

-  **EXISTING TREES**
Existing trees to be retained.
-  **TREES TO BE REMOVED**
Existing trees to be removed and replaced. Subject to detailed design.
-  **FEATURE MEMORIAL TREES**
Feature trees to be planted in avenue planting.
-  **PROPOSED STREET AND OPEN SPACE TREES**
Proposed new and replacement trees. Refer to indicative planting schedule.
-  **PROPOSED OPEN SPACE FEATURE TREES**
Proposed trees to be planted along Crookhaven River Reserve. Refer to indicative planting schedule.
-  **GARDEN BEDS**
Proposed mass planting of groundcovers and low shrubs in mulch. Timber edge where planting area adjoins turf.
-  **TURF AREAS WITH TIMBER EDGE**
Buffalo turf to open space areas and road verge where required. Timber edge where turf adjoins planting bed.
-  **FORESHORE REVEGETATION**
Native revegetation and weed control.
-  **MAIN ROAD TREATMENT**
Proposed coloured bitumen to key areas along Greenwell Point Road. Colour: TBA
-  **EXISTING FOOTPATH SYSTEM**
Existing footpath system to be retained and improved.
-  **PROPOSED FOOTPATH SYSTEM**
Coloured concrete footpath system. 1200mm wide to road edge where required. 2500mm wide to foreshore areas.
-  **PAVED AREAS**
Coloured sawcut concrete with feature cable/paver edge. Colour: Sandstone Header/ Light Sandstone Concrete
-  **BOLLARDS**
Proposed bollards @ 1500mm centres. Type: To match bollards of existing planted areas.
-  **SEATS**
Proposed seats
-  **PERGOLA SHELTER STRUCTURE**
Proposed shelters to match existing.
-  **BUS SHELTERS**
Revamped existing bus shelters. Painting and paving.



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Maroubra, NSW, 2035

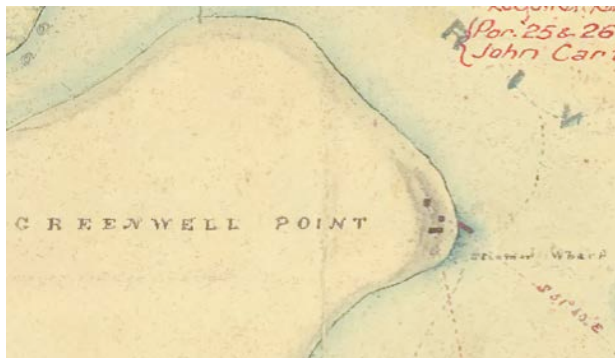
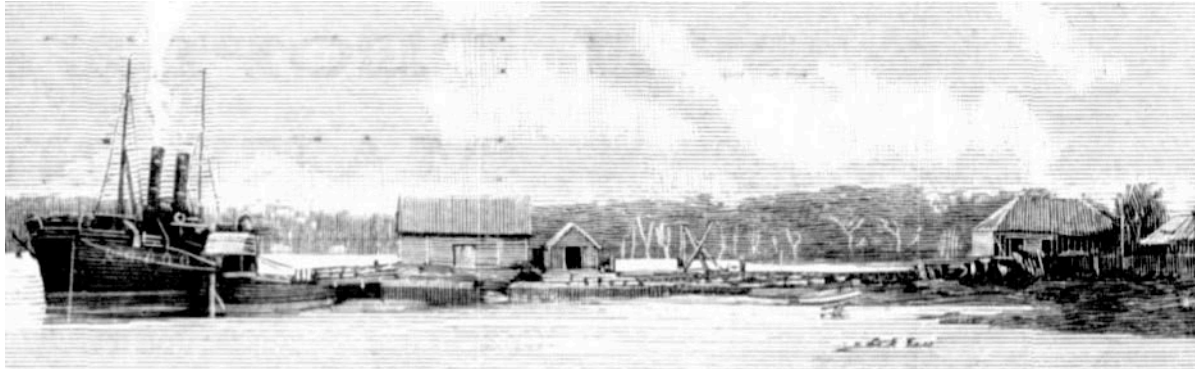
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Greenwell Point Heritage Stone Wharf



Statement of Heritage Impact

DRAFT

Location

Shoalhaven River;
Greenwell Point;
Nowra;
NSW.

February 2016

Greenwell Point Heritage Stone Wharf Statement of Heritage Impact

DRAFT

Prepared for:

Shoalhaven City Council

By:

Cosmos Coroneos

Caroline Wilby

February 2016

Cosmos Archaeology Job Number J15/37

Abbreviations

CMP Conservation Management Plan
LEP Local Environmental Plan
OEH Office of Environment & Heritage
SCC Shoalhaven City Council

Cover Image - Top: Anon (1893) "Greenwell Point." Reproduced in *The Sydney Mail and New South Wales Advertiser* (3rd June 1893).

Cover Image – bottom left - A Legg, G. (1855) *Plan of 5 Islands in the Shoalhaven & Crookhaven Rivers, County of St Vincent, Shoalhaven District.* NSW Land Titles Office, Plan No. V235-787.

Cover Image – bottom right - Wall 1 in July 2006 looking north. Scale in 200 mm increments. (Source: Cosmos Archaeology)

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Executive Summary

This report examines a number of concept options for the stabilisation of the grassed bank, which forms part of the Greenwell Point Heritage Stone Wharf site. Due to concerns for public safety and the loss of cultural heritage significance through erosion, Shoalhaven City Council is investigating how best to mitigate these concerns with minimum impact to the site.

The Greenwell Point Heritage Wharf, also referred to as the Coolangatta Estate Wharf, was constructed in 1829 by Alexander Berry for the purpose of facilitating maritime contact between his properties in the Shoalhaven River and Sydney. The wharf was constructed from stone and over the decades was expanded to its maximum extent in the 1880s. The ashlar masonry walls that are visible today date to the last quarter of the 19th century. For a while Greenwell Point was the fourth largest port in NSW after Sydney, Newcastle and Wollongong. As the 20th century progressed the wharf became less frequented and by the 1940s it had become abandoned. Since that time it would appear the site has been informally 'quarried' for its high quality stone and there have been some attempts at re-arranging some of the surviving masonry to arrest erosion.

The Greenwell Point Heritage Wharf has been assessed to be of State significance due to its associations with the development of NSW and with Alexander Berry, an important figure in early colonial Sydney. The original wharf remains and associated relics are also assessed to be of State significance because they can provide us rare information about how these structures were constructed, the quality of artisanship, how they functioned, and what activities took place there. Maritime infrastructure in early colonial Australia performed a critical role in trade and communication and contributed significantly to the development of this country before the introduction of rail, motor and air transportation.

Four site options have been considered and assessed herein. They range from the construction of a gabion wall along the eroding embankment to the reconstruction of the wharf itself. All options have been assessed, with suitable mitigation, to have an acceptable heritage impact. The greatest variability between the options are the ultimate visual impacts to the existing heritage values of the site and cost, in terms of construction and archaeological mitigation.

The rest of this summary will be completed when the final option is chosen.

1.0 Introduction

1.1 Background

The site is the 19th century sandstone wharf at Anzac Park, Greenwell Point (Figure 1.1). Recent flooding has seen the progression of bank erosion around the remains of the wharf. There has been a wharf/jetty at this site since 1829 when Alexander Berry built the structure to facilitate trade between his estate at Coolangatta and Australia's colonial ports at the time. The site is listed as an archaeological site in Schedule 5 Part 3 the Shoalhaven Local Environmental Plan (LEP) 2014.

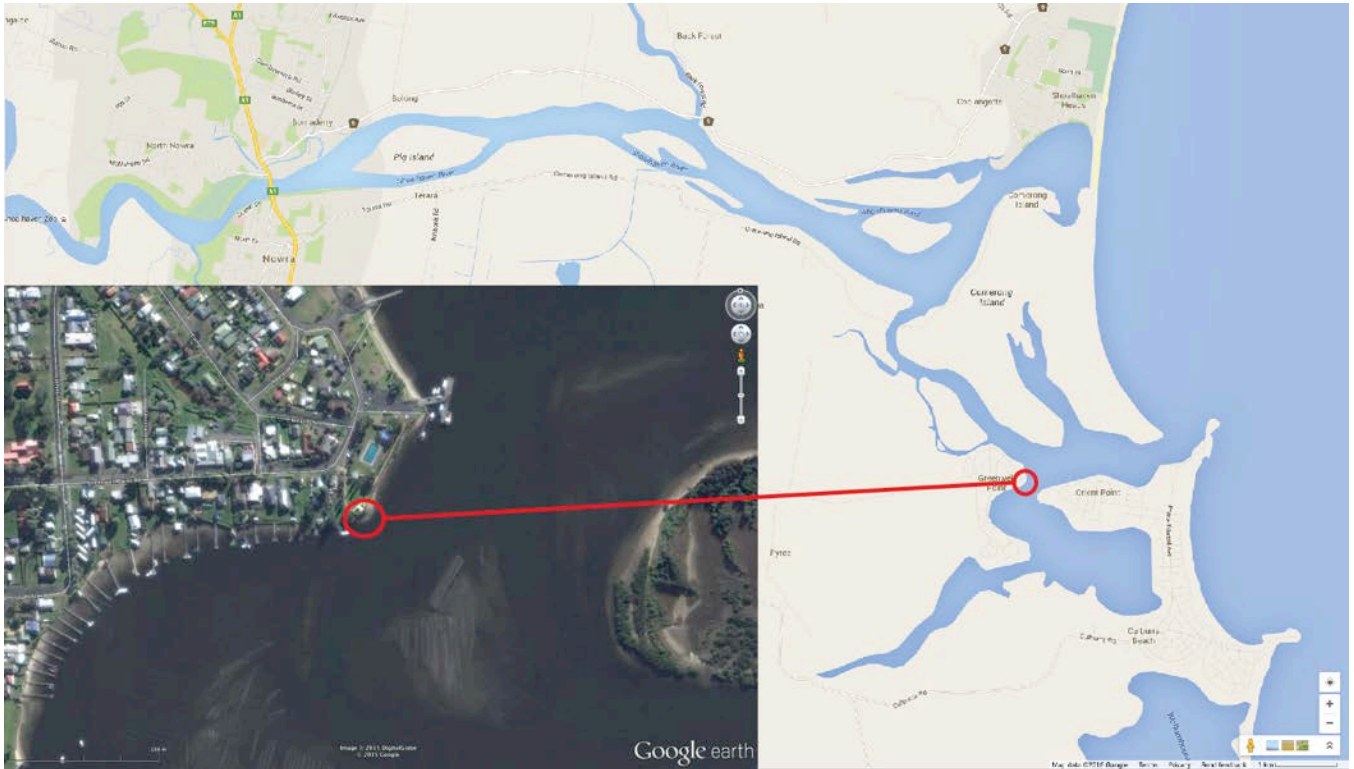


Figure 1.1: Location of Heritage Stone Wharf at Greenwell Point – circled in red. (Source: Google Earth)

Previous plans to relocate the nearby public wharf to this site have been abandoned. The current intention is to explore conservation and bank management options for Shoalhaven City Council (SCC) to consider in the short to medium term timeframe. As a short term response, public safety will be managed by the installation of a leaning fence at the top of the bank.

To protect the site from further erosion, SCC has examined a number of options to manage the site, some of which may require relocation of some of the wall remnants. Cosmos Archaeology has been approached by SCC to assess the impact to the cultural heritage significance of the wharf site.

The finalised version of this document will detail the preferred option - which would be the optimum balance between minimal heritage impact (including) feasible mitigation, effectiveness in the objective of retarding erosion and cost. Depending on the chosen option an application for Section 140 permit, or an Exception from a Section 140 permit, under the *NSW Heritage Act 1977* may need to be submitted. If this is the case this report along with other required documentation would accompany the application.

1.2 Objective of study

The objective of this assessment is:

- To assess the Assist in the preparation of a Section 140 permit application under the NSW Heritage Act 1977 for the proposed works to halt bank erosion in and around the Heritage Zone established around the sandstone wharf at Greenwell Point.

This study *will not* assess the following:

- Potential for Aboriginal archaeological remains.

1.3 Methodology

The approach taken in this study addresses the key requirements and objectives and enables an application for a Section 140 permit, or an Exception from a permit, to be successful.

Site information

An assessment of the historical development and current condition of the wharf site is essential to assess the impact of the proposed site stabilisation options.

The history and heritage significance of the wharf was examined by Ted Higginbotham in 2003 as part of a Conservation Management Plan of the site.¹ The historical review presented in **Section 2** builds on this previous historical review along with recently conducted research using primary sources. It also focuses specifically on the wharf.

Cosmos Archaeology undertook a detailed survey of the wharf in 2006.² In December 2015 the site was inspected again and it was found that little has changed. As a result the site description detailed in the 2006 survey has been used in this report and updated where necessary where minor changes to the site were observed (**Section 3**).

Section 4 analyses the site formation history of the site, assigning where possible a date range for the construction of those walls which are visible and/or the creation of a deposit. This follows the assessment made in 2006, which has been updated with the results of the latest research. With site formation processes better understood the archaeological potential of the site and the different phases of construction can be assessed.

Heritage significance

The heritage significance of the wharf was undertaken in 2003 and was reviewed in light of new information identified (**Section 5**). In addition, the revised significance assessment also grades the individual elements comprising the site. This allows greater flexibility in the design of the proposed bank stabilisation works (**Section 5.3**).

Impact assessment of proposed options

The impact of the proposed options on the wharf have been assessed against the cultural heritage significance of the wharf as a whole as well as its constituent elements (**Section 7**). Mitigation measures and legislative compliance issues (**Section 6**) have also been proposed for each of the options.

Statement of Heritage Impact

¹ Edward Higginbotham & Associates Pty Ltd, March 2003 *Conservation Management Plan for Coolangatta Estate Sandstone Wharf and Former Breaking Chain, Greenwell Point Road, Greenwell Point, NSW*. Prepared for Shoalhaven City Council.

² Cosmos Archaeology Pty Ltd, August 2006. *Coolangatta Estate Sandstone Wharf, Greenwell Point ; Maritime Archaeological Survey*. Shoalhaven City Council

Once the desired design has been decided on by SCC - a balance struck between projected effectiveness of the proposed works against the cost of the works and the cost of mitigation to reduce the impact of the works to an acceptable level – the Statement of Heritage Impact (SoHI) will be prepared (**Section 9**). This is required documentation that would accompany a Section 140 application. Detailed plans for the proposed works would need to have drawn up for this stage of the assessment to be completed and such plans are required for the Section 140 application (**Section 8**).

The other options considered would be presented in the report as this would demonstrate the attempts made to look at various ways to minimise the impact to the significance of the wharf.

1.4 Authorship

This report has been written by Cosmos Coroneos, with the exception of Section 2, which was researched and written by Caroline Wilby.

2.0 Historical Review of the Development of the Wharf

A wharf was first built at Greenwell Point in 1829 to serve the business partnership of British merchants and landowners, Alexander Berry and Edward Wollstonecraft. Berry and Wollstonecraft had met on a voyage from Portugal to Spain in 1812, subsequently engaging in various joint enterprises largely based in London until deciding to settle in Australia in 1819. Upon arrival in New South Wales, both men were granted 2000 unlocated acres of land by Governor Macquarie; with Wollstonecraft selecting 500 acres on Sydney's north shore.

In 1822, Governor Brisbane began offering additional 2,000 acre grants to settlers who would engage to maintain twenty convicts free of charge to the Government; Berry and Wollstonecraft proposed to the Governor that they would take on one hundred convicts, provided he gave them a grant of 10,000 acres in the Shoalhaven River region – a location Berry had explored and found favourable the previous month. The proposal was accepted and in June 1822, Berry set out to select the property, accompanied by explorer Hamilton Hume and the first consignment of convicts. Following an attempt to cross the bar into the Shoalhaven River that resulted in two men drowning, Berry entered via the Crookhaven River and set the convicts the task of cutting a canal through the sand bar that separated the Crookhaven from the Shoalhaven.

Berry subsequently selected land on both sides of the Shoalhaven River, including 2,000 acres encompassing Greenwell Point (Portion 8, Parish of Numbaa), with "Cullengatty (Coolangatta) Farm" at the base of Coolangatta Mountain selected as the central homestead location. By the time the land was officially surveyed and title granted in 1825, large areas of cedar and blue gum had been cleared for timber and converted to pasture for cattle and agricultural land for maize, potatoes and tobacco. Large amounts of produce were sold direct for export through Wollstonecraft and Berry's Sydney stores, with the partners arranging their operations so that one was at Shoalhaven whilst the other was at Sydney's North Shore.³

The Greenwell Point wharf was initially constructed by convict labour under the direction of Wollstonecraft in August 1829. Despite the cutting of the canal between Crookhaven and Shoalhaven Rivers, the upper reaches of the Shoalhaven remain impassable by ocean going vessels due to the shallow depths and frequent sandbars and rocky shoals. Greenwell Point, opposed the mouth of the Crookhaven River, was thus selected as the landing place for ocean-going vessels; whereby inward travellers disembarked at the Greenwell Point wharf and travelled overland via cart to Numbaa, and inward goods and outward produce were transported to and from Greenwell Point along the Shoalhaven via a series of small droghers and punts. Little information regarding the initial wharf has been identified in the historical record; save that it was a stone wharf constructed at "considerable expense" to Berry and Wollstonecraft, had an associated store and was intended for their private use only.⁴ The earliest identified depiction of the wharf appears on a ca. late 1820s map of the Shoalhaven and Crookhaven districts; comprising a rough outline of a wide wharf extending south-east from the southern tip of Greenwell Point (Figure 2.1).

³ Anderson, J. (1990) *Guide to the Papers of the Berry, Wollstonecraft and Hay Families*. Mitchell Library, State Library of New South Wales.; Anon (6th July 1927) "Glimpses of Country Life." *The Sydney Mail*; Berry, A. (1912) *Reminiscences of Alexander Berry*. Angus & Robertson, Sydney.; C. J. B. W. (13th February 1915) "Steam Traffic in the Pioneering Days." *The Shoalhaven News and South Coast Districts Advertiser*; Perry, T. M. (1966) "Berry, Alexander (1781–1873)." *Australian Dictionary of Biography*. National Centre of Biography, Australian National University. & Stephen, M. D. (1967) "Wollstonecraft, Edward (1783–1832)." *Australian Dictionary of Biography*. National Centre of Biography, Australian National University.

⁴ Anderson, J. (1990); Berry, A. (22nd February 1859) "To the Editor of the Sydney Morning Herald." *The Sydney Morning Herald*; Berry, A. (1912) & Wollstonecraft, E. (August 1829) Letter to Alexander Berry – held in the Papers of the Berry, Wollstonecraft and Hay Families; cited by Florance, R. in Edward Higginbotham & Associates (2003) *Conservation Management Plan for Coolangatta Estate Sandstone Wharf and Former Braking Chain, Greenwell Point Road, Greenwell Point, N.S.W.* Report prepared for Shoalhaven City Council.



Figure 2.1: Ca. late 1820s map of Shoalhaven and Crookhaven Rivers (orientated west at top) showing outline of Greenwell Point wharf.⁵

In 1832, Edward Wollstonecraft died, leaving his lands to his sister Elizabeth. Elizabeth had married Alexander Berry in 1827, thus on Edward's death, he effectively inherited full operation of the Coolangatta Estate. By this time, the Shoalhaven property had grown to approximately 51,200 acres through additional land purchases, with over four thousand sheep and cattle, wide stretches of numerous crops, a shipbuilding yard and small private township of over 250 people with accommodation provided to workers under lease. By the mid 1840s, large areas of arable land along the Shoalhaven were being opened up to tenant farmers, putting increasing pressure on the river transport system. The lack of regular and efficient communication with Sydney markets finally led a group of local settlers to form the Shoalhaven Steam Navigation Company in 1852. A powerful steamer of light draft; capable of navigating both the coastline south of Sydney and the shallow Shoalhaven River, was acquired and a regular service directly from Sydney to Greenwell Point and the wharves along the Shoalhaven was established. Alexander Berry was a trustee of the Company and provided the use of his Greenwell Point wharf and stores free of charge.⁶

A plan of various islands in the Shoalhaven and Crookhaven Rivers dating to 1855 depicts the "steamer wharf" at Greenwell Point, once again show orientated broadly south-east. Three structures are also shown at Greenwell Point behind the wharf, likely depicting the stores and wharfinger's (aka harbourmaster) cottage (Figure 2.2).

