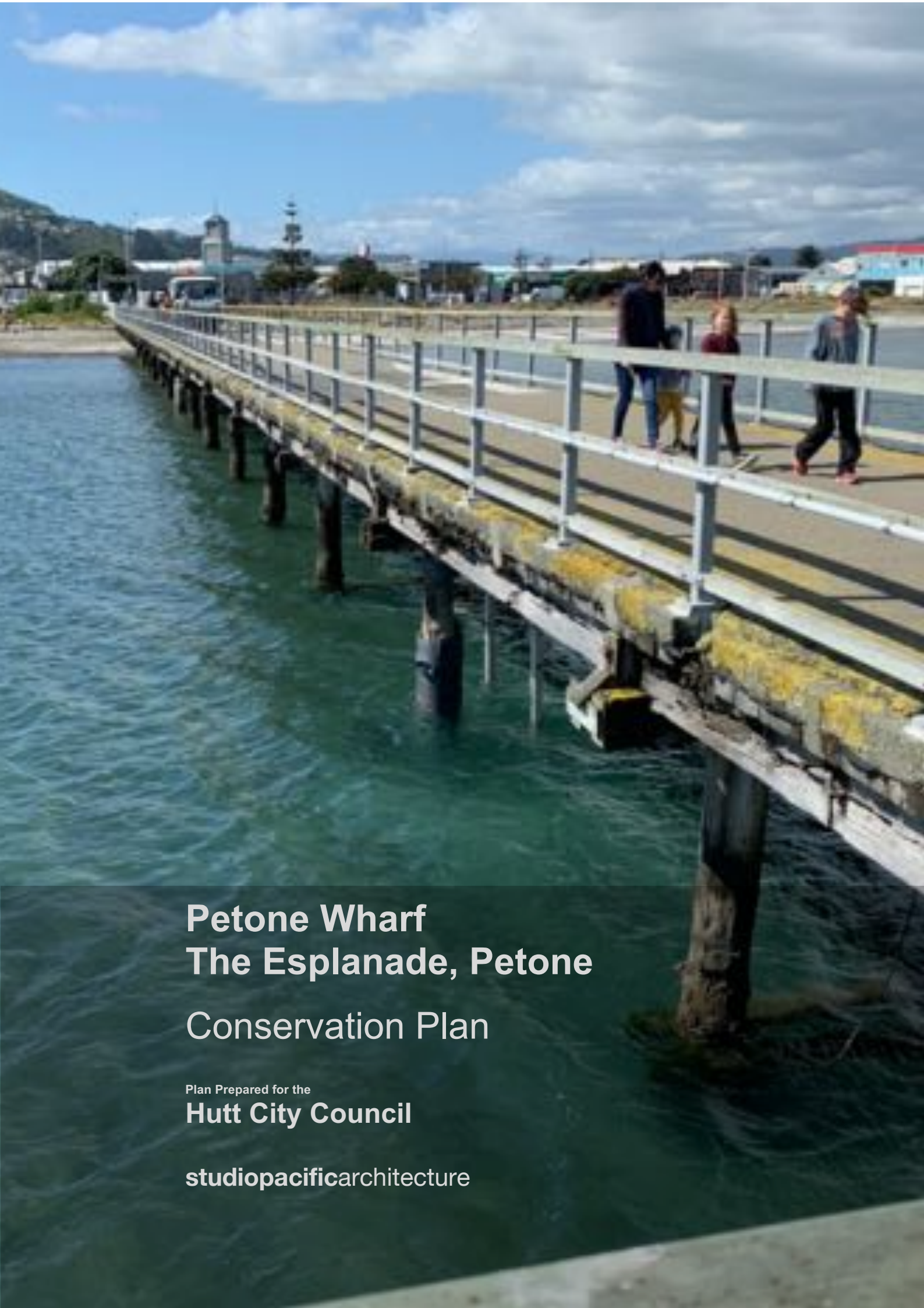

Petone Wharf
The Esplanade, Petone

Conservation Plan

Plan Prepared for the

Hutt City Council

studiopacificarchitecture

Petone Wharf
The Esplanade, Petone, Lower Hutt

Conservation Plan

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Issue A 2022/02/15: Draft for Comment
Issue B 2022/02/23: Final draft for client comment
Issue 1: For Information.

Cover photo, Petone Wharf, northern side, looking to shore, 2018. Source: Calibre Consulting Ltd.

Contents

1 Introduction

1.1 Executive Summary

Following the 2021 wharf condition report by Calibre Consulting Ltd. which proposed refurbishment options for strengthening Petone Wharf, this conservation plan was commissioned by Hutt City Council (HCC). The key findings of this conservation plan on the Petone Wharf are listed below:

1.1.1 Heritage Significance

The Petone Wharf is on the HCC Heritage List, and the Greater Wellington Regional Council (GWRC) List but is not listed by Heritage NZ.

Constructed in 1908, the Petone Wharf is a significant landmark in Petone and the Wellington region and has a high level of authenticity as an example of an early 20th century maritime structure.

The site of Pito-one is significant to mana whenua and was a valued and vital area pre-colonial settlement.

The Petone Wharf played a role in the commercial and recreational development of the Petone and Wellington region. As such, it is representative of changes in wider New Zealand society throughout the 20th century.

Its use during the First and Second World Wars as a base for training troops, and as the access point for Matiu Somes Island link it to the national context and international events.

The Petone Wharf is significant as a structure built by the Wellington Harbour Board and designed by Chief Engineer William Fergusson who were responsible for the design and construction of many maritime buildings and structures throughout Wellington. The Petone Wharf is significantly longer than all other timber wharves in the Wellington Region and appears to be one of the longest timber wharves in New Zealand.

Although the Petone Wharf has been closed to the public since 2020 and has had extensive repairs and alterations since construction in 1908, it retains a high degree of authenticity. While there has been a loss of some material – notably the front gates, fence, and wharf office, as well as structural elements below the wharf – much of the wharf is original fabric.

Significant structural remediation is required before the Petone Wharf can again be used. This conservation plan recommends planning future work to maintain the heritage values of the wharf.

1.1.2 Framework for conservation

The principle regulatory framework for conservation of the Petone Wharf includes:

- Hutt City Council District Plan
- The Regional Coastal Plan for the Wellington Region
- The Proposed Natural Resources Plan for the Wellington Region
- Heritage New Zealand Pouhere Taonga Act 2014
- ICOMOS (NZ) Charter
- Resource Management Act 1991
- Building Act 2004

1.2 Commission and Purpose

This *Conservation Plan* is the result of a commission from Hutt City Council.

The purpose of the *Plan* is to define the cultural heritage values of the Petone Wharf; to identify influences on the future development of the place; to assess its condition; and to make recommendations for its repair, upgrading, and maintenance in a way that ensures the heritage values of the building are preserved and enhanced.

A site visit was made by Lianne Cox and Max Wiles of Studio Pacific Architecture in September 2021 and the entire length of the wharf was accessed. All viewing was done from the decks, or the beach, with no observation by boat. However, Calibre Engineering, who provided the condition assessment did inspect from boat and by diving.

Unless otherwise stated, photographs were taken by Lianne Cox and Max Wiles.

1.3 Ownership, and Land Status and Legal Description

The Petone Wharf is owned by Hutt City Council

The property is legal described as Lot 3 DP 69217, Wellington Land District.

1.4 Location

The Petone Wharf is located opposite Victoria Street on The Esplanade, Petone, Lower Hutt.

Figure 1. Map of the central NZ showing location of the Petone Wharf. Source: Google Earth, accessed November 2021.

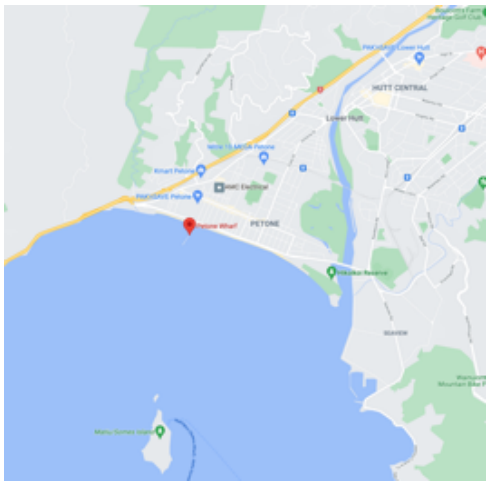

Figure 2. Map of Wellington Harbour showing the location of the Petone Wharf. Source: Google Earth, accessed November 2021.

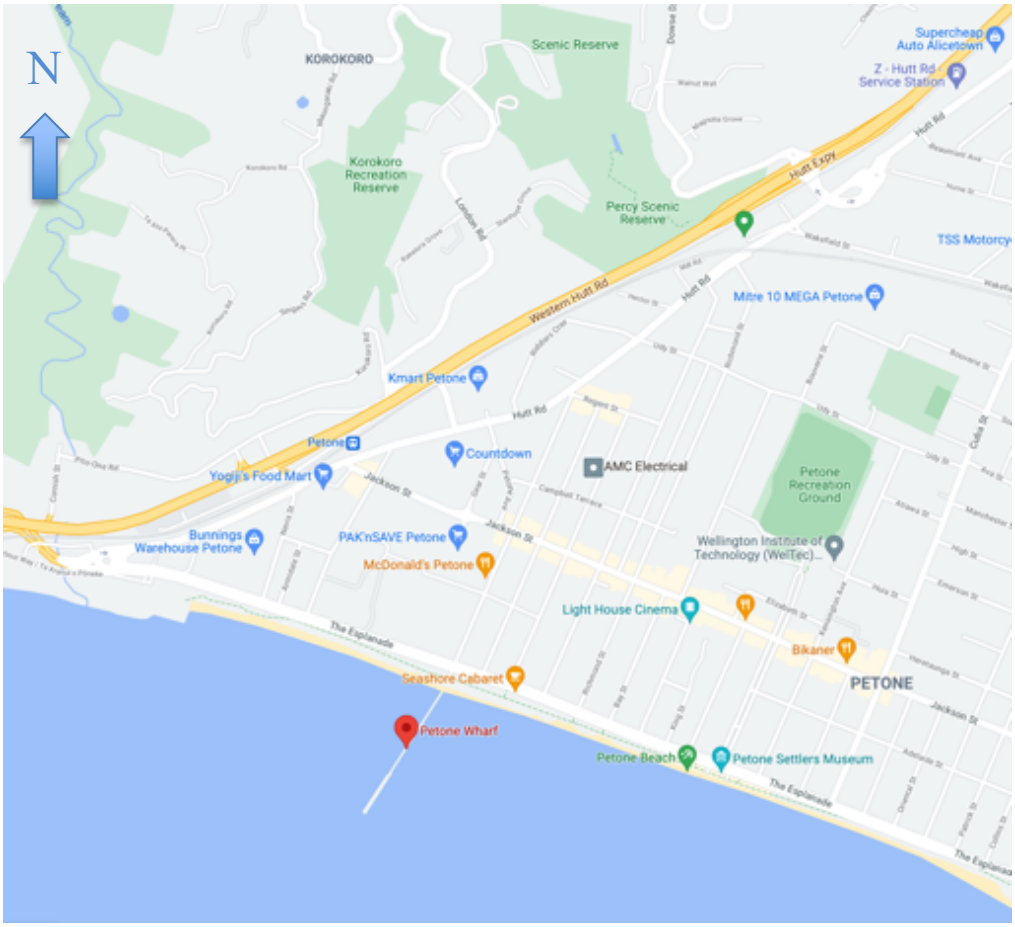

Figure 3. Map of Petone showing the location of the Petone Wharf. Source: Google Earth, accessed November 2021.

1.5 Heritage Status

1.5.1 Heritage New Zealand

The Petone Wharf is not listed by Heritage New Zealand on the New Zealand Heritage List.

1.5.2 Hutt City Council (HCC)

The Petone Wharf is scheduled in the Hutt City Council District Plan Heritage Schedule in Appendix 2 on Map A5.

A5	The Esplanade	Petone Wharf	Lot 3 DP 69217

Figure 4. Hutt City Council heritage listing of the Petone Wharf. Source: Extract from Hutt City Council District Plan, Appendix Heritage 2

Extent of List Entry

The Hutt City Council District Plan does not explicitly define the extent of the heritage listing. It is assumed that the Petone Wharf refers to the entire wharf structure, including the fence, foundations, and entrance gates on The Esplanade.

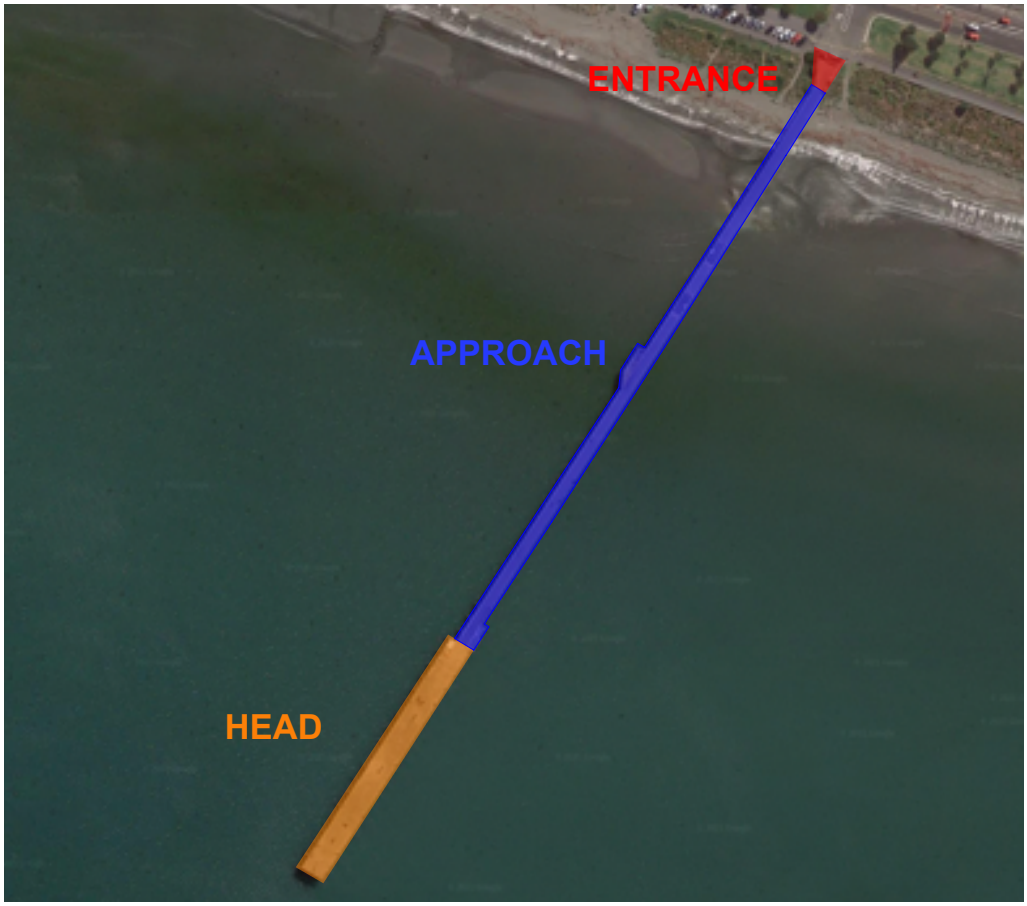

Figure 5. Aerial view of The Petone Wharf with the extent of the three portions of the wharf highlighted. Source: Google Earth, accessed November 2021 (background image).

1.5.3 Greater Wellington Regional Council (GWRC)

The Petone Wharf is listed in the 'Regional Coastal Plan for the Wellington Region' under *Appendix 4 – Features and Buildings of Historic Merit.*

Petone Wharf	Petone foreshore	Wharf

Figure 6. GWRC heritage listing of the Petone Wharf. Source: Extract from GWRC Regional Coastal Plan for the Wellington Region, Appendix 4

In the 'Proposed Natural Resources Plan' the Petone Wharf is listed under *Schedule E2, Historic Heritage Wharves and Boatsheds.*

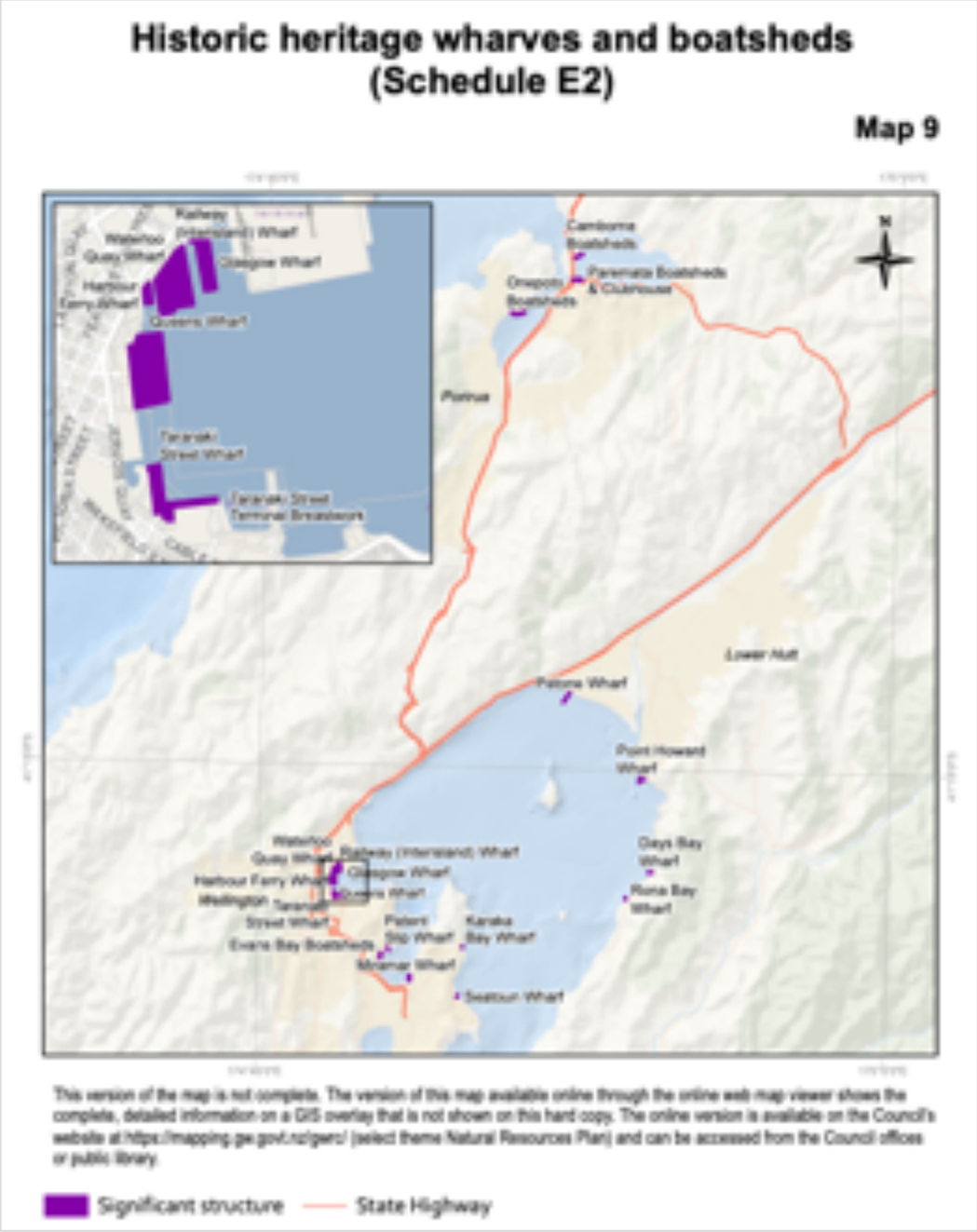

Figure 7. GWRC proposed historic heritage wharves and boatsheds. Source: Extract from GWRC Proposed Natural Resources Plan, Schedule E2 Historic heritage wharves and boatsheds.

Extent of List Entry

The Greater Wellington Regional Council Plans do not explicitly define the extent of the heritage listing. It is again assumed that the Petone Wharf refers to the entire wharf structure, including the fence and entrance gates on The Esplanade.

Refer to Section 5.1.4 for implications of this listing.

1.6 Acknowledgments

Acknowledgement is made to:

- Tom Arthur of Calibre Engineering, who provided the engineering assessment and information about wharf structures.

- The GWRC Heritage Report by Chris Cochran, Russell Murray, Michael Kelly, and Andy Todd.
- Chris Cochran for Peer Review.
-

2 Cultural History

Written by Peter Cooke.

2.1 Timeline

1827	Te Ātiawa settle Pito-one
1840	Petone established by European settlers
1881	Petone Town Board created, upgraded to Borough Council (PBC) in 1888
1884	Gear Meat company builds first wharf, and adds a rail line connected to the Govt Railway via the Gear Meat branch line.
1886	Hutt Park Rail line is laid
1902	First wharf demolished
1908-09	Second (current) wharf built, without rail line
1915	Boat Shelter or marina completed
1915	Hutt Park Co rail line removed
1926	Odlins Petone timber yard opens, exports from wharf
1943	Wharf closed for war
1946	Wharf reopened
1959/60	Redecked in concrete.
1961	Piles re-coppered.
1964	Wharf closed to the public for three months to stop vandalism.
1969	Provision for small boats added.
1976	Last coastal cargo shipment from wharf
1989	Wellington Harbour Board (WHB) dis-established and wharf ownership transferred to Hutt City Council
1989	Petone Borough Council dis-established and administration absorbed in Hutt City Council
2020	Wharf closed to all use.

2.2 Background

Petone is now a suburb of Lower Hutt City but was an independent borough from 1889 after earlier being administered by the Hutt County Council, Wellington Provincial Council, and the New Zealand Company.

Prior to colonial settlement it was the home of migrants from the Taranaki area whose migrations south started in 1824. These migrations had been prompted by musket wars further north, and initially the migrants settled in the Waikanae and Kapiti areas. Things there were not without conflict, and

> *It was after 1827 that these united Taranaki hapū under the leadership of Ngāti Mutunga, began the slow but expansive takeover of the eastern side of the harbour from its resident tangata whenua, Ngāti Ira, Ngāti Kahukura-awhitia and Ngāti Rakaiwhakairi.*[1]

The harbour Te Whanganui-a-Tara is named after the Ngai Tara people. Tara and his half-brother Tautoki claimed descent from Kupe and had a close association with Te Whanganui-a-Tara. The Hutt River (named Heretaunga in the 1830s but Te Awakairangi by earlier Maori) demarcated the boundary between their respective *rohe*, Tara taking the land to the west and Tautoki the east.[2] The Hutt River enters the harbour through Petone Beach.

More recent movements into and through the region were by forces of Ngāti Toa, Te Ātiawa and Ngāti Kahungunu, many of them fighting for the right to settle. The last battle fought by Maori for hegemony over the Hutt Valley was in 1832, at Te Puniunuku.[3]

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1 Love, Honiona, 'Te Tiro Whakaritorito Educating Ourselves - 1. Hunukutanga'. A brief history of Te Atiawa, n.d. p9

2 Peter Cooke with Morrie Love, 'Military Heritage on North Miramar Peninsula', DONZ, 2009, p10

3 Ron Crosby, The Musket Wars, Reed, p259

Te Ātiawa from Taranaki settled in Pito-one, under Te Puni-Kōkopu, at the west end of the beach, and were there when the first European settlers arrived. The name of Pito-one became corrupted as Petone and the land again changed hands after being fought over in 1846. Earthquakes in 1848 and 1855 lessened the risk of river floods, allowing settlement and farming activities to grow. Industries soon followed, along with the means of exporting valuable goods - modern wharfage and a harbour board (in Wellington, formed in 1880).

2.3 Wharf at Petone

The Gear Meat Company Ltd had already (1884) built a private railway wharf at Petone, which was used for loading ships with frozen carcasses and importing coal and other materials.

