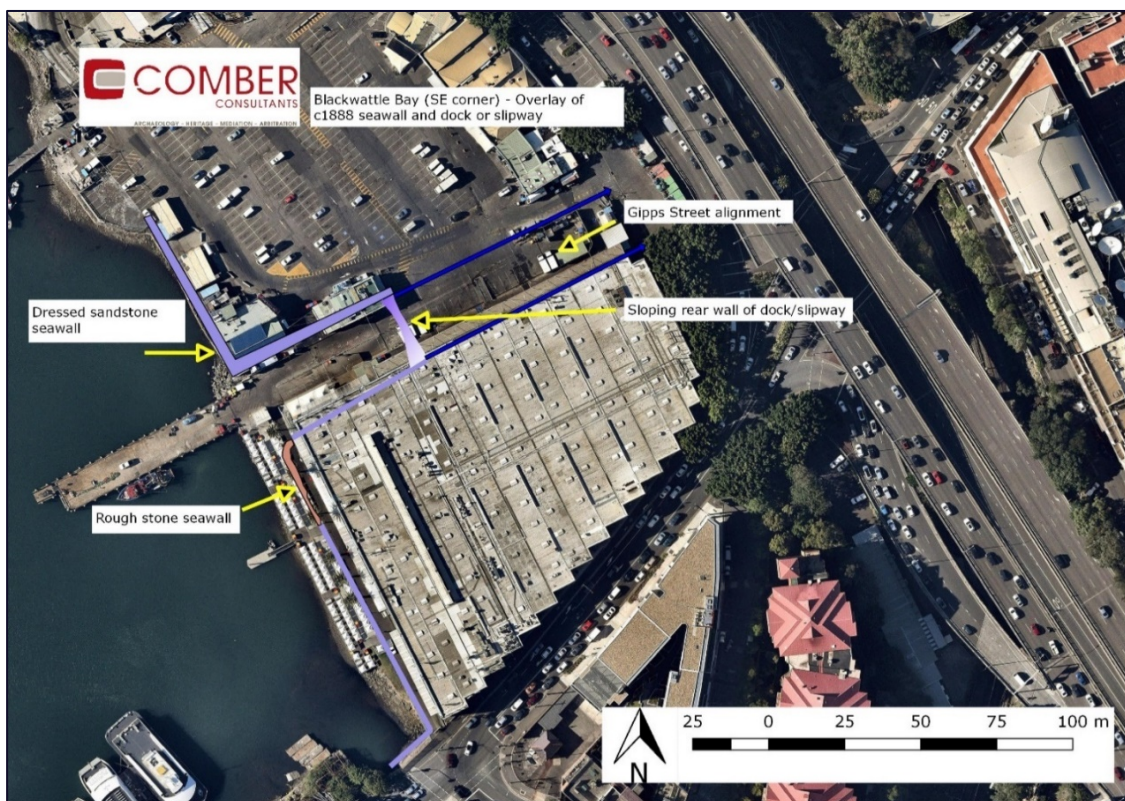


Figure 24: Overlay of the nineteenth century dry dock/slipway and its relationship to Gipps Street and the existing Sydney Fish Markets.



5.3.5 Summary potential of maritime infrastructure potential

Dock: Archaeological investigation of this area has potential to reveal the nature and use of this structure. No other details of this structure are available and any surviving physical evidence has research potential into its form and function. Georeferenced overlays show its likely location in relation to the existing Sydney Fish Market (Figures 11, 12).

The dock would relate to the following State Themes: Commerce, Industry, Transport, Utilities. In the absence of archival records, archaeological investigation would be required to determine the nature and function of this structure.

Other maritime infrastructure: No further investigation of other wharves/jetties structures that once extended into the Bay subsequent to the phases of land fill sites is required. The available historical documentation in existing studies is sufficient to inform future shore based and published interpretation strategies for the Bays Market District.

5.4 Other potential relics within the waters of the Bay

The history of dredging within the Bay will have removed substantial amounts of cultural deposits within the waters of the Study Area. However, as the extent, frequency and duration of that dredging is not documented, there is potential for cultural deposits to survive in isolated areas - in particular, near the stormwater outlets along the southern end of the Bay and areas under or adjacent to the late nineteenth and early 20th century wharves and jetties along the eastern shoreline. There is also potential for evidence of industrial activities along the northern section of the western shore of the bay.

5.5 Summary of Archaeological Potential

There are no indicators to suggest the existence of shipwrecks to be present with the marine component of the Bay due to the history of land reclamation and dredging in this area.

Maritime infrastructure that pre-dates reclamation works may be present, in particular the 1865 era jetty on the eastern shore and the dock or slipway at the end of Gipps Street that appears in an 1888 plan and, in a modified form in a 1916 plan. There is also potential for archaeological deposits to be present within the vicinity of former wharves and from the timber jetties that once extended into the Bay and dating from the late nineteenth century and early to mid-twentieth century. These deposits would be expected to consist of individual items that have fallen from the jetties, wharves or from vessels using those facilities. As outlined above, archaeological monitoring during future dredging or extensive excavation works is recommended.

Any excavation in the vicinity of the early jetty at the former termination of Miller Street also has archaeological potential related to the mid-twentieth century evolution of Blackwattle Bay.

Along the southern shoreline, there is potential for significant archaeological deposits to have accumulated beneath or adjacent to wharves and the storm water outlets.).



6.0 SIGNIFICANCE ASSESSMENT

6.1 Heritage significance

Heritage significance is an expression of the cultural value afforded a place, site or item. This assessment of significance is in accordance with the standard assessment criteria adopted by the Heritage Division of New South Wales as embodied in the Burra Charter.

The following assessment is based on the analysis of the literature review in Section 3 of this report.

6.2 Criteria

Criterion (a): Historic Significance - (evolution):

an item is important in the course, or pattern, of New South Wales's cultural or natural history (or the cultural or natural history of the local area).

Although no historic shipwrecks are known to be present within the Study Area, there is potential for these to be present under landfill. In the event that such relics are present, they could have potential to be of local or State significance in providing archaeological evidence of their construction and function in the late colonial or early post-colonial phases of the evolution of New South Wales.

Maritime infrastructure dating from the second half of the nineteenth century, in the form of pre-land fill jetties or dock/slipway would have potential to be of local or State significance in providing archaeological evidence of the construction and function of these items and their associated industries in colonial New South Wales.