A slightly later plan of the Shoalhaven delta dating to 1857 also depicts the Greenwell Point wharf orientated south-east, with three associated buildings – although in a slightly different arrangement (Figure 2.3). The wharf also appears to have a wide, possible T-shaped end in this plan; however, due to the poor reproduction quality of this image, it is possible that the "T-shape" actually depicts a blurred navigation mark or river sounding, or is possibly just a blemish on the original plan and / or subsequent copies.

⁵ Anon (ca. late 1820s) Map of Shoalhaven and Crookhaven entrances and surrounding districts. State Library of NSW, Image No. Z/M2 811.31/1820/1

⁶ Anon (30th July 1852) "News from the Interior- Shoalhaven." *The Sydney Morning Herald*.; Anon (8th March 1855) "The Obstructive Land System – A Visit to Shoalhaven." *The Empire*.; Berry, A. (22nd February 1859) "To the Editor of the Sydney Morning Herald." *The Sydney Morning Herald*.; Cousins, A. (23rd January 1943) "Kiama Steam Navigation Company." *The Kiama Independent and Shoalhaven Advertiser*. & Stephen, M. D. (1967)

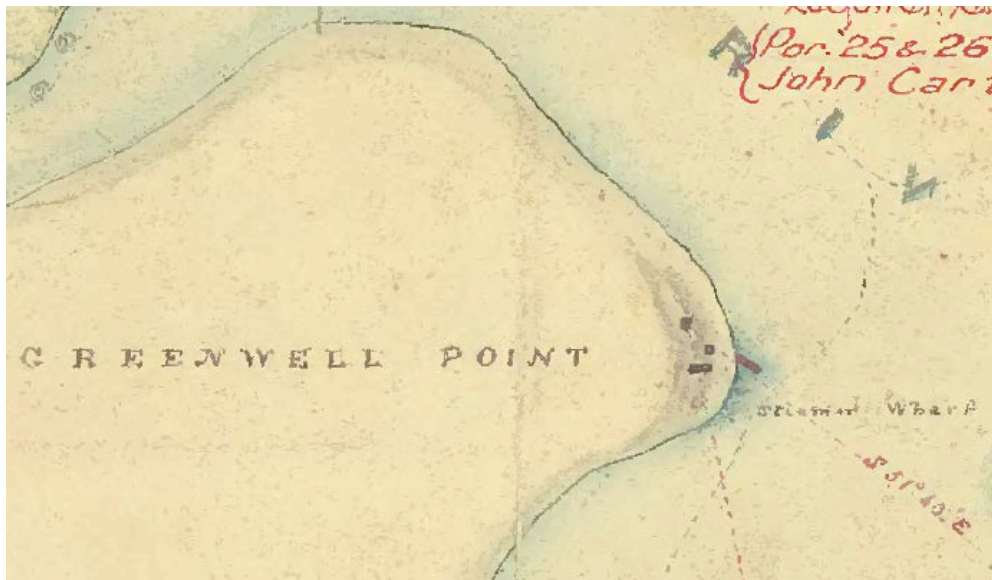


Figure 2.2: 1855 map of Shoalhaven and Crookhaven Rivers (orientated north at top) showing Greenwell Point “steamer wharf” and associated structures.⁷

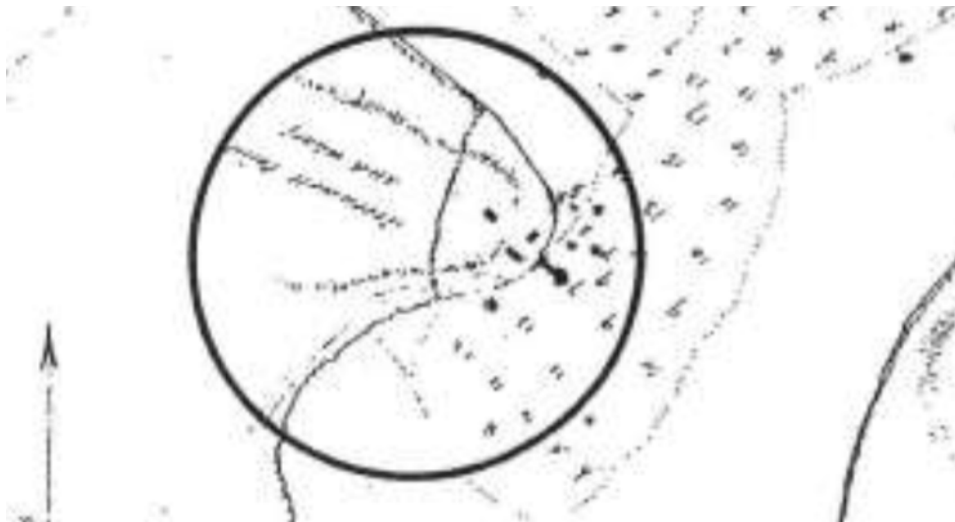


Figure 2.3: 1857 map of Shoalhaven delta (orientated north at top) showing Greenwell Point wharf and associated structures.⁸

Shortly after the establishment of the Shoalhaven Steam Navigation Company, it appears a “braking chain” or “mooring chain” was also installed at Greenwell Point. This chain was reportedly connected to two large anchors, situated north and south of the Greenwell Point wharf. Approaching vessels would pick up the chain by dragging anchor and the vessel could then be secured just beyond the wharf via a mooring buoy attached to the chain.⁹

The commencement of a dedicated and regular steamer service between Sydney and the Shoalhaven was initially very well received by local settlers and tenants. However, it was soon discovered that the Shoalhaven Steam Navigation Company’s vessel, the *Nora Creina*, could not safely travel over the sand flats and rock outcrops beyond the Crookhaven River. Once again, ocean-going services were forced to terminate at Greenwell Point; approximately 16 km from the main settlement at Numbaa and 6.5 km from the nearest inn and public accommodation. The stoppage of direct navigation to the Shoalhaven River was considered to be a significant hindrance to the prosperity of the surrounding district. By the mid 1850s, numerous petitions were made to the Governor General requesting funds for a proper survey of the Crookhaven and Shoalhaven Rivers and subsequent assistance to

⁷ A Legg, G. (1855) *Plan of 5 Islands in the Shoalhaven & Crookhaven Rivers, County of St Vincent, Shoalhaven District*. NSW Land Titles Office, Plan No. V235-787.

⁸ Lovegrove, W. (1857) *Delta of Shoalhaven River*. NSW State Archives, AO Map 15223; reproduced in Higginbotham & Associates (2003)

⁹ Memoirs of Mr. Fred Evans 1986; Shoalhaven City Library.- cited by Florance, R. in Higginbotham & Associates (2003).

remove the obstructions to navigation.¹⁰ Berry's Greenwell Point wharf was also the source of various complaints, being described as "poorly kept" and "tumbledown." Some residents even argued that Berry refused to upgrade the wharf or permit any interested party – including the Shoalhaven Steam Navigation Company – to construct improvements on his behalf, for fear that the wharf would subsequently be converted to a public facility.¹¹

In late 1858, the Shoalhaven Steam Navigation Company merged with two other local operators – the Kiama Steam Navigation Company and the General Steam Navigation Company – to form the Illawarra Steam Navigation Company. The new amalgamated company possessed a fleet of six vessels and serviced all the major ports along the NSW south coast, including Shoalhaven, Wollongong, Merimbula, Kiama, Gerringong, Twofold Bay, Nelligen and Batemans Bay.¹² Possibly in response to the upgraded steamer service, improvements were carried out to Berry's Greenwell Point wharf; including the placement of additional sandstone blocks and / or rubble that had been carried from Berry's North Sydney quarry as ships ballast, and the construction and / or expansion of a timber wharf decking.¹³

In 1862, the NSW Government proclaimed a new line of road from Nowra to Greenwell Point, terminating at Berry's Greenwell Point wharf and thus opening up a direct link between coastal transport and the inland settlements.¹⁴ A broad sketch of the proposed alignment of the new road, prepared in 1863, shows the Greenwell Point wharf as little more than a rough south-east orientated protrusion, two buildings marked "store" at the base of the wharf, and a cluster of four cottages situated slightly further back (Figure 2.4).

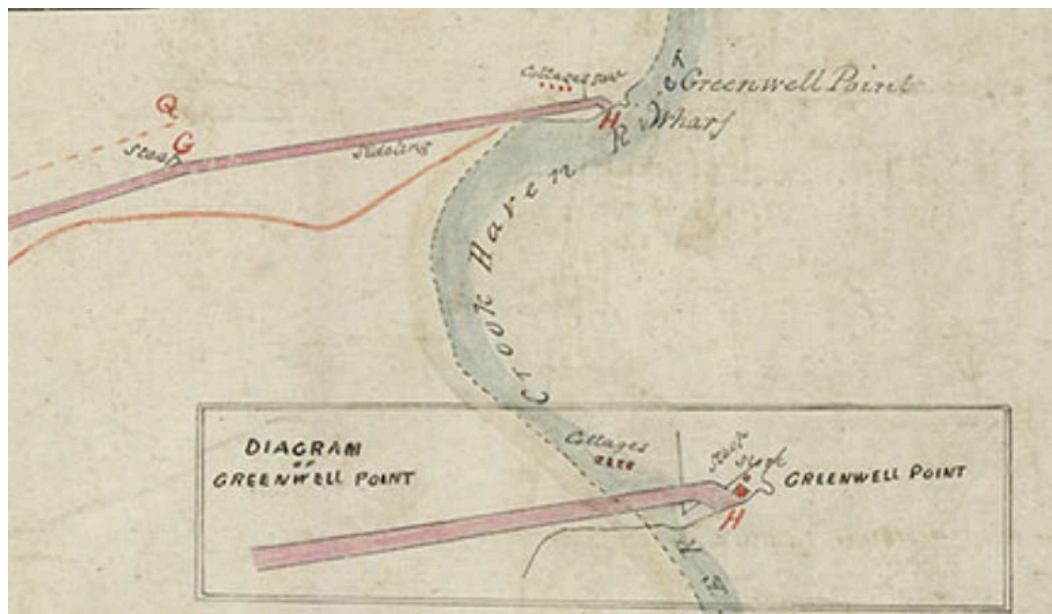


Figure 2.4:
 1863 sketch
 of new road
 from Nowra
 to Greenwell
 Point
 (orientated
 north at top),
 showing
 Greenwell
 Point wharf,
 store and
 cottages –
 with inset
 enlargement.
 15

Despite the earlier improvements to Berry's Greenwell Point wharf, visitors to the Shoalhaven in the early 1860s continued to describe it as a "roughly built", "rudely fashioned stone wharf." Local farmers also regularly complained about the unreliable shipping services and inadequate handling and storage facilities at the wharf.¹⁶ By the mid 1860s, the Nowra to Greenwell Point road had been completed and the Illawarra Steam Navigation Company

¹⁰ Anon (1st January 1855) "Shoalhaven." *The Empire*.; Anon (31st January 1855) "Shoalhaven." *The Empire*.; Anon (14th February 1855) "Green Hills, Shoalhaven." *The Empire*.; Anon (14th May 1857) "Wanderings in Illawarra." *The Sydney Morning Herald*.; Anon (11th August 1856) "Notice of Motion." *Illawarra Mercury*.

¹¹ Lang, J. D. (23rd December 1858) "The Shoalhaven Incubus." *The Illawarra Mercury*.

¹² Pemberton, B. (1979) *Australian Coastal Shipping*. Melbourne University Press, Carlton, Victoria.

¹³ Berry, D. (24th September 1859) Correspondence letters; Reel 2585 Berry & Wollstonecraft Papers – Mitchell Library Sydney. MSS 315/51 Item 1 Frame 34; cited by Florance, R. in Higginbotham & Associates (2003).

¹⁴ Anon (29th July 1862) "Shoalhaven." *Illawarra Mercury*.; Anon (31st January 1863) "Shoalhaven." *The Empire*.

¹⁵ NSW Department of Lands (1863) *Tracing shewing that part of the proposed road from Nowra to Greenwell Point, passing through Mr. Berry's property*. State Library of NSW, image c01945.

¹⁶ Aramis (21st May 1863) "Trip to Shoalhaven." *The Sydney Morning Herald*. A. Resident (15th February 1864) "Letter to Editor." *The Kiama Independent and Shoalhaven Advertiser*.

had expanded their fleet; running weekly services from the south coast ports to Sydney, carrying nearly almost the entire Illawarra region's produce and trade – both import and export – except for coal.¹⁷

As a consequence of the upgraded steamer services and road link, attempts were made to improve river navigation around Greenwell Point and the entrance to the Shoalhaven River. In 1863, the Government owned bucket dredge *Pluto* commenced work deepening the channel from Crookhaven Heads to the wharf at Greenwell Point and extending the canal into the Shoalhaven as far as Terara. In late 1865, *Pluto* was specifically engaged in dredging the clay and loose rock riverbed around Greenwell Point wharf in order to ensure waters reached a suitable depth to allow steamers of any size to moor alongside. Improvements to the wharf itself were also carried out, including the installation of bloodwood timber mooring posts by the Berry Estate, and the construction of additional storage sheds at the end of the wharf by the Illawarra Steam Navigation Company.¹⁸ Maintenance dredging continued to be carried out around Greenwell Point wharf throughout 1866-1867; to such an extent that numerous local residents complained that *Pluto*, which had been intended for improving public navigation along the whole of Crookhaven and Shoalhaven Rivers, was "sweethearting" with the Illawarra Steam Navigation Company and the "everlasting steam fancy spot" of Greenwell Point.¹⁹ Further additions to the Greenwell Point wharf were conducted by the Berry estate in 1868, including the erection of bloodwood timber fenders along the head and sides of the wharf and the construction of further sheds and stables within the group of cottages just beyond the base of the wharf. The wharf decking also appears to have been altered and / or augmented around this time, with a layer of boiler ash and cinder sweepings from the steamers laid down over the stones of the wharf; presumably to create a level surface and foundation for the decking²⁰

In 1870, the NSW Public Works Department put forward a proposal to construct a timber wharf with stone approach at Greenwell Point for public purposes, as Berry's Greenwell Point wharf continued to be used exclusively by the Berry estate and the Illawarra Steam Navigation Company. Designs were prepared and tenders called, however, the proposal was halted due to disputes between David Berry (Alexander's brother and then manager of the Coolangatta Estate) and the Crown regarding ownership of the land along the shoreline of the Crookhaven River.²¹ Meanwhile, the port and accommodation facilities at Berry's Greenwell Point wharf continued to be the cause for complaint, variously described as "extremely bad" and "not a place likely to impress favourably a new arrival to the district – rather the reverse." The cottages and stores were further described as "straggling buildings" of a "shabby and woebegone appearance" with the accommodation provided for travellers looking "as if it had no business there, and felt ashamed of its sign."²²

In 1873, rising floods caused *Coolangatta*, one of the Illawarra Steam Navigation Company paddle steamers, to break loose from moorings at Terara Wharf where it had been undergoing boiler repairs. The crew on board made attempts to both anchor and beach the vessel to no avail and *Coolangatta* was soon dragged into the strong floodwater current and swept uncontrollably down the Crookhaven River towards the heads; at which point the crew

¹⁷ Anon (11th April 1872) "Illawarra – Part I." *The Sydney Morning Herald*. & Pemberton, B. (1979) *Australian Coastal Shipping*. Melbourne University Press, Carlton, Victoria.

¹⁸ Anon (17th September 1866) "Shoalhaven." *The Empire*.; A. Settler (16th March 1865) "To the editor of the Kiama Independent." *The Kiama Independent and Shoalhaven Advertiser*. & Berry, D. (14th December 1865) Correspondence held in Berry & Wollstonecraft Papers – Mitchell Library Sydney. MSS 315/51 Item 1; Reel 2585; Frames 56-60 – cited by R. Florance in Higginbotham & Associates (2003)

¹⁹ Anon (17th September 1866) "Shoalhaven." *The Empire*.; Anon (18th February 1867) "The Dredge at Shoalhaven." *The Empire*. & Anon (25th January 1867) "Shoalhaven." *The Illawarra Mercury*.

²⁰ Berry, D. (2nd April 1868) Correspondence held in Berry & Wollstonecraft Papers – Mitchell Library Sydney. MSS 315/51 Item 1; Reel 2585; Frame 63 – cited by R. Florance in Higginbotham & Associates (2003). & *Memoirs of Robert Aberdeen* published in *The Shoalhaven News* 1941-1942; cited by R. Florance in Higginbotham & Associates (2003)

²¹ Anon (18th May 1870) "Railways and Public Works." *The Sydney Morning Herald*.; Anon (18th May 1870) "Municipal." *The Evening News*.; Anon (21st March 1879) "Shoalhaven." *The Kiama and Shoalhaven Advertiser*. & Anon (25th March 1879) "Shoalhaven." *The Kiama Independent and Shoalhaven Advertiser*.

²² Anon (7th June 1873) "A trip to the mines in the Shoalhaven District." *The Sydney Morning Herald*. & Cruttwell, A. C. (1881) *Sketches of Australia*. W.C. & J. Penny, Somerset, United Kingdom.

abandoned ship. *Coolangatta* was found several days later, overturned and washed up on rocks near Jervis Bay. The hull was recovered and towed back to the Crookhaven River, where it was subsequently moored alongside the Greenwell Point wharf; serving as a landing stage and storage hulk. *Coolangatta* was a wooden side wheel paddle steamer, measuring 30.17 m in length x 5.5 m beam x 1.5 m draft and powered by 25 hp Chapman Bros steam engines; built specifically for the Illawarra Steam Navigation Company Shoalhaven operations in 1865 by J. Cuthbert at Millers Point, Sydney (see Figure 2.5).²³



Figure 2.5: Illawarra Steam Navigation Company paddle steamer *Coolangatta*, pictured moored alongside the wharf at Berry, NSW.²⁴

Towards the end of 1873, Alexander Berry died and the *Coolangatta* estate was passed to his surviving brother, David. In 1879, land disputes between the NSW Government and David Berry were finally resolved and a sum of £1000 was passed in the Legislative Assembly for the construction of a public wharf at Greenwell Point, to be situated north of Berry's original Greenwell Point wharf. Tenders were called in late 1879 with the wharf completed in 1880. However, it appears that the plans to construct the public wharf had not adequately addressed the shallow depths and frequent siltation of the Crookhaven River around Greenwell Point for the wharf remained unused until at least late 1881 due to the absence of a sufficiently deep access channel.²⁵

By this time, Berry's original Greenwell Point wharf was described as a substantial sandstone block wharf large enough for a 60 m ship to berth and load / unload cargo, with a new timber storage building erected on piles on the wharf itself – in addition to the stores, sheds, cottages and hotel situated on land just behind the wharf. Navigation into the upper reaches of the Shoalhaven, however, remained impossible to larger steamers and goods and cargo continued to be unloaded at Greenwell Point and transhipped to smaller vessels.²⁶

In late 1889 David Berry died and John Hay, Berry's cousin, inherited the *Coolangatta* Estate and all associated stock, river steamers and over 21,000 acres of land; with Hay and the Hon. James Norton joint executors and trustees.²⁷ The plan accompanying the Certificate of Title issued to Hay and Norton in 1891 depicts Berry's Greenwell Point wharf as a rounded

²³ Anon (1st July 1865) "The Coolangatta, Steamer." *The Sydney Mail*; Anon (8th March 1873) "Wreck of the Coolangatta." *Australian Town & Country Journal*; Anon (8th March 1873) "Sydney." *Maryborough Chronicle, Wide Bay and Burnett Advertiser*; Anon (11th February 1938) "Reminiscences." *The Nowra Leader*; C. J. B. W. (13th February 1915) "Steam Traffic in the Pioneering Days." *The Shoalhaven News and South Coast Districts Advertiser*; C.J.B.W (21st October 1916) "The Crookhaven Pilot. Relics of the Past." *The Shoalhaven News and South Coast Districts Advertiser*; Hoskin, J. E. / *Flotilla Australia* (2008) *Illawarra & South Coast Steam Navigation Co.* <http://www.flotilla-australia.com/iscsnco.htm> & NSW Office of Environment & Heritage – Shipwreck Database – *Coolangatta* (ID # 1653) <http://www.environment.nsw.gov.au/maritimeheritageapp/ViewSiteDetail.aspx?siteid=1653>

²⁴ Anon (nd) *Berry Wharf with paddlewheeler Coolangatta*. Wollongong City Library. P01/P01205.