A move to build the current wharf off Petone Beach started in 1891. A deputation of both valley mayors and dignitaries met the Wellington Harbour Board (WHB) on 18 June, saying:

> *there was a population of between 3000 and 4000 people living within a radius of three miles from Petone [and] that the time had arrived when a wharf should be erected there. Petone, it was thought, was adapted for a great industrial centre. The Gear Company had already established their works there….*[4]

The harbour board engineer Mr Fergusson had looked at the deputation's proposal, saying it would cost £15,000, and reported that

> *The best position for a wharf was to the westward of the Gear Meat Company's pier.*[5]

The proposed wharf should be for both rail and cart traffic, strong and wide enough for two lanes, with sheds to facilitate loading operations. It should be taken to a depth of water "as would enable a coastal steamer to lie thereat in safety in bad weather, and to permit of the intercolonial and smaller class of ocean steamers using the wharf in calm weather".[6]

The WHB had no means to borrow money and was not convinced of the economic argument in favour of the proposed wharf. The Gear Meat wharf remained the only such structure at Petone and is an integral part of the story of the current wharf.

2.4 Gear Meat Wharf

The Gear Meat & Freezing Co NZ Ltd works in Petone were the "largest single industry in Petone" by 1882.[7] It was the '*lion' of the valley'*.[8]

James Gear had served at sea with the East India Company before landing in NZ and starting a butchery business in Wellington. It soon grew to a meat preserving factory, tinning its product, and expanded to acquire a large site on the Petone foreshore. By now Gear was in partnership with Joseph Beale and the abattoir established in Petone, which would grow to 30 acres, became very productive. Its indoors facilities covered 14 acres, with holding pens for 16,000 sheep outside. At its peak 90 butchers killed 6500 sheep and 90-100 cattle a day.

A technical revolution in the form of freezing equipment meant that NZ meat could be exported by sea to markets such as the UK. The first frozen meat export was in 1882, in the sailing ship *Dunedin*, but many other ships soon were fitted to handle frozen cargo, including the famous survivor, *Edwin Fox*. From this time frozen meat exports

4 Evening Post, 19 June 1891, p4

5 Evening Post, 21 April 1892, p3

6 Evening Post, 21 April 1892, p3

7 Porirua Museum Staff, 'Meat Entrepreneur — James Gear', Otaki Historical Society Historical Journal, OHS, Vol 8, 1985, p52

8 NZ Times, 30 April 1884, p2

"*changed our destiny*", giving NZ "*a new source of wealth*" and adding new dreams for the future of the NZ frontier.[9] Refrigerating equipment was powered by coal (as was electrical generation) and so this also became a sizeable consumable commodity for the company and other industries to bring in.

Gear Meat's abattoir operation was linked to the government railway line which ran from Wellington City up the Hutt Valley, to which the company acquired a private connection, siding and branch line to the meat works. Gear Meat's siding right was dated 13 December 1880.[10] The branch was only 38 chains long (about 764 metres) and was well maintained. The connection to NZ Rail was generally referred to as 'The Junction', being where state met private property (and was just east of the Korokoro Stream bridge). Initially carcasses were railed in to Wellington to be loaded aboard the refrigerated 'Home' boats, such as the *Doric* which took 5200 sheep carcasses and 30 live cattle.[11]

The logic for the company having its own export wharf was obvious. Ships could be loaded within a few hundred metres of the beasts being slaughtered. Light shunting wagons could move wagons full of carcasses to load the ships directly. This would give it an edge over the several other freezing works from whom competition was intense. The site for the wharf was "*chosen because [Matiu] Somes Island provided protection from the southerly swell*".[12]

Gear Meat called for tenders for the wharf in September 1883. It was obvious, though, at the beginning, that the depth of water off Petone beach would not be enough for sizeable ships to come alongside, even with a very long wharf extending far into the harbour. A compromise was therefore chosen. Rather than building a freezing plant in the company's work site, it would use a freezing hulk which could operate off the wharf. A refrigerating hulk would come alongside the wharf to be loaded with and temporarily store the meats until it could be towed to the Wellington wharves or to a home boat anchored in the harbour for the cargo to be trans-shipped.

For this the Gear Meat Company bought the *Jubilee*, a 776-ton barque, which arrived from Sydney under sail on 11 October 1883.[13] Refrigerating machinery for the freezing hulk was also imported and Robertson's 'Phoenix Foundry' in Wellington made the boiler and fitted it all into the *Jubilee*. The floating fridge was completed by April 1884 when it helped unload carcasses from a ship with technical difficulties in Wellington. The *Jubilee* was Gear Meats' only freezing equipment. Until the company wharf was completed, the *Jubilee* was moored alongside the Railway Wharf, Wellington (and in November 1885 her boilers and freezing equipment were doubled, increasing her capacity to freezing 500 sheep a day and storing 12,000 carcasses).[14]

Freeman & Co, Nelson, won the contract to build the meat company wharf, which was not initially built to its later finished length. The *Evening Post* reported in December 1883

> *Excellent progress is also being made with the construction of the wharf at Petone, and a distance of 900 feet has been reached. The structure requires to be extended about 300 feet more before the desired depth of water can be reached.*

A company board meeting in January 1885 talked of a "*small extension to the wharf*", presumably bringing it to its finished length. Work on it may have continued into 1886,

9 Gavin McLean, 'The Rush to be Rich', in Frontier of Dreams, MCH/Hodder Moa, 2005, p183

10 'Gear Meat Siding – Petone' R10733686, ADRM 17570, W2868, R-W1W2868 bx5 04/580 1890-1982, ANZ

11 NZ Mail, 26 Sept 1883, p16

12 Evening Post, 7 Sept 1951

13 *NZ Mail*, 20 Oct 1883, p14

14 *Evening Post*, 11 November 1885 p3. Two of her masts were taken out at this stage.

when it was said to be complete.[15] Plans exist for a 37-foot extension at the end which was approved in December 1890 but believed not to have been built.[16] Plans of other unrealized schemes in the 1890s showed it being almost doubled in length or otherwise modified.

15 *NZ Times*, Supplement, 15 April 1916, p11

16 '*Proposed Extension to the Gear Cos Wharf at Petone*', 4ft:inch, WHB Drawing Office 27/10, MD1640, WCA

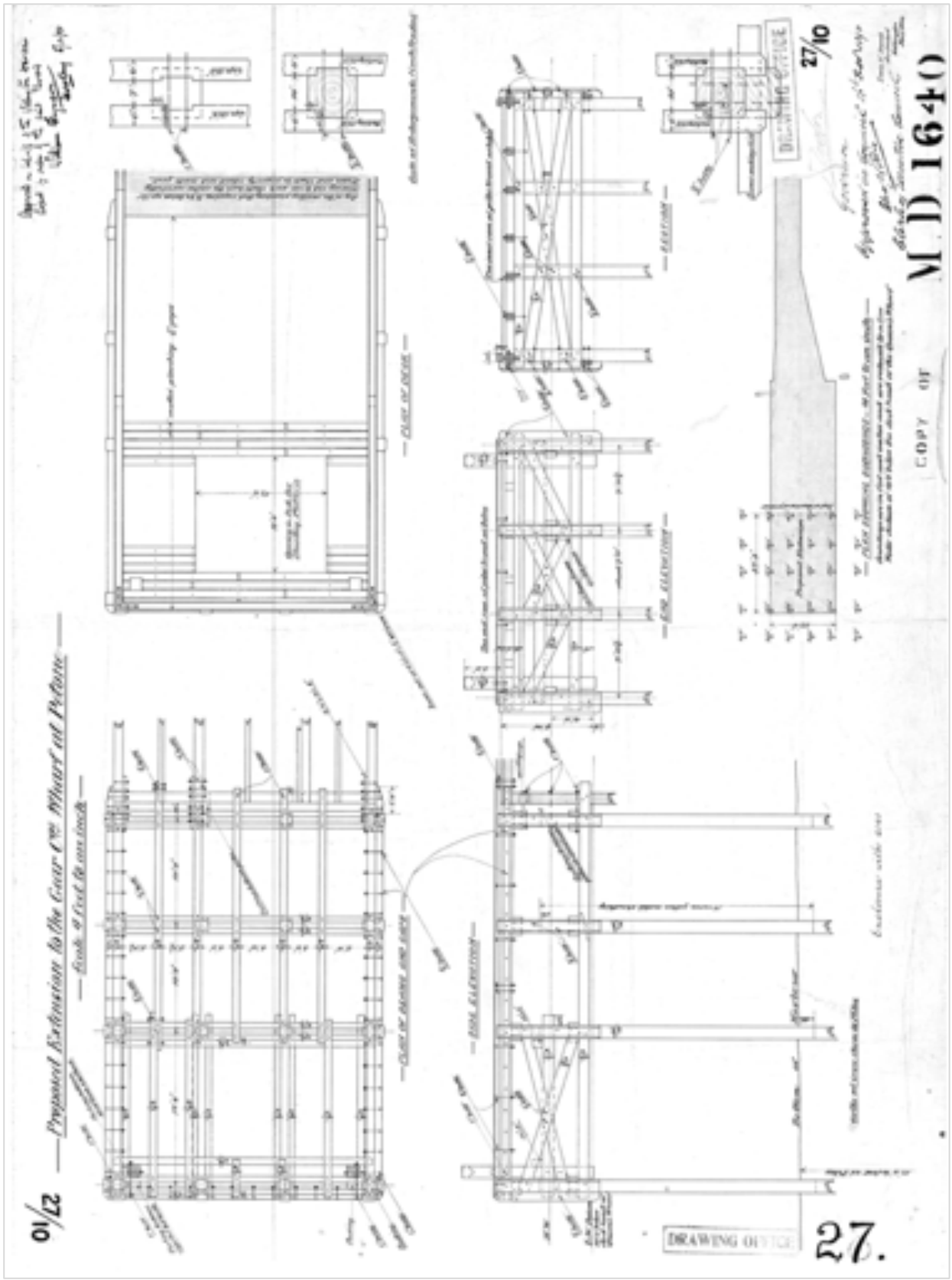

Figure 8. 1890 drawings of the proposed extension to the Gear Meat Wharf. Source: Lewis H. Duval, 1890

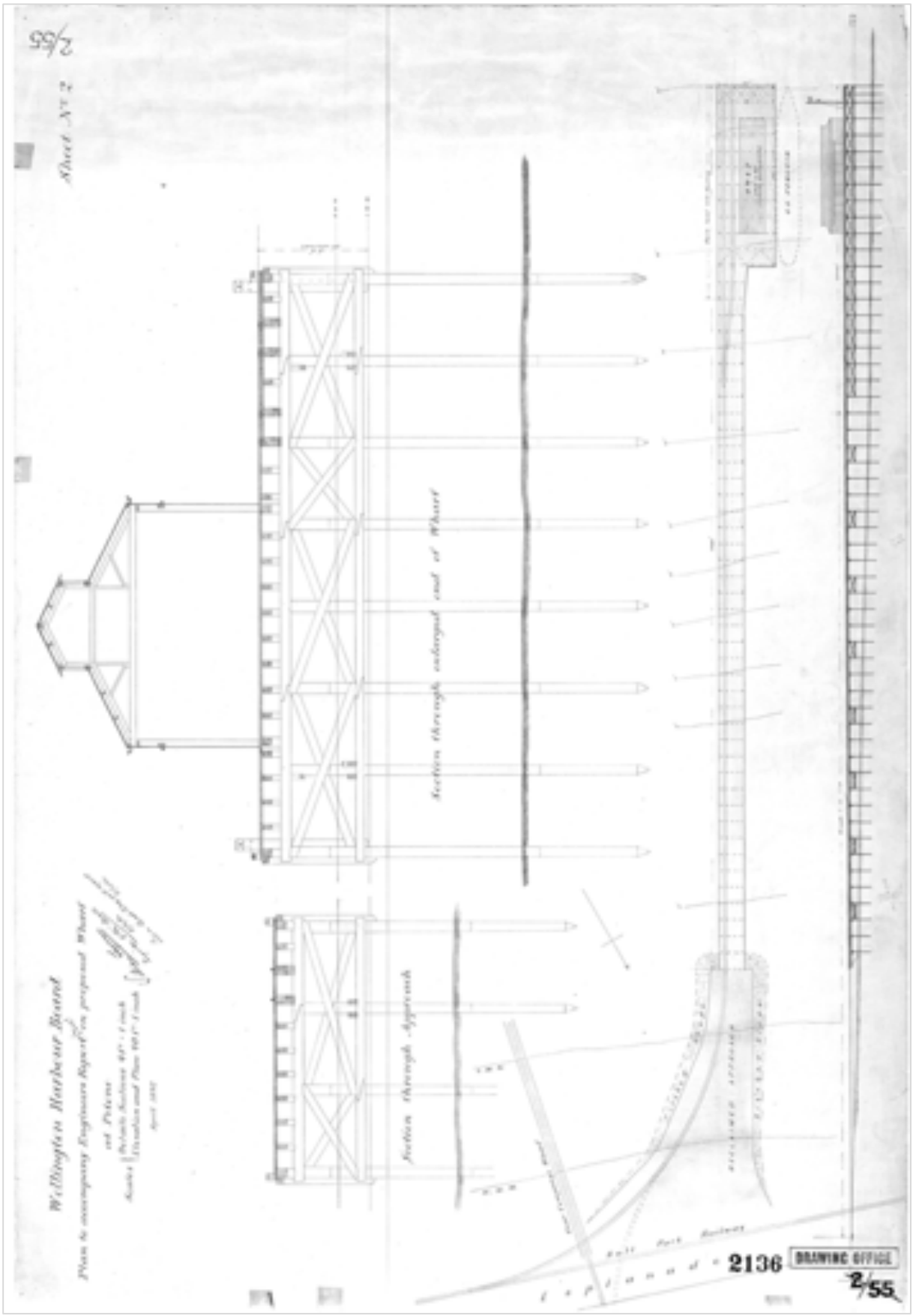

Figure 9. 1892 drawings of a proposed scheme for the Petone Wharf with a large building at the end. Source: Author unknown

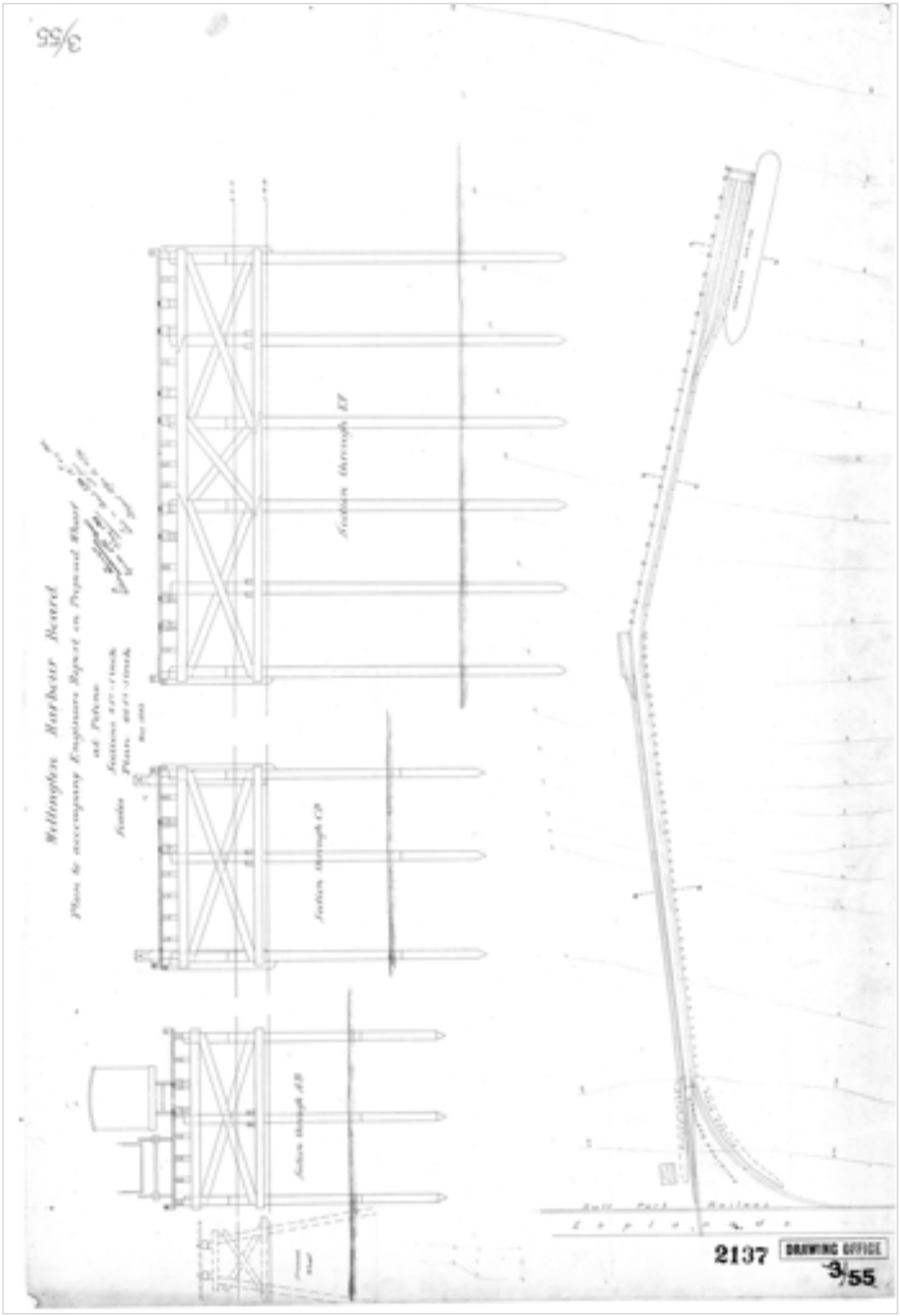

Figure 10. 1893 drawings of a proposed scheme for the Petone Wharf with an angled form. Source: Author unknown

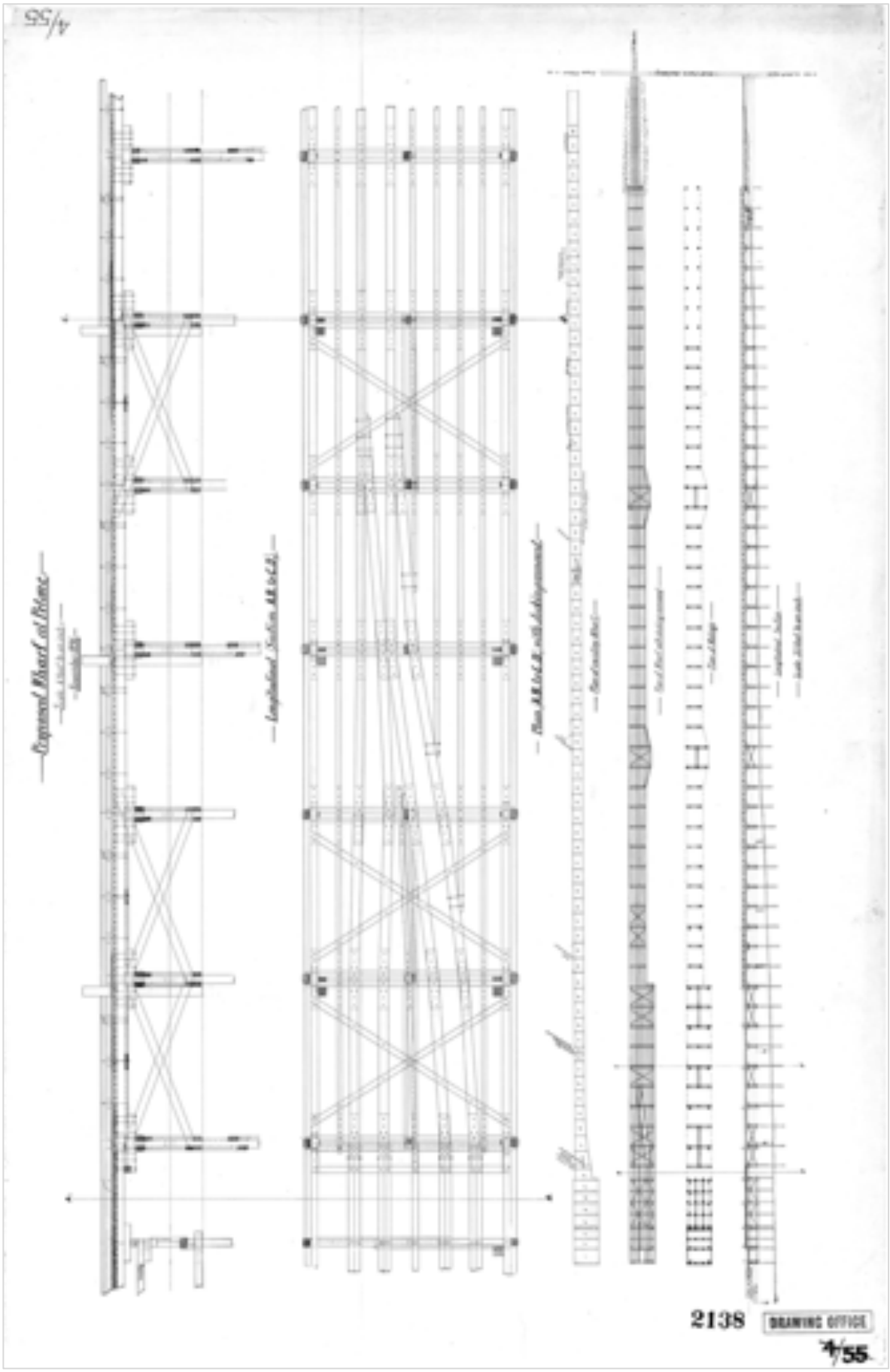

Figure 11. 1896 drawings of a proposed scheme for the Petone Wharf. Source: Author unknown

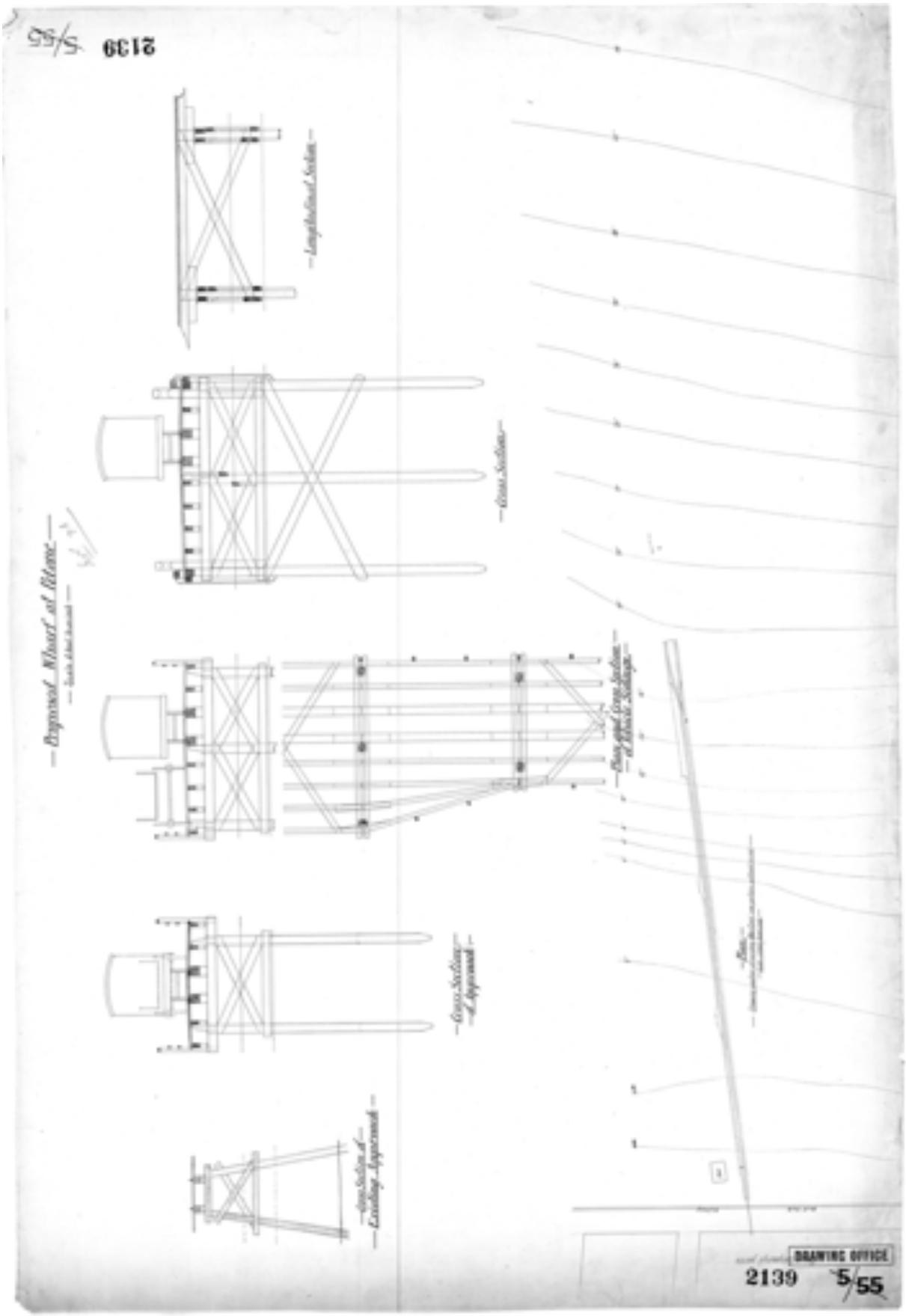

Figure 12. 1896 sections of a proposed scheme for the Petone Wharf. Source: Author unknown