The stone foundations of the small wharf at the end of Cook Street on the western shoreline is of local significance in representing the interface between the industrial and residential functions along that part of Blackwattle Bay.

Relics transported through the stormwater channels and re-deposited into the Blackwattle Bay have potential to have preserved items associated with activities beyond the industries of the Study Area and related to the evolution of both industrial and non-industrial evolution of the stormwater catchment area.

Criterion (b): Associative Significance – (association)

an item has strong or special association with the life or works of a person, or group of persons, or importance in New South Wales's cultural or natural history (or the cultural or natural history of the local area);

The pre-landfill jetties and slipway have potential to be associated with the individuals and/or businesses that operated in the area in the latter half of the nineteenth century.

The sandstone seawall along the frontage of F Buckley & Sons wharf is associated with that family's contribution to the reclamation works along the eastern shoreline. This item is assessed as being of local significance.

Criterion (c): Aesthetic Significance - (scenic qualities / creative accomplishments)

an item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in New South Wales (or the cultural or natural history of the local area);



Except for the sandstone seawalls, there are no other identified items of potential maritime archaeological aesthetic significance within the Study Area due to the ephemeral nature of and subsequent removal of earlier structures.

Criterion (d): Social Significance - (contemporary community esteem):

an item has a strong or special association with a particular community or cultural group in New South Wales for social, cultural or spiritual reasons (or the cultural or natural history of the local area);

There are no identified maritime archaeological items of potential social significance within the Study Area.

Criterion (e): Technical/Research Significance - (archaeological, educational, research potential and scientific values):

an item has potential to yield information that will contribute to an understanding of New South Wales's cultural or natural history (or the cultural or natural history of the local area);

Any surviving evidence of the pre-landfill maritime infrastructure along the eastern shore would have the potential to address research questions, including:

- The design and materials used in their construction
- The specific industries with which they were associated and their significance to that phase of commercial/industrial activity in New South Wales
- Comparisons with similar structures at later periods within the Study Area and elsewhere in New South Wales ports.

Criterion (f): Rarity:

an item possesses uncommon, rare or endangered aspects of New South Wales's cultural or natural history (or the cultural or natural history of the local area);

Shipwrecks in landfill are a small sub-set of the inventory of shipwrecks as a whole and, being supported by landfill, are likely to have been preserved close to their original form. Australian built vessels of that era were often poorly documented and such sites have the potential to provide significant insights into the materials and design elements of these vessels.

Maritime infrastructure in the form of ephemeral jetties from the nineteenth century rarely survive in coastal or estuarine environments. If included in landfill, they have potential to have retained significant form and information not available in archival records.

Criterion (g): Representativeness:

an item is important in demonstrating the principal characteristics of a class of New South Wales's cultural or natural places of cultural or natural environments (or the cultural or natural history of the local area).

The remains of the nineteenth century jetties and slipway have the potential to be representative of similar structures that once existed in other parts of Sydney Harbour.

6.3 Statement of significance

The maritime history of Blackwattle Bay is one of the industrialisation of the Study Area. What began as a natural wetland transitioned into a waste disposal area and, from the latter part of the nineteenth century, evolved to incorporate maritime infrastructure for transshipment of various materials and produce, including timber, coal, iron



products blue metal and fish. As such, the bay has contributed significantly to the commercial development of Sydney and the State.

The evolution of the maritime infrastructure, including wharves, jetties, dry dock/slipway and dredging works have formed the background to the current form and character of the Bay. The sandstone seawall associated with the nineteenth century dry dock/slipway and F Buckley & Sons provides an aesthetic value to that section of the eastern shoreline and represents the process of land reclamation in the latter part of the nineteenth century.



7.0 IMPACT AND MITIGATION

7.1 Historic shipwrecks

Impact

The proposed redevelopment of Blackwattle Bay will not impact upon any known historic shipwrecks or associated shipwreck relics.

Mitigation

While there are no known shipwrecks buried beneath landfill within the Bay, in the event that such relics are located during construction works or geotechnical testing, work should immediately cease in that area and a qualified maritime archaeologist engaged to assess the nature and significance of the shipwreck and to provide advice on appropriate management.

In the unlikely event that shipwrecks are identified within landfill, work should immediately cease in that area and the heritage significance of such sites assessed by a qualified maritime archaeologist. If classified as historic shipwrecks, management strategies, appropriate to their level of significance will be to be developed. These management strategies will also be consistent with the principles contained in the Blackwattle Bay Precinct Plan principles, ie, to:

- Embed and interpret the morphology, heritage and culture of the site to create an authentic and site responsive place. (Principle 15)
- Foster social and cultural understanding and respect to heal and grow relationships. (Principle 16)

The strategies may range from in-situ preservation (preferred), recovery and conservation of key components, to physical and/or electronic and printed interpretation materials.

7.2 Maritime Infrastructure

Impact

1. There is potential for remains of a nineteenth century slipway at the former termination of Gipps Street and two nineteenth century jetties to have survived beneath landfill along the eastern shoreline (Figures 6-10), one of these being at the former termination of Miller Street. Any construction works in the vicinity of these features have potential to disturb and to compromise surviving structure and associated relics.
2. No dredging is currently proposed along the eastern shoreline for the current redevelopment of Blackwattle Bay and additional reclamation or the placement of pylons for new wharves or jetties along the shoreline would not have a significant impact on such deposits.
3. There are no known potential impacts on significant submerged maritime infrastructure at the southern end of Blackwattle Bay or beneath the main Sydney Fish Market building or adjacent wharf. While no mitigation measures are required in terms of maritime infrastructure in these areas, see section 7.3 regarding other archaeological deposits.
4. Along the western shoreline, changes to the seawalls to create 'living seawalls and tidal pools' have potential to impact on existing seawalls and the foundations of the small wharf in the waters of Blackwattle Bay at the end of Cook Street.

Mitigation

The Blackwattle Bay Precinct Plan (November 2020) retains the view corridors leading to the sites of the former wharf at the end of miller street and the slipway/dock at the termination of Gipps Street. Maintenance of these view corridors is appropriate to visual interpretation and the absence of built structures minimises potential for disturbance or destruction of sub-surface archaeological remains. The introduction of services and other ground disturbance.