²⁵ Anon (24th April 1879) "Local Intelligence." *The Telegraph and Shoalhaven Advertiser*; Anon (22nd May 1879) "Public Wharf at Greenwell Point." *The Telegraph and Shoalhaven Advertiser*; Anon (18th December 1879) "Local Intelligence." *The Telegraph and Shoalhaven Advertiser*. & Anon (24th March 1881) "Local Intelligence." *The Telegraph and Shoalhaven Advertiser*.

²⁶ Anon (20th June 1885) "The Shoalhaven District." *Australian Town and Country Journal*. & Walliss, R. J. (ed.) (1988) *Greenwell Point – An Early Shoalhaven Port*, The Greenwell Point Bi-Centennial Sub-Committee; cited in Higginbotham & Associates (2003)

²⁷ Anon (1st October 1889) "Funeral of the Late David Berry, Esq." *The Broughton Creek Register*.

protrusion extending from the southern tip of Greenwell Point; with the 1880 public wharf shown to the north (Figure 2.6).



Figure 2.6:
 1891 plan of
 Greenwell
 Point
 (orientated
 with north at
 top)
 showing
 Berry's
 wharf and
 the public
 wharf –
 labelled as
 "wharf" to
 the north.²⁸

In early 1892, vast portions of the Coolangatta Estate were subdivided, creating numerous sizeable farm allotments across the Numbaa and Gerringong regions and new township sites at Greenwell Point and Bomaderry; and subsequently offered for sale. As part of these subdivisions, the road from Nowra to Greenwell Point (Greenwell Point Road) was partially realigned and the terminus at Berry's original Greenwell Point wharf was altered, extending the road to the public wharf constructed in 1880.²⁹ Surveyors plans prepared in 1892 for the Greenwell Point road deviation depict Berry's original Greenwell Point wharf as a somewhat rough-edged south-east orientated projection, widening slightly towards the wharf head (Figure 2.7); whilst the surveyors plan prepared for the Berry Estate subdivision in 1892 shows the wharf as wider at the base, narrowing to a rounded head (Figure 2.8). It should be noted, however, that as both plans are focussed on land-based features, it is quite likely that the wharf was not accurately surveyed or drawn – as is often the case with maritime features on historic land plans.

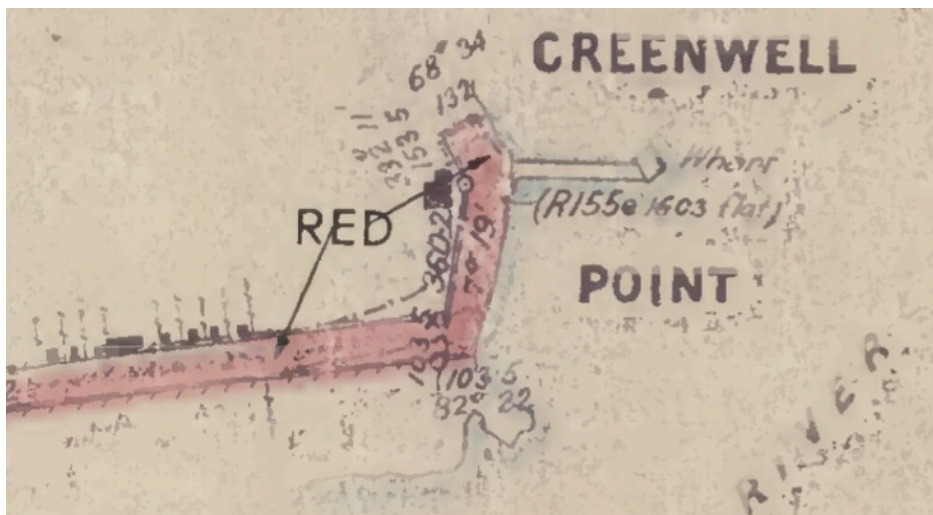


Figure 2.7: 1892
 plan of the
 Greenwell Point
 Road deviation
 (orientated with
 north at top);
 showing Berry's
 Greenwell Point
 wharf as rough-
 edged with wide
 head.³⁰

²⁸ NSW Land Titles Office Torrens Title Volume 1035, Folio 123.

²⁹ Anon (19th March 1892) "The Shoalhaven Land Sale. The Millionaire Berry's Estate." *Freeman's Journal*. & Anon (1st April 1892) "The Berry Estate. Sale of the Numbaa Farm Lands." *The Sydney Morning Herald*.

³⁰ Schleicher, A. (1892) "Plan of Deviation in Road from the Road to Nowra, at the Bridge over the Crookhaven Creek to Greenwell Point, Parish of Numbaa, County of St. Vincent." NSW Land Titles Office, Crown Plan R155 1603.

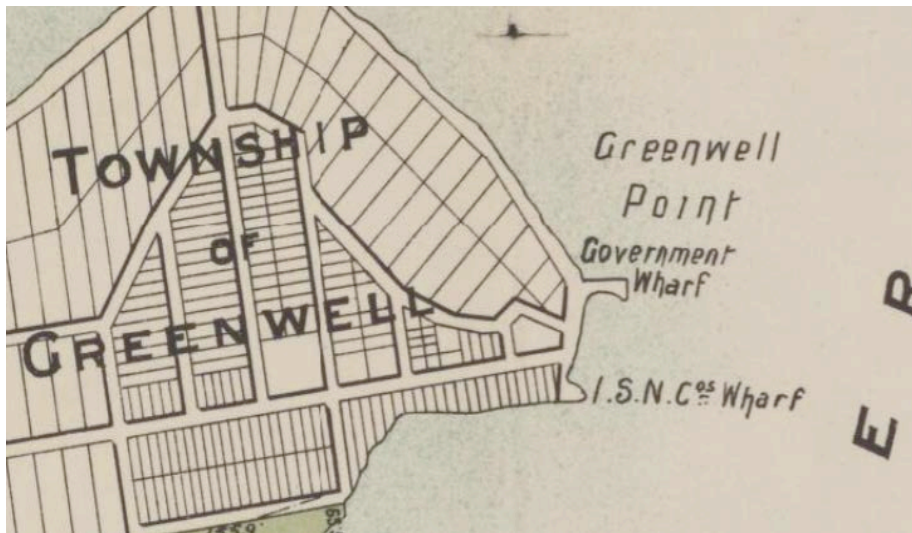


Figure 2.8: 1892 plan of the Berry Shoalhaven Estate depicting rough outline of the original Greenwell Point wharf – labelled as the I.S.N.Co Wharf – and the 1880 “Government Wharf” to the north.³¹

In 1893, a series of artists’ sketches of the Nowra region were printed in *The Sydney Mail and New South Wales Advertiser*, including a view of Berry’s Greenwell Point wharf and associated stores and cottages on shore; drawn from a perspective facing south-west towards the wharf from a point on the Crookhaven River. This sketch depicts two timber stores / sheds located towards the centre of the wharf, a derrick situated near the base of the wharf, and a paddle steamer moored stern up at the head of the wharf. This paddle steamer is shown tied at the port midships to a tall, timber mooring post and also anchored at the bow. Based on the appearance of this vessel, it is most likely *Coolangatta* – which was permanently moored at Berry’s Greenwell Point wharf and used as a landing stage during the mid 1870s onwards (see Figure 2.5 showing *Coolangatta* above). The wharf itself is depicted as a low-level wharf that appears to be lined with a form of timber sheet piling along much of its length (at least on the northern side and the wharf head). Beyond the head of the wharf, a timber stage or platform extends out into the Crookhaven River, abutting *Coolangatta* and likely constructed on timber piles (Figure 2.9).

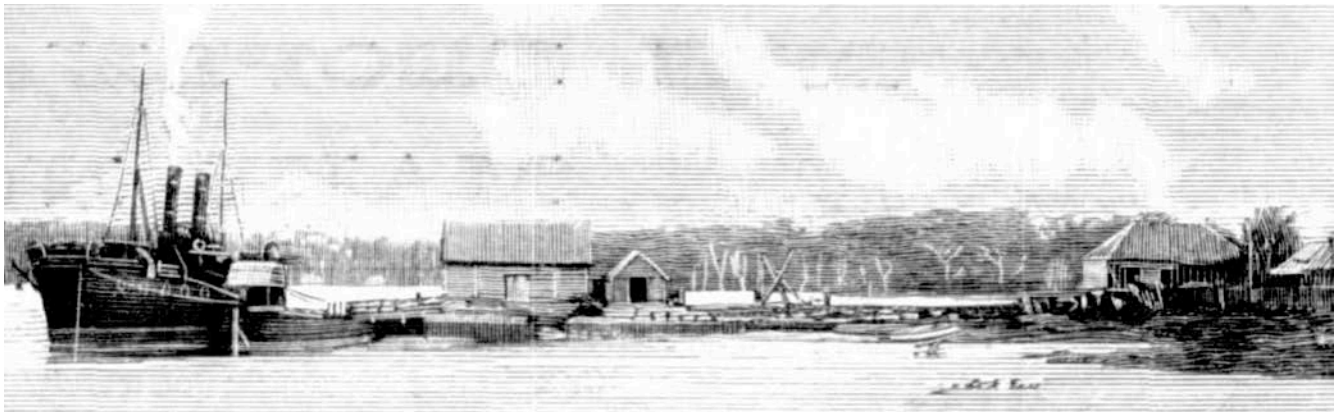


Figure 2.9: Artists sketch of Berry’s Greenwell Point wharf published in 1893.³² The tightly spaced vertical lines along the waterline could represent timber planking attached to the outside of the piles and cross beams. This was not an uncommon practice for wharves, jetties and baths in sheltered waters.

³¹ **Hardie & Gorman Pty Ltd (1892)** *The Numba Farms, portion of the Shoalhaven Estates, the property of the late David Berry Esq. for auction sale in the long room, Numba at noon on Thursday, March 31st 1892 / Hardie & Gorman auctioneers, Sydney, in conjunction with Stewart and Morton, auctioneers, Berry & Shoalhaven.* John Sands, National Library of Australia, Image no. MAP Folder 172, LFSP 2699 (Copy 1).

³² **Anon (1893)** “Greenwell Point.” Reproduced in *The Sydney Mail and New South Wales Advertiser* (3rd June 1893).

The Illawarra Steam Navigation Company continued to use Berry's Greenwell Point wharf until the 1st of June 1895, when the company vacated the "old wharf" and moved their operation to the Greenwell Point public wharf situated just to the north. Just prior to vacating, the Illawarra Steam Navigation Company engaged local ships captains Garde and Elyard to remove the timber moorings at Berry's Greenwell Point wharf and relocated them to more convenient positions near the public wharf. Plans were in place to also move *Coolangatta* and beach the vessel near the public wharf;³³ however, it is not clear if this actually took place. Later reminiscences by local residents report that *Coolangatta* was destroyed by fire, seemingly whilst still moored at the old Berry's Greenwell Point wharf.³⁴

A new Certificate of Title issued to John Hay and James Norton in 1896, following the first rounds of land sales following the subdivision of the Coolangatta Estate, includes a revised plan of Greenwell Point. This plan shows the Greenwell Point Road deviation, terminating at the public wharf and interestingly, does not depict Berry's original Greenwell Point wharf at all (Figure 2.10). This is likely a graphic illustration of the fact that Berry's wharf was no longer in use – to the extent that it did not warrant inclusion on a plan of the property.

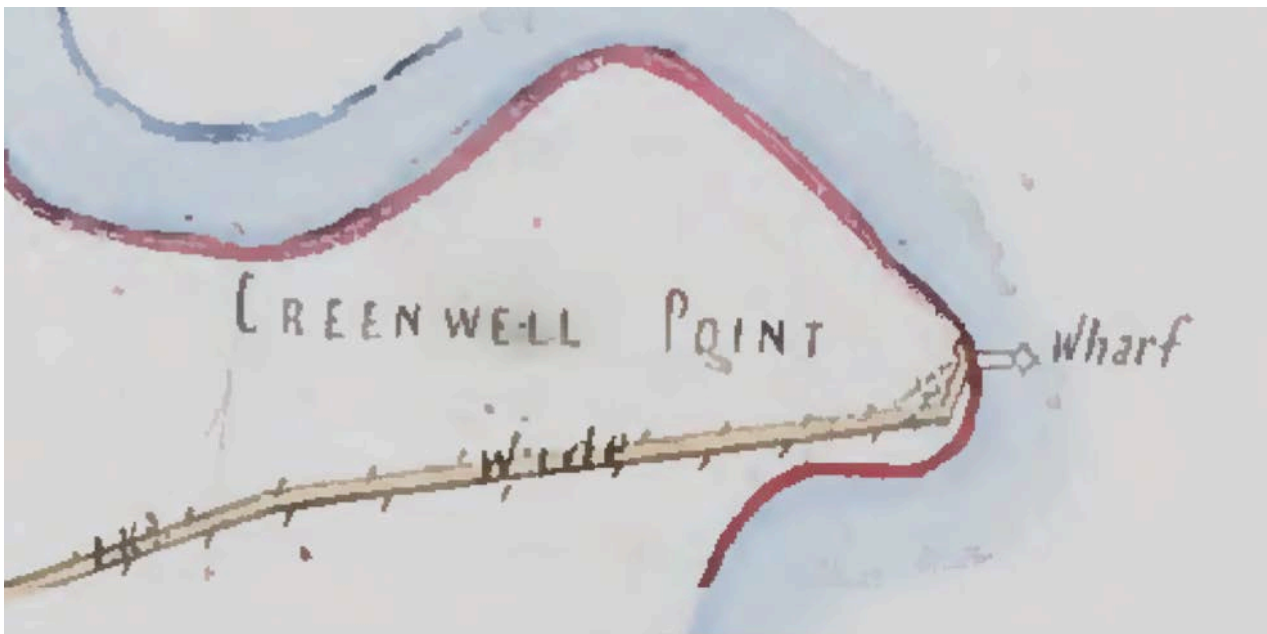


Figure 2.10: 1896 plan of Greenwell Point (orientated with north at top); showing the public wharf but no sign of Berry's original Greenwell Point wharf.³⁵

In 1903, part of Berry's Coolangatta Estate at Numba, including the subdivided township allotments at Greenwell Point, was surveyed in detail, with the resultant plan showing both the Greenwell Point public wharf and Berry's original Greenwell Point wharf; the latter abutting newly created Lot 1A (DP 4071) and fitting around the natural curve of the southern tip of Greenwell Point (Figure 2.11). Berry's wharf is depicted in this plan as being of a rather unusual shape; comprising a relatively narrow, rectangular portion on the southern side, with a much wider section on the northern side that tapers to a central point at the riverward end. It is unclear whether these outlines represent different stages of wharf construction or different materials – i.e. stone and timber components, with the tapered head possibly depicting the timber stage or platform seen in the 1893 sketch. The tapered head design in itself is quite unusual, however, the wharf may have been constructed in this fashion to avoid the jetty being undermined by currents and sediment movement at this bend in the Crookhaven River.

³³ Anon (1st June 1895) "Wharfage at Greenwell Point." *The Shoalhaven News and South Coast Districts Advertiser*.

³⁴ Anon (11th February 1938) "Reminiscences." *The Nowra Leader*.

³⁵ NSW Land Titles Office, Torrens Title Volume 1196, Folio 120.

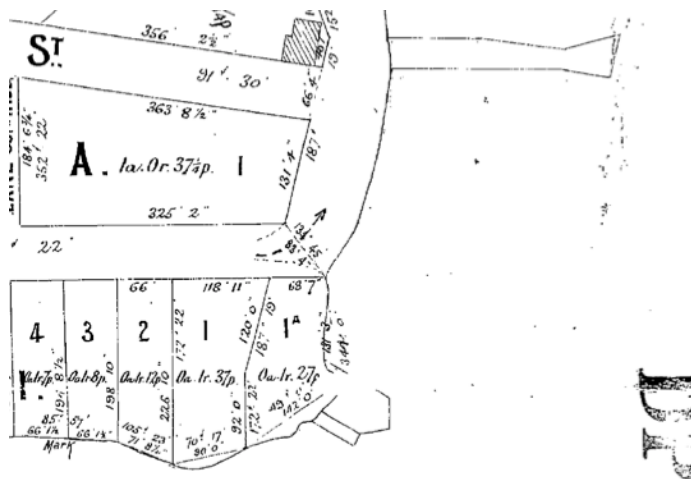


Figure 2.11: 1903 plan of Greenwell Point (orientated with north at top); showing Berry's Greenwell Point wharf and the later public wharf to the north.³⁶

In 1913, numerous allotments at Greenwell Point, including Lot 1A (DP 4071), were purchased by James Cronin, a Sydney law clerk with prominent firm Messrs Dean and Dean and the son of former local Greenwell Point dredge operator. Cronin also purchased the Greenwell Point Hotel property and license and subsequently relocated to Greenwell Point to run the hotel. Cronin subsequently constructed a number of holiday cottages along the shore of the Crookhaven River. There is no clear indication in the historic record that Cronin ever made use of Berry's Greenwell Point wharf adjoining his property and it would appear that the wharf was gradually allowed to fall into disrepair. In 1941, Lots 1 and 1A (DP 4071) were purchased by Ernest George Gess, owner of the Greenwell Point store, and again, there is no indication that Berry's old wharf was ever utilised by Gess.³⁷

In 1952, parts of Lots 1 and 1A (DP 4071) were re-subdivided to create two new lots; 1A and 1B (DP 43067). The surveyor's plan of this subdivision depicts the base of the northern and southern stone walls of Berry's Greenwell Point wharf – again showing how the wharf fitted around the curve of the shoreline and indicating that Berry took advantage of the natural projection at this part of Greenwell Point. The remains of the wharf, however, are marked in this plan simply as "reclaimed land" (Figure 2.12).

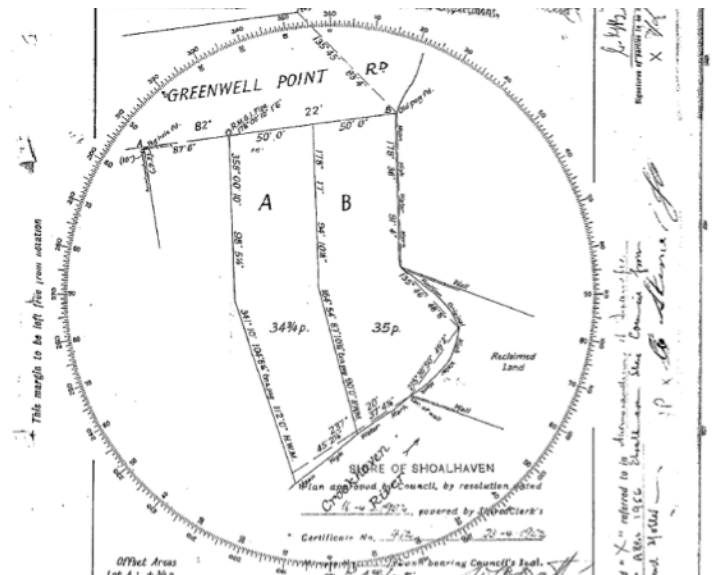


Figure 2.12: 1952 plan of Lots 1A and 1B, Greenwell Point (orientated with north at top); showing the base of the northern and southern walls of Berry's Greenwell Point wharf.³⁸

³⁶ **NSW Surveyor (1903)** *Plan of Subdivision of Part of Alexander Berry's 2000 Acre Grant at Greenwell Point. Municipal District of South Shoalhaven, Parish of Numbaa, County of St. Vincent.* NSW Land Titles Office, DP 4071.