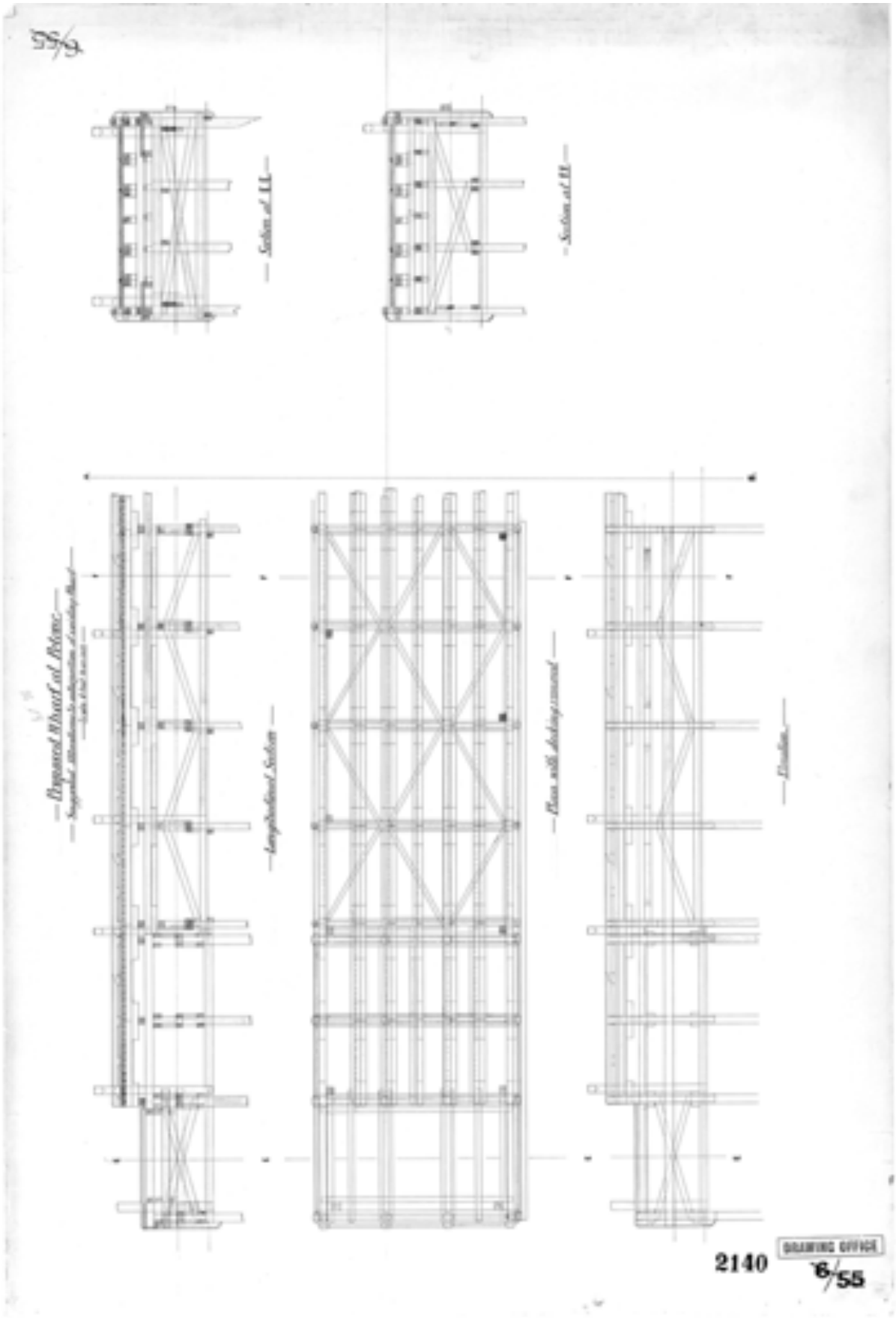

Figure 13. 1896 drawings of a proposed extension to the Gear Meat Wharf. Source: Author unknown

The Gear Meat Works wharf was 1250 feet (381 metres) long, and for most of its length was nearly 18 feet (5.5 metres) wide. The furthest 85 feet (26 metres) was widened to a width of 26 feet (8 metres). The piles under the section closest to the beach were not driven parallel to each other, but inclined inwards with their tops closer together than at their bases. Outer piles were copper-sheathed. It cost £823 13s 11d.[17]

The company also laid a new rail line to the end of the wharf, from inside the meat works site and which was connected to the branch line.

While Gear Meat built the wharf, its location in the harbour required a lease from the WHB. The first lease to Gear Meats was for 14 years, from 1884. When this expired, in 1898, Gear Meat no longer wanted the wharf. The company continued operations at the Petone site (not closing it down until 1982[18]) but found that they saved money if double handling was omitted – by railing the carcasses to Wellington to load increasingly larger ships.

Now the Petone Borough Council showed an interest in the old Gear Meat Company wharf and so WHB leased it to the council. The lease was only for two years, from 1898, renewable, and it included a provision that the council maintain the wharf. The first lease expired in 1900 and was renewed for another two years.[19]

Other activities made use of the old Gear Meat Company wharf. Ferry companies started calling there, the *Colleen* running return trips three days a week from 1890.[20] Excursions to picnics in the eastern bays regularly picked up people from Petone Wharf. The Petone State School, for instance, made regular use of the wharf for its annual picnics, as did a number of large companies and government departments.[21]

The wharf was also used for landing coal for the Gear Meat Company's various boilers, and loading other products such as tallow, pelts and timber. The schooner *Lady St Aubyn* for instance landed timber there in April 1900 intended for an expansion of the Gear Meat works. But the exposed nature of the site was evident when the brig *Sarah and Mary* was "*considerably knocked about while lying at the Petone Wharf in last week's southerly gale"*[22]

In November 1900 when coal was being unloaded from SS *Wainui*, a heavy wagon caused two piles to give way, allowing a section of the decking 45 feet long by 4 feet wide to slump.

The black birch saplings used on the wharf had started to rot. Despite the council earning around £2000 from the wharf, it failed to invest in maintaining the structure. It was criticized for this.[23]

Additionally, railway lines had been laid to more Wellington wharves, such as Glasgow Wharf, increasing the volumes that could be economically exported there. This affected freight volumes handled at the Petone Wharf, further reducing its value. Despite this, in 1900, still almost 10,900 tons of coal, meat, guano, and byproducts, and 312,000 feet of timber were moved over the wharf. But Gear Meat declared an intention henceforth to rail its products to Glasgow Wharf, which sounded the death knell of the Petone Wharf. The Harbour Board reported that "*the necessity for the Petone Wharf will have then largely passed away*".[24]

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17 Warwick Johnston, *The History of Petone Foreshore, Wellington*, 2009, p46. Disputes over the supply of muntz metal for copper sheathing ended up court in mid-1884.

18 Otaki Historical Society Historical Journal, OHS, Vol 8, 1985, p52

19 AG Barnett, GM WHB, Nicholson Petone's First 100 Years, 1940, p259

20 ibid

21 For instance, see Evening Post 8 Feb 1900, p6

22 *NZ Times*, 9 June 1900, p4

23 *Evening Pos*t, 9 February 1915, p3

24 *Evening Post*, 22 March 1901, p4

In 1901 *"the Harbour Board found that the approach to the Petone Wharf was in a dangerous condition and unsafe for use by the people of Petone, for school picnics and excursions, and this resulted in a decision being made to put the wharf up for auction for removal."*[25] The Petone Borough Council was unwilling to spend more on retaining the wharf for its ratepayers.

The WHB advertised the wharf materials in November 1901 but had to report on the 30th that "*not a single bid was received*".[26] Petone residents still lobbied to have the wharf retained for excursionists who did not want to be *"cut… off from communication with the bays around the harbour, except by way of Wellington"*.[27]

The WHB refused such pleading, saying it was too costly to keep safe, and sought a contractor to demolish the wharf in January 1902. Work started deconstructing the wharf late in February, costing around £300. The contractor was free to sell the recovered materials. By April J McWilliams of Mulgrave St was selling *"at Petone Wharf, 40 Totara and Iron bark Piles, from 30 to 40 feet long, coppered and shod; also a lot of fencing posts and about 15,000 ft of sawn totara"* at the Petone Beach site.[28] In May the last of the old birch piles were being cut up and sold in Petone as firewood.

With this, *"for years Petone was isolated from communication by sea*".[29] An *"outcry"* followed the removal of the first wharf. *"It was greatly missed by the public, especially by across-harbour picnickers, who, instead of embarking at Petone, had to first journey to Wellington."*[30] The Petone Navals complained that a submerged pile left in the seabed had damaged one of their cutters. Fishing was also presumably conducted from the wharf, not that it would have been safe when rail traffic moved along it, but the fishing voice was not heard at this time.

People wanted Petone to *"share with Wellington its maritime importance*", and felt a wharf at Petone would enable that to happen.[31] The campaign to build a new wharf at Petone, which had its early musings in the 1890s, took off afresh.

2.5 Rebuild Petone Wharf

Lobbying for a new wharf was driven by the local authority, the Petone Borough Council. Far more players were involved than for the first wharf: this time as well as another local authority (the WHB, which had the ultimate authority), it involved two government department (NZ Railways, and the Marine Department), and two private companies (the Gear Meat Company, and Hutt Park Railway). It was an interchange between six organisations, with various politicians chiming in. And then there was the public, which knew what it wanted.

The matter became political, with parties in the House of Representatives joining both sides, and the discussions and disagreements among them and the councils and boards were reported in detail on by the media.

From Petone's point of view, a wharf was connected to plans for the development of the lower Hutt Valley. Girding their loins beside the council was the Petone Chamber of Commerce. Huge population increase was foreseen: MPs heard that *"One day there would be a huge population stretching from Wellington to Petone"*.[32] Petone

25 AG Barnett, General Manager WHB, in *Nicholson Petone's First 100 Years*, 1940, p259

26 *Evening Post*, 30 Nov 1901, p4

27 *Evening Post*, 5 Dec 1901, p4

28 *NZ Times*, 11 April 1902, p1

29 *NZ Times*, Supplement, 15 April 1916, p11

30 *Evening Post*, 9 February 1915, p3

31 *Evening Post*, 23 April 1903, p5

32 *Evening Post*, 3 Oct 1905 p2

spoke of a *"Roseate Future"*, *"River Protection Works"*, and advancing the Hutt *"From Maori Pa to Villa Residence."*[33]

> *We have spoken of the front door of the Hutt Valley. There were two ways of unlocking it—by water and by land. Sea-carriage, long neglected, promises to be ultimately revived by the agitation for a Petone wharf. Land transit has suffered through an execrable road, for a long time the worst of its kind in the colony, and through a tortuous railway not workable to a full and fast capacity…. ."*[34]

This would open up the lower Hutt Valley and Lowry Bay. Suburbs were planned with commuter connection to Wellington. A state housing scheme started getting working families into home ownership in the wake of the Workers Dwelling Act 1905 (the first houses built were on Patrick St, just along the Petone beach).[35]

Industries were coming to join the meat works, with the Taupo Totara Timber Co Ltd setting up in the valley to service the building boom. Further industrial development was expected on Gear Island. Coal was thought a major potential item for import, for use by the Gear Meat Company plant and the Wellington Woollen Mill Co Ltd, Petone. Also, the Council foresaw rising maritime coastal trade from the wharf.

A wharf length of 1000 feet was required for a ferry service, but 2000 feet would be needed for loading ships.[36]

Petone Borough also planned a large investment to bridge the Hutt River near its rivermouth, opening up major access to the eastern valley and Wainuiomata, and starting a road connection to the eastern bays. Only a slender waterpipe bridge with a footway existed. If bridged for vehicular and rail traffic, the council hoped Hutt Park would become a "*popular public resort*".[37] This was a response to the Wellington Racing Club having just moved its big race days to Trentham racecourse, leaving Hutt Park looking for a future.[38]

This reference to the Hutt Park is relevant because the Hutt Park Railway Company had earlier (in 1886) laid a private rail line almost the full length of Petone beach, extending the Gear Meat Company line from the wharf site to the bank of the Hutt River. This served its race days (the punters walking across the footway on the pipe bridge and the last few hundred yards) but many in Petone wanted it to become a public utility carrying freight and commuters. It also provided a major theme in the argument for building a new Petone Wharf.[39]

In wanting a new rail wharf built, PBC had to woo over the owners of existing rail facilities. They talked with the NZ Railways about shunting and found that the Gear Meat Company was prepared to offer shunting services from the wharf to the NZ Railways shunting yard at Petone, and the Hutt Park Railway Company was prepared to allow use of its line for 6d per ton (a rate that NZ Railways said was too high). If steam shunting was uneconomic the council might use horse-draught.

As well as the general cargo for Petone, the Harbour Board conceded that a rail wharf at Petone would be valuable to the port only when Wellington's main wharves were congested.[40]

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33 *NZ Mail*, 3 Oct 1906 p25

34 *NZ Mail*, 3 Oct 1906 p25

35 Barbara Fill, *Seddon's State Houses*, NZHPT 1984

36 *Evening Post*, 27 Aug 1903 p6

37 NZ Times, 14 Nov 1906 p8

38 W Nicholson, *Petone's First Hundred Years*, PBC, 1940, p52

39 *NZ Gazette*, 22 July 1885, Plan PWD 13012. The route was deviated slightly in 1894. NZ Gazette, line, 23 April 1894, Plan PWD 17194

40 Sec WHB to GM NZ Govt Railways, 25 May 1906, *'Proposed joint Road and Rail Wharf – Petone'*, R10561146 ADQD 17422 W2278 R3W2278 bx113, 1906/1755, pt1, 1906-15, ANZ

In general, WHB were reserved on the value of another Petone wharf. The NZ Government Railways department, however, was even less enthusiastic. NZ Railways did not want to offer shunting services over the private line because it would keep an engine and crew idle at the Petone junction, so ruled this option out. It did not want to lend or hire out its wagon stock and under no circumstances did it allow private engines or rolling stock on the government-owned lines.[41] The General Manager annotated this letter, saying that it *"would be desirable [that] traffic be delivered to the coys at The Junction"* - that all exchange be at the junction.

The major issue was the Hutt Park line. PBC considered buying it outright to service the wharf (and as part of plans being considered for establishing a general tram network throughout Petone and Lower Hutt). NZ Railways was wary of this as potentially offering competition in both wharf and rail traffic. The line was idle, following the race meetings having shifted to Trentham, and had been offered for sale to the Government in 1903, for £2000. NZ Rail had no interest in it

The line was now 20 years old and had not been maintained. It had been laid to seaward of The Esplanade and therefore very close to the dunes and waves which in stormy weather battered its foundation. So it was *"in very poor repair"*.[42] The General Manager, Thomas Ronayne, advised government against the purchase, feeling that the business it might generate would not repay the outlay. Another reason was that the Gear Meat Company had leased the Hutt Park line (in 1899) and still had 18 years to go on a lease to use it. It is amazing how much difficulty the short dormant line east of the wharf (only 115 chains long, or 2310 metres) caused.

The Petone Mayor, George London, lobbied the government ministers directly. He was supported by an ally in local MP, Thomas Wilford. The Minister of Railways, Tom Hall-Jones, declined the suggestion of buying the Hutt Park line, saying it would offer no benefit to the colony.[43] The government also barred the Petone Borough Council from buying the line.

Legislation was involved. A private-member's bill aiming to vest the foreshore in PBC (which would have allowed the Council to build the wharf) went before the Local Bills Committee in 1903.[44] The WHB opposed it as did any committee in Parliament which looked at it, and the bill was not passed.[45]

Another attempt at law-making carried more weight. The 'Petone and Hutt Corporations Empowering Act' passed and took effect from 30 October 1905 though only after a provision enabling councils such as Petone to build their own wharves was removed.[46] Its preamble stated the two valley councils want WHB to *"erect a wharf suitable for cart and railway traffic"*, and in order to build such a wharf the WHB required a site near the beach for a store or other accommodation necessary for the expected trade. Private rights were to be extinguished immediately contiguous to the high-water mark at the wharf site, and land under the approaches to the wharf to be vested in WHB. "*If railway lines are to be put down on such wharf access be arranged and through communication provided by the NZ Government railway system*". It gave WHB the right to lay tram lines over streets. The Act also allowed the Councils to raise loans, levy special rates and purchase property for this wharf outcome. In exchange

41 Chief Engr NZGR to GM NZGR, 20 June 1906, *'Proposed Joint Road and Rail Wharf – Petone'*, R10561146 ADQD 17422 W2278 R3W2278 bx113, 1906/1755, pt1, 1906-15, ANZ

42 GM NZGR to Minister of Railways, 14 Dec 1906, 1906/1755, pt1, ANZ

43 Minister of Railways to Wilford, 21 Dec 1906, 1906/1755, pt1, ANZ

44 *Evening Post*, 17 Sept 1903 p6

45 *Evening Post*, 4 Nov 1905 p9

46 NZGR to Chair Local Bills Ctee, 26 Sept 1906, 1906/1755, pt1, ANZ

the whole of Petone Beach could be vested with PBC as a reserve for public promenade and recreation.[47]

Petone did not give up. A newspaper called it *"The ambition of that end of the harbour"*.[48] They continued to press the government to buy the Hutt Park line until well after the wharf work was finished: "*As a result of Mr Hall-Jones's refusal to allow the borough to acquire the [Hutt Park] line, a wharf suitable for cart traffic was erected*."[49]

47 The Petone and Hutt Corporations Empowering Act, 1905, nzlii.org, accessed 14 Oct 2021. Previously the beach between high and low-tide was vested with the WHB. This raised the issue of Petone not having a direct representative on the WHB. *NZ Times*, 25 Oct 1904. P7

48 *NZ Times*, 1 Jan 1907

49 *The Dominion*, 14 July 1909

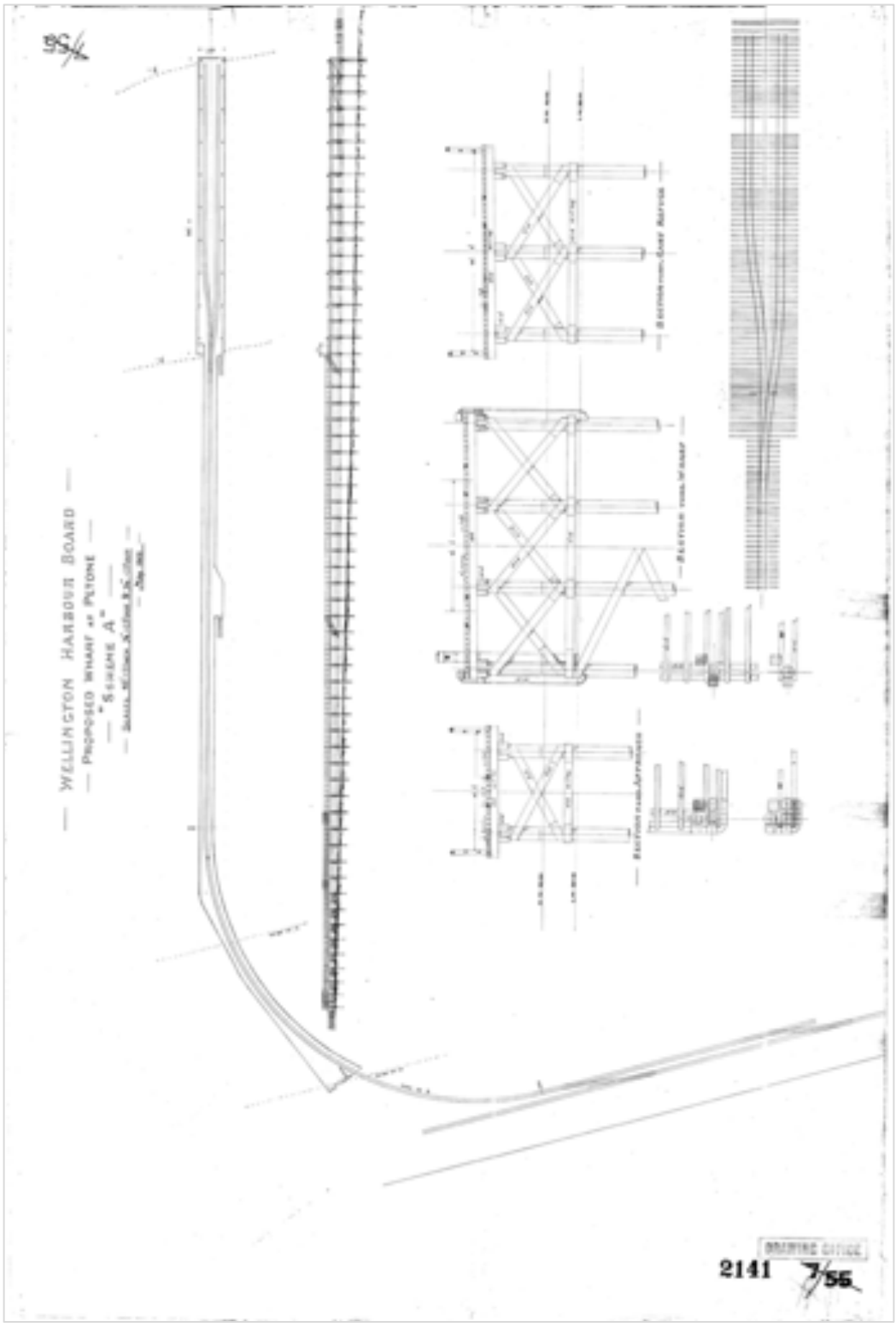


Figure 14. 1905 'Scheme A' drawings of the proposed wharf with rail line. Source: Author unknown

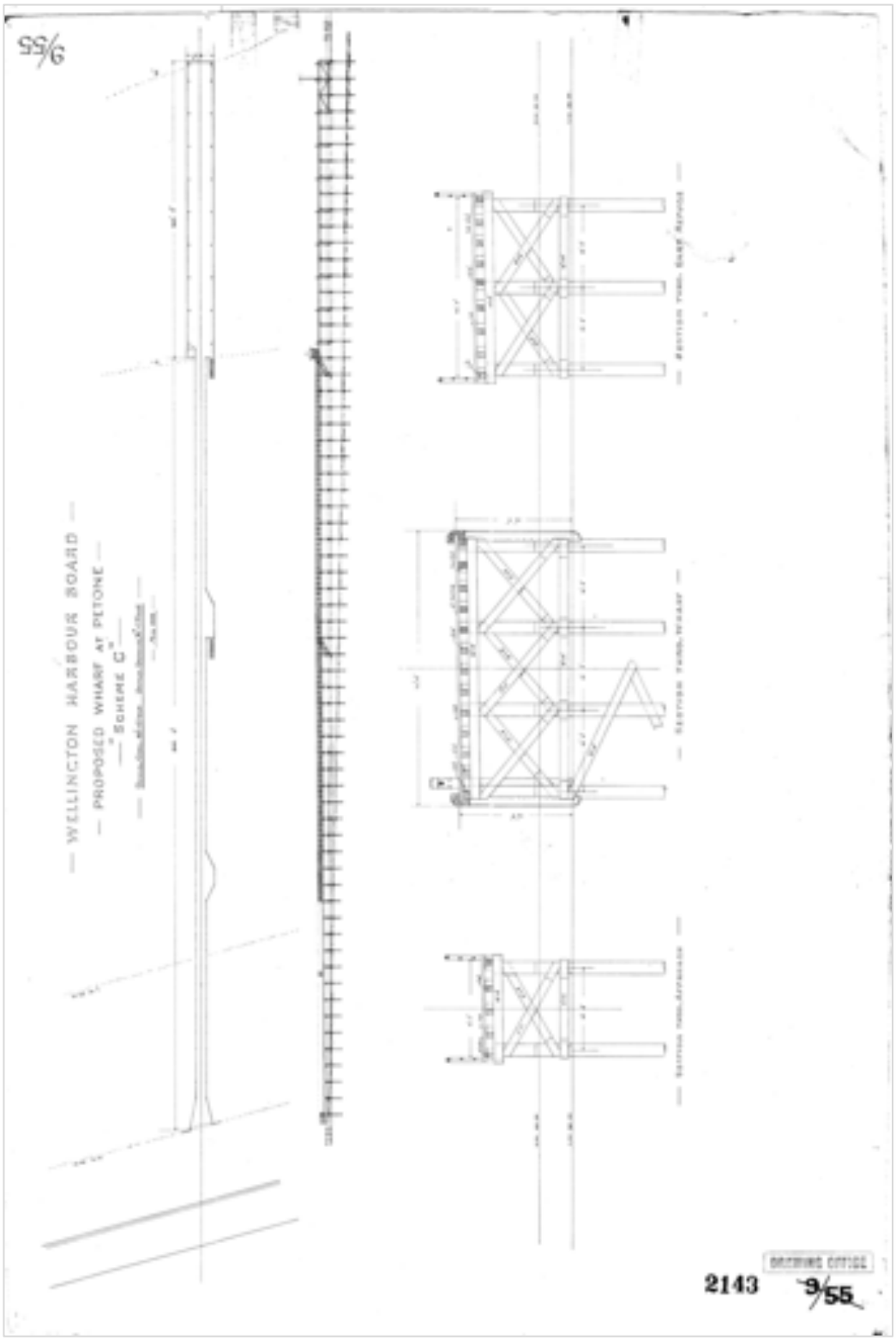


Figure 15. 1905 'Scheme C' drawings of the proposed wharf with no rail line. Source: Author unknown

2.6 Contract No.146

Before this decision on the Hutt Park railway was known, in 1906 the WHB prepared plans for a wharf with a railway.[50] Several variations were considered, Scheme C of which had two cart refuges and no rail line. The plans closest to that built were five

50 *NZ Times*, 14 August 1906 p6

sheets labelled 'Wellington Harbour Board Petone Wharf Contract No.146' and stamped 'Drawing Office' '116/1', copy of 'MD 3061'. It is signed 'William Fergusson, Engineer to the [WH] Board, 21.5.07' and annotated 'Plunket, Governor, Approved in Executive Council, JF Andrews, Actg Secry of Executive Council, 11th June 1907'. On the first plan is written 'Copy enclosed with letter 11.8.06 to Secretary Hutt Park Ryly [Railway Company Ltd]'.