However, any proposed earthworks within the vicinity of these features should be monitored by a suitably qualified archaeologist. If evidence of those structures is identified, work should immediately cease in that area to enable the archaeologist to assess the nature and significance of the feature and to provide advice on appropriate management.

As indicated in the Blackwattle Bay Precinct Plan principles (November 2020), physical evidence of the history of the evolution of the maritime character of Blackwattle Bay would provide opportunities to provide information to interpret the history of the site and to:

- Embed and interpret the morphology, heritage and culture of the site to create an authentic and site responsive place. (Principle 15)
- Foster social and cultural understanding and respect to heal and grow relationships. (Principle 16)

The strategies may range from in-situ preservation (preferred), recovery and conservation of key components, to physical and/or electronic and printed interpretation materials.

7.3 Other archaeological deposits within Blackwattle Bay

Impact

Along the southern shoreline, substantial seabed disturbance is proposed for the New Sydney Fish Market. Archaeological monitoring would be required prior to these works, (eg for extensive piling, basements construction for parking, pipelines or cables).

Along the northern half of the western shoreline there is potential for relics associated with the industrial activities of the c1930s-1940s.

Elsewhere in the bay and, in view of previous dredging works and the absence of any proposed new dredging for the renewal of the Blackwattle Bay precinct, there will be no significant impact on archaeological deposits.

Mitigation

Along the southern end of Blackwattle Bay mitigation measures are required in those areas where substantial seabed disturbance is proposed.

7.4 Unexpected finds procedure

The mitigation measures contained in sections 7.1, 7.2 and 7.3 above are contained in the following Unexpected Finds Procedure for the maritime archaeological aspects of the SSP Proposal for Blackwattle Bay.

- A. If excavation works are proposed within reclaimed land within the vicinity of mapped locations of pre-reclamation jetties and/or dock/slipway a qualified archaeologist is to be engaged to:
 - a. Conduct test excavations prior to any construction works in those areas
 - b. Assess the significance of any exposed structural remains and/or relics
 - c. Provide management advice appropriate to that significance to inform design plans to incorporate management that is appropriate to the significance of those structures and associated relics.
- B. In the unlikely event that a shipwreck is located during construction works either within the marine environment or within areas of land fill:
 - a. Work should cease immediately in the vicinity of the shipwreck
 - b. A qualified maritime archaeologist should be engaged to:
 - i. Assess the significance of the shipwreck
 - ii. Provide management advice appropriate to that significance to inform design plans to incorporate management that is appropriate to the significance of the shipwreck and associated relics.



- C. If dredging is proposed within the Study Area, including dredging or excavation beneath the former coal loader at the head of the Bay a qualified archaeologist should be engaged to:
- a. Monitor those works
 - b. If a shipwreck, relic, feature or other item is uncovered during that monitoring:
 - Work is to cease within that area
 - The archaeologist will:
 - Assess the significance of any exposed structural remains
 - If the item is within the curtilage of the former Coal Loader, listed on the State Heritage Register, or is assessed by the archaeologist as a relic of local or State significance, the Heritage Division of the Office of Environment and Heritage will be notified and work will not recommence until approved by the New South Wales Heritage Council.
 - Provide management advice appropriate to the assessed level of significance to inform design plans to incorporate management that is appropriate to the significance of those structures and associated relics.



8.0 OPPORTUNITIES

Any surviving remains of maritime infrastructure or relics associated with the evolution of the Study Area has the potential, through archaeological investigation, to provide information to be included in the promotion of the Blackwattle Bay precinct as a tourist destination.

The prime site of maritime archaeological potential under reclaimed land is the nineteenth century dry dock/slipway that was located at the end of Gipps Street and adjacent to the existing Sydney Fish Market building. Public events held during archaeological excavations typically attract considerable and positive public interest. Post excavation opportunities can include both temporary and permanent exhibitions of the materials recorded. These exhibitions can range from physical structures, objects and photographs to interactive applications – including three dimensional virtual realities accessible as smart phone applications.

If a significant structure, such as the former dock/slipway is uncovered during the renewal of Blackwattle Bay, reuse strategies should be considered. Dependent upon the condition, material and significance of the item such opportunities could include:

- Incorporation as a waterside feature in design and interpretation plans for the reuse of the current site of the Sydney Fish Market
- Relocated into the public domain as an artwork, similar to the approach adopted at Pyrmont with the tumbling balls retained from the former Cane-ite works.



9.0 RECOMMENDATIONS

The following recommendations are made based on:

- Legal requirements under the terms of the *Heritage Act 1977*
- The research and analysis outlined contained in this report
- Results of the assessment as outlined in this report

IT IS RECOMMENDED THAT:

The findings of this maritime archaeological assessment are:

1. *Shipwrecks:*

Due to the history of dredging within Blackwattle Bay and in the absence of any indication of shipwrecks being included within landfill at Blackwattle Bay, no additional historical research, remote sensing surveys or dive surveys are required to identify shipwrecks in the Study Area prior to rezoning and any Development Approval.

2. *Maritime infrastructure:*

- a. The remains of the sandstone seawall at the former F Buckles & Sons site, and likely to be associated with the nineteenth century dock, should undergo conservation works and included in the presentation and interpretation of the eastern foreshore.
- b. In view of the Blackwattle Bay Water Uses Plan, any proposed impacts on the existing sandstone seawalls or the stone foundations of the small wharf off the end of Cook Street should be subject to archaeological assessment in view of any specific proposed works in this area.
- c. Archaeological investigations should precede any construction or other ground disturbance works in the vicinity of:
 - i. The former dock at the end of Gipps Street
 - ii. The early wharf at the end of Miller Street
 - iii. Seabed impacts on heritage within the site of New Sydney Fish Market is part of the SSDA and is covered in the Maritime Heritage Impact Statement (Nutley 2019).
- d. View corridors and setbacks should be retained to assist in interpretation of the location of items b(i) and b(ii) above.
- e. Elsewhere in the bay, due to the history of dredging and the absence of proposed dredging in the current State Significant Precinct (SSP) Proposal study area:
 - iii. No further investigation is required of jetties that extended into Blackwattle Bay subsequent to the phases of land fill.
 - iv. No further investigation is required of deposits of non-structural cultural material within the Study Area prior to rezoning and Development Approval.