³⁷ **Anon (8th January 1913)** "District Notes." *The Shoalhaven Telegraph*; **Anon (16th December 1938)** "Greenwell Point." *The Nowra Leader*; **NSW Land Titles Office, Torrens Title Volume 2376, Folio 141**; **NSW Land Titles Office, Torrens Title Volume 2775, Folio 194** & **NSW Land Titles Office, Torrens Title Volume 5220, Folio 1**

³⁸ **NSW Surveyor (1952)** *Plan of part of Lots 1 & 1A, Section 1, D.P 4071, Parish of Numbaa, County of St. Vincent.* NSW Land Titles Office, DP 43067.

In 1956-1957, Lot 1B (DP 43067) was purchased by the Shoalhaven Shire Council and declared a public recreation reserve in mid 1967 (Crown Reserve R86354). A surveyor's plan showing the areas reserved in 1967 depicts the full outline of the stone walls of Berry's Greenwell Point wharf (Figure 2.13). Contrary to the 1903 plan of Greenwell Point (Figure 2.11), this plan shows the head of the wharf tapered only slightly, with the northern stone wall angled at approximately 45° for a short length at the north-east end of the wharf. The remainder of the wharf head, however, is depicted as being relatively straight. It is possible that this difference between plans indicates that the fully tapered point, as shown in the 1903 plan, was either a timber stage component or an additional stone wall extension that had deteriorated by the time the 1967 plan was prepared.

In 1977, a long stretch of the Crookhaven River foreshore at Greenwell Point was reclaimed by the Shoalhaven City Council in order to extend the public recreation reserve. This reclamation extended north from, and included, the remains of Berry's original Greenwell Point wharf (Figure 2.14).

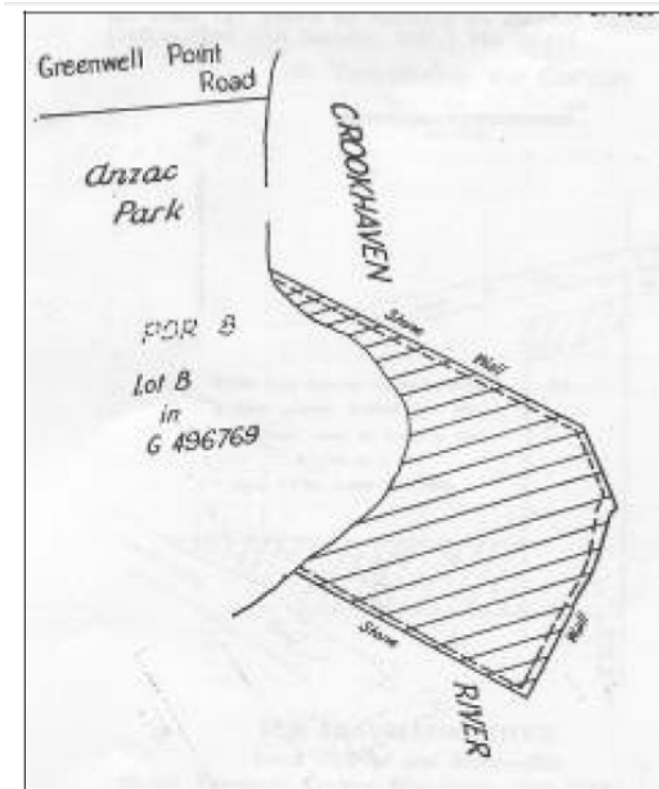


Figure 2.13: 1967 plan of Lots 1B, Greenwell Point (orientated with north at top); showing the stone walls of base of the Berry's Greenwell Point wharf.³⁹

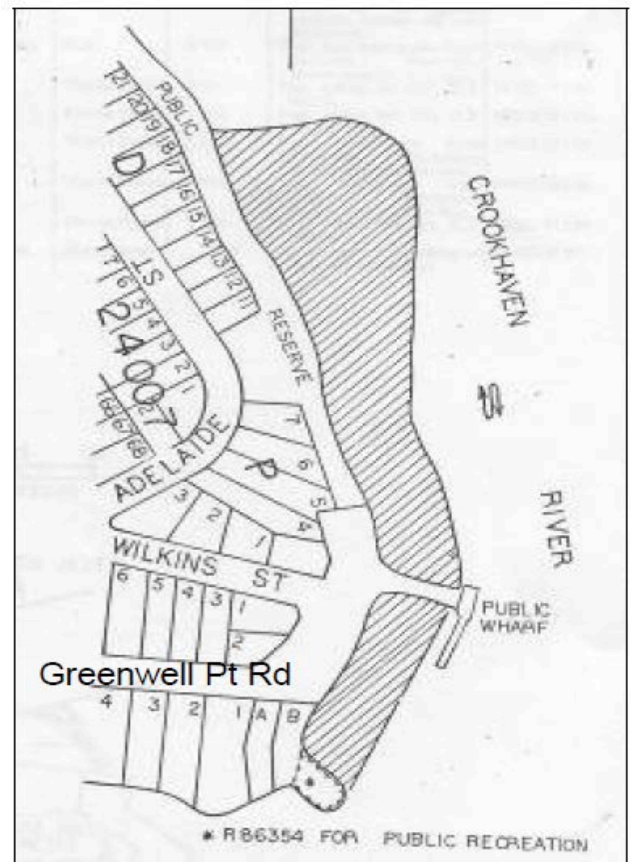


Figure 2.14: Plan of 1977 land reclamation, Greenwell Point - hatched (orientated with north at top); with the outline of Berry's Greenwell Point wharf shown in relation to the area reclaimed.⁴⁰

³⁹ Crown Reserve R86354 reproduced in Shoalhaven City Council (2006) *Greenwell Point Foreshore Reserve – Plan of Management*. SCC File No. 29965.

⁴⁰ *Ibid.*

3.0 Site Description

3.1 General Description

The site was inspected 2nd December 2015 by Cosmos Coroneos. The site was previously inspected in detail in July 2006.⁴¹ Comparisons between the two inspections show relatively little change to the site. The site description that follows builds on the one presented in the 2006 report and will highlight any changes to the site since 2006.

The remains of the Greenwell Wharf are situated in ANZAC Park to the south of Greenwell Point Road at Greenwell Point (Figures 3.1 and see Figure 1.1). A comparison with an image from 2006 (Figure 3.2) taken from a similar position shows a similar profile for the grassed bank overlaying the western part of the wharf, though there appears in 2015 to be less (ca. 0.5 m) sand cover. The other differences between 2006 and 2015 images are the planting of pine trees for the War Memorial and the installation of timber posts as part of a safety barrier.



Figure 3.1: Looking towards Greenwell Wharf (left of shot) from the north in December 2015 (Source: Cosmos Archaeology)



Figure 3.2: Looking towards Greenwell Wharf (left of shot) from the north in July 2006. (Source: Cosmos Archaeology)

Riverward of the grassy bank – which is composed of fill (see below) - is an extensive scatter of sandstone blocks laying within the intertidal zone on coarse riverine sands (Figures 3.3 and 3.4). Discernable amongst the scatter are the lower courses of possibly five separate walls composed of un-bonded sandstone blocks. These walls have been constructed at different times and represent modifications and additions to the wharf throughout the 19th and 20th centuries. One of these walls survives to a height of around 1 m and retains the southern side of the grassy bank.

⁴¹ *Op. Cit.*, Cosmos Archaeology, July 2006



Figure 3.3: Rubble scatter on the eastern and southern edges of Greenwell Point Wharf in December 2015. Looking towards the south east and viewed at a rising tide. The intact section of wall is Wall 1 – see below and Figure 3.6 (Source: Cosmos Archaeology)



Figure 3.4: Rubble scatter on the eastern and southern edges of Greenwell Point Wharf in July 2006. Looking westwards and viewed at a low tide. (Source: Cosmos Archaeology)

To the south west of the wharf, mangroves are present in the relatively wider intertidal zone. A sandy beach extends from the north of the wharf site to the currently operating Public Wharf. This beach was artificially created in the 1970s through the reclamation of the mud flats between the two wharves.

The rubble scatter and sandy beach drops off relatively steeply into a sand/silt riverbed to the immediate south of the wharf remains. The current at the change of tides can run up to an estimated 1 to 2 knots.

Since the site was inspected in 2006 the War Memorial that had previously existed on the site has been enlarged with the installation of two separate sandstone feature walls flanking paved raised podium (Figure 3.5). Also flanking the construction are two flag poles and the aforementioned pine trees.



Figure 3.5: ANZAC Park War Memorial at Greenwell Point Looking towards the southeast. Exposed remains of the wharf are beyond the pine trees (see Figure 3.1).⁴²

⁴² Register of War Memorials in NSW – ANZAC Park War Memorial.
<http://www.warmemorialsregister.nsw.gov.au/content/anzac-park-war-memorial>

3.2 Above the low water line

The survey identified at least five walls and numerous other artefacts, which assist in the interpretation of the construction history of the wharf (Figure 3.6). These walls are described separately:

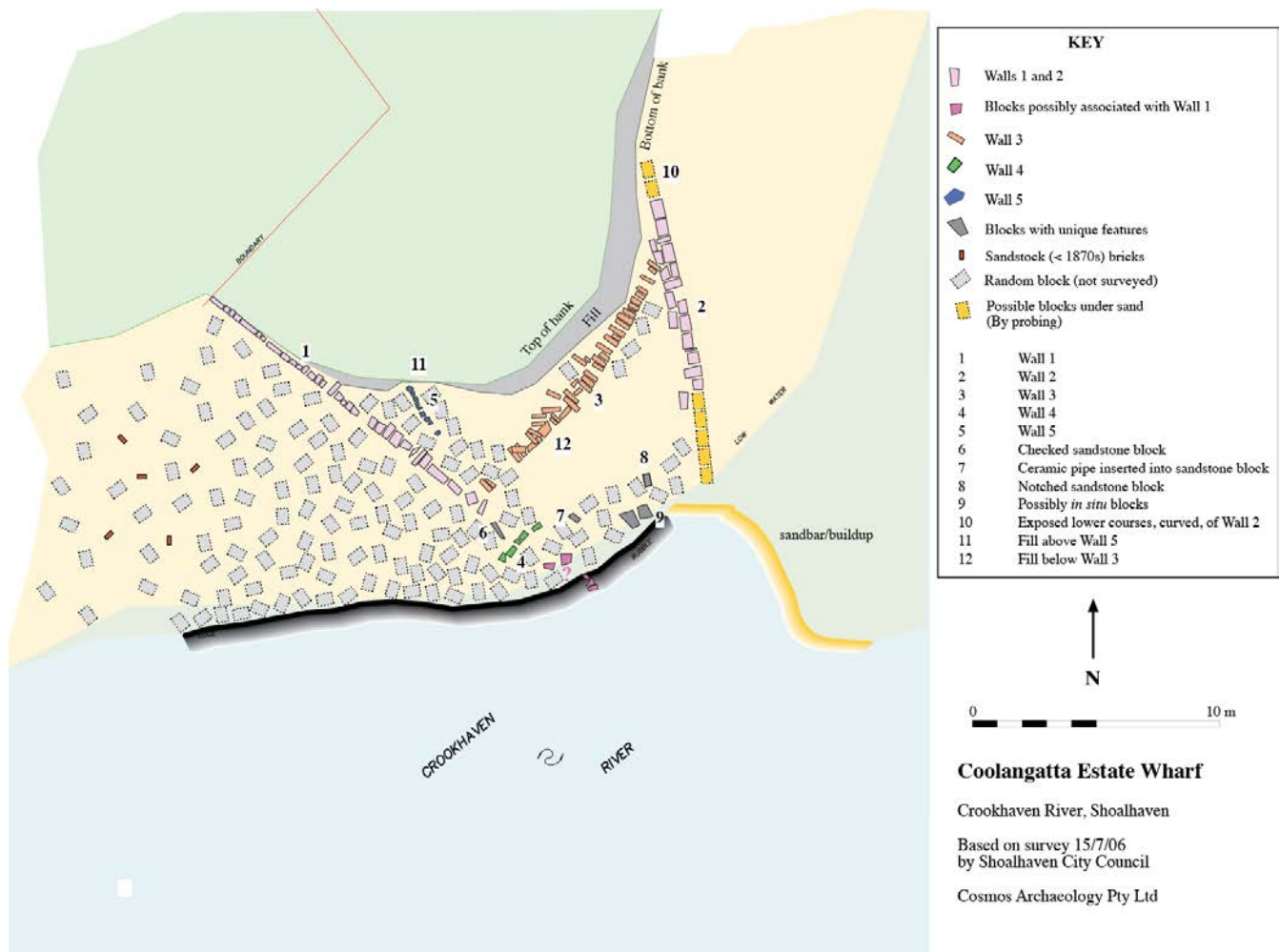


Figure 3.6: Site plan created in 2006 of the Greenwell Wharf. The December 2015 inspection found that relatively little had changed on the site and so the 2006 plan remains valid for this assessment.⁴³ It was not determined in the December 2015 inspection whether the sand bar was still present. Context 13 is not shown on this plan. It is a layer of fill, which appears to be under Wall 1.

Wall 1 (Context 1)

Located at the southern portion of the site, this wall, running in a NNW-SSE axis, is the best preserved wharf wall presently visible (Figures 3.7 and 3.8). Composed of squared sandstone blocks, it is preserved to around 1m above the ground level on the southern side. The wall retains the bank/fill on its northern side (Figure 3.9 and 3.10).

The visible length of the wall is 17.5 m and is preserved up to four courses at the western end and one course high at its extreme eastern end (Figure 3.11). The approximate width of the wall is 90 cm. The dimensions of the blocks in the lower course range from 100 x 45 x 20 to 90 x 50 x 30 cm. The size of the blocks in the upper most courses range from between 90 x 80 x 25 to 40 x 40 x 35 cm.

⁴³ *Op. Cit.*, Cosmos Archaeology, July 2006 : Figure 4



Figure 3.7: Wall 1 in July 2006 looking north. Scale in 200 mm increments. (Source: Cosmos Archaeology)



Figure 3.8: Wall 1, in foreground, in December 2015 looking north. Shows little or no movement of the dislodged blocks since 2006. Also the grassed bank in the foreground seems to have encroached on the blocks of Wall 1 while the same bank in the background seems to have receded slightly. (Source: Cosmos Archaeology)



Figure 3.9: Wall 1 in July 2006, looking east. (Source: Cosmos Archaeology)



Figure 3.10: Wall 1, in foreground, in December 2015, looking east. (Source: Cosmos Archaeology)



Figure 3.11: Extreme visible end of Wall 1 in July 2006, looking east. Note the concrete slab on the right side of the image. Scale in 200 mm increments. (Source: Cosmos Archaeology).

The wall has undergone repairs over time, with the latest repairs consisting of concrete rubble being laid atop of the upper courses (Figure 3.12). There is also possible evidence of the application of 'sacrificial mortar' (sandy matrix mixed with shell grit), on the external facing of the wall.



Figure 3.12: View of Wall 1 in July 2006 with concrete rubble repairs in the top right corner of shot, looking north (Source: Cosmos Archaeology).

The eastern end of Wall 1 has been dismantled, while some of the sandstone blocks laying within the immediate vicinity are very likely to have been part of this wall. In 2006 probing and the removal of sand adjacent to the eastern most block did not reveal a continuation of the wall. Some blocks were observed further to the east, which appeared to be *in situ* and in alignment of Wall 1 (see Figure 3.6). It is also possible that the wall turned to the north east to meet with Wall 2 and that the lowest courses are now buried under sand (see **Section 5.0**).

The removal of the sand adjacent to the eastern most block of Wall 1 in July 2006 exposed a layer of brown coloured fill mixed with a high concentration of dark green glass, shell and pebbles. It appears that the lowest course of Wall 1 rests on this fill. This fill will be referred to as Context 13.

Wall 2 (Context 2)

This wall is located at the northern end of the wharf site and lies on NNE – SSW axis. The wall is composed of squared sandstone blocks preserved to around 0.5 m above the ground level, on the northern side (Figures 3.13 and 3.14). The sand level is flush with the top of the extant wall on its southern side.



Figure 3.13: Wall 2 in July 2006, looking south east. Scale in 200 mm increments. (Source: Cosmos Archaeology)



Figure 3.14: Wall 2 in July 2006, looking north west. Scale in 200 mm increments. (Source: Cosmos Archaeology)

The extant remains of the wall measures 12.4 m in length and approximately 1 m, and is two blocks wide (Figure 3.15). Up to three courses are preserved at the western end, with one course visible at the extreme eastern end (Figure 3.16). The dimensions of the blocks are similar to those of Wall 1 and some evidence of 'sacrificial mortar' was also observed.



Figure 3.15: Wall 2 in July 2006, looking east.
 (Source: Cosmos Archaeology)



Figure 3.16: Eastern extremity of Wall 2 in July 2006, looking east.
 Scale in 200 mm increments. (Source: Cosmos Archaeology)

As with Wall 1, this wall has been dismantled with some of the blocks laying nearby possibly being associated with this feature. Probing conducted in July 2006 eastward of the eastern most block indicated that there were possibly buried blocks along the alignment up to the edge of the rubble/fill batter. The removal of sand at the western end of the wall also revealed three sandstone blocks which formed a curve veering to the west, disappearing under the grass bank (Context 10 and Figure 3.17). This arrangement of blocks may have formed a return keying point for another wall running NW-SE, which connected to Wall 2 (see **Section 4.0**)



Figure 3.17: Continuation of Wall 2 at its western end before it enters the grassy bank – Context 10.
 Scale in 100 mm increments.
 (Source: Cosmos Archaeology)

Wall 3 (Context 3)

This wall is located in the centre of the site at the base of the grassed bank. The wall runs in a NE – SW direction for a distance of 13.35 m and is composed of sandstone blocks (Figures 3.18 and 3.19).



Figure 3.18: Wall 3 in July 2006, looking north.
 (Source: Cosmos Archaeology)



Figure 3.19: Wall 3 in July 2006, looking south. Scale in 200 mm increments. (Source: Cosmos Archaeology)

The blocks, measuring between 66 x 23 x 23 and 98 x 35 x 30 cm, are roughly laid in a single row with their longest sides abutting (Figures 3.20 and 3.21). One course is visible, however, the blocks lay on a lower course mostly buried in the sand.



Figure 3.20: Wall 3 in July 2006, looking west. Colour adjusted to remove shadow in background. Scale in 200 mm increments. (Source: Cosmos Archaeology)



Figure 3.21: Wall 3 in December 2015, looking west. Note the reduction of sand levels between the wall and the grassed bank – ca. 0.25 to 0.40 m. The bank itself has slightly eroded –perhaps by 0.25 m. Scale in 200 mm increments. (Source: Cosmos Archaeology)

A closer examination of this course revealed that it contained lumps of concrete with bluestone aggregate (Figure 3.22). The wall rests on fill (Context 12) similar to that observed at the eastern end of Wall 1. The fill in this location is red-brown sandy silt mixed with sandstone 'chips', 'clinker' (boiler ash) and many fragments of glass – clear window glass, 'gin' bottle glass and light amber coloured glass - that appeared to date to the 19th century.

The use of concrete, the 'rough' nature of the wall, and the fact that it overlays Wall 2 suggests that Wall 3 is a later construction and not part of the wharf structure (Figure 3.23).