These 1906 plans show the wharf equipped with a rail line. The single line bifurcates into two at the widened outer end of the wharf. Where the wharf touches dry land it is splayed on the east side (although another sheet shows it splayed to the west) to allow the gentle curve (on a 5-chain radius) in the line that merges with the Hutt Park line. At least two other lines branch while still on the wharf to enter the land marked 'Area Vested in the Harbour Board' (in the block between Fitzherbert and Victoria St]. On this area is shown a 'Proposed Store', into which one of the rail lines enters. Sheets 2144 and 2145 show slightly different arrangements of the 'Proposed Store' and the lines servicing it.

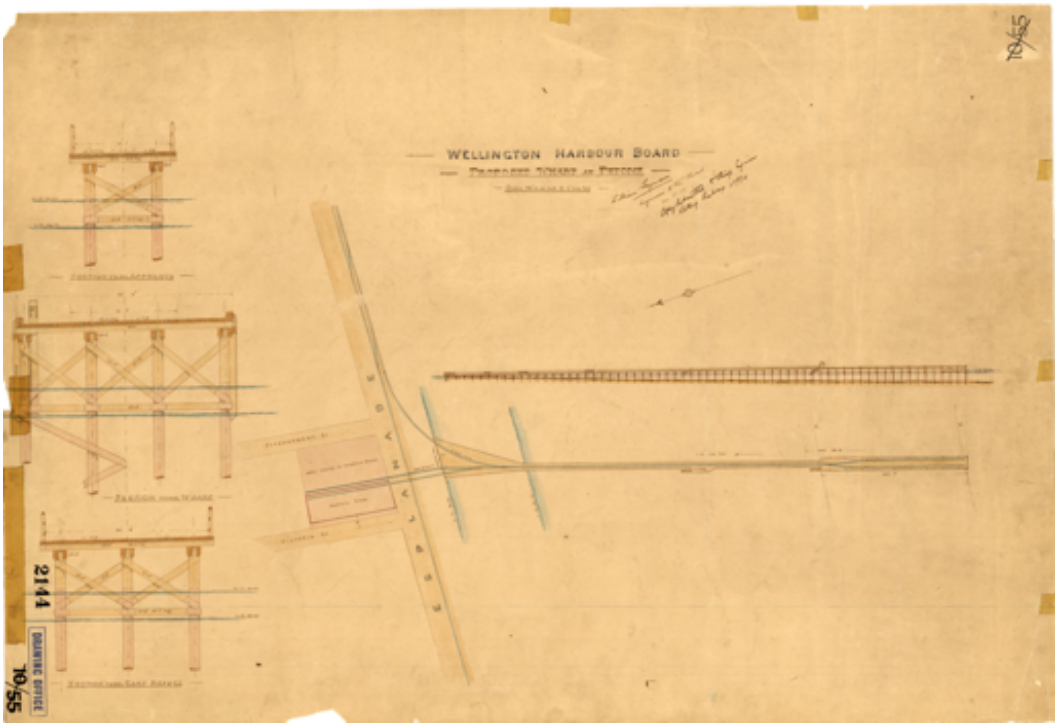


Figure 16. 1906 'Contract No. 146' drawings of the proposed wharf with a rail line and proposed store opposite. Source: William Fergusson, Petone Wharf Contract No. 146, 21 May 1907

The wharf as planned offered 15-20 feet depth at the widened end. Purists in fact regarded the widened end to be the wharf proper, the rest was merely the approach. The approach to the widened section offered a 1-in-140 fall, presumably allowing wagons to free-wheel back to land. As shown, the wharf is angled about 15° from the perpendicular off the beach leaning towards the west (whereas the previous wharf veered about the same angle to the eastwards). The planned approach was 932ft long and 14ft wide within the railings, and the widened end 365' 5" x 33' 2". The approach is based on two driven piles, and the end on four. A 'cart refuge' is present at about half length. Ornamental gates are shown with a gas light on one post.

The 'Wharves & Accounts Committee' of the Harbour Board compromised on the Petone Wharf proposal, favouring it without rail. The Petone Borough Council finally realised the obstacles in front of it for a rail wharf were insurmountable, and *"they asked the Board in January to proceed with the construction of a wharf suited for road traffic only"*.[51] Lobbying for rails to be laid continued, however, well after the wharf was completed. Arguments against this included the cost, that the wharf was not strong

51 *NZ Times*, 21 January 1908, p7

enough for an engine and loaded wagons (requiring it to be strengthened at about the same cost as the construction cost), and it would require *"a considerable fan-shaped addition to the landward end of the approach so as to provide for the curved connection"*.[52]

The Council had to buy some lands on the Petone foreshore for use as an approach to the Petone Wharf (this land included Sections 141-148 and was handed over to the WHB). It also had to remove and re-erect the Petone Naval Artillery Volunteers boatshed.[53]

2.7 Wharf Construction

A construction contract was let by the WHB to Donald McLean & Co Ltd, of 12 Hawker St, Mt Victoria, Wellington, dated 26 July 1907.[54] McLean had until 31 December 1908 to finish the job. The contract value was £9,412 12s. The total cost in 1909 came to £10,468 which included an endowment of £3,000 from the Petone borough in return for the construction of the wharf.[55] Mr Gardiner supervised the work.

Work started around February 1908, though preliminaries such as building a 44 x 17 foot site office-cum-shed had already started in January.

> *The contractors had on hand at Wellington some 14,000 to 16,000 feet of timber, and this supply will be increased greatly by the arrival of the Kongsbyrd, which was loading timber at Port Stephens, before sailing for Wellington. It is reported that one of the casks containing picks and other tools to be used in the construction of the wharf was broken open a night or two ago, and some £3 worth of tools stolen.*[56]

By April piles of timber were accumulating on the foreshore. "*A hundred thousand feet will soon have been delivered. Pile-driving operations will shortly be resumed. The ceremony in connection with the driving of the first pile of the wharf proper is looked forward to with interest…*".[57]

The supply of piles, however, was not as the contractor had hoped and in June this was said to be slowing the work. In August the *"long and narrow Petone Wharf is gradually pushing its way towards deep water, in spite of the delay in the supply of piles".*[58]

52 *NZ Times*, 19 January 1909, p7

53 *Evening Post*, 2 March 1908, p8

54 'Petone Wharf Contract', AC016:3:146, Part 1/2, D1, WCA

55 *The Dominion*, 25 September 1908, p2

56 *Evening Post*, 7 Jan 1908, p2

57 *NZ Times*, 3 April 1908, 07. No such ceremony was noted by the media.

58 *Evening Post*, 7 Aug 1908, p7

Figure 17. 1908 construction work on the Petone Wharf. Source: Sir George Grey Special Collections Auckland Libraries, NZG-19080624-37-1

Work was also been hampered in September by *"boisterous weather; in fact, the only damage of any account recorded up to the present has been the breaking by the waves of one of several large punts"*.[59] At the same time, the fencing was being completed (climb-proof from the gates and for a good distance), *"while the massive entrance gates, seen from Jackson-street, look quite imposing"*.[60]

In November *"bottom planking is laid down to within about 70 yards of the end of the wharf. The diver is at present examining all the bolts and fastenings situated under high water mark."*[61]

The wharf can be said to have been completed when it was first used. A boat picked up people from the wharf on 19 December 1908 for the Petone State School picnic in the bays, and the following year the *Alexander* disgorged the first load of sheep across the wharf on 8 January.[62] Regular steamers ran to the bays from the wharf by the end of January. The WHB meeting in February 1909 reported *"that the Petone Wharf was practically out of the contractor's hands, and available for use"*.[63] The first timber shipment to be delivered over the new wharf came from the *Defender* on 15 April. In May a cargo of 350,000 feet of jarrah came from Australia for use in the construction of the Hutt pipe and traffic bridge which, had its construction preceded the wharf, might ironically have tipped the balance in favour of a rail wharf.

As built the wharf was 1295 feet (395m) long with 15-20 feet (4.5-6m) deep water at low tide at the end. No rail line was laid, however a small hut was built on it. The wharf started subsiding almost immediately, with recreational fishermen reporting a slumping in April 1909 caused by the heavy timber loads being carted.[64] This led it to

59 Evening Post, 28 September 1908, p6

60 ibid

61 Evening Post, 13 November 1908, p2

62 NZ Times, 18 Dec 1908, p7; Evening Post, 7 Jan 1909, p8

63 Evening Post, 24 February 1908, p15

64 The Dominion, 19 April 1909, p7

be called *"the collapsible Petone Wharf"*.[65] Work repairing this continued into 1910 and involved *"the outer piles [being] strengthened by the driving of additional piles to a great depth. These piles are embedded about 50ft in the ground."*[66] After this strengthening, limits were placed on the weights the wharf could take. Timber was not to be stacked too high (no more than 2 cwt per square foot) and vehicle loads could not exceed 7.5 tons, or 3 tons per axle.[67]

Industries continued to use the wharf, carting their produce to ships tied up at the end. It would have warranted rail traffic: *"Traffic at times is very heavy, when frozen meat, tallow and the sheep business are in full swing during the summer"*, the NZ Railways reported.[68]

The carts using the wharf are shown as single-axle carts drawn by one horse. These had the manoeuvrability to turn around on the wharf's widened end.[69]

The new wharf, even by 1909, was referred to as a *"white elephant"*, such as by the Hutt Valley Tramway Board.[70] Critics of the WHB called it "perfectly useless".[71] Despite that, "*there are indeed few in Petone to-day who would prefer no wharf at all"*.[72]

But those who wanted a rail-served wharf were bitterly disappointed. A Petone councillor Southgate said "*Halley's Comet will be here again before the coal for Petone's gasworks is delivered at the Petone Wharf by 2000-ton steamers*".[73]

65 NZ Freelance, 12 Feb 1910

66 Evening Post, 13 Dec 1910, p7

67 Caretaker List of Duties, WHB, 'Petone Wharf, General Correspondence' 1935-75. WHB 6/30/13. ACO23:171:6/30/13.1 [D5], WCA

68 NZGR to Traffic Manager Wtn, 25 June 1907, 'Gear Meat Siding – Petone' R10733686, ADRM 17570, W2868, R-W1W2868 bx5 04/580 1890-1982, ANZ

69 Photo, David Johnson, Wellington Harbour, Wtn Maritime Museum Trust, 1996, p222

a) 70 *The Dominion*, 17 July 1909, p3

b) 71 *Auckland Star*, 29 Jan 1901, p4

72 *Evening Post*, 9 February 1915, p3

73 *NZ Freelance,* 18 June 1910, p22

Figure 18. The finished Petone Wharf from The Esplanade, 1909. Source: ATL 1/2-002541-F

2.8 The Boat Harbour

The only significant modification made to Petone Wharf was the boat harbour, but it had a very brief life. As a haven for small boats, the intention in 1914 was to:

> *. . . run a wall out at right angles from the large end of the wharf, about 600 ft. from low-water mark. The wall would extend out 300 ft., in an easterly direction, then turn inwards for 40ft. This would shut off from southerly winds an area of about five acres of water, with a depth of 14 feet or 15 feet under the protecting wall.*[74]

A plan of the boat harbour shows two lengths of wall, 200 ft and 300 ft.[75] Built by the Harbour Board, it was completed in 1915 but attracted much criticism, not the least because it did not shelter boats from the elements. Boat sheds had also been built on the foreshore nearby. The boat harbour was removed shortly thereafter.

2.9 The Wharf in Use

Petone Wharf was used mainly for the transfer of livestock, timber and general cargo. Boaties, swimmers and recreational fishers also enjoyed the amenity. One fisher landed a 100lb fish in 1916 and another three years later got an even bigger 'fish'. It was in fact a 4.5-ton beaked whale, which he had spotted in the harbour. He got his rifle, shot it and then with a mate rowed the mortally wounded beast in to the beach.[76]

Accidents occurred on the wharf, and it was the venue for some drownings, attempted suicides, and suicides. Teen Albert Monkhouse dived off it in January 1911 but into water too shallow and broke his spine, leading to his death. A youngster, Robert C Fitness, fell through a hole in floor of the old latrine in the shed in 1962 caused by removal of a floor plank, which led to protracted legal action and eventually a

74 *The Dominion*, 21 March 1914, p3

75 *'Sketch Plan of Staging to form Boat Harbour'*, 4ft:inch, WHB, Drawing Office 2176, 40/55, WCA

76 *NZ Freelance*, 29 October 1919

settlement of £148 2s paid to him.[77] In the 1970s two men were paralysed after diving from the wharf into shallow water. Signage was improved but accidents continued, and emergency services found accessing the wharf difficult when private cars blocked the gates.

Back in the 1910s, the Petone Navals continued to use their boat in the vicinity of the wharf and set off a submarine explosion about 250 yards east of the wharf one New Year's Day in connection with the Heretaunga Aquatic Sports Club.[78]

Recreational boaties used the wharf. The Heretaunga Boating Club ran boat races from it, as did the Petone Yacht & Motor Boat Association.

Lighting was added in August 1910, sitting 32 feet (9.7m) above the water at the seaward end.

The wharf was not immune from the industrial disruption caused by the 1913 waterfront dispute, in which waterside workers were in conflict with shipping companies (which were backed by the Government). In October *"the strike committee have the wharf picketed"* to prevent its use in unloading coal for Petone's gasworks.[79] The Council was accused of posting two men to watch the pickets, but this was denied.

During the Great War, people deemed 'enemy aliens' were interned on Matiu Somes Island. The island was serviced from the Petone Wharf and two internees, both notable swimmers, swam to the wharf from the Island trying to escape.[80] When the internment ended in December 1918, 321 Germans were brought to Petone Wharf from the island.[81] They boarded a special train which had been brought along the Gear Meat Company line close to the wharf. That line had also been used earlier to test fire NZ's only rail artillery – two 12-pounder guns mounted on wagons and intended for protecting Westport's coal-loading facilities.[82]

The Peace Celebrations in July 1919 included fireworks fired from Petone Wharf.[83]

77 '*Petone Wharf, General Correspondence'* 1935-75. WHB 6/30/13. ACO23:171:6/30/13.1 [D5], p104, WCA

78 *Evening Post*, 30 December 1908, p8

79 *NZ Times,* 29 Oct 1913, p8

80 *NZ Times,* 25 March 1915, p6

81 *Evening Post*, 14 Dec 1918, p7

82 Peter Cooke, *Defending NZ*, DNZ 2000, Vol 1, p183

83 *NZ Times*, 21 July 1919, p6

Figure 19. Aerial view of Petone and the Petone Wharf, 1930. Source: ATL 1/2-116645-F

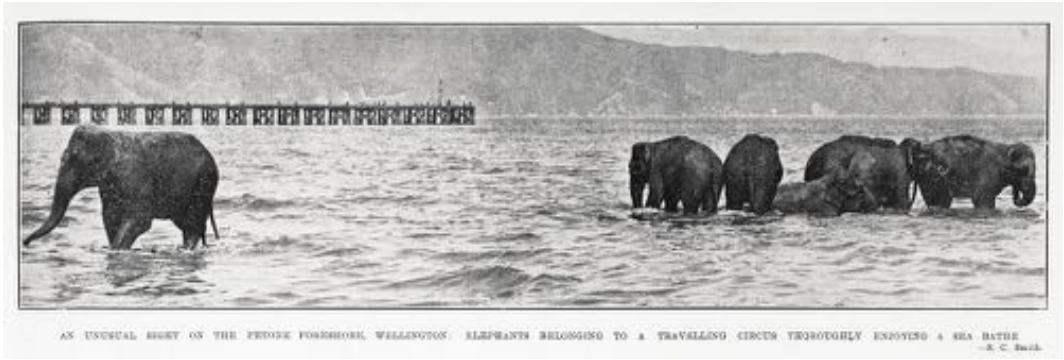


Figure 20. Elephants from a travelling circus at Petone Beach, 1931. Source: S. C. Smith Auckland Weekly News AWNS-19340221-37-1

After the war, with irregular use by shipping, Petone Wharf did not have its own staff. This changed in 1935 when a local man offered himself to WHB. FJ Brader lived nearby and could maintain the houses on the board's sections at the foot of the wharf, as well as monitor use on the wharf. The Harbour Board agreed and took him on from 9 September at £2 6s a week. His duties were: to note vessel arrivals and departures and limit loadings on the wharf; *"daily attendance at the wharf, keep it clean and tidy, and care for and protect the Board's property and plant thereon"*, including removing mussels from piles. The wharf telephone (in one of two sheds on the wharf) was connected to his cottage at 8 Victoria St, Petone. His mandate was extended to include Point Howard oil berth in 1940.[84]

During World War 2, Matiu Somes Island was again used for war-related purposes, which saw Petone wharf used for servicing. As well as the internment camp being re-established there, a degaussing range was built on which Wrens measured the

84 Caretaker List of Duties, WHB, *'Petone Wharf, General Correspondence'* 1935-75. WHB 6/30/13. ACO23:171:6/30/13.1 [D5], WCA

magnetic signature given off by steel ships and enabled those ships to adjust their signature to prevent it triggering magnetic mines.

Petone Wharf was closed to the public in 1943 *"owing to rearrangement of shipping in war years and the change in waterfront methods"*.[85] This however did not mean it lay idle. Much naval activity replaced the civilians. A return of 'Vessels berthed at Petone Wharf' showed its usefulness:[86]

> *April 1945, 'Navy Vessels almost every day'. Class of Cargo 'Navy Boys'. Remarks 'Military Secret'*
>
> *May to August 1945, [each month] 'usual Navy launches', 'Navy Boys', for 'Training'*
>
> *October 1945, 'taking gear away'*

A Naval Electronics School was established in 1942 or 43 in the boat club buildings, and its launches tied up alongside the wharf. As well as for patrolling, these launches would have worked a training loop laid off the beach parallel to the wharf, but extending a third the way to Matiu Somes Island. Ratings learnt on the training loop to identify vessels passing over it, before moving to the many such devices laid to defend Wellington and other harbours. This loop was lifted in 1946.[87]

The Navy League was an early post-war user, and requested davits be installed to lift and store two whalers (double ended rowing/sailing boats). These boats were used in naval cadet training, later by TS *Tamatoa* whose premises are adjacent to the wharf. Previously the cadets launched and retrieved boats on a skidway, but the *"skidway which was built many years ago for hauling cutters up the beach is in a bad state of repair"*.[88] The Royal NZ Navy also wanted its davits erected on the wharf in 1955, but this may not have been done. By the 1970s only one boat was raised on davits, but it was protected by a fence and locking gate (and was removed around 1980).[89]

In 1947 the Petone Amateur Swimming & Life Saving Club started swimming lessons from the wharf. This was because the polio (or infantile paralysis) epidemic had seen the McKenzie Baths in Udy Street closed temporarily.

85 *Evening Post*, 7 Sept 1951

86 *'Vessels berthed at Petone Wharf*', 'Petone Wharf, General Correspondence' 1935-75. WHB 6/30/13. ACO23:171:6/30/13.1 [D5], WCA

87 Peter Cooke, *Defending NZ*, 2000, p451

88 Cmdg Officer Wtn Navy League Sea Cadet Corps WW Olphert to GM WHB requested 4 Oct 1946 , *'Petone Wharf, General Correspondence'* 1935-75. WHB 6/30/13. ACO23:171:6/30/13.1 [D5], WCA

89 WHB, *'Petone Wharf'* 1975-85. WHB 6/30/13. ACO23:171:6/30/13.2 [D5], WCA. P102

Figure 21. The Petone Foreshore and Wharf viewed from Korokoro, 1950. Source: Te Papa A.009494

Shipping had not returned to the wharf in bulk when in 1951 there was a plan to re-use the *"long but little-used wharf"* for wheat exports. Silos were planned for the land owned by the WHB at the foot of the wharf but this too did not happen.[90] The NZ Shipowners Federation asked the WHB in 1953 if the wharf was safe to use. The board engineer, DSG Marchbanks, said the wharf had been maintained and was good for use that did not exceed the weight limits imposed on it.[91] The Harbourmaster said vessels up to 340ft in length and with a maximum draught of 14ft 6in aft and 12ft forward may berth at the wharf. They could tie up overnight so long as the crew remained on board to shift the vessel if the weather deteriorated (pre-war the Union Steam Ship Company paid £54 8s 4d for repairs to the wharf caused by the anchor of its 1060-ton vessel MV *Karu* while alongside during a northerly gale[92]). The 1950s saw a modest increase in coastal shipping using the wharf. But this was not enough to warrant a telephone being re-established in the wharf hut (for Wharfmaster R Fitzgerald), as requested by the Merchant Service Guild in 1955 (the WHB would do it if a shipping company would pay for it).