3. *Unexpected finds:*

It is recommended that the Unexpected Finds procedure contained in Section 7.4 is adopted for the maritime archaeology of Blackwattle Bay.

4. *Interpretation:*

Blackwattle Bay's maritime history of evolution has considerable potential as an interpretation and educational resource. Supported by archaeological evidence, the story of its evolution from a natural wetland swamp to an area for waste disposal, to industrial wharves and shipping vital to the commercial development of Sydney and the State, to the home of Sydney's fishing fleet, dragon boats and many cruise boats. dredging works, wharves, jetties, coal loader and archaeological evidence would provide depth and character to the revitalised Blackwattle Bay. The interpretation of the maritime heritage of Blackwattle Bay should be guided by the advice provided in Appendix B of this report.



REFERENCES

- Artefact Heritage 2017. 'The Bays Market Precinct Rezoning - Aboriginal Cultural Heritage Assessment Report (ACHAR)'. Report to UrbanGrowth New South Wales. Artefact Project 170119. 13 July 2017
- Bower, R & Staniforth, M 1993. 'Report of the maritime archaeological survey of areas of the Upper Parramatta River affected by dredging for the Rivercat Ferry Service', Australian National Maritime Museum for the New South Wales Department of Transport.
- City Plan Heritage 2013. 'Heritage Significance Assessment incorporating Heritage Impact Assessment, Terrestrial Archaeology, Blackwattle Bay Maritime Precinct'. Report 1 for Blackwattle Bay Marina Pty Ltd, May 2013
- City Plan Heritage 2014. City of Sydney Industrial & Warehouse Buildings Heritage Study. Report to City of Sydney Council
- City Plan Services 2017. 'Bays Market Precinct: Blackwattle Bay and Wentworth Park – History, Built Heritage, Archaeology and Landscape Study'. Report to UrbanGrowth New South Wales, July 2017
- City Plan Heritage, 2020a. European Heritage Assessment. Report to Infrastructure. Report to Infrastructure NSW, November 2020.
- City Plan Heritage, 2020b. Heritage Interpretation Strategy: Blackwattle Bay State Significant Precinct Study. New South Wales, Report to Infrastructure NSW, November 2020.
- Comber Consultants 2020. Underwater Cultural Heritage Management & Offshore Renewables – Best Practice Guidelines.
- Comber Consultants, 2013. 'Berrys Bay Marina – Maritime Archaeological Assessment'. Report to GML Heritage on behalf of Pacifica Developments
- EDAW 1999. 'Blackwattle Bay Park Plan of Management'. Report to Leichhardt Municipal Council, May 1999
- Evesson W T 1939. Municipality of The Glebe, Detail Map. Housing Improvement Board of New South Wales. Drawn by W. T. Evesson – March 1939. The Glebe Occupational Survey.
- Flapan, M (Ed) 2008. 'List of New South Wales Ship Builders and Boat Builders from the Register of Australian and New Zealand'. http://www.boatregister.net/New_South_Wales_Builders.htm. Compiled by 21 March 2008)
- fjmt studio 2017. 'Bays Market District master planning principles'. 01 August 2017
- fjmt studio August 2020. Blackwattle Bay final precinct plan wip
- Gillett, R March 2003. 'Australia's First Warship – The Torpedo Boat Acheron'. *Naval Historical Review*. Accessed on 1 September 2017 on <http://www.navyhistory.org.au/australia's-first-warship-the-torpedo-boat-acheron>
- JK Geotechnics 2017. 'Factual Geotechnical Report – Geotechnical investigation for Proposed Bays Market District at Blackwattle Bay, Pyrmont, New South Wales'. Report to UrbanGrowth New South Wales 3 April 2017
- Nutley, D 2005. 'The Last Global Warming – Archaeological Survival in Australian Waters'. Flinders University Monograph Series Number 10., Department of Archaeology, Flinders University.
- Maunsell Australia Pty Ltd 2006. 'Bank Street, Pyrmont Master Plan'. Prepared for New South Wales Maritime, Forrester, A, Poulos Bros Seafoods Pty Ltd, BiDivest Australia Ltd, Hymix Australia Pty Ltd 2006. December 2006
- Waterways Authority 2000. 'Rozelle and Blackwattle Bay Master Plan'
- Waterway Construction Group, February 2012. 'Seabed Clearance Report Blackwattle Bay'. Report to Roads and Maritime Services.
- Wing, J, Wiltshier, S & Woodward, A 1997. 'Conservation management Plan: Coal Bins and Associated Structures, Pyrmont Bridge Road, Blackwattle Bay'. Prepared by Perumal Murphy Wu Pty Ltd in association with Hughes Trueman Reinhold Pty Ltd and Judy Wing for The Office of Marine Administration, July 1997.



10.0 APPENDIX A: ANNEX TO THE 2001 UNESCO CONVENTION ON THE PROTECTION OF THE UNDERWATER CULTURAL HERITAGE

Rules concerning activities directed at underwater cultural heritage

I. General principles

Rule 1. The protection of underwater cultural heritage through in situ preservation shall be considered as the first option. Accordingly, activities directed at underwater cultural heritage shall be authorized in a manner consistent with the protection of that heritage, and subject to that requirement may be authorized for the purpose of making a significant contribution to protection or knowledge or enhancement of underwater cultural heritage.

Rule 2. The commercial exploitation of underwater cultural heritage for trade or speculation or its irretrievable dispersal is fundamentally incompatible with the protection and proper management of underwater cultural heritage. Underwater cultural heritage shall not be traded, sold, bought or bartered as commercial goods.

This Rule cannot be interpreted as preventing:

(a) the provision of professional archaeological services or necessary services incidental thereto whose nature and purpose are in full conformity with this Convention and are subject to the authorization of the competent authorities;

(b) the deposition of underwater cultural heritage, recovered in the course of a research project in conformity with this Convention, provided such deposition does not prejudice the scientific or cultural interest or integrity of the recovered material or result in its irretrievable dispersal; is in accordance with the provisions of Rules 33 and 34; and is subject to the authorization of the competent authorities.

Rule 3. Activities directed at underwater cultural heritage shall not adversely affect the underwater cultural heritage more than is necessary for the objectives of the project.