Furthermore, the uniformity of the blocks used in Wall 3 does appear to suggest that blocks had been specially selected from the debris of the earlier wharf structure.



Figure 3.22: Wall 3 in July 2006. Sandstone blocks sitting on lower course of concrete with bluestone aggregate. (Source: Cosmos Archaeology)



Figure 3.23: Relationship between Wall 3 (background) and Wall 2 (foreground) in July 2006. Looking south (Source: Cosmos Archaeology)

Wall 4 (Context 4)

Located eastwards of the eastern end of Wall 1 is a line of five blocks running along a north-south axis, perpendicular to the axis of Wall 1. The length of the feature is 1.74 m long and one course is visible. The tops of the blocks range in size from 74 x 30 cm to 82 x 40 cm.

Wall 5 (Context 5)

To the north of, and almost running parallel to, Wall 1 is a line of twelve (visible) very roughly worked sandstone blocks (Figures 3.24 and 3.25). They are smaller in size than the sandstone used in the other walls, measuring approximately 35 x 35 x 15 cm.



Figure 3.24: Wall 5 in July 2006, looking south east. (Source: Cosmos Archaeology)



Figure 3.25: Wall 5 in July 2006, looking west. (Source: Cosmos Archaeology)

In addition to the identified walls were a number of sandstone blocks which displayed unusual features and were very likely associated with the wharf structure. These will be described separately:

‘Checked’ block (Context 6)

This block, located between Walls 1 and 4, has a square cut or check at one end (Figure 3.26). It was probably set into the wharf wall and supported a timber beam protruding from the wall.

Block with ceramic pipe inserted (Context 7)

This block is situated to the north of Wall 4. This block formed part of the wharf wall, with the ceramic pipe performing the function of draining water that accumulated in the fill behind the wall (Figure 3.27).

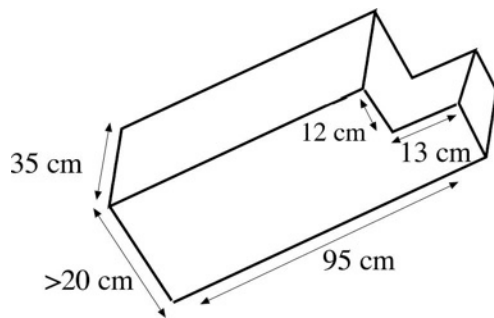


Figure 3.24: Sketch of ‘checked block’ (Context 6) in July 2006. (Source: Cosmos Archaeology)



Figure 3.25: Block with ceramic pipe inserted (Context 7), in July 2006. Scale in 100 mm increments. (Source: Cosmos Archaeology)

In situ blocks? (Context 9)

Two sandstone blocks, 80 x 76 x 28 cm and 100 x 70 x 25 cm, appear to be *in situ* – though moved slightly – and may be part of a wall alignment; the other blocks that would form the wall having been removed or are buried (Figure 3.26). These blocks are located on the edge of the rubble/fill batter.



Figure 3.26: In situ blocks (Context 9), in July 2006. Scale in 100 mm increments. (Source: Cosmos Archaeology)

The observable fill that comprises the grassed bank and is retained by Walls 1 and 2 – and to a failed extent Wall 3 – consists of a series of loose brown silt mixed with clay and sand (Context 11) and includes a thick layer of coal ash (Figures 3.27 and 3.28).⁴⁴ The ash layer appears to be overlaying loose rock rubble (see Figures 3.28 and 3.29) and Wall 5 (see Figure 3.32). Fragments concrete can be seen around the exposed face of the fill but they are likely to have been put there to arrest erosion (see Figure 3.28).



Figure 3.27: View of fill (Context 11) that comprises the grassed bank exposed from erosion in December 2015. Looking north west. (Source: Cosmos Archaeology)



Figure 3.28: View of fill (Context 11) in July 2006. Looking north west. Scale in 200 mm increments. (Source: Cosmos Archaeology)

Above the ash layer there is a mid brown loamy sand layer approximately 200 mm thick. At one location along the exposed fill strata is a thin layer of broken dark green bottle glass which are eroding out of the fill (Figure 3.29 and 3.30). The varying angles and orientations of the glass suggests that they were deposited in a single event as part of the filling process rather than being deposited over time over a hardened walking surface (in which case they would be lying flat).



Figure 3.29: View of fill sequences, which comprise the grassed bank (Context 11) in December 2015. Glass layer shown with red arrow. Note cavity in centre of image. Scale in 200 mm increments. (Source: Cosmos Archaeology)



Figure 3.30: Dark green bottle glass eroding out of (Context 11), in December 2015. Scale in 200 mm increments. (Source: Cosmos Archaeology)

⁴⁴ Context 11 refers to a number of fill sequences, which may be separated by years between events. Closer examination of this formation should involve assigning identified fill strata their own context numbers.

The grassed bank has undergone limited erosion since the July 2006 inspection, possibly up to 0.5 m in places (compare Figure 3.31 with Figure 3.32). There appears in places within the fill, cavities up to 1 m deep, which are recent (see for example Figure 3.29). It is difficult to tell whether this is due to erosion or to burrowing by bottle collectors. Whatever the cause, these cavities destabilise the formation and will likely accelerate its erosion and collapse.



Figure 3.31: View of eroding grassed bank in December 2015. Looking west. (Source: Cosmos Archaeology)



Figure 3.32: View of eroding grassed bank in July 2006. Looking west. Note the exposed remains of Wall 5 in the foreground. (Source: Cosmos Archaeology)

3.3 Below low water line

In 2006 diving was undertaken on the east and south of the wharf site. No definitive evidence of intact wharf walls were identified apart from three blocks, which appeared to follow the alignment of Wall 1 (Figures 3.33 and 3.34). However these three blocks are arranged in a stepped fashion rather than forming the flush face which weakens the argument that they are a continuation of Wall 1.



Figure 3.33: Possibly in situ blocks in line with Wall 1 in July 2016. Scale in 100 mm increments. (Source: Cosmos Archaeology)



Figure 3.34: Possibly in situ blocks in line with Wall 1 in July 2016. Bottle visible between the two blocks. Scale in 100 mm increments. (Source: Cosmos Archaeology)

Observations suggest that the wharf walls were built on fill, composed of mostly sandstone rubble (Figure 3.35). This means that the rubble is not derived from the collapse of the wharf walls. The incline from the top edge of the rubble down to the sandy seabed is relatively steep – 3 m over an average distance of 3 m (approximately 45°). Observed within the crevices of the rubble face were the occasional complete or fragmentary bottle and ceramic vessel (Figures 3.36 and 3.37). Some of these artefacts appeared to date to the 19th century and their ‘exposed’ presence is highly unusual for such a site. It indicates that (diving) bottle hunters have not regularly visited the site and therefore the archaeological potential of the site is considerably enhanced. This observation should not be published. The final version of the 2006 report omitted references to the bottles.

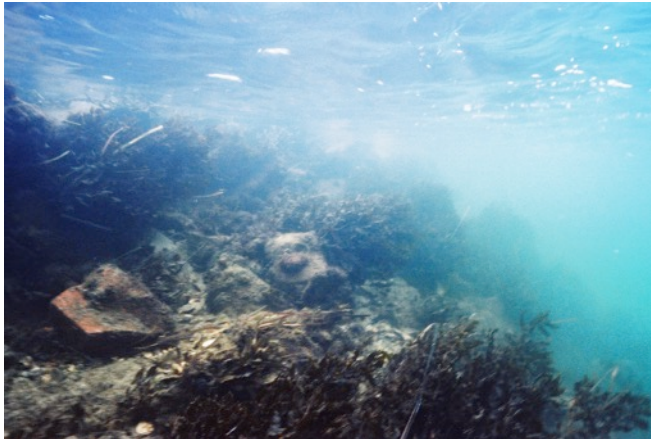


Figure 3.35: 30 Example of rubble slope in July 2016.
 (Source: Cosmos Archaeology)



Figure 3.36: 19th century dark green “black” glass bottle in July 2016. Scale in 100 mm increments.
 (Source: Cosmos Archaeology)



Figure 3.37: “Pickle jar” and fine walled ceramic jar/bottle with pale blue glaze. Scale in 100 mm increments. (Source: Cosmos Archaeology)

Beyond the toe of the rubble fill, the seabed is composed mostly sand/silt with patches of seagrass increasing in frequency with distance from the rubble. Sandstone blocks were also observed on the seabed but these seemed to be tumble from the collapse/dismantling of the wharf wall or used as temporary and improvised moorings.

4.0 Interpretation and archaeological potential

4.1 Identification of construction phases - historical.

The Greenwell "Berry's" Wharf was first constructed in 1829⁴⁵. Little is known of this wharf other than it was made of stone and constructed at 'considerable expense'. The 1820s depiction of the wharf is schematic but it does seem to show a linear projection from the shoreline (see Figure 2.1). The next distinctive configuration of the wharf is shown on a plan dated 1855 (see Figure 2.2). It is clear that the structure is a linear feature configured more like a jetty than a wharf.

The advent of steam technology in the 1850s meant that larger, more manoeuvrable vessels could visit the Crookhaven River and keep a regular timetable. This stimulated the changes to the Greenwell Wharf as documented in the historical record during this time. In the late 1850s the wharf appears to have been modified, perhaps expanded by the placement of additional sandstone blocks and/or rubble as well as the construction or expansion of a timber wharf decking. It could be assumed that the upper portions and most easily accessible stone from the original 1829 wharf would have been utilised, leaving the basal remains *in situ*. However even after these refurbishments it was being referred to as a roughly built and rudely fashioned wharf.

Further improvements took place in the 1860s with the installation of mooring posts and fenders along the head and sides of the wharf. Also around this time boiler ash appears to have been laid as fill over the stones of the wharf to provide a level surface and it is likely that the size of the wharf was further expanded. It would appear that much of the fill visible on the site (Context 12) and the rubble batter along the edge of the site were laid down from the 1860s into the 1870s (see **Section 4.2**). This creation, or more possibly expansion, of the fill or foundation most likely coincided with construction of the wharf walls, which are visible today. The wharf appears to have reached its final form – the form visible today - by around 1880. Plans of the wharf towards the end of the 19th century show a wider structure than what had been depicted earlier (see Figures 2.6, 2.7 and 2.8). It almost definitely had by this time a timber apron (see Figure 2.9).

The most detailed depiction of the Greenwell Wharf is depicted in a 1903 plan, Figure 2.11 in this report reproduced below (Figure 4.1).

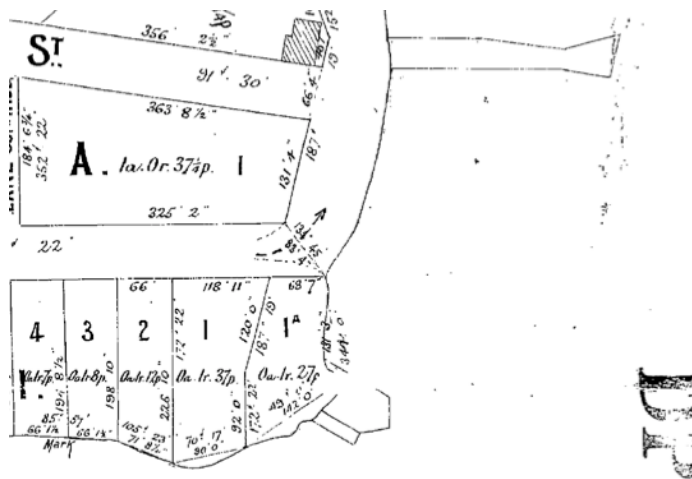


Figure 4.1: 1903 plan of Greenwell Point (orientated with north at top); showing Berry's Greenwell Point wharf and the later public wharf to the north.⁴⁶

It is unclear what exactly is depicted in this plan, the different stages of construction or timber and stone elements? The rectangular strip on the southern side of the structure does appear to be a timber apron. The tapering point is unusual and may also outline a timber apron or the edge of the stone component of the structure. If the latter is the case then the

⁴⁵ *Ibid.*, pg 10

⁴⁶ **NSW Surveyor (1903)** *Plan of Subdivision of Part of Alexander Berry's 2000 Acre Grant at Greenwell Point. Municipal District of South Shoalhaven, Parish of Numbaa, County of St. Vincent.* NSW Land Titles Office, DP 4071.

shape may have deflected the ebb and flow currents so as to reduce eddies forming around the wharf and provide stability to the structure. The design of the wharf could also have reduced the build up of sediments, mobilised by the current, on either side of the structure.

It would appear that the wharf site fell into gradual functional disrepair throughout the 20th century, accelerating after the 1940s. A plan from 1967 (Figure 2.13 reproduced below at Figure 4.2) shows a rectangular projection with a chamfered northern corner. The differences between this depiction and the one from 1903 could be that by 1967 the timber elements of the wharf such as the apron and piles would have collapsed and/or been removed. With the abandonment of the wharf it could be expected that much of the masonry would have been removed.

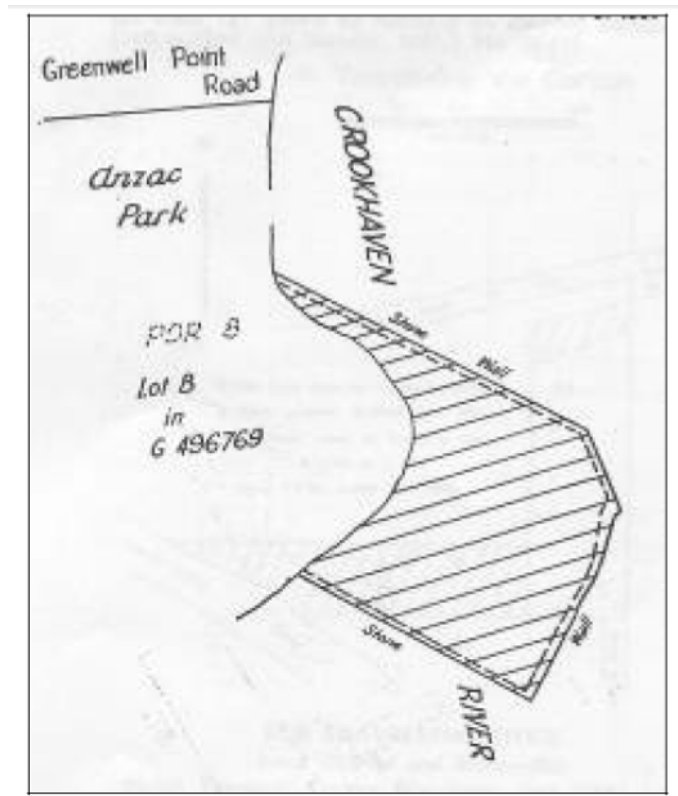


Figure 4.2: 1967 plan of Lots 1B, Greenwell Point (orientated with north at top); showing the stone walls of base of the Berry's Greenwell Point wharf.⁴⁷

Based on the known construction history of the wharf the following phases can be discerned:

Phase	Period	Description
1	1829 to 1850s	Linear and rectangular stone wharf
2	1850s to 1860s	Widened stone wharf with possibly timber decking.
3	1860s to 1940s	Expansion with increased fill contained by large ashlar masonry. Timber apron, mooring posts and fenders.
4	1940s to 2016	Abandonment as functioning wharf and gradual dismantling.

⁴⁷ Crown Reserve R86354 reproduced in Shoalhaven City Council (2006) *Greenwell Point Foreshore Reserve – Plan of Management*. SCC File No. 29965.

4.2 Identification of construction phases - archaeological.

The visible archaeological evidence shows that Wall 1 (Context 1) corresponds with the southern parallel wharf wall, while Wall 2 (Context 2) corresponds with the northern converging wall (Figure 4.3) as they appear in the 1967 plan (Figure 4.2).

The remnants of the northern parallel wall are presently under the reclamation of the 1970s. No evidence was observed of the southern converging wall. The lowest courses may be buried under sand but as 19th century fill was observed close to the surface at the visible eastern end of Wall 1, it is also likely that most of the southern converging wall has been removed.

If the proposed alignment of the southern converging wall, as depicted in Figure 4.3, is correct it raises the issue of how vessels could have moored alongside the wharf. The rubble fill, which forms the eastern and southern of edge of the low water mark, would have protruded beyond the base of the wall. The top of the fill/rubble batter is less than 1 m below high water and therefore vessels of reasonable size could not have approached close to the wharf. It is assumed that the same wall/rubble batter configuration is evident for the northern converging wall, however, the build up of sediments resulting from the 1970s reclamation and ongoing erosion of Greenwell Point, has obscured (buried) the evidence.

An alternative alignment of the missing section of wall – that would link Walls 1 and 2 – has been proposed. This is based on the observation that some sandstone blocks amongst the rubble along the top edge of the batter appear to be in alignment with Wall 1 – the southern parallel wall of the 1903 plan. This proposal has the southern parallel wall (Wall 1) continuing to the top of the rubble batter before turning northwards – following the top of the batter – to link with Wall 2. The apparently *in situ* blocks of Context 9 would have formed part of this wall (Figure 4.3). Such a configuration however would have provided only marginally deeper water access – due to the batter - for vessels to tie up against the wharf. This proposal is based on tenuous visible evidence and would require extensive removal of sand and loose surface rubble to substantiate. This proposal also cannot be reconciled with what is depicted on the latest and only detailed plan of the wharf.



KEY	
	Walls 1 and 2
	Blocks possibly associated with Wall 1
	Wall 3
	Wall 4
	Wall 5
	Blocks with unique features
	Sandstock (< 1870s) bricks
	Random block (not surveyed)
	Possible blocks under sand (By probing)

Possible alignments of 'missing' walls based on 1903 plan of Wharf



Possible alignments of 'missing' walls based on tenuous visible archaeological evidence



Possible extent of timber apron



N

0 10 m

Greenwell "Berry's" Wharf

Crookhaven River, Shoalhaven

Based on survey 15/7/06
by Shoalhaven City Council

Cosmos Archaeology Pty Ltd

Figure 4.3: Site plan created in 2006 of the Greenwell Wharf with some thoughts on past configurations.

The historical archaeological evidence and the surmised relationship of the rubble fill and batter with the wharf walls, are reminiscent of reclamations where timber aprons on piles project beyond the sea/wharf walls built on fill. In such circumstances, the outermost row of piles are just beyond the toe of the rubble/fill batter. The historical evidence suggests that piling was carried out around Greenwell Wharf, if only for the placement of fender piles. It is very likely that a timber apron extended beyond at least the converging north and south walls into deeper water. No physical evidence of timber piles was observed. After the wharf was abandoned such piles would have been eaten away by marine borers and collapsed, leaving the stumps protruding slightly above the river bed. They may also have been cut away down to the river bed as they would have eventually posed a hazard to navigation – hence their absence on the 1967 plan of the wharf. Should such piles have existed they may be presently buried under a thin layer of sand and only periodically uncovered.

The rectangular feature appended to the southern parallel wall of the wharf in the 1903 plan could have been constructed from stone or was a timber apron set on piles. The latter is more probable given that there is little visible evidence of a stone wall running parallel to Wall 1 to its south. To conclusively demonstrate the nature of the construction of this feature would require the removal of loose surface rubble and substantial amounts of sediment.

It is also unclear, given the extent of the fill southwards of Wall 1, whether vessels tied up along its southern side. There is the possibility, albeit a remote one, that this structure was part of the original 1829 wharf and that an almost new wharf – with parallel and converging walls - commencing in the 1850s was built alongside it, to the north. The more likely explanation is that it is a later expansion to the 1860s configuration of the wharf, constructed for the purposes for storing cargo and/or equipment and was built in part to contain the ash/clinker fill (Context 11).

Wall 3 (Context 3) was very likely constructed to stabilise the eroding fill previously contained by the wharf walls. It could be the outermost wall shown in the 1967 plan, running in a NE - SW direction. Wall 4 (Context 4) may have been an earlier attempt at consolidating the exposed fill.