90 *Evening Post*, 7 Sept 1951

91 Acting Sec NZ Shipowners Fed, to Sec WHB, 26 Aug 1953, and HM to Sec WHB 3 Sept 1953, *'Petone Wharf, General Correspondence*' 1935-75. WHB 6/30/13. ACO23:171:6/30/13.1 [D5], WCA

92 *'"Karu" – Damage to Wharf at Petone*, 8.2.1937', WHB file HH 2, AF092:109:3687, B103, WCA

Figure 22. View over Petone with the Petone Wharf in the background, 1954. Source: Te Papa A.007780

Maintenance continued to draw harbour board expenses. In 1955 the decking was poor enough to warrant replacing. The WHB proposed redecking in concrete at a cost of £7000. Specifications were to concrete the approach, 15ft wide and 1330ft long, and the wharf proper 33ft wide and 365 ft long. WHB called for tenders in 1959 for redecking in concrete, which started in the 1960/61.[93] Recoppering 50 piles and braces was contracted out in 1961-62.[94]

Vandalism of the wharf and its associated structures was frequent, and became a notable problem for the WHB in the 1960s. Signs and enhanced lighting did not stop it. The Board considered engaging honorary warders but found it did not have the authority to do so. The caretaker (now R. Blair, Wharfinger) could not stop it so the wharf was closed to the public on 1 July 1962. The board was *"loathe to take action which would deprive many people of a great deal of pleasure"*.[95] An outcry from legitimate users led to the wharf being reopened on 1 October.

The Department of Agriculture erected a Maximum Security Quarantine Station on Matiu Somes Island (for animals) in 1968. Its launch *Matiu* used the wharf until told not to by the Marine Department which claimed the wharf was unsafe. Repairs were carried out and the launch restarted operations on 21 Oct 1968. This showed that landing facilities for small boats were needed. So in 1969, at the request of the Department of Agriculture, the WHB constructed landing facilities for small craft on the east side of Petone Wharf. These are those still at the wharf.[96] The need to keep quarantined animals away from the public meant the Department was able to exclude the public from the wharf when transferring stock to the island from 1973.

By the 1970s commercial use of the wharf had tailed off. After the *Portland* stopped calling, only the *Te Aroha* regularly called there to load logs and calcinated lime, making 70 to 100 visits a year. A temporary watchman attended each visit as there was no longer a permanent custodian for the wharf.

93 *'Specifications for Contract No.302, Petone Wharf Redecking'*. WHB Tenders closed 17 Feb 1960. AC016:7:302, WCA. Kleinjan Bros Ltd did this work in a contract signed 4 March 1960, for £4556 2s.

94 *'Petone Wharf, General Correspondence'* 1935-75. WHB 6/30/13. ACO23:171:6/30/13.1 [D5], WCA

95 *'Petone Wharf, General Correspondence*' 1935-75. WHB 6/30/13. ACO23:171:6/30/13.1 [D5], WCA, p62

96 WHB to Sec Marine Dept 13 March 1969. WHB tracing No.3292 now numbered MD13389 – NOT ON FILE *'Harbours - Wellington - Petone Wharf'* (R23855312) 1969 AANS 7457 W5883, bx10, 43/17/9/20, ANZ; Plan 'Proposed landing jetty - Petone Wharf for Matiu – 1969', WHB 3292, Jan 1969

The Petone based army unit, the 6th Independent Field Squadron RNZE, used Petone wharf for diving training from 1971. Such use was approved by WHB so long as WHB was indemnified for any liability from accidents and the Diver's Flag was flown.

C&A Odlin Timber & Hardware Co Ltd withdrew from agreement with NZ Railways on 21 August 1980 because of *"excessive charge levied for the hire of a tractor by Gear Meat Company Limited to shift wagons to and from"*.[97] Another user, WH & WHO Wills, stopped tobacco exports over the wharf at about this time.

The Gear Meat Company also closed its Petone operation at this time, and this ended major industrial use of the wharf. The company terminated its private siding agreement with NZ Railways on 11 Aug 1985.[98]

The wharf continued to service Matiu Soames Quartine Station until 1995.

Petone Wharf was finally closed to the public, as a safety precaution, in January 2021.

2.10 Conclusion

By 1983 the Harbour Board said the wharf *"is of no value at all to this department."*[99] Its commercial value to shipping had been eroded by the arrival of roll-on roll-off ferries and the fact that *"appropriate facilities exist[ed] 15 minutes trucking time away"*, in Wellington.[100] Developing the Korokoro Bight for harbour-side usage was investigated.

But the main social memory of the wharf is its use by ordinary people; fishing, swimming or just walking its length, taking in sea airs. To quote a cheery 'what's on' piece about things to do in Petone:

> *"It's at risk of sea-worms and earthquakes, but locals love their wharf. You can take a walk, a swim, or fish off the end."*[101]

Petone Borough Council and the Harbour Board discussed the Borough taking over the wharf or its eventual demolition, though the Borough said it could afford neither option. These discussions ended when both organisations were disestablished in the 1989 local government reforms, which vested the wharf in the new Hutt City Council as at 19 December 1988.[102]

Many of the issues were shared with other harbour-side boroughs, Eastbourne particularly, and other solitary wharves are dotted around harbour, notably at Days Bay.

97 '*Gear Meat Coy's Private Railway Siding'*, 1970-1985 R16117877, AAEB, W3293, bx12, item 2967 pt1, ANZ

98 ibid

99 WHB, '*Petone Wharf*' 1975-85. WHB 6/30/13. ACO23:171:6/30/13.2 [D5], WCA

100 Chief Engineer to Sec WHB, 2/4/82, WHB, *'Petone Wharf*' 1975-85. WHB 6/30/13. ACO23:171:6/30/13.2 [D5], WCA

101 *NZ Herald*, 3 January 2020, pA6

102 Local Govt Amendment Act 1989

3 Physical Description

3.1 Original Information

We have:

- The original drawings titled 'Wellington Harbour Board- Proposed New Wharf at Petone'. This consist of 4 hand drawn watercolour sheets stamped MD3601, and the cover sheet is signed by William Ferguson, the Engineer to the Board on 24th
- The 'Wellington Harbour Board Contract No. 146 Petone Wharf' dated 26th July 1907 between the Wellington Harbour Board and Donald McLean and Co. This contains the General Conditions of Contract, as well as the specification.
- The 'Specification for Contract No. 302 Petone Wharf Redecking' dated 30th July 1960 between the Harbour Board and Kleinjan Bros. Ltd. This contains the General Conditions of Contract, as well as the specification.

3.2 Site

The Petone Wharf is located towards the western end of Petone Beach on The Esplanade, opposite the intersection with Victoria Street. The wharf is at the same level as, and accessible directly from, The Esplanade and sits adjacent to a carpark and path and cycleway which runs the length of the foreshore.

Figure 23. The entrance to Petone Wharf as seen from the intersection of Victoria Street in 2021. Source: Google Street View, June 2021, accessed November 2021

The wharf crosses over the beach, and at low tide the underside of the wharf is accessible from the beach and is able to be walked under.

The Esplanade is a major four lane arterial road, and is a dominant feature of the Petone foreshore, separating the suburb of Petone from the beach. Along its northern inland side, The Esplanade is densely built, with a concentration of large commercial and industrial buildings at the western end and residential houses to the east from Nelson St onwards.

There are few significant built structures to the southern seaward side of The Esplanade, and other than the Petone Wharf consist of: the Wellington Water Ski Club to the far west; the Tamatoa Sea Cadets building, the Petone Rowing Club, and the Heretaunga Boating Club near the wharf; and the Petone Settlers Museum to the east.

The relatively central position of the Petone Wharf on The Esplanade and its considerable length means the Petone Wharf is visible for the entire length of The Esplanade from both the east and west and is a dominant visual feature from on the beach. The Petone Wharf is also visible on the approach to Petone from Wellington across the harbour on State Highway 2.

Figure 24. View of Petone Wharf from The Esplanade, approach from the east. Source Google: Street View September 2020, accessed November 2021

Figure 25. View of Petone Wharf from The Esplanade, approach from the west. Source: Google Street View, December 2021, accessed November 2021

3.3 Architectural

3.3.1 Overall

The Petone Wharf is a long, thin wharf extending south from the beach into Wellington Harbour. The Petone Wharf is 1290' (393m) long and consists of 64 x 20' (6097mm) bays, divided by 66 'bents' of cross-braced timber piles. The wharf is set at an angle of 70 degrees to the beach.

The wharf can be divided into three distinct sections of varying widths and constructions: **the entrance, the approach, and the head.**

In long section, the head is flat, while the entry and approach fall at 1:166 to the shore. In cross section, there is a typical 2" cross fall across the approach, and a 6" fall across the head, all sloping down to the west.

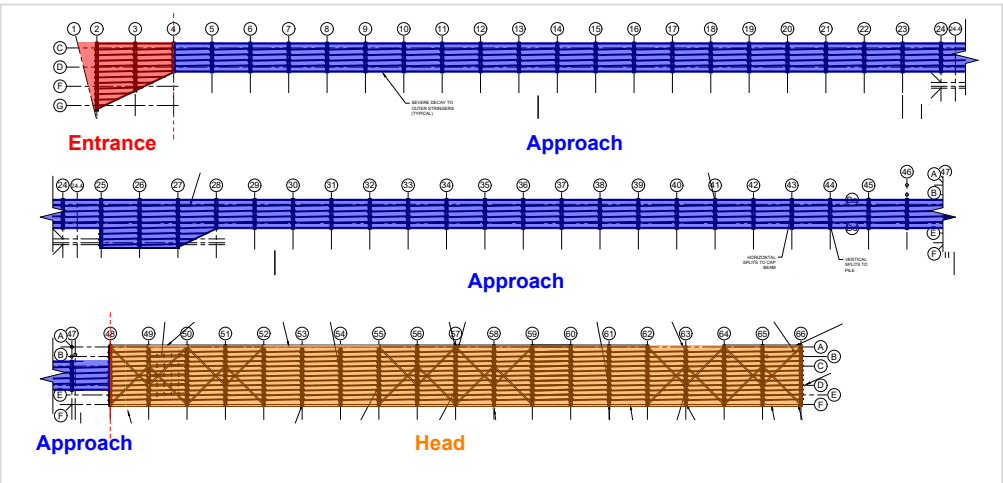


Figure 26. Plan of the Petone Wharf showing the divisions of the Entrance, Approach, and Head

3.3.2 Terminology

Below is a definition of terms used throughout this conservation plan to describe the key structural elements of the Petone Wharf.

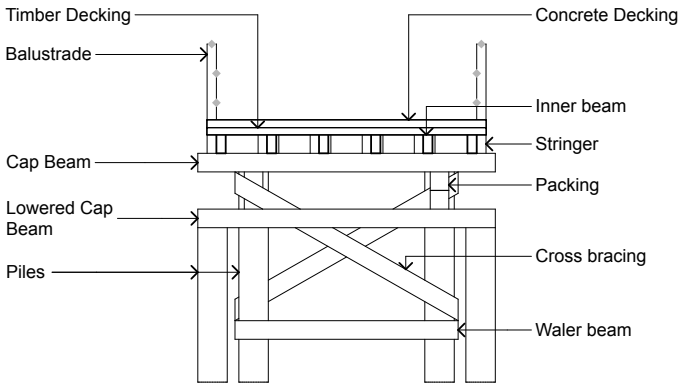


Figure 27. Atypical bent from the approach portion of the wharf with key structural elements labelled. A typical bent is the same without the additional piles and lowered cap beam.

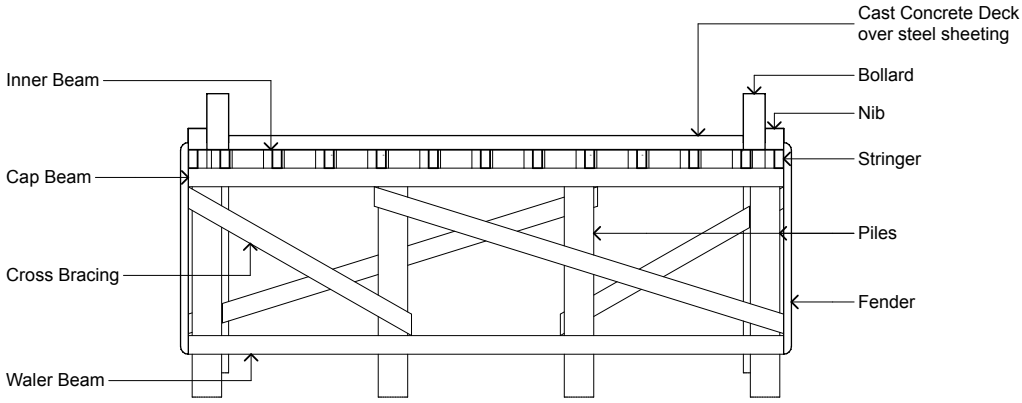


Figure 28. Typical bent from the head portion of the wharf as originally built with key structural elements labelled.

Bent: Trestle structure supporting the wharf, made up of piles, cross-bracing, cap and waler beams. There are typically two piles per bent in the approach, and 6 in the wharf head.

Bollard: 14” x 14” square vertical timber post protruding through wharf decking, intended for the mooring of vessels.

Pile: Vertical timber posts driven into the seabed to support the wharf. At the top of the piles they are at least 16” diameter at the approach and 18” diameter at the head.

Cap beams: Pairs of horizontal timber 12”x6” beams fixed at the top of the piles, running between the piles, across the bent. There are two cap beams per bent fixed to **each side (front and rear) of the piles.**

Waler beams: Similar to the cap beam, but fixed at a level so the underside of the beam is 6 inches above the low tide line. Horizontal timber 12”x6” beams fixed to the piles, running between the piles, across the bent. There are two waler beams per bent fixed to each side (front and rear) of the piles. The original construction drawings show walers to all bents except 1 to 13 at the start of the wharf, this differs from the construction specification but is consistent with site observations.

Stringers: Timber beams spanning between the cap beams, in the long direction of the wharf. These are 12”x6” with the exception of the outer stringers on the wharf head which are 12”x12”.

The inner stringers are orientated on a slight angle and overlap at each bent where they are bolted together.

Cross bracing: 12”x6” timber braces running diagonally between the waler and cap beams and fixed to piles at the top and head of each member. Cross braces are also fixed where they cross-over each other with timber packing between members. As per the original specification, bents 1 to 51 had no cross bracing, however the survey completed by Calibre shows this may be bents 1 to 24.

Fenders: Vertical curved timber posts fixed at the ends of each bent formed from 15”x16” timber. Fenders extend from 12” below low water level to 4” below the kerb, and prevent boats being damaged by bumping the wharf structure when tied to bollards. At the outer corners of the wharf are special curved fenders.

3.3.3 The Entrance

Figure 29. On the entrance looking north towards The Esplanade, January 2022

The entrance of the wharf consists of the first three bays that are directly accessible from The Esplanade. The entrance portion of the wharf is splayed in plan, with a width of approximately 10 metres at the widest end at The Esplanade, narrowing to 4.6 metres where it connects with the approach section of the wharf. The street edge of the wharf follows the angle of The Esplanade and so is not exactly perpendicular to the wharf.

The entrance is the lowest portion of the wharf, slightly elevated above beach level, sitting on piles within the sand dunes.

Figure 30. The entrance as seen from The Esplanade, January 2022

The entrance has a white painted timber picket-style fence, supported on a metal frame which is bolted into the wharf decking. This fence is relatively low, approximately 4' (1.2m) on either side of the wharf, but gradually increases in height as it approaches the street, to match the approximate 8' (2.4m) height of the gate portion at the street edge. Along the street edge are four large stop-chamfered posts, which are possibly original, however are not in original configuration. These posts are arranged in an uneven distribution to suit the recently removed non-original vehicle and pedestrian access gates. There is a small portion of picket fence remaining at the west of the entrance.

3.3.4 The Approach

The approach of the wharf consists of bays 4 to 46 and is the long, narrow portion of the wharf at 15' (4.6m) wide. On the west side of the approach, between bays 31 to 33 is a 10' (3.1m) wide cart refuge which protrudes from the side of the wharf. The cart refuge is asymmetrical in plan, with the southern end tapering into the wharf, while the northern end is perpendicular to the wharf structure.

The approach is elevated above the beach, spanning the inter-tidal zone. During low tide when the wharf can be walked under, the supporting structure and underside of the approach portion of the wharf can be accessed.

The end 'head' portion of the wharf sits higher than the approach, and there is a evident ramp on the last four bays of the approach. This differs to the original construction drawings which show a consistent 1:166 slope along the approach.

The approach is bounded by a metal and timber balustrade which is bolted into the wharf decking. This balustrade also encloses the cart refuge to the west of the wharf.

Figure 31. The approach looking north towards Petone.

Figure 32. The approach looking south towards Wellington.

Figure 33. The structure below the approach as seen from the cart refuge

Figure 34. Habitual users of the rail on the approach.

Figure 35. A representative bay of the approach portion of the wharf as built in 1908. Original fabric is grey.

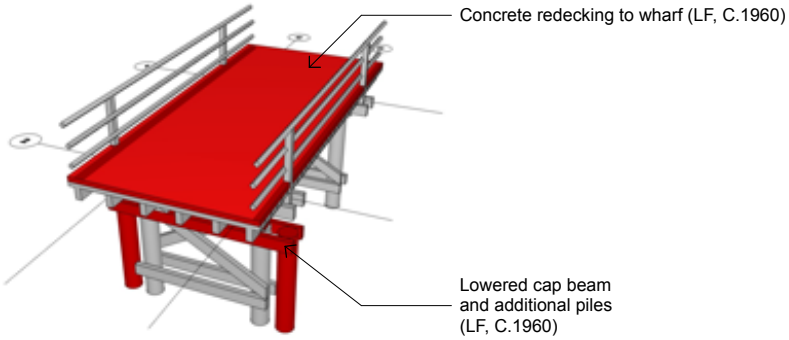


Figure 36. A representative bay of the approach portion of the wharf C. 1960-1990 with the later fabric highlighted red. This includes the offset piles, and concrete decking.

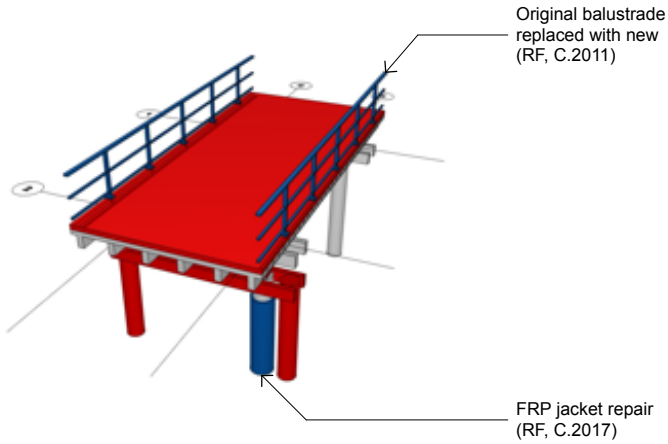


Figure 37. A representative bay of the approach portion of the wharf C. 1991-2021 with the recent fabric highlighted blue. This includes the FRP jacket, and new balustrade.

3.3.5 The Head

The head is the end portion of the wharf, consisting of the last 19 bays of the wharf – bay 47 to 66. The head is the widest portion of the wharf at 10.1 m wide and sits higher than the rest of the wharf.

The head is constructed from ironbark and jarrah timber cross-braced piles and beams. The original timber decking was removed in 1960 and replaced with a reinforced concrete deck cast on steel sheeting.

Off the east side of the wharf, at the north end of the head portion of the wharf, is a recent, non-original, steel mesh access platform which steps down from the head at two different levels.

The head has a cast concrete kerb around the perimeter, except for a small area of timber at the north-east corner. The timber kerb is not original, but is likely made from recycled original material.

Several original painted timber bollards remain around the perimeter of the wharf, these are generally in poor condition.

At the northern end of the head, opposite the access platform is a small upstand. A building was demolished in this location in 2017 following damage in the Kaikōura earthquake. The removed building had replaced an earlier office in the same location. The concrete upstand is part of the concrete deck added in the 1960's. The building removed in 2017 differed from the structure originally built on the wharf.

There are two metal ladders located at bents 58 and 66. The original drawings note a ladder at bent 66, but the ladder currently in this location doesn't appear to match the original details, and so is likely not original. It is unknown whether the ladder at bent 58 is original, or when this was installed. The ladder at bent 66 is in very poor condition, particularly below the high-water line.

On the head are several non-original bench seats, rubbish bins, and fishing rod holders fixed to the concrete topping slab.

Figure 38. The head looking south towards Wellington

Figure 39. A fishing rod holder on a corner of the head

Figure 40. Bench seats on the head. Source: Calibre Consulting Ltd.

Figure 41. An original timber bollard on the head

Figure 42. Remaining foundations on the wharf head. Source: Calibre Consulting Ltd.

Figure 43. Timber kerbing at the north-east corner of the head

The below are sketches showing the above low tide construction of the wharf.

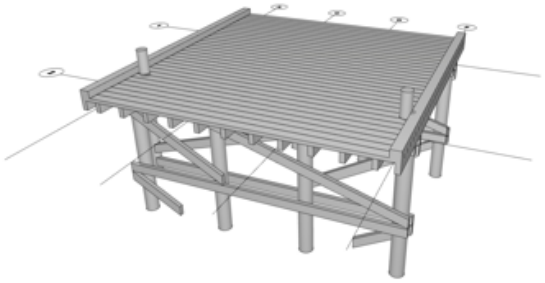


Figure 44. A representative bay of the head portion of the wharf as built in 1908. Original fabric is shown grey.

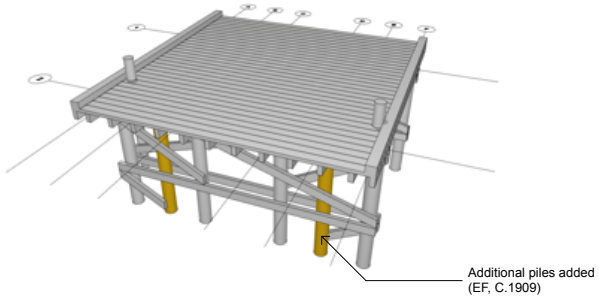


Figure 45. A representative bay of the head portion of the wharf C. 1908-1959 with the early fabric shown in yellow

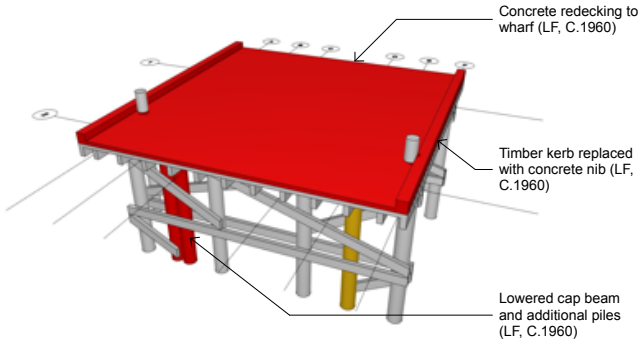


Figure 46. A representative bay of the head portion of the wharf C. 1960-1990 with the later fabric highlighted red

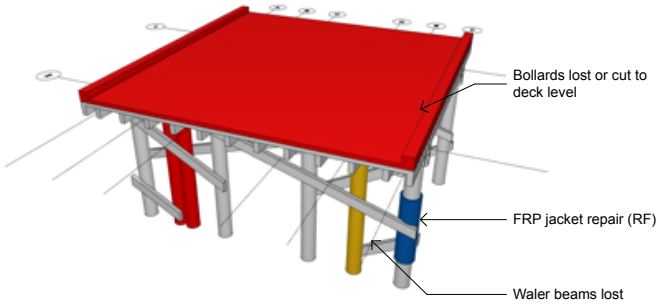


Figure 47. A representative bay of the head portion of the wharf C. 1991-2021 with the recent fabric highlighted blue

3.4 Modifications

The Petone Wharf retains most of the original fabric from 1908 with the notable exception of the decking and handrails. The form of the wharf remains intact and as

per the original drawings. Ancillary items such as the building and boat stairs have been replaced or removed but most of the piles, bracing, caps and stringers remain.