Rule 4. Activities directed at underwater cultural heritage must use nondestructive techniques and survey methods in preference to recovery of objects. If excavation or recovery is necessary for the purpose of scientific studies or for the ultimate protection of the underwater cultural heritage, the methods and techniques used must be as non-destructive as possible and contribute to the preservation of the remains.

Rule 5. Activities directed at underwater cultural heritage shall avoid the unnecessary disturbance of human remains or venerated sites.

Rule 6. Activities directed at underwater cultural heritage shall be strictly regulated to ensure proper recording of cultural, historical and archaeological information.

Rule 7. Public access to in situ underwater cultural heritage shall be promoted, except where such access is incompatible with protection and management.

Rule 8. International cooperation in the conduct of activities directed at underwater cultural heritage shall be encouraged in order to further the effective exchange or use of archaeologists and other relevant professionals.

II. Project design

Rule 9. Prior to any activity directed at underwater cultural heritage, a project design for the activity shall be developed and submitted to the competent authorities for authorization and appropriate peer review.

Rule 10. The project design shall include:

(a) an evaluation of previous or preliminary studies;



- (b) the project statement and objectives;
- (c) the methodology to be used and the techniques to be employed;
- (d) the anticipated funding;
- (e) an expected timetable for completion of the project;
- (f) the composition of the team and the qualifications, responsibilities and experience of each team member;
- (g) plans for post-fieldwork analysis and other activities;
- (h) a conservation programme for artefacts and the site in close cooperation with the competent authorities;
- (i) a site management and maintenance policy for the whole duration of the project;
- (j) a documentation programme;
- (k) a safety policy;
- (l) an environmental policy;
- (m) arrangements for collaboration with museums and other institutions, in particular scientific institutions;
- (n) report preparation;
- (o) deposition of archives, including underwater cultural heritage removed; and
- (p) a programme for publication.

Rule 11. Activities directed at underwater cultural heritage shall be carried out in accordance with the project design approved by the competent authorities.

Rule 12. Where unexpected discoveries are made or circumstances change, the project design shall be reviewed and amended with the approval of the competent authorities.

Rule 13. In cases of urgency or chance discoveries, activities directed at the underwater cultural heritage, including conservation measures or activities for a period of short duration, in particular site stabilization, may be authorized in the absence of a project design in order to protect the underwater cultural heritage.

III. Preliminary work

Rule 14. The preliminary work referred to in Rule 10 (a) shall include an assessment that evaluates the significance and vulnerability of the underwater cultural heritage and the surrounding natural environment to damage by the proposed project, and the potential to obtain data that would meet the project objectives.

Rule 15. The assessment shall also include background studies of available historical and archaeological evidence, the archaeological and environmental characteristics of the site, and the consequences of any potential intrusion for the long-term stability of the underwater cultural heritage affected by the activities.

IV. Project objective, methodology and techniques

Rule 16. The methodology shall comply with the project objectives, and the techniques employed shall be as non-intrusive as possible.



V. Funding

Rule 17. Except in cases of emergency to protect underwater cultural heritage, an adequate funding base shall be assured in advance of any activity, sufficient to complete all stages of the project design, including conservation, documentation and curation of recovered artefacts, and report preparation and dissemination.

Rule 18. The project design shall demonstrate an ability, such as by securing a bond, to fund the project through to completion.

Rule 19. The project design shall include a contingency plan that will ensure conservation of underwater cultural heritage and supporting documentation in the event of any interruption of anticipated funding.

VI. Project duration – timetable

Rule 20. An adequate timetable shall be developed to assure in advance of any activity directed at underwater cultural heritage the completion of all stages of the project design, including conservation, documentation and curation of recovered underwater cultural heritage, as well as report preparation and dissemination.

Rule 21. The project design shall include a contingency plan that will ensure conservation of underwater cultural heritage and supporting documentation in the event of any interruption or termination of the project.

VII. Competence and qualifications

Rule 22. Activities directed at underwater cultural heritage shall only be undertaken under the direction and control of, and in the regular presence of, a qualified underwater archaeologist with scientific competence appropriate to the project.

Rule 23. All persons on the project team shall be qualified and have demonstrated competence appropriate to their roles in the project.

VIII. Conservation and site management

Rule 24. The conservation programme shall provide for the treatment of the archaeological remains during the activities directed at underwater cultural heritage, during transit and in the long term. Conservation shall be carried out in accordance with current professional standards.

Rule 25. The site management programme shall provide for the protection and management in situ of underwater cultural heritage, in the course of and upon termination of fieldwork. The programme shall include public information, reasonable provision for site stabilization, monitoring, and protection against interference.

IX. Documentation

Rule 26. The documentation programme shall set out thorough documentation including a progress report of activities directed at underwater cultural heritage, in accordance with current professional standards of archaeological documentation.

Rule 27. Documentation shall include, at a minimum, a comprehensive record of the site, including the provenance of underwater cultural heritage moved or removed in the course of the activities directed at underwater cultural heritage, field notes, plans, drawings, sections, and photographs or recording in other media.

X. Safety

Rule 28. A safety policy shall be prepared that is adequate to ensure the safety and health of the project team and third parties and that is in conformity with any applicable statutory and professional requirements.

XI. Environment



Rule 29. An environmental policy shall be prepared that is adequate to ensure that the seabed and marine life are not unduly disturbed.

XII. Reporting

Rule 30. Interim and final reports shall be made available according to the timetable set out in the project design, and deposited in relevant public records.

Rule 31. Reports shall include:

- (a) an account of the objectives;
- (b) an account of the methods and techniques employed;
- (c) an account of the results achieved;
- (d) basic graphic and photographic documentation on all phases of the activity;
- (e) recommendations concerning conservation and curation of the site and of any underwater cultural heritage removed; and
- (f) recommendations for future activities.

XIII. Curation of project archives

Rule 32. Arrangements for curation of the project archives shall be agreed to before any activity commences, and shall be set out in the project design.

Rule 33. The project archives, including any underwater cultural heritage removed and a copy of all supporting documentation shall, as far as possible, be kept together and intact as a collection in a manner that is available for professional and public access as well as for the curation of the archives. This should be done as rapidly as possible and, in any case, not later than ten years from the completion of the project, in so far as may be compatible with conservation of the underwater cultural heritage.