Wall 5 is enigmatic. It would be tempting to speculate that it may be associated with the original 1829 wharf. However, the size of the irregular shaped blocks used to form this wall are possibly too small to be considered a retaining seawall for even the most rudimentary reclamation. It is more likely to have performed the function of a temporary bund during the reclamations that took place after the 1850s.

Based on the above discussion, the visible archaeological remains and potential archaeological remains can be assigned to the construction phases identified in **Section 4.1**:

Phase	Period	Visible archaeological remains	Potential archaeological remains
1	1829 – 1850s	None identified	<ul style="list-style-type: none"> Foundations of stone retaining walls. Fill within retaining walls Artefacts discarded around wharf
2	1850s to 1860s	<ul style="list-style-type: none"> Wall 5 (Context 5) Context 13 	<ul style="list-style-type: none"> Possible other wall alignments similar to Wall 5. Foundations of stone retaining walls. Artefacts discarded around wharf Pile/pier holes for structures located on wharf
3	1860s to 1940s	<ul style="list-style-type: none"> Wall 1 (Context 1) Wall 2 (Context 2) Contexts 6, 7, 8, 9? 10, 11, 12 Rock rubble slope underwater 	<ul style="list-style-type: none"> Continuation of Walls 1 and 2. Other retaining walls. Artefacts discarded around wharf Pile stumps and other structural elements associated with timber apron. Stumps from fender piles and mooring posts. Pile/pier holes for structures located on wharf
4	1940s to 2016	<ul style="list-style-type: none"> Wall 3 (Context 3) Wall 4 (Context 4) 	<ul style="list-style-type: none"> Various forms of erosion prevention measures

5.0 Significance Assessment

5.1 Introduction

This significance assessment will utilise and in some cases augment the heritage significance statements made in the Edward Higginbotham and Associates 2003 Conservation Management Plan for this site.⁴⁸ This assessment will also distinguish the significance of the each of the four construction phases of the wharf:

- Phase 1 – Original convict built wharf (1829 to 1850s);
- Phase 2 – First expansion (1850s to 1860s);
- Phase 3 – Greatest extent (1860s to 1940s);
- Phase 4 – Abandonment (1940s to 2016).

An assessment of cultural significance or heritage significance seeks to understand and establish the importance or value that a place, site or item may have to select communities and the general community at large. The Australian ICOMOS Charter for the Conservation of Places of Cultural Significance⁴⁹ (the Burra Charter 1979, most recently revised in 1999), the standard adopted by most heritage practitioners in Australia when assessing significance, defines cultural significance as:

“Aesthetic, historic, scientific or social value for past, present or future generations”

Value may be contained in the fabric of the item, its setting and relationship to other items, the response that the item stimulates in those who value it now, or the meaning of that item to contemporary society.

Accurate assessment of the cultural significance of sites, places and items is an essential component of the NSW heritage assessment and planning process. A clear determination of a site's significance allows informed planning decisions to be made for a place, in addition to ensuring that heritage values are maintained, enhanced, or at least minimally affected by development. Assessments of significance are made by applying standard evaluation criteria provided by the NSW Office of Environment and Heritage⁵⁰:

- An item is important in the course or pattern of NSW's cultural or natural **history** (or the cultural or natural history of the local area);*
- An item has strong or special **associations with the life or works of a person, or group of persons, of importance in NSW' cultural or natural history** (or the cultural or natural history of the local area);*
- An item is important in demonstrating **aesthetic characteristics** and/or a high degree of **creative or technical achievement** in NSW (or the local area);*
- An item has strong or special **associations with a particular community or cultural group** in NSW (or the local area) **for social, cultural or spiritual reasons**;*
- An item has **potential to yield information** that will contribute to an understanding of NSW's cultural or natural history (or the cultural or natural history of the local area);*
- An item possesses **uncommon, rare or endangered** aspects of NSW's cultural or natural history (or the cultural or natural history of the local area);*
- An item is important in **demonstrating the principal characteristics of a class of NSW's cultural or natural places**; or cultural and natural environments.*

⁴⁸ Edward Higginbotham & Associates Pty Ltd, March 2003 : Section 4

⁴⁹ The Australia ICOMOS 1999 Charter for the conservation of places of cultural significance.

⁵⁰ **NSW Heritage Office (2001) Assessing Heritage Significance**

5.2 Evaluation of Cultural Significance

The following evaluations, which draw directly from Edward Higginbotham and Associates 2003 Conservation Management Plan, have been bracketed with quotation marks.⁵¹

- a. *An item is important in the course or pattern of NSW's cultural or natural **history** (or the cultural or natural history of the local area);*

"The former Coolangatta Estate Wharf was one of a number of major improvements carried out by Berry & Wollstonecraft on their Coolangatta Estate in the 1820s. The Estate itself was unusual because of its large size, not only just for the Illawarra, but also for the rest of the settled districts at that time. The wharf at Greenwell Point was constructed in 1829 and is located near Berry's Canal, another estate improvement, which was constructed to assist navigation between the Crookhaven and Shoalhaven Rivers in 1822.

While the wharf served to transport estate and other produce to market in Sydney from the 1820s onwards, the opening up of the estate to tenant farmers in the 1840s provided a boost to traffic from the wharf. Until navigation on the Shoalhaven River was improved in the 1860s, Greenwell Point provided the may access to shipping for the opening up of the Shoalhaven area. The Illawarra Steam Navigation Company was formed in 1852 and used the wharf on a regular basis. By 1872 Greenwell Point was the fourth largest port in New South Wales, after Sydney, Wollongong and Newcastle. The extent of coastal trade and shipping prompted the government to build a government wharf in 1880, while a lighthouse and pilot station had been established in 1872.

The bridge over the Shoalhaven at Nowra, opened in 1881, the arrival of the railway at Bomaderry in 1893 and the dredging of the river enabling seagoing vessels to reach Nowra itself in 1904, all these events cut into the extent of shipping at Greenwell Point, commencing a downward trend in usage until the last steamer arrived in 1939. While coastal shipping might have been defunct by this time, the fishing and oyster industries caused a resurgence in the fortunes of Greenwell Point from the 1940s onwards."

Phase	Historical significance
1 (1829 – 1850s)	The remains of the wharf and associated archaeological deposits connected to the Greenwell Point Heritage Stone Wharf are assessed as being of State significance by this criterion.
2 (1850s to 1860s)	The remains of the wharf and associated archaeological deposits connected to the Greenwell Point Heritage Stone Wharf are assessed as being of State significance by this criterion.
3 (1860s to 1940s)	The remains of the wharf and associated archaeological deposits connected to the Greenwell Point Heritage Stone Wharf are assessed as being of State significance by this criterion.
4 (1940s to 2016)	The remains of the wharf and associated archaeological deposits connected to Greenwell Point Heritage Stone Wharf do not meet the local or State listing of this criterion.

⁵¹ Edward Higginbotham & Associates Pty Ltd, March 2003 : Section 4

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

“ The former Coolangatta Estate Wharf and braking chain have strong associations with the owners of the Coolangatta Estate, Alexander Berry and Edward Wollstonecraft. Both these individuals played an important role in the development of the Shoalhaven area, as well as being influential in their business pursuits in Sydney. The wharf is also associated with the formation and ongoing success of the Illawarra Steam Navigation Company. “

Phase	Association with a person(s) of importance in NSW
1 (1829 – 1850s)	The remains of the wharf and associated archaeological deposits connected to the Greenwell Point Heritage Stone Wharf are assessed as being of State significance by this criterion.
2 (1850s to 1860s)	The remains of the wharf and associated archaeological deposits connected to the Greenwell Point Heritage Stone Wharf are assessed as being of Local significance by this criterion.
3 (1860s to 1940s)	The remains of the wharf and associated archaeological deposits connected to the Greenwell Point Heritage Stone Wharf are assessed as being of Local significance by this criterion.
4 (1940s to 2016)	The remains of the wharf and associated archaeological deposits connected to Greenwell Point Heritage Stone Wharf do not meet the local or State listing of this criterion.

c. An item is important in demonstrating *aesthetic characteristics* and/or a high degree of *creative or technical achievement* in NSW (or the local area);

From what has been observed of the remains of the wharf there does not appear to be any evidence of creative or technical merit in its construction and the historical sources make no special mention of any particular feature of the wharf. Though the wharf has collapsed, the site does have an aesthetic appeal in that it does convey convincingly the image of the archetype archaeological site with remnant walls composed of large ashlar blocks and similar blocks scattered around.

Phase	Aesthetic, creative or technical significance
1 (1829 – 1850s)	The remains of the wharf and associated archaeological deposits connected to Greenwell Point Heritage Stone Wharf do not meet the local or State listing of this criterion.
2 (1850s to 1860s)	The remains of the wharf and associated archaeological deposits connected to Greenwell Point Heritage Stone Wharf do not meet the local or State listing of this criterion.
3 (1860s to 1940s)	The remains of the wharf and associated archaeological deposits connected to the Greenwell Point Heritage Stone Wharf are assessed as being of Local significance by this criterion.
4 (1940s to 2016)	The remains of the wharf and associated archaeological deposits connected to Greenwell Point Heritage Stone Wharf do not meet the local or State listing of this criterion.

- d. An item has strong or special *associations with a particular community or cultural group* in NSW (or the local area) for social, cultural or spiritual reasons;**

The Greenwell Point Heritage Stone Wharf does not appear to have any strong or special association with a particular community of cultural group.

Phase	Association with a particular community or social group
1 (1829 – 1850s)	The remains of the wharf and associated archaeological deposits connected to Greenwell Point Heritage Stone Wharf do not meet the local or State listing of this criterion.
2 (1850s to 1860s)	The remains of the wharf and associated archaeological deposits connected to Greenwell Point Heritage Stone Wharf do not meet the local or State listing of this criterion.
3 (1860s to 1940s)	The remains of the wharf and associated archaeological deposits connected to Greenwell Point Heritage Stone Wharf do not meet the local or State listing of this criterion.
4 (1940s to 2016)	The remains of the wharf and associated archaeological deposits connected to Greenwell Point Heritage Stone Wharf do not meet the local or State listing of this criterion.

- e. An item has *potential to yield information* that will contribute to an understanding of NSW's cultural or natural history (or the cultural or natural history of the local area);**

The assessment of archaeological potential for the site has found that the remains of the original convict built wharf (Phase 1), and associated artefacts discarded around the structure are buried under subsequent wharf expansions from the 1850s onwards. This provides an excellent opportunity to study early regional colonial private-built maritime infrastructure using convict labour. Such examination can say much about the availability, or lack of, suitable materials for building as well as the level expertise in design and execution of such works. The artefacts - such as cargo and personal possessions - discarded by convicts, passengers and stevedores on the wharf would provide an insight into the activities that took place at this location very early on in the period of European colonisation.

Phases 2 and 3 of the site can also provide new information on maritime infrastructure development outside the major urbanised areas of NSW in the mid to late 19th century.

Phase	Archaeological significance
1 (1829 – 1850s)	The remains of the wharf and associated archaeological deposits connected to the Greenwell Point Heritage Stone Wharf are assessed as being of State significance by this criterion.
2 (1850s to 1860s)	The remains of the wharf and associated archaeological deposits connected to the Greenwell Point Heritage Stone Wharf are assessed as being of Local significance by this criterion.
3 (1860s to 1940s)	The remains of the wharf and associated archaeological deposits connected to the Greenwell Point Heritage Stone Wharf are assessed as being of Local significance by this criterion.
4 (1940s to 2016)	The remains of the wharf and associated archaeological deposits connected to Greenwell Point Heritage Stone Wharf do not meet the local or State listing of this criterion.

- f.** An item possesses **uncommon, rare or endangered** aspects of NSW's cultural or natural history (or the cultural or natural history of the local area);

"The Coolangatta Estate Wharf ... provide[s an example] of improvements, which were constructed at the major coastal and river ports of New South Wales. On each major NSW river system, at least one major wharf would have been found, sometimes more, as for example on the Hunter River with ports at Newcastle and Morpeth. Nonetheless for each river system, large wharf structures would have been infrequent or at least concentrated in limited locations."

Early Sydney and major regional centres would have had stone wharves possibly similar to that constructed at Greenwell Point, however many would have been destroyed by development, dredging or now lie under metres of foreshore reclamation.

Currently on the NSW Heritage Register there five wharves registered as being of State significance, with two of these, Echuca and Tathra wharves, dating from the 1860s. On the NSW Heritage Inventory there are a total of 137 wharf sites listed. Of these, three (Booral Wharf and wharf remains at Wharf Road and Bedlam Point in Ryde, Sydney) were constructed before 1850. There are early known wharf/jetty sites at the former Squires Estate at Putney in Sydney and at Windsor on the Hawkesbury River, both dating back to as early as the 1790s. However these were constructed from timber piles checked into bed logs and weighed down with ballast,⁵² they were not stone built wharves.

Phase	Uncommon, rare or endangered
1 (1829 – 1850s)	The remains of the wharf and associated archaeological deposits connected to the Greenwell Point Heritage Stone Wharf are assessed as being of State significance by this criterion.
2 (1850s to 1860s)	The remains of the wharf and associated archaeological deposits connected to the Greenwell Point Heritage Stone Wharf are assessed as being of Local significance by this criterion.
3 (1860s to 1940s)	The remains of the wharf and associated archaeological deposits connected to the Greenwell Point Heritage Stone Wharf are assessed as being of Local significance by this criterion.
4 (1940s to 2016)	The remains of the wharf and associated archaeological deposits connected to Greenwell Point Heritage Stone Wharf do not meet the local or State listing of this criterion.

- g.** An item is important in **demonstrating the principal characteristics of a class of NSW's cultural or natural places**; or cultural and natural environments.

"The Coolangatta Estate Wharf provide important examples of wharfage at New South Wales coastal and river ports and would repay comparative study."

Phase	Demonstration of principal characteristics
1 (1829 – 1850s)	The remains of the wharf and associated archaeological deposits connected to the Greenwell Point Heritage Stone Wharf are assessed as being of Local significance by this criterion.

⁵² **Cosmos Archaeology Pty Ltd, October 2012** Proposed Windsor Bridge Replacement, Windsor, NSW. Maritime Archaeological Statement of Heritage Impact; Final Working Paper Report and **Cosmos Archaeology Pty Ltd, March 2015** Halvorsen's Boat Building Complex. Maritime Archaeological Assessment.

2 (1850s to 1860s)	The remains of the wharf and associated archaeological deposits connected to the Greenwell Point Heritage Stone Wharf are assessed as being of Local significance by this criterion.
3 (1860s to 1940s)	The remains of the wharf and associated archaeological deposits connected to the Greenwell Point Heritage Stone Wharf are assessed as being of Local significance by this criterion.
4 (1940s to 2016)	The remains of the wharf and associated archaeological deposits connected to Greenwell Point Heritage Stone Wharf do not meet the local or State listing of this criterion.

STATEMENT OF SIGNIFICANCE

“ The former Coolangatta Estate Wharf ... was one of a number of major improvements carried out by Berry & Wollstonecraft on their Coolangatta Estate in the 1820s. Both these individuals played an important role in the development of the Shoalhaven area, as well as being influential in their business pursuits in Sydney. The Estate itself was unusual because of its large size, not only just for the Illawarra, but also for the rest of the settled districts at that time. The wharf at Greenwell Point was constructed in 1829 and is located near Berry’s Canal, another estate improvement, which was constructed to assist navigation between the Crookhaven and Shoalhaven Rivers in 1822.

While the wharf served to transport estate and other produce to market in Sydney from the 1820s onwards, the opening up of the estate to tenant farmers in the 1840s provided a boost to traffic from the wharf. Until navigation on the Shoalhaven River was improved in the 1860s, Greenwell Point provided the may access to shipping for the opening up of the Shoalhaven area. The Illawarra Steam Navigation Company was formed in 1852 and used the wharf on a regular basis. By 1872 Greenwell Point was the fourth largest port in New South Wales, after Sydney, Wollongong and Newcastle. The extent of coastal trade and shipping prompted the government to build a government wharf in 1880, while a lighthouse and pilot station had been established in 1872.

The bridge over the Shoalhaven at Nowra, opened in 1881, the arrival of the railway at Bomaderry in 1893 and the dredging of the river enabling seagoing vessels to reach Nowra itself in 1904. All these events cut into the extent of shipping at Greenwell Point, commencing a downward trend in usage until the last steamer arrived in 1939. While coastal shipping might have been defunct by this time, the fishing and oyster industries caused a resurgence in the fortunes of Greenwell Point from the 1940s onwards.

The historical and archaeological analysis indicates that archaeological remains associated with the wharf and braking chain are likely to survive. These remains would contribute to our knowledge of the construction of the wharf, the location and construction of associated sheds and infrastructure.” Such information would contribute to our understanding of the wharf itself and rare data on the methods used in the construction of maritime infrastructure in early colonial NSW.

“ The Coolangatta Estate Wharf ... provide examples of improvements which were constructed at the major coastal and river ports of New South Wales. On each major NSW river system, at least one major wharf would have been found, sometimes more, as for example on the Hunter River with ports at Newcastle and Morpeth. Nonetheless for each river system, large wharf structures would have been infrequent or at least concentrated in limited locations. The Coolangatta Estate Wharf and braking chain provide important examples of wharfage at New South Wales coastal and river ports and would repay comparative study.”

The Greenwell Point Heritage Stone Wharf has been assessed to be of State significance with respect to its role in the historical development of NSW, it association with an important person and its archaeological potential.

5.3 Schedule of significant forms and fabric

The above section has addressed the significance of the Greenwell Point Heritage Stone Wharf as a whole, however, it is also often a useful management tool to separate an item into structural components and examine the heritage significance of each – especially when impacts are proposed to certain structural elements only. This process allows for more informed analysis of what constitutes significant form and fabric, or what fabric is of little significance, or intrusive. An outline of the criteria for grading significance in such a way – as recommended in the NSW Heritage Office *Heritage Manual* (2001) is provided in the table below:

GRADING	JUSTIFICATION	STATUS
Exceptional	Rare element directly contributing to an item's local or State significance.	Fulfils criteria for local or State listing.
High	High degree of original fabric. Demonstrates a key element of the item's significance. Alterations do not detract from significance.	Fulfils criteria for local or State listing.
Moderate	Altered or modified elements and / or elements with little heritage value, but which contribute to the overall significance of the item.	Fulfils criteria for local or State listing.
Low	Alterations detract from significance. Difficult to interpret.	Does not fulfil criteria for local or State listing.
Intrusive	Damaging to the item's heritage significance.	Does not fulfil criteria for local or State listing.

Based on the information provided in **Section 2** (historical overview), **Section 3** (physical description) and the above summary and updated significance assessment, the following grading of the visible significant form and fabric for the Greenwell Point Heritage Stone Wharf is provided in the table below:

COMPONENT	DESCRIPTION	SIGNIFICANCE
Wall 1	Ashlar stone block wall, likely to be associated with Phase 3 of the construction history of the wharf.	High heritage significance.
Wall 2 and Context 10	Ashlar stone block wall, likely to be associated with Phase 3 of the construction history of the wharf.	High heritage significance.
Wall 3	Ashlar stone blocks laid on concrete strip footing. Associated with Phase 4 of the construction history of the wharf.	Intrusive
Wall 4	Ashlar stone blocks, forming a wall. Associated with Phase 4 of the construction history of the wharf.	Intrusive
Wall 5	Foundations of dry rubble wall. Possibly associated with Phase 3 of the construction history of the wharf.	High heritage significance.
Context 6	Checked sandstone block, likely to be associated with Phase 3 of the construction history of the wharf.	Moderate heritage significance
Context 7	Ceramic pipe inserted into sandstone block, likely to be associated with Phase 3 of the construction history of the wharf.	Moderate heritage significance
Context 8	Notched sandstone block, likely to be associated with Phase 3 of the construction history of the wharf.	Moderate heritage significance

Context 9	Possibly <i>in-situ</i> blocks, possibly associated with Phase 3 of the construction history of the wharf.	Moderate heritage significance
Contexts 11 and 12	Fill likely to be associated with Phase 3 of the construction history of the wharf.	Moderate heritage significance
Context 13	Fill possibly associated with Phase 2 of the construction history of the wharf.	Moderate heritage significance

6.0 Heritage Listings and Statutory Requirements

6.1 Cultural Heritage Statutory Protection – Introduction

Cultural heritage in New South Wales (NSW) is protected and managed under a hierarchy of legislation. The following section provides a brief summary of the relevant statutory regulations regarding the current study area.