It is unclear when many of the structural modifications were made – these were possibly done as part of regular maintenance, or on an 'as required' basis, however some more significant works including re-decking the wharf were undertaken in 1960.

A summary of modifications to the wharf is below:

3.4.1 Off-grid timber posts below the head

Below the head portion of the wharf two rows of mid-span piles are present, which are not documented on the original drawings. These match the original construction in appearance, and were added in 1909-1910 in response to the wharf slumping.

3.4.2 Entry Gate

The original entry gates along The Esplanade consisted of a wide vehicle gate in the middle, with two smaller pedestrian gates on either side of the vehicle entry. The gates were divided by eight tall decorative posts arranged symmetrically across the entrance. The top datum of the fence was flat, apart from the vehicle entry gate which was scalloped.

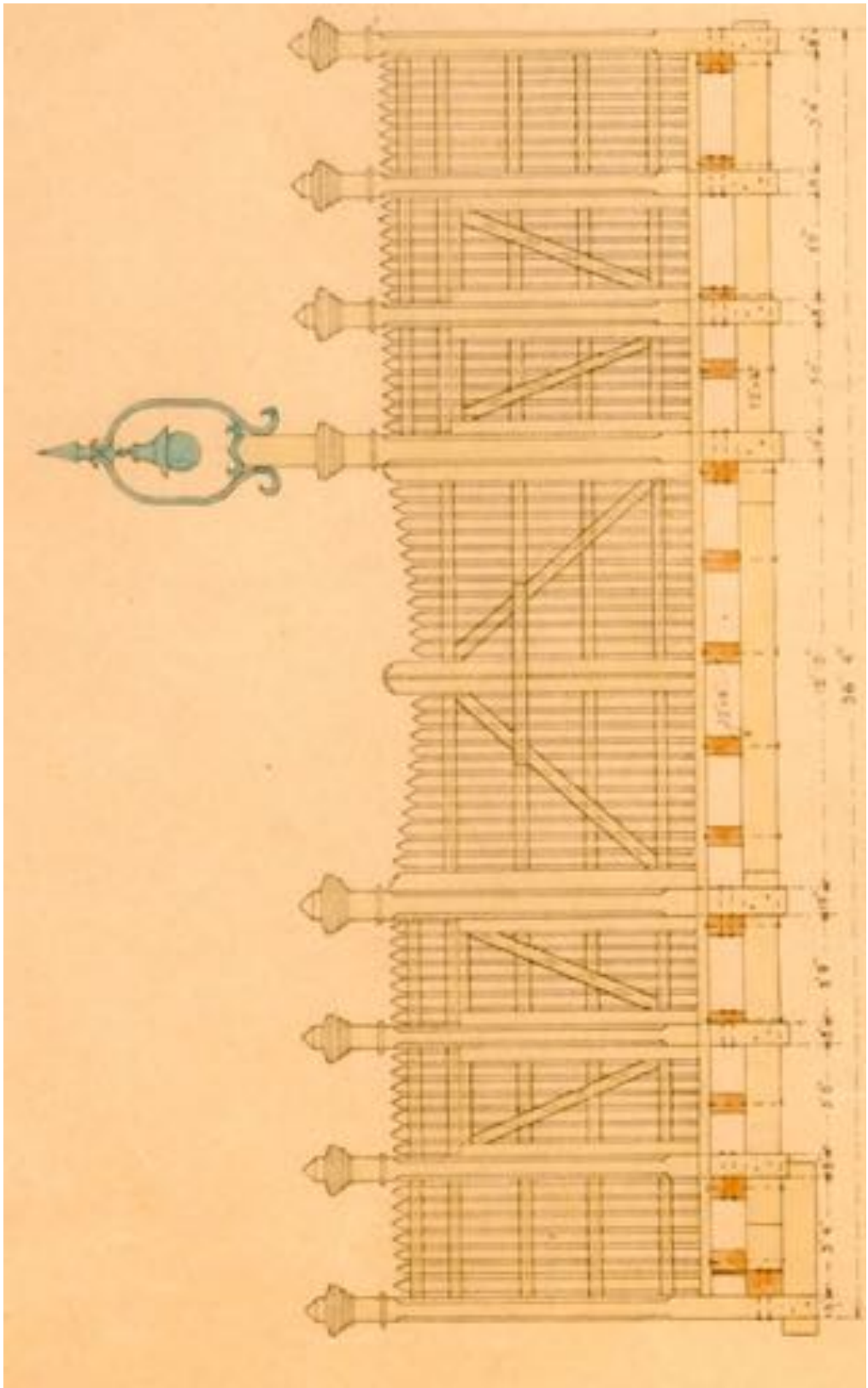


Figure 48. Extract from original drawings showing the front gates as designed. The gates are seen from the wharf side. Source William Fergusson, Petone Wharf Contract No. 146, 21 May 1907

As seen from The Esplanade, the post to the left of the vehicle entry was slightly taller than the other posts to support a decorative metal light. It is unclear whether this light was ever actually installed.

Figure 49. Detail view of The Petone Wharf, 1909, showing the original entrance gates and side fence down the wharf. This is consistent with the drawing, but the light is missing from the tallest post. Source: ATL 1/2-002541-F

The most recent entry gate, present since at least the 1960's until December 2021 was similar in design to the original, but had been extensively modified or completely replaced. It was still 2.5 metres tall, but the configuration of gates and posts had changed. The entry was asymmetrical with a wide vehicle entry to the east and two smaller pedestrian gates to the west.

The gates were divided by six tall posts. These posts were of a similar size and design to the posts shown in the original drawings, but with ornamentation removed. The vehicle entry gate was no longer scalloped and matched the height of the rest of the entrance fence.

The pedestrian gates appear to have matched the originals in terms of dimensions and design, apart from the height of the bottom rail. It is unclear whether the rest of the fence or vehicle gates were constructed from original members, or the original gates were re-used.

A cut-out metal sign reading 'Petone Wharf' was present over the vehicle entrance and a solid sign board sat above the western gate and fence. This sign board was possibly installed in 2006 when the East-West ferry started running to Petone Wharf.

Figure 50. The Petone Wharf entrance, 1960's. Source: Unknown

Figure 51. The Petone Wharf entrance in November 2021. Source: Calibre Consulting Ltd.

In December 2021 the vehicle and pedestrian entry gates, signs, two posts, and much of the fence along The Esplanade were removed due to the discovery of severe rot below ground-level in the posts. As of January 2022, only the two outer-most posts, two central posts, and a portion of fencing remain of the entry gates. The two central posts appear to be original, with stop chamfers and a shaped top, while the two outer-most posts appear more recent and are constructed of a rougher timber with less detailing.

Figure 52. The Petone Wharf entrance, January 2022, with gates, fencing, and two posts removed

Figure 53. Possible original central post, note stop chamfer detail.

Figure 54. Likely non-original outer post, note rough timber

3.4.3 Picket Fencing

As detailed on the original drawings, and visible in photos shortly after construction, the original picket fences returned for a considerable distance down the sides of the wharf – for 12x 20-foot bays. This fence was a consistent height of approximately 6" (1.8m) for the length of the fences. The pickets were supported on the timber balustrades. It appears the original picket fences down the wharf were in place until at least 1990.

Figure 55. The Petone Wharf, 1909, showing the original entrance gates and side fence down the wharf. Source: ATL 1/2-002541-F

Figure 56. *The Petone Wharf, 1990, Wellington Anniversary Day re-enactment of settlers arriving. Note: it appears the original side fence still in place. Source: Memelink, Alfred, Petone Settlers Museum < https://petonesettlers.org.nz/2014/01/17/happy-anniversary-wellington/amp/>*

Figure 57. The Petone Wharf 2002 with the balustrade original structure. Note the arris rails. Source: Whaka, "Storm Wellington Harbour", 2002, Photograph. Accessed 09-11-2021 https://commons.wikimedia.org/wiki/File:Storm_Wellington_Harbour.JPG?fbclid=IwAR0KGchDL-7VH9s-ucMYzhx5WAizfXo5Jlg1dxJDe_n3NJiOHmcR9Bzbe94

Figure 58. The timber balustrade and fence, possibly original c.2011. Source: Cochran and Murray Conservation Architects, Historic Heritage of the Wellington Region

In the 1990's, and again around 2016, the pickets were replaced in a slightly different configuration, which remains today. The pickets only extend approximately 20 metres down the sides of the wharf and varied in height. The pickets are approximately 2.5m at the entrance, matching the height of the gates on The Espalanade, and gradually decrease to approximately 1.2m in height for the last 7 metres along each side of the wharf. It is not known if the pickets are the originals reused, or new fabric. Until approximately 2012 the pickets were supported on the timber balustrade when this was replaced with the current steel and timber design.

Figure 59. The current fence as seen from outside the wharf

Figure 60. The current fence as viewed from on the wharf. Note the palings decrease in height from The Esplanade in the first few bays.

Figure 61. The current fence palings. These are of the same dimensions (not height) of the original, but it is unclear if they are original

Figure 62. The current fence structure with metal stanchions and timber horizontals to match the current balustrade

3.4.4 Balustrade

The original balustrade had horizontal base, mid, and top rails constructed from arris cut 4”x4” timber rails set on the diagonal between 6”x6” posts. The drawings show it as 4’6” (1.370m) high. A timber balustrade – likely the original – was in place until at least 2012, after which it was replaced. horizontal timber rails made by arris cutting a 4”x4” timber and setting it on the diagonal between 6”x6” posts.

The current balustrade which runs down either side of the approach portion of the wharf is constructed from galvanised steel posts with timber base, mid, and top rails. The balustrade is bolt-fixed into the concrete decking at its base.

There was no timber kerbing on the entry or approach.

Figure 63. Current metal and timber balustrade over slumped portion of the approach. Source: Calibre Consulting Ltd.

Figure 64. Current metal and timber balustrade, 2021

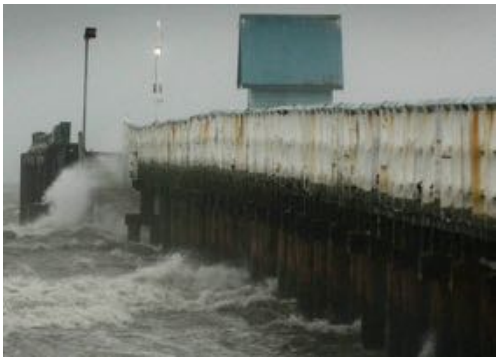


Figure 65. Original balustrade. Date unknown, Source: Phil Reid, Stuff, Jan 23, 2021." Repair or Demolish: 'Call for Honest Debate on Future of Petone Wharf".

Figure 66. The handrail as of 2012 with multiple repairs. The toprail and post are as per the original specification, however the base and mid rails may have been replaced. Source: Calibre Consulting Ltd.

3.4.5 Concrete re-decking

As part of the 1960 work a concrete topping slab was added to the entire wharf. On the entry and approach portions of the wharf, the concrete deck was cast directly onto the timber decking. On the head, the decking was removed, and a reinforced concrete deck was cast over flat steel sheeting which sits on the sub-structure. At some point an asphalt topping was laid over the entrance and approach portions of the wharf. This asphalt does not extend to either side of the wharf, with a border left at each edge, so the balustrade is bolted directly to the concrete decking.

In 2018 on the approach two large portions of the concrete decking and asphalt were removed, exposing the original timber decking. These have since been infilled with a lighter concrete and so are identifiable.

Figure 67. Test portion of concrete decking removed showing original decking, 2018. Source: Google Street View, December 2021

Figure 68. Concrete and asphalt decking on the approach of the wharf, 2021

Figure 69. The concrete decking on the wharf head. Source: Calibre Consulting Ltd.

Figure 70. Side view of the concrete decking on the approach over the original timber decking. Source: Calibre Consulting Ltd

Figure 71. The timber decking below the concrete topping on the approach exposed during a test. Source: Calibre Consulting Ltd.

Figure 72. The edge of the concrete wharf deck on the entrance above the sand dunes. Source: Calibre Consulting Ltd.

3.4.6 Removal of stairs

The wharf originally included two timber staircases descending to water level. These were located on the western side of the wharf at the cart refuge, and on the eastern side of the wharf at the north end of the head in the location of the current access platform. Both stairs have been removed from the wharf. It is unclear when the stair from the head was removed, but the stair from the cart refuge was removed in approximately 2010. In 2018 the piles from the cart refuge stair were cut below the seabed to prevent them being dangerous to shipping or other wharf users.

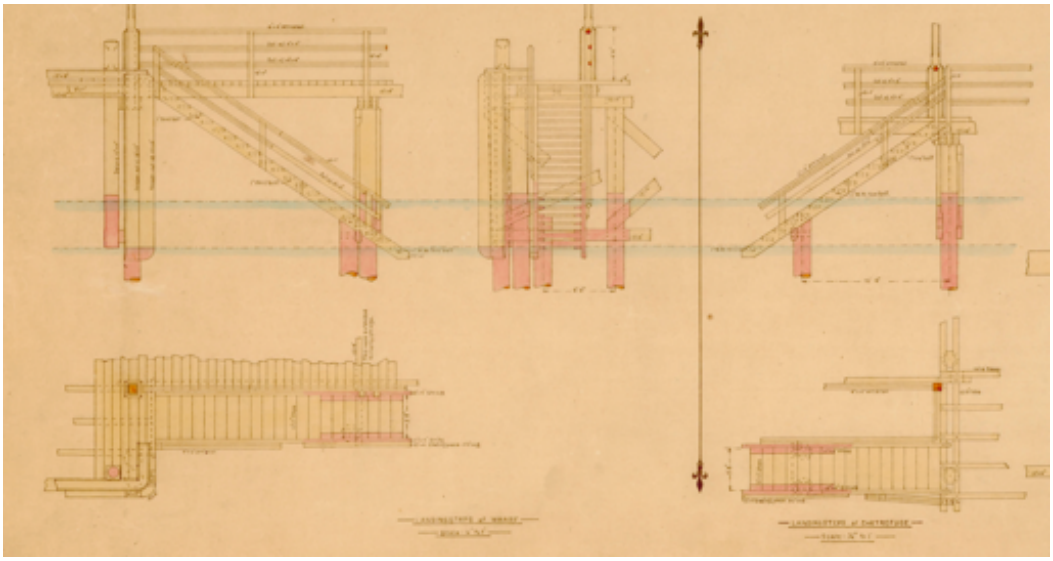


Figure 73. The original 1907 drawings of the stairs to the head (left) and cart refuge (right). Source: William Fergusson, Petone Wharf Contract No. 146, 21 May 1907

Figure 74. View of the cart refuge with stairs present, 2009. Source: Calibre Consulting Ltd., 2009

Figure 75. The stairs from the cart refuge, 2009. Source: Calibre Consulting Ltd., 2009

3.4.7 Removal of office building(s)

Until 2017 there was a small office building located at the beginning of the head on the western side of the wharf. Since construction there have been at least four iterations of this office building.

The 1907 drawings show a timber weatherboard building, with a gable roof running parallel to the wharf. This office building had windows on all four sides – a single sash window to the east and west, and a double sash window to the north and south. There was a single timber door onto the wharf from east face of the building. The roof was drained directly to the wharf and harbour via two symmetrical downpipes at the southern end of the building. The office building was painted a contrasting colour-scheme with light weatherboards and dark trim. Until at least 1909 an office building constructed as per the original drawings was present on the wharf.

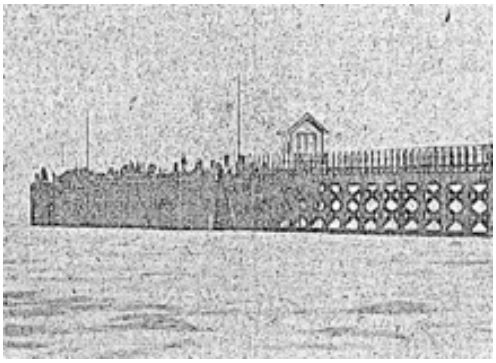
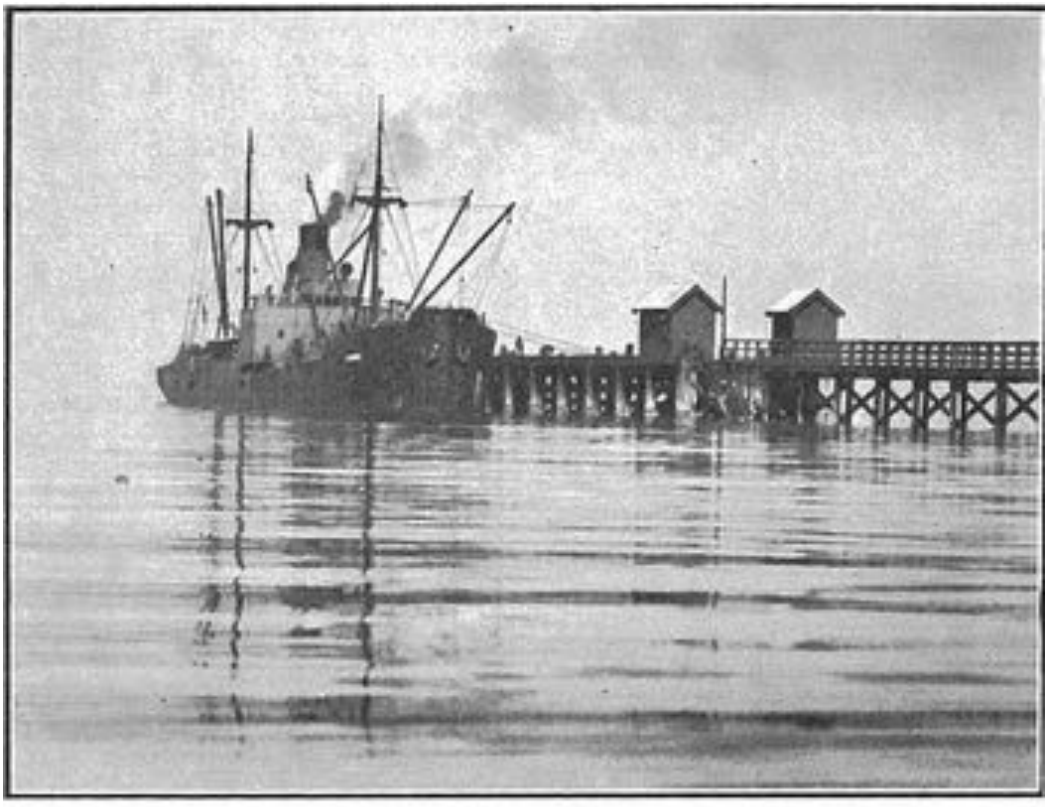


Figure 76. The Petone Wharf 1909. Source: Dominion, Volume 2, Issue 486, 20 April 1909, Page 6

Figure 77. Original Drawing of the Office at Petone Wharf. Source William Fergusson, Petone Wharf Contract No. 146, 21 May 1907

At some point soon after construction, a second office building was built directly opposite the first, on the east side of the wharf. This may also be the time much of the joinery and detailing appears to have been removed from the original building. The second building appears to have matched the design of the original. The 1953 painting specification refers to the two buildings as the 'office building' and the 'mess building'. The original drawings refer to the documented western building as the 'office building', so it is likely the second building was the 'mess building'.



THE WHARF, PETONE.

Figure 78. The Petone Wharf showing two office buildings, undated photo. This appears to show the original documented building to the west (right), and the additional building of the same general form to the east (left). Note that there are no visible windows on the western building . Source: A. Barnett, "Petone Wharf", Petone's First 100 Years, 1940, LT. Watkins Ltd. Accessed 09-11-2021 <https://library.huttcity.mebooks.co.nz/text/Petone100/t1-body-d55.html>

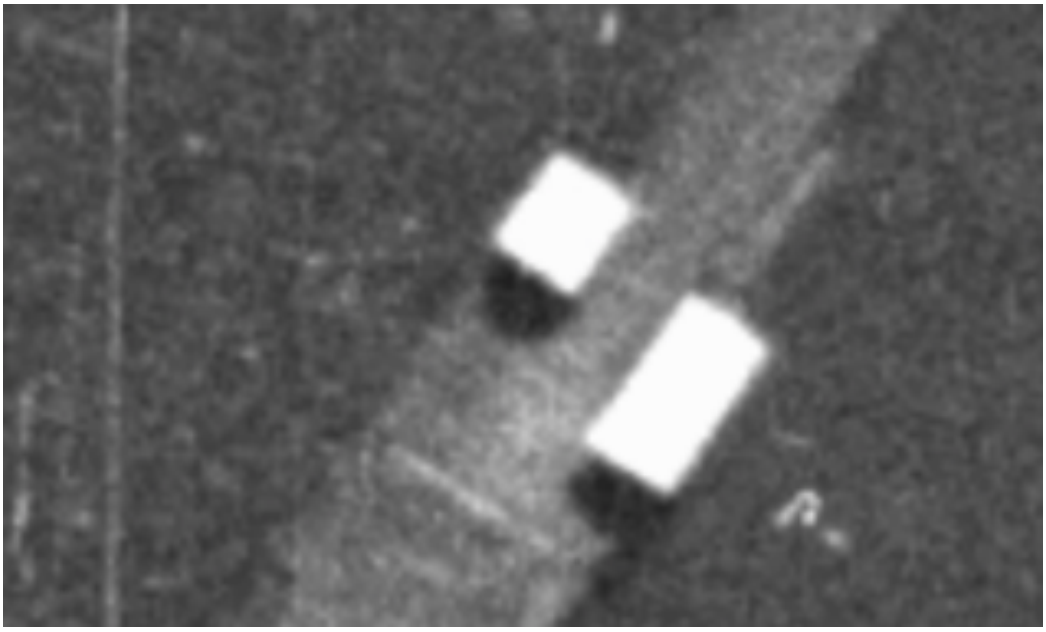


Figure 79. 1941 aerial view of the wharf buildings, showing what is likely the original wharf office to the west (left) and the longer mess building to the east (right). Source: Hutt City Council Historic Aerials

By 1974 both office buildings had again been extensively modified or replaced with new weatherboard buildings. This likely occurred in 1960 with the installation of the concrete slab and removal of decking from the head, which would have required the removal of both buildings. The new design had a monopitch roof and was longer in plan. The entry door on the western building was still located in the same position. It is possible some original fabric, such as window joinery was reused in the new buildings. These two buildings were present on the wharf at least until 1989.