Rule 34. The project archives shall be managed according to international professional standards, and subject to the authorization of the competent authorities.

XIV. Dissemination

Rule 35. Projects shall provide for public education and popular presentation of the project results where appropriate.

Rule 36. A final synthesis of a project shall be:

- (a) made public as soon as possible, having regard to the complexity of the project and the confidential or sensitive nature of the information; and
- (b) deposited in relevant public records.

11.0 APPENDIX B: HERITAGE INTERPRETATION STRATEGY - MARITIME

A.2019

12-07-2019

Heritage Interpretation Strategy Blackwattle Bay Maritime heritage input

These maritime heritage comments supplement and reference the appropriate sections of the Strategy prepared by City Plan Heritage (CPH) March 2018 document (16-237). This input is based on the findings of the Bays Market District Maritime Archaeological Assessment - Stage 1 – B.2017 (Nutley, September 2017) and supplementary investigation.

2.1.2 Proposed Site p16/120

It is recommended that the list of built elements also includes built structures that are in an archaeological context. These include:

The c1880s dry dock/slipway that aligns with the northern side of the original alignment (Nutley 2017, Figure 8 p27. See Figure 1 below and also City Plan Heritage Strategy Figure 30 p33/120. 1886 SA Map 580 & Figure 38 p41/120)

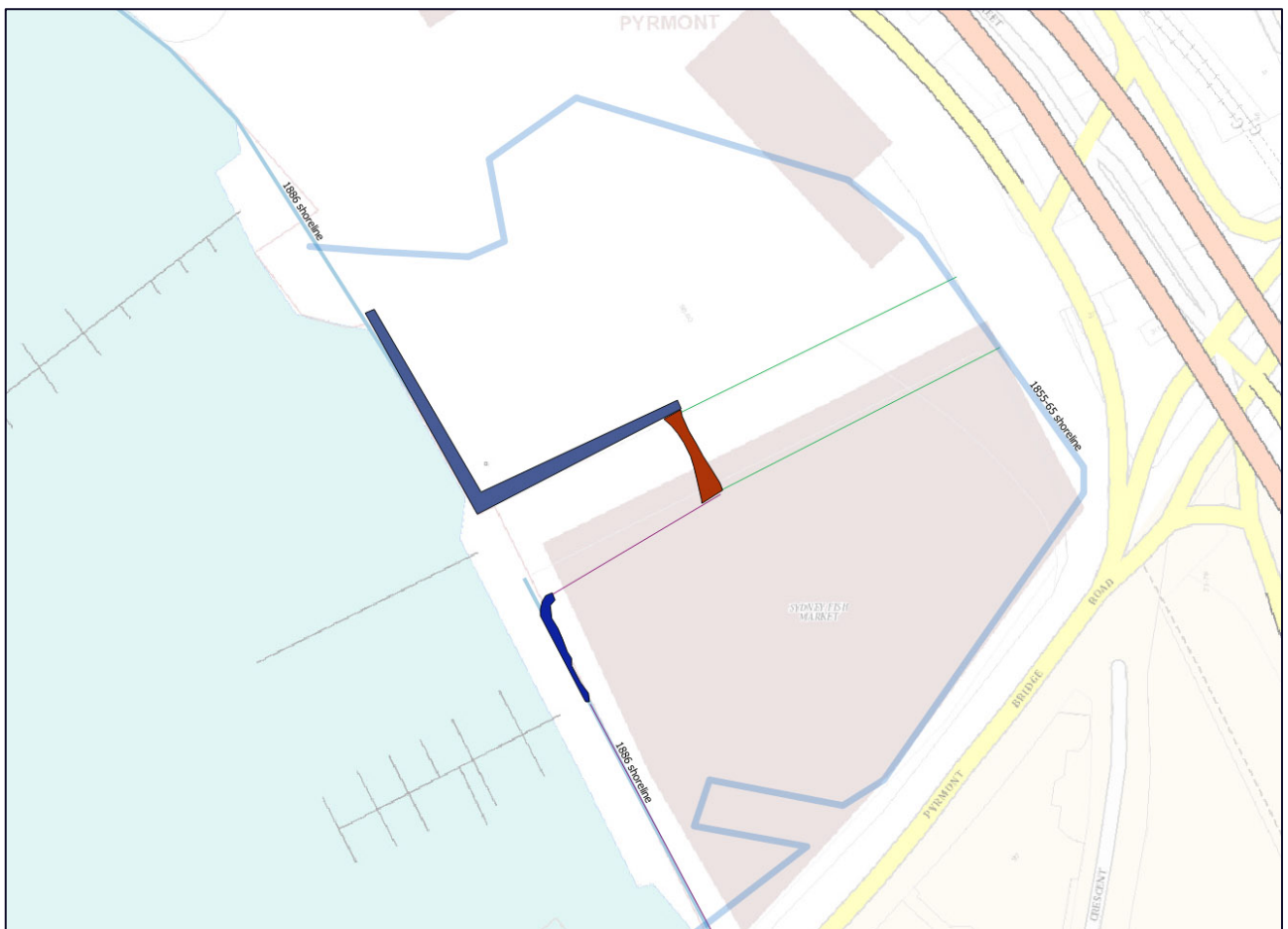


Figure 1: overlay of former dry dock/slipway at the end of Gipps Street and shorelines from 1855-1886.
(also note a former jetty/wharf leading off Pyrmont Bridge Road now beneath the existing Fish Market building)

- The remnant 19th century sandstone seawalls on the eastern side of the bay and adjacent to the existing Fish Markets carpark. (Figure 2)



Figure 2: Where the existing sandstone seawall terminates (red arrow) may mark the entrance to the c1880s dry dock/slipway.

- The early 19th century causeway along Bridge Road. This causeway represented a major change in the form and the function of Blackwattle. It would be appropriate for it to be included in the interpretation strategy.

The only item currently on the list that is representative of the former industrial use of the bay is the former coal loader. It would be appropriate to include the above structures in this list as they all have potential for interpretation – both within construction design for the new precinct and in other interpretative mediums.

A. Section 3: Heritage Context - Areas of Potential Archaeological Remains p25/120

- (i) This list should also include the 1880s dry dock/slipway: the c1880s dry dock/slipway (Figure 1 above, Lands, Metropolitan Detail Survey, Sheet Sydney G3).