6.1.1 Commonwealth Legislation

The *Environment Protection and Biodiversity Conservation Act 1999* (the EPBC Act) is the Australian Government's central piece of environmental legislation. It provides a legal framework to protect and manage matters of national environmental significance, including heritage places.

The National Heritage List (NHL) is a list of natural, historic and Indigenous places that are of outstanding heritage significance to Australians and are considered to have National Heritage value. Places on the NHL are recognised and protected under the EPBC Act. Prior to being listed on the NHL, a place is assessed against set criteria by the Australian Heritage Council, which then makes a recommendation to the Minister for the Department of Environment.

Any proposed actions to a National Heritage place which have, will have, or are likely to have, a significant impact on its National Heritage values, must be referred to the Minister. Actions which constitute a significant impact to a National Heritage place are those that will cause:

- one or more of the National Heritage values to be lost;
- one or more of the National Heritage values to be degraded or damaged; or,
- one or more of the national Heritage values to be notably altered, modified, obscured or diminished.

The Minister will make a decision as to whether or not the proposed actions constitute a significant impact and require approval under the *EPBC Act*. If approval is required, an environmental assessment of the proposed development must be carried out.

6.1.2 NSW Heritage Act 1977 (amended 1999)

The NSW *Heritage Act 1977* is the primary piece of State legislation affording protection to all items of environmental heritage (natural and cultural) in NSW. Under the Act, "items of environmental heritage" include places, buildings, works, relics, moveable objects and precincts identified as significant based on historical, scientific, cultural, social, archaeological, architectural, natural or aesthetic values. Items of identified heritage at a level of State significance are listed on the NSW State Heritage Register and are afforded automatic protection against any activities that may damage an item or affect its heritage significance under the Act.

Relics Provision and Protection

In addition to buildings and items listed on the State Heritage Register, various cultural heritage sites, items and archaeological features and deposits are afforded automatic statutory protection by the relics provisions of the NSW *Heritage Act 1977*. The Act defines 'relics' as any item that:

a) relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement, and

(b) is of State or local heritage significance.

Sections 139 to 145 of the Act prevent the disturbance or excavation of any land if there is a reasonable cause to suspect that a relic will be discovered, exposed, moved, damaged or destroyed, unless an excavation permit has been issued by the Heritage Council of NSW.

The type of permit that is required depends on whether the relic or relics have been listed on the State Heritage Register.

Infrastructure, such as drains, bridges and kerbing, is known as a 'work'. This term is applied to functioning and often to non-functioning infrastructure. These items are not defined as a relic, and development affecting them can be carried out under a list of Standard Exemptions⁵³ (if listed on the State Heritage Register) or otherwise Standard Exceptions⁵⁴, without the requirement of a permit. In addition, impacts to the cultural significance of relics assessed to be minor can qualify for an Exception from the requirement for a permit. The significance of the item (whether it is listed on the State Heritage Register or not) and the level of impact determines the requirement to undertake a heritage assessment and proposed suitable mitigation works; however, a permit application is not required.

Section 57.1 details the effect of interim heritage orders and listings on the State Heritage Register:

When an interim heritage order or listing on the State Heritage Register applies to a place, building, work, relic, moveable object, precinct, or land, a person must not do any of the following things except in pursuance of an approval granted by the approval body under Subdivision 1 of Division 3:

- (a) demolish the building or work,*
- (b) damage or despoil the place, precinct or land, or any part of the place, precinct or land,*
- (c) move, damage or destroy the relic or moveable object,*
- (d) excavate any land for the purpose of exposing or moving the relic,*
- (e) carry out any development in relation to the land on which the building, work or relic is situated, the land that comprises the place, or land within the precinct,*
- (f) alter the building, work, relic or moveable object,*
- (g) display any notice or advertisement on the place, building, work, relic, moveable object or land, or in the precinct,*
- (h) damage or destroy any tree or other vegetation on or remove any tree or other vegetation from the place, precinct or land.*

Under Section 57.2, the Minister can grant an exemption from Section 57.1.

Management of Heritage Assets by NSW Government Agencies

The NSW *Heritage Act 1977* also requires all government agencies to identify and manage heritage assets in their ownership and control. Under Section 170 of the Act, government instrumentalities must establish and keep a register entitled the "Heritage and Conservation Register" which includes all items of environmental heritage listed on the State Heritage Register, an environmental planning instrument or which may be subject to an interim heritage order that are owned, occupied or managed by that government instrumentality.

Under Section 170A of the *Heritage Act 1977*, all government agencies must also ensure that all items entered on its Heritage and Conservation Register are maintained with due diligence in accordance with State Owned Heritage Management Principles approved by the NSW Minister for Infrastructure & Planning on advice of the NSW Heritage Council. These principles serve to protect and conserve the heritage significance of identified sites, items and objects and are based on relevant NSW heritage legislation and statutory guidelines.

⁵³ NSW Heritage Council 2009 <http://www.environment.nsw.gov.au/resources/heritagebranch/heritage/StandardExemptions.pdf>

⁵⁴ NSW State Government, 6th August 2008 SCHEDULE OF EXCEPTIONS TO SUBSECTIONS 139 (1) AND (2) OF THE HERITAGE ACT 1977 MADE UNDER SUBSECTION 139 (4)
<http://www.environment.nsw.gov.au/resources/heritagebranch/heritage/gazette.pdf>

6.1.3 Environmental Planning & Assessment Act 1979

The *Environmental Planning and Assessment Act 1979* establishes the framework for cultural heritage values to be formally assessed in the land use planning and development consent process. The Act requires that environmental impacts are considered prior to land development; this includes impacts on cultural heritage items and places and archaeological sites and deposits. The Act also requires that Local Governments prepare planning instruments (such as Local Environmental Plans, Development Control Plans) in accordance with the Act to provide guidance on the level of environmental assessment required.

Shoalhaven Local Environmental Plan (2014)

The *Shoalhaven LEP 2014* currently provides planning and development controls for the Council local government area, which includes the subject site. Heritage items are found in Schedule 5 of the LEP. The LEP (Clause 5.10.1) outlines the objectives of the heritage protection within the local government area, which are:

- (a) *to conserve the environmental heritage of Shoalhaven,*
- (b) *to conserve the heritage significance of heritage items and heritage conservation areas, including associated fabric, settings and views,*
- (c) *to conserve archaeological sites,*
- (d) *to conserve Aboriginal objects and Aboriginal places of heritage significance.*

Clause 5.10(2) lists requirements for consent, as development consent is required for:

- (a) *demolishing or moving any of the following or altering the exterior of any of the following (including, in the case of a building, making changes to its detail, fabric, finish or appearance):*
 - (i) *a heritage item,*
 - (ii) *an Aboriginal object,*
 - (iii) *a building, work, relic or tree within a heritage conservation area,*
- (b) *altering a heritage item that is a building by making structural changes to its interior or by making changes to anything inside the item that is specified in Schedule 5 in relation to the item,*
- (c) *disturbing or excavating an archaeological site while knowing, or having reasonable cause to suspect, that the disturbance or excavation will or is likely to result in a relic being discovered, exposed, moved, damaged or destroyed,*
- (d) *disturbing or excavating an Aboriginal place of heritage significance,*
- (e) *erecting a building on land:*
 - (i) *on which a heritage item is located or that is within a heritage conservation area, or*
 - (ii) *on which an Aboriginal object is located or that is within an Aboriginal place of heritage significance,*
- (f) *subdividing land,*
 - (i) *on which a heritage item is located or that is within a heritage conservation area, or*
 - (ii) *on which an Aboriginal object is located or that is within an Aboriginal place of heritage significance,*

Consent is not required in some circumstances, such as if (Clause 5.10[3]):

- (a) *the applicant has notified the consent authority of the proposed development and the consent authority has advised the applicant in writing before any work is carried out that it is satisfied that the proposed development:*

- (i) *is of a minor nature or is for the maintenance of the heritage item, Aboriginal object, Aboriginal place of heritage significance or archaeological site or a building, work, relic, tree or place within the heritage conservation area, and*
 - (ii) *would not adversely affect the heritage significance of the heritage item, Aboriginal object, Aboriginal place, archaeological site or heritage conservation area, or*
- (b) *the development is in a cemetery or burial ground and the proposed development:*
 - (i) *is the creation of a new grave or monument, or excavation of disturbance of land for the purpose of conserving or repairing monuments or grave markers, and*
 - (ii) *would not cause disturbance to human remains, relics, Aboriginal objects in the form of grave goods or to an Aboriginal place of heritage significance, or*
- (c) *the development is limited to the removal of a tree or other vegetation that the Council is satisfied is at risk to human life or property, or*
- (d) *the development is exempt development.*

Clauses 5.10(4) to 5.10(6) explain that the consent authority may require a heritage management document to be prepared that assesses the extent to which the carrying out of the proposed development would affect the heritage significance of the heritage item or heritage conservation area concerned. After considering the heritage significance of a heritage item and the extent of change proposed to it, the consent authority may require the submission of a heritage conservation management plan before granting consent.

In the case of consent granted for the demolition of a State heritage item, the consent authority must notify the Heritage Council about the application and take into consideration any response received from the Heritage Council within 28 days after the notice is sent (Clause 5.10[9]).

Clause 5.10(10) explains that the consent authority may grant consent to development for any purpose of a building that is a heritage item or of the land on which such a building is erected, or for any purpose on an Aboriginal place of heritage significance, even though development for that purpose would otherwise not be allowed by this Plan, if the consent authority is satisfied that:

- (a) *the conservation of the heritage item or Aboriginal place of heritage significance is facilitated by the granting of consent, and*
- (b) *the proposed development is in accordance with a heritage management document that has been approved by the consent authority, and*
- (c) *the consent to the proposed development would require that all necessary conservation work identified in the heritage management document is carried out, and*
- (d) *the proposed development would not adversely affect the heritage significance of the heritage item, including its setting, or the heritage significance of the Aboriginal place of heritage significance, and*
- (e) *the proposed development would not have any significant adverse effect on the amenity of the surrounding area.*

As a Public Authority, Shoalhaven Shire Council who is the development proponent in this instance is exempt from requiring a consent for such works with respect to the provisions of the Shoalhaven LEP 2014.

6.2 Statutory Heritage Register Search

In NSW there are four types of statutory listings for cultural heritage sites, objects and places:

- National Heritage List;
- State listing on the NSW Heritage Council State Heritage Register;
- *Local Environmental Plan* (LEP); and,
- Section 170 Heritage and Conservation Register.

6.2.1 National Heritage List

The National Heritage List is a register of natural and cultural places with outstanding heritage significance to the Australian nation. Each entry to the National Heritage List is assessed by the Australian Heritage Council as having exceptional heritage value and is protected under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*. The Act requires that approval is obtained from the Australian Government Minister for the Environment Protection, Heritage and the Arts before any action takes place that has, will have, or is likely to have, a significant impact on the national heritage values of a listed place.

Greenwell Point Heritage Stone Wharf is not listed on the National Heritage List.

6.2.2 NSW State Heritage Register

The State Heritage Register is a statutory list of places and items of State heritage significance made by the Minister for Planning. The Register lists a diverse range of places, including archaeological sites, that are particularly important to the State and which enrich our understanding of the history of NSW.

Places and items listed on the Register are legally protected under the NSW *Heritage Act 1977* and approval is required from the Heritage Council of NSW prior to undertaking work that results in their alteration or modification.

Greenwell Point Heritage Stone Wharf is not listed on the State Heritage Register. There are no other heritage items listed within the immediate area surrounding Greenwell Point Heritage Stone Wharf.

6.2.3 Shoalhaven Local Environmental Plan (2014)

Identified items of cultural heritage significance are listed in Schedule 5 of the *Shoalhaven LEP (2014)*. Each item in this list is subject to protection under the planning and development controls of the LEP.

Greenwell Point Heritage Stone Wharf is listed as an archaeological site:

Greenwell Point wharf and surrounds (Lots 7300-7302, DP 1165443).

6.2.4 NSW Section 170 Heritage & Conservation Register

The *Heritage & Conservation Registers* are established in accordance with Section 170 of the NSW *Heritage Act (1977)* in order to record all the heritage items in the ownership or under the control of government agencies and to assist in total asset management by providing information on assets which have identified heritage significance. The Register has been prepared in accordance with the NSW Heritage Office guidelines and corresponds with information in the State Heritage Inventory, as managed by the NSW Heritage Office.

Greenwell Point Heritage Stone Wharf is not included on any Section 170 Heritage and Conservation Registers.

6.3 Non-Statutory Heritage Register Search

6.3.1 Register of the National Estate

The Register of the National Estate (RNE) is a non-statutory listing of natural and cultural heritage places that are considered special to Australians and worth keeping for the future. The register was initiated by the Australian Heritage Commission in 1976 and now contains over 13,000 places across Australia. The RNE is now maintained by the Australian Heritage Council, however, in 2006, the *Environment Protection and Biodiversity Conservation Act 1999*, and the *Australian Heritage Council Act 2003* were amended to, among other things, stop changes to the RNE. The Australian Heritage Council can no longer add to, alter, or remove all or part of a place from an RNE listing.

Listing on the RNE was a way of identifying and providing information on Australia's heritage places and publicly confirmed their value to the community. Places on the RNE may be protected under appropriate States, Territories and Local Governments heritage legislation and under an agreement between the Commonwealth and States and Territories it is intended that registered places will be considered for inclusion in appropriate Commonwealth, State / Territory heritage lists. Registered places can also be protected under the EPBC Act if they are also included in another Commonwealth statutory heritage list. However, the act of listing a place on the RNE does not constitute automatic legal protection. Notwithstanding, the RNE is widely recognised as an authoritative compilation of the heritage significance of many of Australia's natural and cultural places and is still considered by planning agencies when decisions regarding development and conservation are being determined.

Greenwell Point Heritage Stone Wharf is not listed on, or associated with any other listing present on the Register of National Estate heritage listing.

6.4 Summary of Statutory Provisions Relevant to the Study Area

	EPBC Act (1999)	NSW Heritage Act (1977)		Environmental Planning and Assessment Act (1979)
	National Heritage List	State Heritage Register	S170 Heritage and Conservation Register	Shoalhaven LEP (2014)
Greenwell Point Heritage Stone Wharf				☑

6.5 Non-Statutory Guidelines

6.5.1 The Burra Charter: Australia ICOMOS Charter for Places of Cultural Heritage Significance 1999

The *Burra Charter: Australia ICOMOS Charter for Place of Cultural Significance* is the widely accepted reference document for heritage conservation standards in Australia. The Charter evolved from the International Charter for the Conservation and Restoration of Monuments

and Sites (Venice 1964), and the Resolutions of the 5th General Assembly of the International Council on Monuments and Sites (ICOMOS) (Moscow 1978), and was adopted by Australia ICOMOS (the Australian National Committee of ICOMOS) in August 1979 at the historic South Australian mining town of Burra.

The *Burra Charter* provides guidance for the conservation and management of places of cultural significance (cultural heritage places) and is based on the knowledge and experience of Australia ICOMOS members. The Charter sets a standard of practice for those who provide advice, made decisions about or undertake works to places of cultural significance, including owners, managers and custodians and Charter can be applied to all types of places of cultural significance including natural, indigenous and historic places with cultural values.

Conservation – “the processes of looking after a place so as to retain its cultural significance” – is an integral part of the management of places of cultural significance and is an ongoing responsibility. The *Burra Charter* advocates a cautious approach to change; do as much as necessary to care for the place and to make it useable, but otherwise change it as little as possible so that its cultural significance is retained.

The key conservation principles of the Charter include the following:

Places of cultural significance should be conserved. Such places are worth conserving because they enrich our lives – by helping us understand the past; by contributing to the richness of the present environment and because we expect them to be of value to future generations.⁵⁵

The cultural significance of a place is embodied in its physical fabric, settings, contents, use, associated documents and its meaning to people through their use and associations with the place. *Conservation* is based on a respect for the existing *fabric, use, associations and meanings*. It requires a cautious approach of changing as much as necessary but as little as possible.⁵⁶

The cultural significance of a place and other issues affecting its future are best understood by a methodical process of collecting and analysing information before making decisions. *Conservation* should make use of all the knowledge, skills and disciplines which can contribute to the study and care of the *place*.⁵⁷

Conservation of a place should identify and take into consideration all aspects of cultural and natural significance without unwarranted emphasis on any one value at the expense of others.⁵⁸

Conservation requires the retention of an appropriate visual *setting* and other relationships that contribute to the *cultural significance* of the *place*. New construction, demolition, intrusions or changes which would adversely affect the setting or relationships are not appropriate.⁵⁹

The physical location of a *place* is part of its *cultural significance*. Relocation is generally unacceptable unless this is the sole practical means of ensuring its survival.⁶⁰

Contents, fixtures and objects which contribute to the *cultural significance* of a *place* should be retained at that place. Their removal is unacceptable unless it is; the sole means of ensuring their security and *preservation*; on a temporary basis for treatment or exhibition; for cultural reasons; for health or safety; or to protect the place.⁶¹

⁵⁵ **The Burra Charter: Australia ICOMOS Charter for Places of Cultural Significance 1999** Article 2

⁵⁶ *Ibid.*, Article 3

⁵⁷ *Ibid.*, Article 4

⁵⁸ *Ibid.*, Article 5

⁵⁹ *Ibid.*, Article 8

⁶⁰ *Ibid.*, Article 9

⁶¹ *Ibid.*, Article 10

The contribution which *related places* and *related objects* made to the *cultural significance* of the *place* should be retained.⁶²

Conservation may, according to circumstance, include the processes of; retention or reintroduction of a *use*; retention of *associations* and *meanings*; *maintenance*, *preservation*, *restoration*, *reconstruction*, *adaptation* and *interpretation*, and will commonly include a combination of more than one of those.⁶³

6.6 2003 Conservation Management Plan

The Edward Higginbotham and Associates 2003 Conservation Management Plan addressed the issue of the conservation of the wharf ...*"In order to retard and possibly totally halt the ongoing erosion and destruction of the wharf by tidal action."*⁶⁴ Six options were presented, these being:

Option	Description	Enhance significance?	Compliance with ICOMOS Burra Charter and / or policies of this [2003] report
Option 1. Restoration from landward end.	Restoration of as much of the wharf as can be found with the remnants available and then terminate the works in a manner, which protects the free ends. Commencement could either be from the landward end projecting seaward or from the seaward end progressing landwards but leaving a gap where material is insufficient.	Yes, but leaves a gap in the wharf.	Yes, but may require reworking of sandstone blocks. Not necessarily a practical outcome to leave gap in wharf.
Option 2. Restoration from seaward end.		Yes, but leaves a gap in the wharf.	Yes, but may require reworking of sandstone blocks. Not necessarily a practical outcome to leave gap in wharf.
Option 3. Erect modern breakwater (piling) to protect site and leave as is.	Form some sort of protective structure external to the wharf remnants (perhaps with the remnants gathered into a confined area)	No	Introduces a modern intrusive element into the wharf area, which does not belong to the wharf.
Option 4. Reconstruction, using existing stones as capstones over in situ and precast base.	Reconstruct the entire form of the wharf using existing materials wherever possible and modern materials to infill gaps and provide support. For example, footings could be constructed from precast concrete blocks and then original sandstone used only for the more visible upper courses, or alternatively sandstone blocks could be laid as a single skin with a concrete block (or in-situ concrete backing wall). The wharf could be reconstructed in sections with concrete block or in situ concrete infill sections.	Yes, but infill materials introduce a visible foreign element	Yes, but may require reworking of sandstone blocks and possible introduction of new blocks.
Option 5. Reconstruction, using existing stones where possible and infill with <i>in situ</i>		Yes, but infill materials introduce a visible foreign element	Yes, but may require reworking of sandstone blocks and possible introduction of new blocks.