Figure 80. *The Petone Wharf, 1974, showing two modified office buildings. Source: ATL AW-1058*

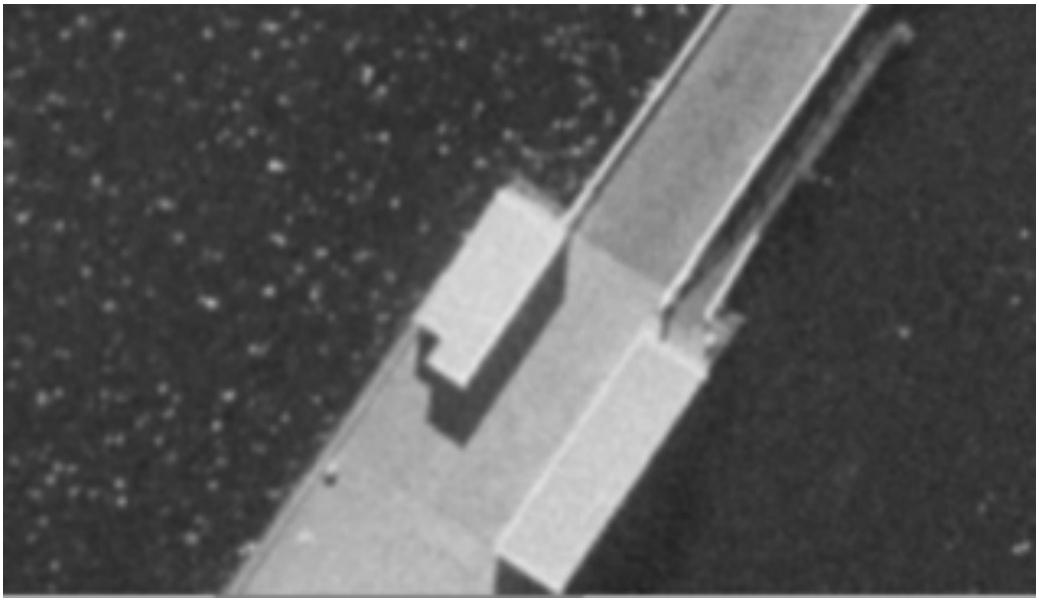


Figure 81. 1977 aerial view of the wharf buildings. Both buildings are longer in plan and the west (left) building has a small extension to the north. Source: Hutt City Council Historic Aerials

Figure 82. The Petone Wharf, 1982, showing the eastern modified office buildings. Source: ATL EP/1982/0270/30A

Figure 83. The Petone Wharf, 1989, looking towards Wellington, showing both modified buildings. The north-facing window appears to match that of the original building in dimensions and style. Source: Ans Westra, Petone Wharf, 1989. Accessed 13-01-2022 <https://issuu.com/capitalmag/docs/capital_46_-_online_version/34>

By 1990 the eastern office building had been removed, and the western building extensively modified again. The building now had a steep gable roof running perpendicular to the wharf, and no windows. The door onto the wharf was still located in the same position as the original design. The building appears to have returned to the original dimensions, and the extended portion of the foundations possibly dating from the slab construction in 1960 were visible beyond the building. This building was damaged in the 2016 Kaikōura earthquake and demolished by the Hutt City Council in 2017. The walls, suspended timber floor, and roof trusses have been placed in storage.

The concrete foundation nib and slab of the most recent iteration of the building, and part of the foundation nib of an earlier iteration remain.

Figure 84. 2017 aerial view of the most recent wharf building. Source: Hutt City Council Historic Aerials

Figure 85. The Petone Wharf, 2013, showing the most recent iteration of the building. Source: Um Vs Camera, "Petone wharf shed (before 2016 earthquake - now gone)", 2013, Photograph. Accessed 09-11-2021 <https://commons.wikimedia.org/wiki/File:Petone_wharf_shed_(before_2016_earthquake_-_now_gone).jpg>

Figure 86. The Petone Wharf, November 2021, with the building removed and concrete foundations visible. Source: Calibre Consulting Ltd.

3.4.8 Access platform

In 1969 a timber access platform was constructed to the east of the wharf at the north end of the head to allow the Matiu – a small boat which travelled to Matiu Somes Island – and other small boats to access the wharf. It is assumed that the original stairs present at this location were demolished at this time.

Around 2013 this timber access platform was noted as being in poor condition and was demolished and replaced with the current steel access platform. This access platform is constructed from steel grate flooring with painted metal balustrades, and consists of two levels sitting below current wharf level accessed by steps from the head. The platform is supported on five new piles.

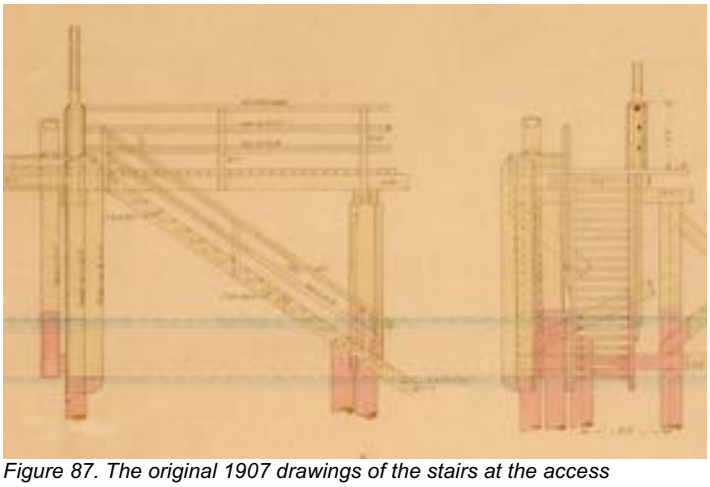


Figure 87. The original 1907 drawings of the stairs at the access platform. Source William Fergusson, Petone Wharf Contract No. 146, 21 May 1907

Figure 88. The original access platform, 1985. Source: ATL EP/1985/0715/11A-F

Figure 89. The previous timber access platform in 2012 prior to demolition. Source: Calibre Consulting Ltd.

Figure 90. The current steel mesh access platform

3.4.9 New furniture

On the head portion of the wharf several timber and metal bench seats and rubbish bins were installed between 2000 and 2005. Around the perimeter of the wharf, colourful painted fishing-rod holders have been fixed to the concrete perimeter nib. These were manufactured by Morris Metal Products in Nelson St, Petone, and were not intended to be painted – this was done at a later date by an unknown party.

Figure 91. One of the painted fishing rod holders fixed to the wharf head

Figure 92. The bench seats on the wharf head, 2017. Source: Calibre Consulting Ltd.

3.4.10 Lowered Cap Beams

- On the head, the cap beams on most bents have been lowered or replaced due to rot in the top of the piles, or the piles sinking. This work involved cutting down the top of the piles where rotten and installing a cap beam at the new lower height. Timber packing and corbels have been added between the lowered cap beams and stringers.

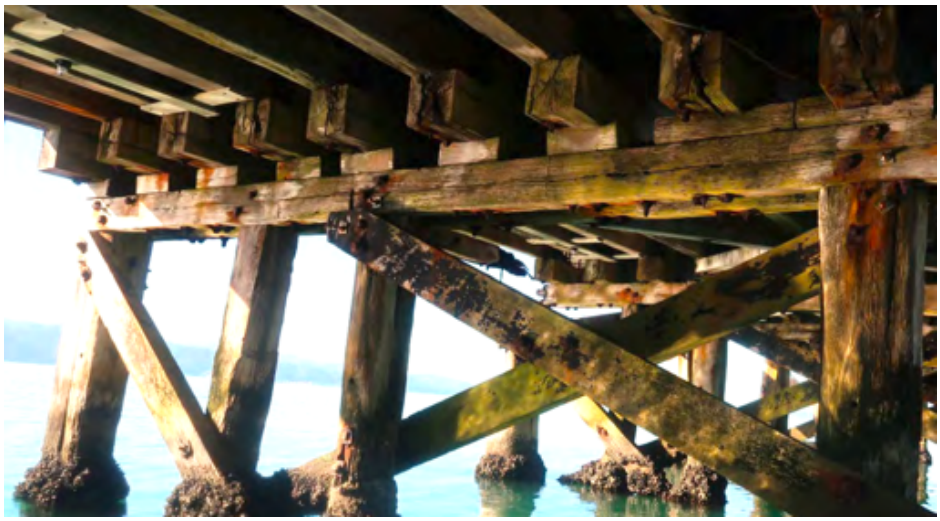


Figure 93. Timber packing between lowered cap beam and stringers. Source: Tom Arthur, Calibre Consulting Ltd., 2021 Wharf Condition Report, 25 June 2021.

- On bents 45 and 46, presumably due to rot in the top of the piles, the top portion of the piles have been removed and a second lower cap beam added, while the original cap beams have remained in place. The removed portion of the piles have been replaced with two large timber blocks stacked vertically.

Figure 94. Timber blocks between upper and lower pile caps on bent 45. Photo by Calibre Engineering.

Figure 95. Bent 46 with timber blocking between upper and lower pile caps. Note the missing original pile on the left-hand side with the top of the original pile still in place.

3.4.11 Structural modifications during repairs and maintenance

Throughout the regular maintenance and repairs to the structure over its lifetime, several modifications have been made, and some structural elements have been lost to decay. These modifications have been recorded by Calibre in their 2021 'Wharf Condition Report'. A summary of relevant modifications is below:

- Corbels have been added beneath the cap beams to provide support on bents 28 and 52.
- Waler beams are missing on the majority of bents supporting the head
- Below several bents in the head and at the end of the approach, secondary piles have been added adjacent to the original piles due to deterioration of the older piles.
- On the head portion of the wharf several timber fenders, metal kerbing, and bollards are missing, and where present are generally in poor condition.

Figure 96. Existing timber corner fender and metal kerbing on the head.

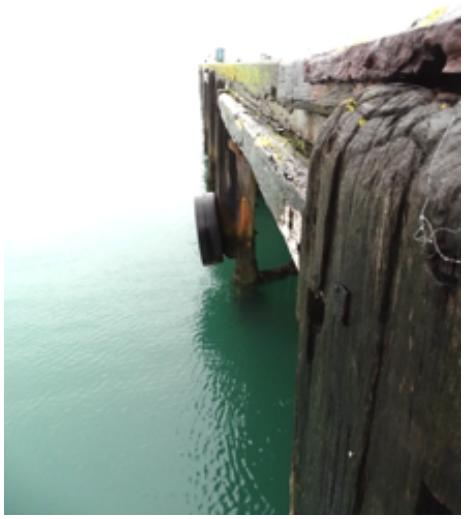


Figure 97. Existing timber fender on the head.

- Below the head portion of the wharf several piles have been partially encased in concrete

- In 2017 a fire beneath the head damaged the east end of bent 63, resulting in a section of the pile, brace, and cap beam being destroyed. As a result of this the stringer collapsed and the concrete decking above this area is now relying on support from the inner stringer.

Figure 98. Fire damage to bent 63 on the head. Source: Calibre Consulting Ltd.

- In 2017 and 2018 FRP repairs were undertaken on many piles in the approach.
- In 2018 on the head portion of the wharf, splice repairs were made to several cap beams.
- In 2021 several waler beams on the approach portion of the wharf were removed to allow for the inspection of the piles. Also, from bent 24 to 30 (excluding 26) both walers and cross bracing (where present) were removed for pile inspections.
- In 2021 a stump and FRP repair was undertaken on many of the piles of the approach portion of the wharf.

Figure 99. FRP Repairs on piles below the approach section of the wharf. Source: Calibre Consulting Ltd.

3.5 Architectural Influences

3.5.1 Design Style

The Petone Wharf has always had a pared-back, functional aesthetic, with its structure exposed and unembellished. Despite this, the original drawings show there was some ornamental Victorian influence particularly in the design of the entrance gates and the since demolished wharf office.

The original drawings, and photographs taken of the wharf shortly after construction, show a typical, ornate Victorian style, with a symmetrical configuration, applied detailing to the posts, and scalloped topped entry gates. The original drawings also document a large ornate metal light next to the entry gates. It is unclear whether this light was ever installed.

The most recent iteration of the entrance dating from the 1960s retained a stripped Victorian Gothic style, with an emphasis on verticality seen through the tall, thin picket fence palings and large stop-chamfered posts. The 'Petone Wharf' sign over the gates and the more recent signboard were not in-keeping with the original Victorian style of the wharf and added to the mixture of styles present in the structure.

With the removal of the entrance gates and posts in 2021, the identifiable design style of the wharf has also been removed. The remaining posts and tall picket fencing retain the scale and verticality of the earlier Victorian influenced entrance.

Figure 100. The original gates as built, 1909. Source: ATL 1/2-002541-F

Designed in 1907, the drawings of the now demolished wharf office indicate it followed the design conventions of a typical residential villa, with timber weatherboard cladding, a corrugated metal sheet roof, and ornate timber joinery and detailing both internally, and externally.

3.5.2 Comparisons

The Petone Wharf is representative of typical wharf structures built throughout New Zealand in the early 1900s. Within the Wellington Region, the Petone Wharf is similar to several small wharf structures of a similar age at Days Bay (1895), Seatoun (1901), Karaka Bay (1901), Rona Bay (1906) and Point Howard (1929).

Although the Petone Wharf is significantly larger than these other local wharves, they are similar in design and construction, featuring a hardwood timber trestle structure, with timber piles driven into the seabed.

The Petone Wharf is significantly longer than all other timber wharves in the Wellington Region and appears to be one of the longest timber wharves in New Zealand.

Below is a comparison of similar heritage listed timber wharves throughout the Wellington Region, and similar timber wharves throughout New Zealand.

Wharf	Date	Length (m)
Shortland Wharf (Thames)	1867	103
Days Bay	1895	135
Seatoun	1901	90
Rona Bay	1906	62
Petone Wharf	1908	393
Karaka Bay	1909	30
Hicks Bay Wharf	1925	110
Governors Bay Jetty	1927	300
Point Howard	1929	169

3.6 Construction and materials

3.6.1 Structure

The Petone Wharf is a 1290' (393m) long timber wharf supported on a traditional cross-braced trestle design, consisting of 66 'bents' at a 20' (6m) spacing. As per the original structural drawings, the structure changes down the length of the wharf:

- Bents 1-3 are not typical and support the splayed entrance. Bent 1, where the wharf end meets the footpath is a low concrete wall. Bents 2 and 3 are three and two bays wide respectively with no waler beams or cross bracing.
- Bents 4-13 are one bay wide and had no waler beams or cross bracing
- Bents 14-24 are one bay wide and had no cross bracing
- Bents 25-27 support the cart refuge and are two bays wide and had cross bracing and waler beams
- Bents 28-47 are one bay wide and had both cross bracing and waler beams
- Bents 48-66 support the head and are three bays wide and had both cross bracing and waler beams. Further underwater bracing was present on half the bents.

3.6.2 Materials

The original wharf piles are constructed from ironbark or jarrah timbers and were sheathed in copper from below the seabed until just above median high water line.

The original pile caps, waler beams, cross-bracing, beams, and fenders were ironbark. Since construction the timber structural members have been repaired and replaced extensively with new timber. Refer to table below.

Figure 101. Repaired/replaced cap beam below the head constructed largely from new timber in original configuration. Source: Calibre Consulting Ltd.

Where timber structural members had exposed ends or connections sitting below the median high-water line they were sheathed in copper. The copper sheathing was to protect the timber from attack by marine organisms such as teredo worm. Much of this copper sheathing is missing and the remainder is in poor condition.

Figure 102. Some remaining copper sheathing on a pile. Source: Calibre Consulting Ltd.

The wharf deck is concrete, which is poured directly on top of the original timber decking on the entry and approach, and on metal sheeting on the head.

The modern balustrade is constructed from metal (either aluminium or galvanised steel) and treated timber.

The entrance fence and gates are constructed from timber and painted.

The below table compares the original and current materials present in the various built elements of the wharf.

Table of Materials

	ORIGINAL MATERIAL	CURRENT MATERIAL

PILES	Ironbark or jarrah timber	Ironbark or jarrah where original. Failed piles replaced with new timber piles, species unknown
SHEATHING	Copper	Still present on some members. It is assumed that all copper present dates from original construction
WALER BEAMS	Totara or jarrah timber	Totara or jarrah where original. Failed beams replaced with greenheart hardwood timber
CROSS BRACING	Totara or jarrah timber	Totara or jarrah where original. Failed beams replaced with greenheart hardwood timber
CAP BEAMS	Ironbark timber	Ironbark where original. Failed beams replaced with greenheart hardwood timber
STRINGERS AND INNER BEAMS	Ironbark timber	Ironbark where original. Failed beams replaced with greenheart hardwood timber
DECK	Ironbark, eucalyptus, or Australian hardwood timber	Concrete or asphalt on the original timber decking on the approach. Concrete deck to wharf head
BOLLARDS	Ironbark timber	Ironbark where original bollards remain
ABUTMENT UPSTAND WALL	Concrete, 7 parts aggregate to 1 part NZ or British Portland Cement	Concrete retaining wall is still present
BALUSTRADE	Jarrah or totara timber	Galvanised steel and aluminium, and unpainted timber, likely pine
FENCE	Jarrah or totara timber	Non-original timber, species unknown
GATES	Jarrah or totara timber	Non-original timber, species unknown

3.7 Condition

Due to the poor condition and slumping of several piles on the head, the wharf is currently closed. In 2021 a condition survey of the Petone Wharf was undertaken by Calibre Group Engineering Consultants. Excerpts of this survey commenting on the condition of the wharf are below:

> *The condition of the wharf generally gets worse as you get further from the beach. Many timber members show signs of deterioration, with capping beams and corbels having extensive rot at the end of the wharf.*
>
> *The condition of the piles has declined significantly since the last dive inspection was completed in 2018. Nine piles had failed around the cart refuge and were repaired in February – March 2021, the failed piles were found to have severe loss of section due to teredo worm. It is likely that other piles on the wharf will have similar hidden deterioration. The dive inspection noted the piles on the wharf head to be in poor condition, the piles located along the western edge and outer half of the wharf head are generally in poor or very poor condition.*
>
> *The edge beams at the head of the wharf are showing widespread degradation, many of the beams along the western side of the wharf have lost structural integrity, four on the wharf head were replaced in 2018. The inner beams are generally in much better condition and with the exception of the innermost bent on the wharf head where there is decay due to freshwater ingress from above.*
>
> *A large proportion of the edge beams on the approach require replacement, there is vegetation growing on many of these beams, which retains moisture, accelerating decay.*
>
> *The steel access platform (jetty) is in moderate condition, with deformation of steel beams and rust. The structure is vulnerable to earthquakes as it straddles the wharf head and approach, which move differently during an earthquake. It*

was damaged during the Kaikoura earthquake with some beams remaining twisted.

The usage of the wharf is less onerous than the intended design use providing redundancy, however there are clusters of piles that have failed or are on the verge of failure.

The deck on the wharf head is not level, which is primarily due to historic pile failures. In 2019, survey marks were installed over each pile by Calibre, these are surveyed for vertical movement on an annual basis. The most recent survey indicated minor vertical movement around pile 63F, the dive survey confirmed the two closest piles are at the point of failure and the pile cap has failed. The difference between the highest and lowest point on the wharf head is around 0.25m. The wharf head was built higher than the approach, which has a noticeable ramp at the end.

The concrete deck is in reasonable condition, areas have been removed for pile repairs and the concrete and reinforcement were noted to be sound. The construction joints are leaking which has accelerated decay of the timber below.

There are two ladders on the wharf head. The ladder at the end of the wharf on pile 66D is in a very poor condition below the high-water line and should be removed or replaced if this part of the wharf is re-opened. The ladder on the fender at pile 58F is in moderate condition.

The streetlights and other furniture are in moderate - good condition. The lighting below the deck has not worked for several years, the cabling is broken hanging from the underside of the deck. It is unclear if the cables are live, we recommend loose / broken cable should be removed.

4 Assessment of Heritage Values

The various elements or fabrics that make up any historic building or structure have their own intrinsic value and the contribution they make to the overall significance of the building can be assessed. In addition, the cultural significance of the structure as a whole can also be assessed and the structure given an overall rating of significance.

In the following section, an assessment is made of the significance and provenance of the elements or fabric that make up the Petone Wharf.

The overall significance of the structure is then assessed and expressed as a "Statement of Significance".

4.1 Significance of Elements

4.1.1 Degrees of Significance

Exceptional	This identifies views, spaces or fabric of exceptional quality. These views, spaces, or items: • have exceptional architectural and/or historic value, **and**; • have insignificant changes from the original **and**; • are predominantly significant early fabric.
Considerable	This identifies views, spaces or fabric of considerable quality. These views, spaces, or items: • have considerable architectural and/or historic value **and**; • have insignificant or minor changes from the original **and**; • contain significant early fabric.
Some	This identifies views, spaces or fabric of some quality. These views, spaces, or items: • have some architectural and/or historic value **and**; • may have some changes from the original **and**; • spaces and views will typically contain some early fabric. This category may also include later fabric of quality that adds to the social or historic significance of the place.
Little or no significance	This means the element or space has little or no cultural heritage value, but which may have functional value. These views, spaces, or items include: • those bearing little relationship to their early form **or**; • those with little or no architectural value **or**; • modern additions, alterations or services. It includes all those spaces not otherwise identified.
Negative	The term 'negative' is applied if the view, space, or item actively detracts from the heritage significance of the overall place. Negative items typically: • Are not heritage fabric • Have no heritage significance.

4.1.2 Provenance

This identifies the age and likely date of introduction of fabric into the structure.

Much of the wharf's fabric dates from construction in 1908, with additions and significant maintenance in 1961 from 2017 until present day.

There is very little photographic evidence of the underside of the wharf from any date, and therefore caution must be given to attributing dates to structural items.

Provenance is categorised as follows:

Original Fabric (OF): fabric which is likely to date from 1908, when the Petone Wharf was first constructed.

Early Fabric (EF): fabric which dates from 1908 to, and including, 1959.

Later Fabric (LF): fabric introduced into the building from 1960 to, and including 1989**.**

Recent Fabric (RF): Fabric introduced in, or post 1990.

Note that the differentiation between original, early, and later fabric is difficult due to the weathering of the wharf structure and a lack of documentation. The identification of original structural fabric is particularly difficult because the wharf slumped and was repaired very soon after construction.