Address: Aligned with former extension where Gipps Street met Blackwattle Bay

Located within HCA: Not in HCA

Comment: A dry dock or slipway may be associated with D and W Robertson, Blackwattle Bay ship builders and iron and steel merchants (listed in Sands 1885) and later with Saxton & Binns Timber Yard. This structure was located at the former terminus of Gipps Street and partially under the north-west corner of the former Sydney Fish Market.

This structure pre-dates Saxton and Binns' timber Yard lease south of Gipps Street. Its purpose is currently unconfirmed but it features in plans for about 30 years, from the mid-1886 to 1910. D and W Robertson, (shipbuilders as well as iron and steel merchants and owned by James and William Robertson), had its 'Works' at Abattoirs Road, Blackwattle Bay from 1885. 'Blackwattle Iron Works' is



shown on an 1888 plan off 'Gipps Crescent' (formerly Abattoir Road). This is likely to have been D & W Robertson's premises. No identification is given as to the occupancy of the adjacent, recently reclaimed land to the south. This area includes the dry dock/slipway which, if not owned by D & W Robertson, would certainly have been useful for the launch and recovery of ships they were constructing or maintaining.

Images:

- (a) 1886 plan, State Archives Map 580
- (b) 1888 plan (City of Sydney Sheet G3 – SLNSW M Ser 4 811.17-1 IE4379048 FL 4379095)
- (c) 1899 map (Figure 38 in City Plan Heritage p41/120 - Parish Petersham, 1899 edition, LPI)
- (d) 1903 City of Sydney1179_001
- (e) 1910 map City of Sydney1181_001

State themes: The State Themes related to this feature are Commerce, Industry, Transport, Utilities, (represented in the CPH Strategy in Section 8 on p86/120).

B. 8.1 - 'Interpretation by Fabric and Design'. p87/120

This section discusses 'Interpretation by Fabric and Design' and considers interpretation of former streets, including Miller and Gipps Street, both of which terminated at Blackwattle Bay. Miller Street terminated at an early jetty. Gipps Street terminated at a former dock/slipway. By 1908, the ends of both streets featured jetties extending into the bay. In both cases this termination reveals a key purpose of those roads in linking the sea to the land. This underlines the importance of including this aspect of the roads in the interpretation plan.

If construction works have potential to impact on the former dry dock/slipway, archaeological excavations may be required. The results of such an investigation would not only assist in determining its use but would also provide material evidence to include in the interpretation of the precinct.

C. 8.2 Heritage Walk p90/120

The list of items for consideration in the heritage walk should also include:

- The early maritime infrastructure that was at the termination of Gipps Street (dry dock/slipway)
- The early maritime infrastructure that was at the termination of Miller Street (early jetty)
- The location of the Cam and Co fleet at the Bank Street Wharf

The location of the additional stars for these features is shown on Figure 3.

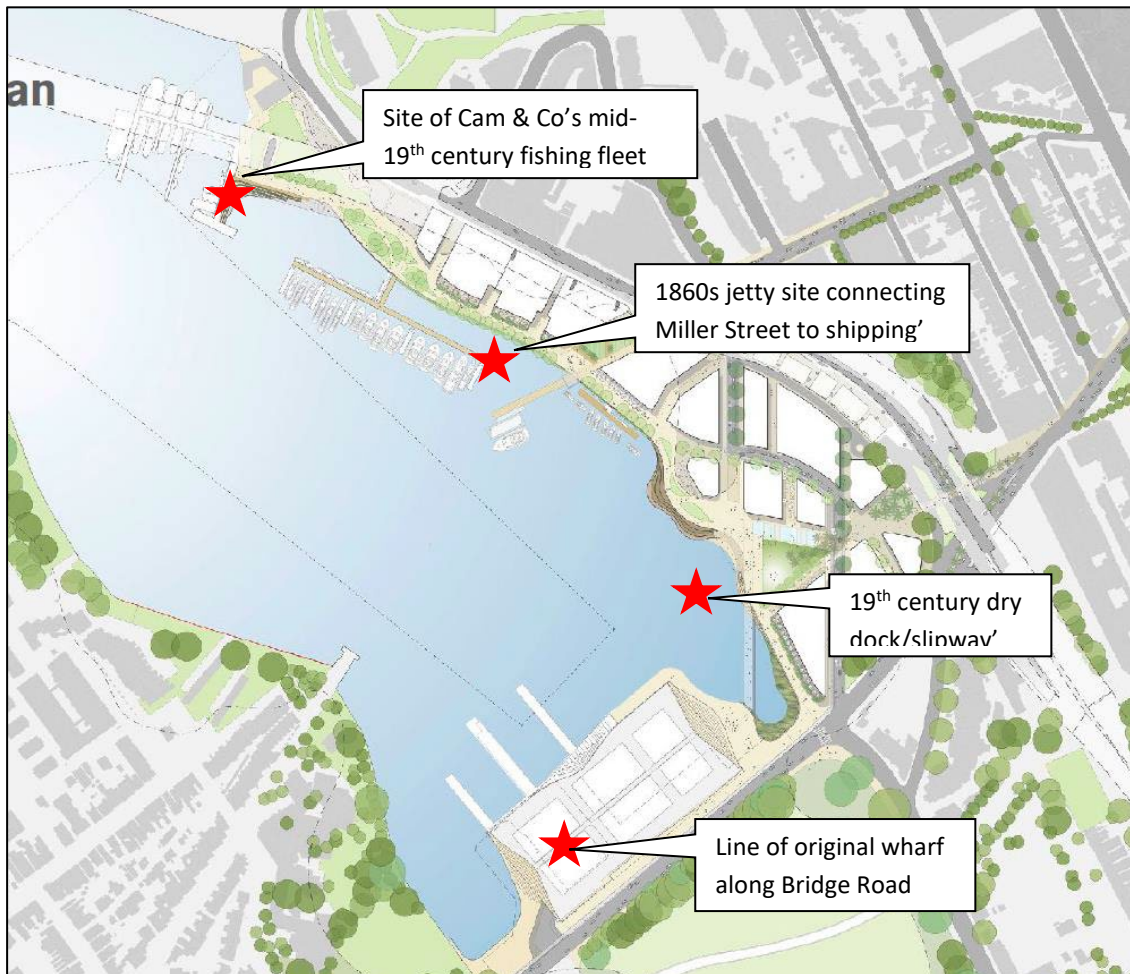


Figure 3: Figure 75, p92/120 of CPH draft Interpretation Plan

It is recommended that the following are added to this figure 75, p92/120:

1. the location of the 1880s dock/slipway

Suggested text in text box for Figure 75:

19th century dry dock/slipway

Suggested text for signage panel:

A dry dock/or slipway on this site in the mid-1880s. This may have been constructed by, but almost certainly utilised by D and W Robertson, the only shipbuilders known to have been operating in Blackwattle Bay at this time. Dry docks and slipways were used for completing work on new vessels after they had been launched and while undergoing repairs on older vessels. This structure was buried under later works but the nearby sandstone seawalls mark the approaches to the dock/slipway.