⁶² *Ibid.*, Article 11

⁶³ *Ibid.*, Article 14

⁶⁴ Edward Higginbotham & Associates Pty Ltd, March 2003 : Section 7.1

and precast.			
Option 6. Reconstruction, using existing stones only as a facing with an <i>in situ</i> or block backing wall.		Yes.	Yes, but may require reworking of sandstone blocks and possible introduction of new blocks.

Of these options, the 2003 CMP considered that Option 6 was the most preferable, although Options 4 and 5 would also be acceptable over Options 1 and 2 for reasons of practicality and public safety. Option 3 was the least preferred option.

7.0 Options for site stabilisation

7.1 Assessment of Concept Options

At this stage of the project two options have been presented by SCC for assessment (see Section 7.2).⁶⁵ Three further options have been included which are 'do nothing' and Option 6 in the 2003 CMP.

It is noted that the reconstruction option is not a favoured option by the Heritage Advisor to Shoalhaven Council.⁶⁶ The third option is a suggested variation to one of the options proposed by SCC.

Each of the identified options is assessed here individually. The assessment includes predicted requirements for each option, risks of the success of each option, potential impact to cultural heritage significance, and whether the option is considered acceptable or not from a cultural heritage perspective.

Risks

The assessment of risk is based on a number of uncertain elements that must be taken into account when considering the potential success of each option. This includes factors such as long stability of the works, on-going maintenance, and accelerated loss of heritage significance.

The risk for each option is the likelihood of the option not being implemented successfully, resulting in a detrimental, unintended and uncontrolled impact to the physical elements and cultural heritage significance of the site.

To assist in the assessment of risk, the following list of ratings has been linked to a percentage chance of the option not being implemented successfully. The risk ratings and accompanying percentages are as follows:

Certain	100%
Almost Certain	95% to 99%
Very likely	75% to 94%
Likely	50% to 74%
Unlikely	26% to 49%
Very unlikely	2 to 25%
Remote	0 to 1%

Heritage mitigation

The level and type of archaeological work that is required to mitigate the proposed impacts to an acceptable degree from a heritage perspective. This could range from archival recording, salvage excavation and/or monitoring of works to the area.

Impact to Significance

Each of the options is assessed with regard to its potential impact on the cultural significance identified. The options are not graded but are expressed as being either acceptable or unacceptable to the cultural significance. The risk to significance that a particular option entails is assessed along with whether an option is seen as proportionate to the assessed significance. The impact to significance also takes into consideration proposed mitigation measures.

⁶⁵ Options provide by Ray Massie. Coast and Estuaries Officer, Shoalhaven City Council, email: 12/1/2016

⁶⁶ Louise Thom, Heritage Advisor to Shoalhaven City Council : Heritage Advisor Meeting Notes, 7/1/2016

Approvals

This refers only to the requirement of a permit, or an exception from a permit under Section 140 of the NSW *Heritage Act 1977*.

Costings

Only cost estimates can be provided at this stage, and no detailed costings can be provided for the engineering options due to the variability of prices for some of the equipment/material required. Once an option has been decided, detailed costings can be provided. In the meantime an indication of the relative price for various costings can be ascertained by reviewing the material, equipment and expertise required for each of the options.

7.2 Descriptions of Concept Options

7.2.1 Concept Option 0 - Do nothing

This option leaves the site as it is.

7.2.2 Concept Option 1- Rock armour and mid-slope path

This option entails:

- Installation of bank protection (using sandstone gabion) to frontage with minimal disturbance to the wharf remains;
- Inclusion of a mid slope path with seating bench to provide for viewing of heritage blocks and education signage provisions, and;
- Revegetation of the rock protection to soften the frontage and improve stability of the embankment (Figure 2.2 and 7.1).

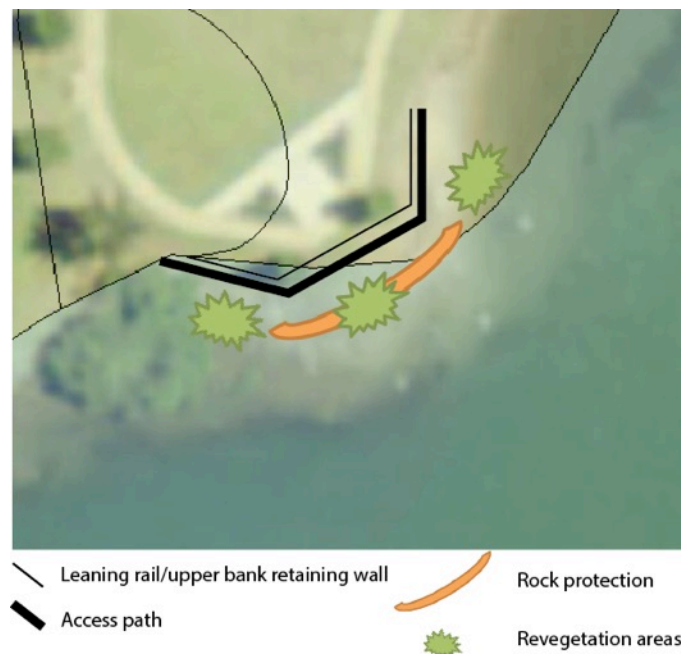


Figure 7.1: Option 1 for stabilisation of embankment above Heritage Stone Wharf at Greenwell Point.
 (Source: SCC)

7.2.3 Concept Option 2 - Rock armour and high tide walkway using mesh

This option entails:

- Installation of safety fencing at the erosion crest to “make safe” completed in 2015,
- Installation of bank protection (using sandstone gabion) with minimal disturbance removing any foreign concrete litter with View Portals into the exposed Shipping Ballast heritage fill,
- Include a high tide walkway using enviro mesh decking including seating benches to provide for viewing of heritage blocks with education signage installations ,
- revegetate the rock protection to soften the frontage and improve stability of the embankment (Figure 7.2).

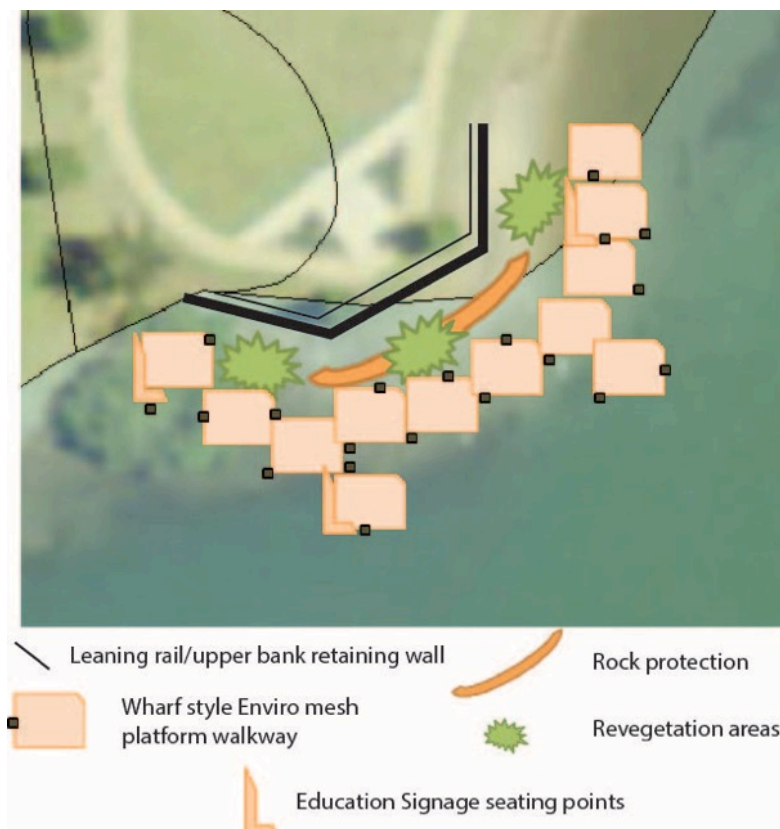


Figure 7.2: Concept Option 2 for stabilisation of embankment above Heritage Stone Wharf at Greenwell Point. (Source: SCC)

7.2.4 Concept Option 3 - Rock armour and high tide walkway using existing blocks

This option is a variation on Concept Option 2. It uses the existing blocks on site instead of enviro mesh and limits the amount of signage and sub-surface impacts. It involves:

- Installation of safety fencing at erosion crest to “make safe” completed in 2015,
- Installation of bank protection (using sandstone gabion) with minimal disturbance removing any foreign concrete litter with View Portals into the exposed Shipping Ballast heritage fill,
- Includes a high tide walkway using blocks associated with the wharf. The blocks used would be from Wall 3, possibly Wall 4 and selected ‘loose’ blocks.
- Some blocks could be stacked in a manner to form seating.

- The blocks would be arranged in a way to look randomly scattered but at the same time forming a continuing path around the high tide mark.
- The concrete strip footing of Wall 3 could also be utilised.
- Seating benches to provide for viewing of heritage blocks with education signage installations.
- Revegetate the rock protection to soften the frontage and improve stability of the embankment (Figure 7.3) .

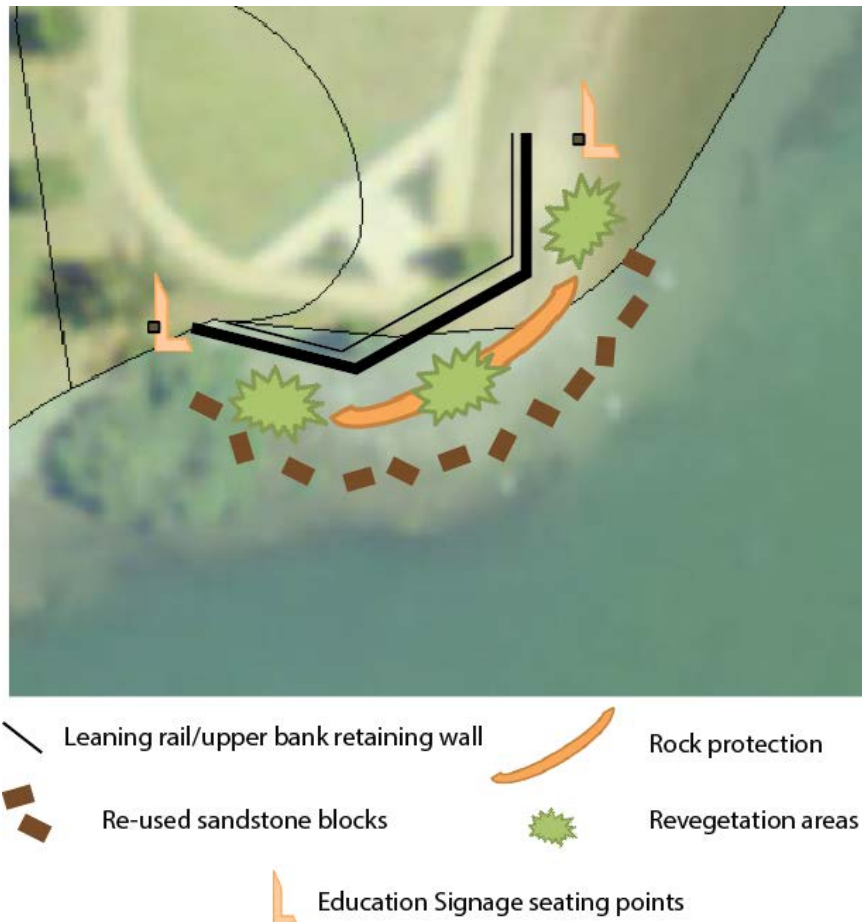


Figure 7.3: Concept Option 3 for stabilisation of embankment above Heritage Stone Wharf at Greenwell Point. (Source: SCC)

7.2.5 Concept Option 4 - Reconstruct the Wharf

This follows Options 6 of the 2003 CMP. The key elements are to reconstruct the entire form of the wharf using existing materials wherever possible and modern materials to infill gaps and provide support. For example, footings could be constructed from precast concrete blocks and then original sandstone used only for the more visible upper courses, or alternatively sandstone blocks could be laid as a single skin with a concrete block (or in-situ concrete backing wall).

The wharf could be reconstructed in sections with concrete block or *in situ* concrete infill sections.

7.3 Evaluation of Options

Option	Option 0	Concept Option 1	Concept Option 3	Concept Option 3	Concept Option 4
Risks	<ul style="list-style-type: none"> Ongoing erosion of grassed bank exposing relics to be looted.- <i>Certain</i> 	<ul style="list-style-type: none"> Failure of wall – Very <i>unlikely</i> Increase pedestrian traffic may accelerate erosion in non-protected areas - <i>Likely</i> 	<ul style="list-style-type: none"> Failure of wall – Very <i>unlikely</i>. Potential for collapse of mesh without appropriate maintenance - <i>Unlikely</i>. Mesh gets covered in marine growth obscuring archaeological remains – <i>Likely</i>. 	<ul style="list-style-type: none"> Failure of wall – Very <i>unlikely</i>. Without block 'pavers' set into sand possible fall hazard - <i>Likely</i> 	<ul style="list-style-type: none"> Failure of wall – Very <i>unlikely</i>. Potential for people to jump off wharf into shallow water - <i>Likely</i>
Identified Impacts	None	<ul style="list-style-type: none"> Will obscure exposed face of ash fill. Some excavation into bank will be required for both the installation of the gabion wall and seating/signage. 	<ul style="list-style-type: none"> Will obscure exposed face of ash fill. Some excavation into bank will be required for both the installation of the gabion wall and seating/signage. Post installing along high tide mark – many expected obstructions. Will obscure archaeological remains unless directly over the site. 	<ul style="list-style-type: none"> Will obscure exposed face of ash fill. Some excavation into bank will be required for both the installation of the gabion wall and seating/signage. Dismantling of Walls 3 and 4. Removal of select 'loose' blocks Digging in of some blocks. 	<ul style="list-style-type: none"> Digging in of some blocks. Dismantling of Walls 3 and 4. Removal of select 'loose' blocks Significant visual change to the riverfront of Greenwell Point
Advantages	<ul style="list-style-type: none"> Allows full view of the remains of the wharf and may expose more blocks. 	<ul style="list-style-type: none"> Allows full view of the remains of the wharf. Allows for interpretation. Least impact against most benefit for site stabilisation. 	<ul style="list-style-type: none"> Allows pedestrian access across the site while reducing impact. View portals reduces likelihood of looting. 	<ul style="list-style-type: none"> Allows pedestrian access across the site while reducing impact. View portals reduces likelihood of looting. Reduction of introduced materials 	<ul style="list-style-type: none"> Give the impression of what Greenwell Point may have looked like in the 19th century.

Option	Option 0	Concept Option 1	Concept Option 3	Concept Option 3	Concept Option 4
Heritage mitigation	<ul style="list-style-type: none"> Archival recording 	<ul style="list-style-type: none"> Controlled archaeological excavation in select areas where gabion wall to be placed. Archival recording 	<ul style="list-style-type: none"> Controlled archaeological excavation in select areas where gabion wall to be placed. Excavation and/or monitoring where posts are to be placed. Archival recording 	<ul style="list-style-type: none"> Controlled archaeological excavation in select areas where gabion wall to be placed. Excavation and/or monitoring where blocks are to be placed. Archival recording 	<ul style="list-style-type: none"> Archival recording Monitoring of removal of blocks. Controlled archaeological excavation and/or monitoring of where blocks are to be dug out or strip footings placed.
Impact to heritage significance	Not applicable	The proposed works would have a minor impact on the archaeological significance of remains associated with Phases 2, 3 and possibly Phase 1.	The proposed works would have a minor impact on the archaeological significance of remains associated with Phases 2, 3 and possibly Phase 1, and a substantial impact to the aesthetic values associated with Phase 3 of the site.	The proposed works would have a minor impact on the archaeological significance of remains associated with Phases 2, 3 and possibly Phase 1. It will have a substantial impact to the items associated with Phase 4 of the site, however these items are assessed to be intrusive and have no significance	The proposed works would have a moderate impact on the archaeological significance of remains associated with Phases 2, 3 and very likely Phase 1. It will have a substantial impact to the items associated with Phase 4 of the site, however these items are assessed to be intrusive and have no significance. It will also have a substantial impact to the aesthetic values associated with Phase 3 of the site.
Heritage Impact	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable
Approvals	None	Exception from a Section 140 permit.	Section 140 permit	Section 140 permit	Section 140 permit
Estimated Cost	None	Ca. \$75,000	> \$250,000	\$100,000 to \$150,00	> \$750,000

8.0 Proposed Works

[To be written when option is decided upon]

[should include detailed design plans, not concept]

[would also include a section on why this option was chosen over others]

9.0 Heritage Impact Assessment

[Detailed impact assessment addressing the heritage values of the wharf as a whole, the individual elements of the wharf and how it complies with guidelines and charters]

[Use Heritage Office guidelines]

10.0 Conclusion

10.1 Summary of findings

The findings of this report can be summarised as follows:

[To be written when final option is decided upon]

10.2 Recommendations

[To be written when final option is decided upon]

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Received

21 SEP 2015

File No.

6037 E

Referred to:

① TIM Fletcher

② Carolyn
Crebbin

③ MURCH

18th September 2015

Her Honour the Mayor
Shoalhaven City Council
Mrs Joanna Gash
PO Box 42
NOWRA NSW 2541

Dear Mrs Gash,

On a recent visit to ANZAC Park at Greenwell Point by members of the Nowra RSL Sub-Branch committee, it was noticed that the downpour of rain in late August had caused more erosion south of the War Memorial.

Erosion by the estuary of ANZAC Park has been the subject of much correspondence during the past 2 decades, with little done to prevent this erosion.

I note, that in February 2001, a grant application by Nowra Greenwell Point RSL Sub-Branch to the Department of Veterans Affairs for an amount \$43269.00 to restore the river bank and thus protect the Memorial was refused.

I also note that on 21/3/2004, Plan No. 4535.05 was drawn up by K Murray and H Smit entitled City of Shoalhaven Greenwell Point Master Plan Southern Reserve Precinct. This was submitted to council for discussion on 27/5/04. This plan proposed to reconstruct Berrys historic wharf with a proposed new jetty immediately behind the War Memorial. In the long term this proposal would be ideal, as it would solve the erosion problem, and provide additional space for participants to gather, a much needed requirement now at ANZAC Dawn Services. You, being in regular attendance at this Dawn Service know that a

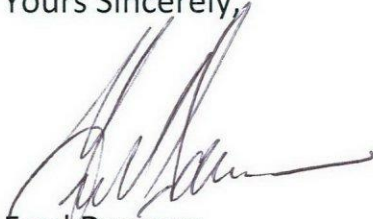
large number of persons stand on the roadway, and are thus denied real participation in the Service.

The Sub-Branch are very well aware that to implement this plan as detailed in the aforementioned plan, would require an enormous amount of money, and that all work undertaken has to be prioritised. However, with regards to the erosion, I would suggest that a cost effective solution is available, and this is the following.

Lying in the sand of the estuary and visible at low tide is a significant number of cut sand-stone slabs, sufficient to protect the area which is being eroded in the vicinity of the cannon if lifted and built into a wall.

I understand that because this area is listed 'heritage', that may cause some problems, but I would submit that if nothing is done, there might not be heritage to protect.

Yours Sincerely,

A handwritten signature in dark ink, appearing to read 'Fred Dawson', with a long, sweeping horizontal stroke extending to the right.

Fred Dawson
President