Images:

- (a) 1886 plan, State Archives Map 580
- (b) 1888 plan (City of Sydney Sheet G3 – SLNSW M Ser 4 811.17-1 IE4379048 FL 4379095)
- (c) 1899 map (Figure 38 in City Plan Heritage p41/120 - Parish Petersham, 1899 edition, LPI)
- (d) 1903 City of Sydney1179_001
- (e) 1910 map City of Sydney1181_001



2. the location of the early wharf at the end of Miller Street (now under reclaimed land). The location of the red star for this site would be in the area of open space shown in the figure at the end of Miller Street.

Suggested text in text box:

1860s jetty site connecting Miller Street to shipping

Suggested text for signage panel:

In this parkland lies the site of an 1860s jetty. This jetty was where Miller Street originally met the bay before reclamation works extended the shoreline. The jetty at the end of Miller Street provided merchants with direct access to shipping in the bay. From here goods could be loaded and unloaded for transport to Sydney Town and to centres throughout New South Wales.

As more land was needed to stockpile timber and other goods, the foreshores of the bay were extended by filling in a portion of the bay. In 1895, timber merchants Alexander Charles Saxton and Jabez Henry Binns leased a site immediately north of Miller Street. Other timber merchants also crowded the bay included the Kauri Timber Company and Hudson and Sons. The new foreshores would be been bustling with the arrival and departure of ships, the sawing of timbers and the loading and unloading of horse-drawn carts with many products, including prefabricated homes.

Images:

Illustrate with image from Saxton and Binns catalogue (possibly redrawn for clarity) as well as images of A & E Ellis timber yard and wharves (Figures 45 and 50 of CPH Interpretation Plan)

3. the Cam & Co fishing fleet wharf

Suggested text: 'Site of Cam & Co's mid-19th century fishing fleet

Suggested text for signage panel (adapted from history in CPH interpretive plan):

In 1929 Italian immigrant fisherman Carlo Caminiti (later anglicised to Charles Cam) purchased land here at 1 Bank Street, Pyrmont. From this beginning, he built a successful fishing fleet.

Earlier, in 1923 he had purchased, the trawler Goonambee, and a second trawler in 1924. By 1934, the Cam and Sons Ltd. fleet included the Beryl II, Alfie Cam, Olive Cam, Mary Cam and the Goorangai. Following the outbreak of WWII, Carlo offered some of his fleet to the Royal Australian Navy to be used as coastal patrol ships. During the war, one of the ships was sunk by a Japanese submarine and one was acquired by the United States Navy.

In 1955, the Olive Cam was wrecked on the New South Wales south coast, near Mowarry Point with the loss of three lives. Carlo's himself had died eight years earlier in 1947, and since that time, Cam and Sons operations had begun winding down. The loss of the Olive Cam would have added to the company's financial burdens and, six years later, in 1961, the company officially ceased operations. However, for nearly 40 years, Carlo Aminiti's enterprise had made an important contribution to the New South Wales fishing industry and the history of Blackwattle Bay.

Images:

Figure 61, 62 and 62 from CPH Interpretation Plan

4. Sea Walls, - eastern shore

Incorporate as suggested in item (1) above

5. Storm Water Drain

In my view, the storm water drain outlets have very little interpretive potential

Suggested text for signage panel:

6. Former Coal Loader

This feature was not within the scope of the maritime assessment which was limited to underwater or under reclamation. The text is perhaps better sourced through others who are more familiar with its history.



7. Howard Smith Wharf

This feature was not within the scope of the maritime assessment which was limited to underwater or under reclamation. The text is perhaps better sourced through others who are more familiar with its history.

D. 8.2.2 General history p95/120

Currently, 8.2.2 is primarily a list of historic themes but it also includes two items that are more physical/structural in nature. These are point 3 (changing shoreline and reclamation) and point 4 (jetties and wharves). Point 3, the changing shoreline is related to point 2 (land grants). Point 4 (jetties and wharves) is related to point 5 (timber industry) as well as point 6 (fishing industry) and point 7 (Industrial development). It is suggested to remove these from the list of themes and to, instead, match them with physical features. Seawalls should be added to the line on jetties and wharves.

E. 8.2.3 Connecting Key Sites – History Timeline p96/120

The section on the table regarding the 1880s mentions the reclamation of the Blackwattle Bay swamps. Mention should also be included about the dry dock/slipway at the end of Gipps Street.

Suggested wording: 1880s: *Construction of a dry dock/slipway for vessel construction and maintenance and to connect with land transport along Gipps Street.*

F. 9.3 Naming Strategy – Naming Strategy p116/120

The suggested inclusion of John Harris, and Saxon and Binns is supported. Shipbuilders D and W Robertson should be added to this list through association with the only dry dock/slipway constructed in the bay. Would also consider including the timber merchants A & E Ellis and Hudson and Sons and Allen Taylor & Co worthy of recognition.

In addition, I would recommend including Carlo Caminiti, (Charles Cam), owner of the Cam & Co fishing fleet. Naming the former location of the Cam & Co fleet. 'Carlo Caminiti' (rather than his anglicised name) would be a great way to recognise his contributions migrants to Australia. Alternatively, '*Olive Cam*' would be an appropriate way of connecting the story of the risks to which those involved in the fishing industry are exposed. The wreck of the steam trawler *Olive Cam* in 1955, near Mowarry Point with the loss of three lives is also a tragedy that represents the ongoing risks faced by the fishing fleets.