4.1.3 Inventory

SETTING	**EXCEPTIONAL**	
The wharf is situated on the harbour edge in a popular and scenic area. It is very visible. The setting has exceptional significance.		
 *Figure 103. The setting of the Petone Wharf. Source Google: Street View September 2020, accessed November 2021*	Exceptional	Stretch of bay to east and west, dunes, views to and from wharf, angle of wharf to land.
	Considerable	Adjacent to commercial area, Close to Petone town centre
	Some	Planting at either side of the Wharf entrance,
	Not relevant	Carpark and promenade path and cycleway

<table>
<tr><td>THE ENTRANCE</td><td colspan="2">CONSIDERABLE</td></tr>
<tr><td colspan="3">The entrance (bents 1 to 4) is the first portion of the wharf, accessible directly from The Esplanade, and displays features that represent the Victorian style of the original design. It has an overall rating of considerable significance.</td></tr>
<tr><td colspan="3">ABOVE DECK</td></tr>
<tr><td rowspan="5"> 
Figure 104: The wharf entrance. Source: Google Street View February 2018, accessed January 2022</td><td>Exceptional</td><td>Timber Entry Posts (OF tbc)
Splayed plan (OF)</td></tr>
<tr><td>Considerable</td><td>Picket fence palings along The Esplanade (LF)</td></tr>
<tr><td>Some</td><td>Vehicle and pedestrian entry gates (LF)
Picket fence palings down the sides of the wharf (RF)
Concrete decking (LF)</td></tr>
<tr><td>Not relevant</td><td>Low steel vehicle gate (RF?)
Services installed on inside fence (RF?)</td></tr>
<tr><td>Intrusive</td><td>Metal ‘Petone Wharf’ Sign (RF)
Metal and timber balustrade frame to fencing (RF)
Timber signboard over western gates (RF)
Plastic signs (smoking, dogs, warning) on the fence along The Esplanade (RF)
Concrete decking to wharf (LF)
Lighting column (RF)</td></tr>
<tr><td colspan="3">BELOW DECK</td></tr>
<tr><td rowspan="5"> 
Figure 105. Below the wharf entrance deck. Source: Google Street View November 2018, accessed January 2022</td><td>Exceptional</td><td></td></tr>
<tr><td>Considerable</td><td>Concrete foundation wall at street edge (assumed OF)
Original timber decking (OF)
Original timber stringers and inner beams (OF)
Original timber piles (OF)</td></tr>
<tr><td>Some</td><td></td></tr>
<tr><td>Not relevant</td><td></td></tr>
<tr><td>Intrusive</td><td></td></tr>
</table>

<table>
<tr><td>THE APPROACH</td><td colspan="2">CONSIDERABLE</td></tr>
<tr><td colspan="3">The approach (bents 4 to 48) is longest portion of the wharf, spanning from the entrance to the head, and has considerable significance.</td></tr>
<tr><td colspan="3">ABOVE DECK</td></tr>
<tr><td rowspan="5"> 
Figure 106. The wharf approach</td><td>Exceptional</td><td>The extreme length of the wharf (OF)
The form of the wharf including the cart refuge (OF)</td></tr>
<tr><td>Considerable</td><td>Timber decking (OF)</td></tr>
<tr><td>Some</td><td></td></tr>
<tr><td>Not relevant</td><td>Wind speed and weather monitoring rods (RF)</td></tr>
<tr><td>Intrusive</td><td>Metal and balustrade frame to fencing (RF)
Concrete decking (LF) and asphalt (RF) to wharf</td></tr>
<tr><td colspan="3">BELOW DECK</td></tr>
<tr><td rowspan="5"> 
Figure 107. Below the wharf approach deck</td><td>Exceptional</td><td>Form of timber bents (OF)</td></tr>
<tr><td>Considerable</td><td>Original timber piles (OF)
Original timber waler beams (OF)
Original timber cap beams (OF)
Original timber cross bracing (OF)
Original timber stringers and (OF)
Copper sheathing to structural elements in tidal zone (OF/EF)</td></tr>
<tr><td>Some</td><td>Lower cap beam and packing (LF)
Additional support piles (LF)</td></tr>
<tr><td>Not relevant</td><td>FRP jacket repairs to several piles (RF)
Stump repairs to several piles (RF)
Steel access platform (RF)
Water quality testing plant (RF)</td></tr>
<tr><td>Intrusive</td><td>Lights and cabling (RF)</td></tr>
</table>

<table>
<tr><td>THE HEAD</td><td colspan="2">EXCEPTIONAL</td></tr>
<tr><td colspan="3">The head (bents 48 to 66) is widest end portion of the wharf, furthest from the beach, and has exceptional significance.</td></tr>
<tr><td colspan="3">ABOVE DECK</td></tr>
<tr><td rowspan="5"> 
Figure 108. The wharf head</td><td>Exceptional</td><td>Form of the head (OF)</td></tr>
<tr><td>Considerable</td><td>Timber fenders (OF)
Metal kerbing to corner fenders (OF)
Timber bollards (OF)</td></tr>
<tr><td>Some</td><td>Foundation wall of shed (LF)
Timber portions of nib balustrade (LF)</td></tr>
<tr><td>Not relevant</td><td>FRP jacket repairs to several piles (RF)
Stump repairs to several piles (RF)
Steel access platform (RF)
Water quality testing plant (RF)
Wind speed and weather monitoring rods (RF)
Bench seats and rubbish bins (RF)
Fishing rod holders on kerb (RF)</td></tr>
<tr><td>Intrusive</td><td>Temporary construction fencing (RF)
Concrete decking to wharf (LF)
Concrete kerb (LF)</td></tr>
<tr><td colspan="3">BELOW DECK</td></tr>
<tr><td rowspan="5"> 
Figure 109. Below the wharf head deck. Source: Calibre Consulting Ltd
 
Figure 110. Example of pile repair.</td><td>Exceptional</td><td>Original timber piles (OF)
Original timber waler beams (OF)
Original timber cap beams (OF)
Original timber cross bracing (OF)
Original timber stringers and inner beams (OF).</td></tr>
<tr><td>Considerable</td><td>Secondary off-grid piles supporting failed members (EF)
Copper sheathing to structural elements (OF/EF)</td></tr>
<tr><td>Some</td><td>Lowered cap beam and packing (LF)
Additional support piles (LF)
Other non-original timber structural members in place of original (LF)</td></tr>
<tr><td>Not relevant</td><td>FRP jacket repairs to several piles (RF)
Stump repairs to several piles (RF)</td></tr>
<tr><td>Intrusive</td><td>Lights and cabling (RF)
Steel sheet supporting concrete slab (LF)</td></tr>
</table>

4.2 Existing Assessments

Hutt City Council

The Petone Wharf is listed in the *Hutt City Council District Plan Heritage List* in Appendix 2 on Map A5. There are no comments on significance.

Greater Wellington Regional Council

The Petone Wharf is listed in the Regional Coastal Plan for the Wellington Region under *Appendix 4 – Features and Buildings of Historic Merit*.

In the *Proposed Natural Resources Plan* the Petone Wharf is listed under Schedule E2, Historic Heritage Wharves and Boatsheds.

The document *Coastal Historic Heritage of the Wellington Region* prepared by Cochran & Murray Conservation Architects, Michael Kelly, and Andy Dodd for the GWRC assessed the Petone Wharf as:

> *The Petone Wharf has very high townscape/landscape values. It has strong historical value for its original purpose and long period of continuous use. It has significant social values as a highly recognised structure on the Petone foreshore and for the heavy recreational use it receives.*[103]

Heritage New Zealand

The Petone Wharf is not listed by Heritage NZ, however both the Day's Bay Wharf and the Rona Bay Wharf are listed as Category 2 Historic Places.

4.3 Assessment Criteria

This section summarises the cultural heritage values of The Petone Wharf.

There are several sources from which one could draw criteria for the assessment of the heritage values of the Petone Wharf. These include those in the Heritage New Zealand Pouhere Taonga Act, the Resource Management Act, and the Hutt City District Plan. Since this Conservation Plan has been commissioned by the HCC, the District Plan criteria are used.

These are as set out in the document 'Taonga Tuku Iho – The Heritage Policy' dated 23 August 2021, with Section 3 noting that the Council's definition and interpretation of historic heritage aligns with that provided in the RMA 1991 Section 2 as follows:

historic heritage—

(a) means those natural and physical resources that contribute to an understanding and appreciation of New Zealand's history and cultures, deriving from any of the following qualities:
- (i) archaeological:
- (ii) architectural:
- (iii) cultural:
- (iv) historic:
- (v) scientific:
- (vi) technological; and

(b) includes—
- (i) historic sites, structures, places, and areas; and
- (ii) archaeological sites; and
- (iii) sites of significance to Māori, including wāhi tapu; and
- (iv) surroundings associated with the natural and physical resources

Figure 111. Extract from Section 2 of RMA 1991.

[103] 4.0 page 234 'Coast Historic Heritage'. GWRC.

4.4 General Assessment of Significance

The RMA definitions are used below, however scientific and technology are combined, and Contextual/Group/Environment/Landmark is added.

4.4.1 Archaeological

Values associated with evidence of past use, especially as may be revealed using archaeological techniques.

There is potential for considerable archaeological interest due to:

- the intersection of the Petone Wharf with the previous Gear Meat Company wharf.
- fallen pieces of the wharf timber, fixings etc on the seabed,
- the silt around the wharf is likely to contain items that have fallen from the wharf or boats since 1908.

4.4.2 Architectural

A structure may have architectural and aesthetic values that demonstrate or are associated with design values, form, scale, colour, texture and material of the place.

The remaining posts and pickets of the entry fence, retain some of the imposing Victorian style of the original entrance.

The length and narrowness of the wharf is notable. The rhythm of the bents and cross beams of the structure result in a distinctive silhouette of early 20th century timber construction techniques.

4.4.3 Cultural

Values associated with the use of the place; what it means to people, and the spiritual, artistic, traditional or political values that the place may embody.

The Petone Wharf is valued as a place of recreation, particularly for walking and fishing, within the Wellington Region.

It is a remnant and reminder of Petone's history as a working-class suburb and industrial centre. It speaks to the past ambitions of Petone to be progressive and develop its own self sufficiency and identity.

The Wharf has considerable social value.

4.4.4 Historic

Values associated with particular events or uses that happened at the place, and which have importance for their impact on the community.

The site of Pito-one is significant to mana whenua, and was a valued and vital area pre-colonial settlement.

The Petone Wharf played a role in the commercial and recreational development of the Petone and Wellington region. As such, it is representative of changes in wider New Zealand society throughout the 20th century.

Its use during the First and Second World Wars as a base for training troops, and as the access point for Matiu Somes Island link it to the national context and international events.

The wharf is associated with trade, largely of meat and timber, and the local businesses associated with these industries, namely the Gear Meat Company, and the C & A Odlin Timber and Hardware Company. These two businesses have great significance to the development of Petone as a commercial centre, and hence to its growth as a residential area.

The Petone Wharf is significant as a structure built by the Wellington Harbour Board and designed by Chief Engineer William Fergusson who were responsible for the design and construction of many maritime buildings and structures throughout Wellington.

4.4.5 Scientific/Technological

A building may have values that demonstrate or are associated with: the nature and use of materials, finishes, and/or technological or constructional methods which were innovative, or of notable quality for the period.

Despite its current condition and modifications since construction, the wharf is well-built, and retains the integrity of the original 1907 design.

The timber cross-braced bents which support the wharf are of particular significance as an example of early 20th century engineering.

In a wider sense, the wharf has representative value as an example of a purpose-built commercial wharf.

The wharf appears to be one of the longest timber wharves in NZ, with only the Bluff Wharf known to be longer.

4.4.6 Contextual/Group/Environment/Landmark

A building may have contextual values that demonstrate or are associated with: a relationship to the environment(constructed and natural) setting, a group, precinct, or streetscape; a degree of consistency in terms of scale, form, materials, texture, colour, style and/ or detailing in relationship to the environment (constructed or natural), setting, a group, precinct or streetscape; a physical or visible landmark; a contribution to the character of the environment (constructed and natural) setting, a group, precinct or streetscape.

The location of the Petone Wharf on the edge of Wellington Harbour is a particularly prominent and important site in the entire Wellington Region. The extreme length of the wharf, and its isolation on a long bay make it highly visible from the train, highway, local coastal road, and from the air.

The wharf is associated with recreation throughout the Wellington region with a long history of use for swimming, fishing, and boating. The wharf has been a ferry stop, and so is also linked to the development of Eastbourne and Lower Hutt's eastern bays.

4.5 Authenticity

Taking integrity and authenticity to be the same, the Riga Charter[104] defined authenticity as:

> *"The measure of the degree to which the attributes of cultural heritage [including form and design, materials and substance, use and function, traditions and techniques, location and setting, and spirit and feeling] credibly and accurately bear witness to their significance."*

This concept of authenticity is used to assess heritage values in this plan.

Although the Petone Wharf has undergone significant alterations since construction in 1908, the original design is largely intact and easily legible. None of the later interventions have detracted significantly from the original design. While there has been a loss of some material – notably the front gates, fence, and wharf office, as well as structural elements below the wharf – much of the wharf is original fabric.

Although there is a great deal of original and early fabric currently in the wharf, the current condition of this fabric is very poor, and has resulted in the closure of the wharf to the public. Hence what appears to be authentic material is, in places, literally surface appearance only.

[104] '*Riga Charter on Authenticity and Historical Reconstruction in Relationship to Cultural Heritage*',

4.6 Overall Statement of Significance

The Petone Wharf is an important landmark in Petone and the Wellington Region, and has a high level of authenticity as an example of an early 20th century maritime structure.

Being of such a considerable length, the Petone Wharf is a landmark within the Wellington Region, and prior to its closure, was a popular recreation spot.

The Petone Wharf retains significant associations with the commercial and social development of Wellington, and is an important remnant of the industrial, working-class history of Petone.

Based on a comparison with similar wharf structures, we believe the Petone Wharf to have equivalent significance with that of Category 2 buildings in the Heritage New Zealand list.

The Petone Wharf has considerable heritage significance.

5 A framework for Conservation Policies

5.1 Factors affecting the Conservation of the Petone Wharf

The conservation of the Petone Wharf is constrained and limited by a number of factors that need to be taken into account when formulating conservation policies. Identified constraints affecting the wharf include the following:

- The cultural significance of the building
- Objectives and resources of the Owner
- The condition of the wharf
- Tangata Whenua consultation and input
- Resource Management Act
- Heritage protection
- The requirements of the Building Act
- Potential threats and Risk Management
- Sustainability and Climate Change
- The degree of community support for retaining and rebuilding the wharf

5.1.1 Constraints arising from the Statement of Significance

From the Statement of Significance, a number of constraints arise that will have an influence on the conservation policies.

- A space or feature that has been assessed as being more significant will be subject to a more rigorous conservation approach and may even require a specific policy.
- Any work that may remove or conceal evidence of past use or events must be carefully considered.
- No work should be undertaken that reduces the structures architectural value or aesthetic integrity.
- The physical condition of the wharf must be taken into account.

5.1.2 Objectives and available resources of the Owner

The Petone Wharf is owned by the Hutt City Council. Due to its poor condition the wharf is unsafe and has been closed to the public since January 2021. The Hutt City Council wish to refurbish it, so it can be reopened for public use. The wharf is valued and used by the public as a destination, recreational amenity, and for water sports.

5.1.3 Tangata Whenua

The Petone Wharf is located in close proximity to the site of Pito-One Pā, a large and significant Pā in the Wellington Region, and it is anticipated that tangata whenua will have an interest in the structure and environs.

We recommend that specific consultation takes place with tangata whenua prior to any development proposals.

5.1.4 Heritage Protection

Hutt City Council Listing

The Petone Wharf is scheduled in the Hutt City Council District Plan Heritage List, Appendix 2, and is within the 'Special Recreation' zone. The listing is for the entire wharf structure.

Under the HCC District Plan rule 14F 2.2 *Any other alteration, repair or modification of any building or structure listed in Appendix Heritage 1 & 2* is a Restricted Discretionary

Activity. Therefore, change to the wharf beyond repair and maintenance will require a Resource Consent application.

Greater Wellington Regional Council Listing

The Petone Wharf is listed in the *Regional Coastal Plan for the Wellington Region* under Appendix 4 – Features and Buildings of Historic Merit. The listing is for the entire wharf structure.

> Under the GWRC Regional Coastal Plan, Rule 13, any maintenance, repair, replacement, extensions, additions and alterations to structures listed in Appendix 4 is a Controlled Activity and would require a Resource Consent.

The Petone Wharf is also listed in the *Proposed Natural Resources Plan* under Schedule E2, Historic Heritage Wharves and Boatsheds.

> Under the GWRC Proposed Natural Resources Plan, Rule R168, the maintenance, repair, or alteration of structures listed in Appendix E2 are a Permitted Activity provided that several conditions are met, including that work does not involve the removal, relocation, partial or total demolition of any structure. If these conditions are not met, alterations become a Restricted Discretionary Activity and a Resource Consent would be required.

Heritage New Zealand Pouhere Taonga Act 2014

The Petone Wharf is not currently listed as by Heritage NZ under the Heritage New Zealand Pouhere Taonga Act 2014.

The Heritage New Zealand Pouhere Taonga Act contains a consent process for any person intending to do any work that may modify or destroy an archaeological site. The Act defines an archaeological site as any place that was 'associated with human activity that occurred before 1900' and which 'may provide through investigation by archaeological methods, evidence relating to the history of New Zealand' (section 20).

Any person intending to undertake work that may 'modify or destroy the whole or any part of an archaeological site' must first obtain an authority from Heritage New Zealand for that work. An authority is required by any person who 'knows, or ought reasonably to have suspected, that the site is an archaeological site', whether or not it is 'an archaeological or is entered on (a) the New Zealand Heritage List…or (b) the Landmarks list'.

Although the existing wharf is post 1900 in date, it both intersects with the original Gear Meat Company Wharf (1884), and is in an area of high Māori occupation and use. As such, we recommend that an archaeologist is engaged to advise in this area.

ICOMOS (NZ) Charter

The appropriate standard for use in conservation processes and practice in New Zealand is the ICOMOS New Zealand Charter 2010.[105]

ICOMOS stands for the International Committee on Monuments and Sites. The charter sets out principles, practices and definitions to guide the conservation of places of cultural heritage value with particular relevance to the New Zealand situation. Heritage New Zealand and a number of territorial authorities have formally adopted the charter. It is recommended that all relevant requirements of the *Charter* be followed.

The full text of the *Charter* is included in the Appendix of this Plan.

As an aspirational document, all work in conserving a place should be closely guided by the Charter which includes the following important conservation principles:

- A place of cultural heritage value should be maintained regularly.

[105] ICOMOS New Zealand Charter for the Conservation of Places of Cultural Heritage Value, ICOMOS New Zealand (Inc.),2010.

- Conservation of a place should be based on a thorough understanding of its cultural heritage values.
- The conservation of places of interest to Māori is conditional on decisions made in appropriate whānau, hapū and iwi groups, and should proceed only in this context.
- Work undertaken at a place should be the minimum necessary to conserve its cultural heritage values and involve the least possible loss of heritage fabric or evidence taking into account the cultural context to which they belong.
- Repair work should generally be carried out on a 'like for like' basis and follow traditional methods. Repair work to a higher technical standard may be appropriate in some situations.
- Where possible new work should be reversible so as to allow change back to the original if required in future. If significant heritage fabric is removed it should be stored for possible future use.
- Ideally the original use of a place should be continued. If this is not possible an alternative use should be compatible with the values of the place and seek to minimise any change.
- Conservation recognises the passing of time and the potential value and significance of all periods. All can be important and one should not be given precedence at the expense of others.
- All conservation work should be carried out by appropriate qualified and experienced conservation professionals.
- Conservation works should be fully documented with drawings and photographs before, during and after the works.
- Where the fixtures, fittings and contents of a place are of significant cultural heritage value they should be considered an integral part of the place and be conserved with it.
- Where the setting of a place is integral to its cultural heritage values the setting should be conserved with the place.

5.1.5 Legislation

Resource Management Act 1991[106]

The Resource Management Act 1991 is concerned with the sustainable management of natural and physical resources; it aims to avoid, remedy or mitigate any adverse affects of development on the environment. The Act identifies (section 6) the protection of heritage as a matter of national importance, and defines historic heritage as:

> *'those natural and physical resources that contribute to an understanding and appreciation of New Zealand's history and cultures, deriving from any of the following qualities: archaeological, architectural, cultural, historic, scientific, technological'*

and includes sites, structures, places and areas; archaeological sites; sites of significance to Maori, including wāhi tapu, and surroundings associated with the natural and physical resources.

The Act establishes the framework for the preparation and administration of district plans 'to assist territorial authorities to carry out their functions in order to achieve the purposes of this Act (section 72). A district plan may include rules which 'prohibit, regulate or allow activities' (section 76) in order to achieve the plan's objectives.

Section 88 of the Act requires an application for a resource consent on a listed heritage item to include an assessment of any actual and potential effects of the work and lists matters to be considered in the Fourth Schedule of the Act. These can include 'any effect on those in the neighbourhood, and where relevant, the wider community'

106 Chris Cochran's standard synopsis of the RMA as relevant to this Conservation Plan.

and 'any effect on natural and physical resources having aesthetic, recreational, scientific, historical, spiritual, or cultural or other special value for present or future generations'.

Building Act 2004[107]

We believe that the Petone Wharf is included in the definition of 'structure' and hence the Building Act does apply.

Under the Building Act 1991 alterations to existing buildings or changes of use will require compliance with the provisions of the NZ Building Code 'as nearly as reasonably practicable'. These provisions apply to a building mean of escape from fire, and its access and facilities for use by people with disabilities. If compliance would result in loss of significance, a dispensation can be sought.

Earthquake strengthening, and fire protection may be required for structures in public use, and separate reports may be required and included as part of the plan.

The undertaking of certain work to a place may trigger statutory compliance provisions such as for seismic, fire, access, and sanitary issues. Health and safety issues might include signage, barriers or limiting public access to certain areas and these have the potential to impact the conservation or significance of a place. In certain cases, a dispensation may be acceptable on heritage grounds. This would need to be discussed with the local authority.

The Building Act 2004 controls all matters relating to building construction. The following matters are of particular relevance when considering repairs, maintenance and alterations to existing and historic buildings.

Repair and Maintenance (Schedule 1 Exempt Building Work)

A building consent is not required for 'any lawful repair and maintenance using comparable materials'.

However, all work is required to comply with the Building Code. This means compliance with durability requirements (clause B2): for structural elements, not less than a 50 year life; for secondary elements which are difficult to replace, 15 years; and for linings and other elements that are easily accessible, 5 years. In dealing with heritage buildings, it is appropriate to aim for a 50 year life for all elements.

Principles to be Applied (Section 4)

Assessment of building work subject to the Act is required to take into account, amongst other things,

> *'the importance of recognising any special traditional and cultural aspects of the intended use of a building', and 'the need to facilitate the preservation of buildings of significant cultural, historical or heritage value' (sub-sections d and l); also*
> *'the need to facilitate the efficient and sustainable use in buildings of materials and material conservation' (sub-section n).*

Building Consents (Section 40 - 41)

It is an offence to carry out building work not in accordance with a building consent, except for exempted buildings and work as set out in Schedule 1 of the Act. (These include certain signs, walls, tanks etc, as well as repairs and maintenance.)

Section 41(c) allows for urgent work, such as emergency repairs, to be carried out without a consent, but such work is required to obtain a Certificate of Acceptance directly after completion.

107 Cochran and Murray's standard synopsis of the Building Act 2004 as relevant to this Conservation Plan.

Alterations to Existing Buildings (Section 112)

Alterations to existing buildings require a building consent, which will be issued by the consent authority if they are satisfied that after the alteration the building will 'comply, as nearly as is reasonably practicable and to the same extent as if it were a new building, with the provisions of the building code that relate to:

(i) means of escape from fire; and

(ii) access and facilities for persons with disabilities, and

continue to comply with the other provisions of the building code to at least the same extent as before the alteration'.

Alterations that do not comply with full requirements of the building code may be allowed by the territorial authority if they are satisfied that:

'(a) if the alteration were required to comply … the alteration would not take place; and

(b) the alteration will result in improvements to attributes of the building that relate to (i) means of escape from fire; or (ii) access and facilities for persons with disabilities; and

(c) the improvements referred to in paragraph (b) outweigh any detriment that is likely to arise as a result of the building not complying with the relevant provisions of the building code.'

Similar provisions apply to the change of use of a building.

In reference to Section 112 (i) above, building code requirements for means of escape from fire can be met by following Clause C2 of the Building Code.

Access (Sections 117 – 120)

In carrying out alterations to any building *'to which members of the public are to be admitted … reasonable and adequate provision by way of access, parking provisions and sanitary facilities must be made for persons with disabilities'.*

In reference to Section 112 (ii) and Sections 117 - 120 above, building code requirements for access and facilities for persons with disabilities can be met by following NZS 4121: 2001 Design for Access and Mobility – Buildings and Associated Facilities. This has sections on the dimensions and design of ramps, entrances, doors, toilet facilities etc.

Dangerous, Earthquake-prone and Insanitary Buildings (Sections 121 – 132)

A dangerous building is one likely to cause injury or death, whether through collapse or fire. An earthquake-prone building is one that will have its ultimate capacity exceeded in a moderate earthquake and would be likely to cause injury or death. An insanitary building is offensive or likely to be injurious to health because of its condition or lack of appropriate facilities.

A territorial authority can, if it judges a building to be dangerous, earthquake prone or insanitary, require work to be done to reduce or remove the danger or to render it sanitary.

5.1.6 Condition of Structure

SPA have not completed a survey of the condition of the wharf. This is because Calibre Consulting Ltd completed a '2021 Wharf Condition Report' for Hutt City Council. This contains detailed survey information on the Petone Wharf, including from boats, and dive investigation. We have viewed the areas of the wharf visible from deck, and the beach, but we have chosen to rely on the Report for the condition of the wharf.

The below table summarises the components and condition as noted in the Report, and from information direct from Calibre Consulting. The relevant portions of the Report are included in the Appendix.

Item	Indicative condition	Comments
Concrete decking. This is poured on steel sheet at head, and on timber decking on approach.	Reasonable condition. Construction joints leaking. Underside of slab at head is uneven. Area of 2500m2.	Some parts have been removed for access to pile heads and repoured.
Timber Decking (on entry and approach).	Reasonable condition away from edge of wharf (based on inspection of limited areas during pile repairs).	Water is coming through the construction joints and accelerating decay.
Balustrade post remnants	Cut down to deck level.	Most are gone.
Edge and Inner Stringers (supporting decking/concrete)	Edge stringers are in poor condition, but inner stringers reasonable. Large proportion of edge beams on approach and head require replacement.	Some edge beams have already been replaced.
Horizontal bracing to underside of deck, wharf head only	Poor condition.	Some have been removed.
Original cap beams supporting stringers (run across wharf)	Extensive rot at end of wharf.	Capping beams in head have been lowered with packing above, possibly shortly after construction due to slumping.
Packing between original and new capping beams.		
New cap beams at lower level where piles have been cut down.		
Vertical cross bracing to piles.	Poor condition. Many broken or not present in the tidal zone. Almost all underwater bracing is missing	
Walers (horizontal member below cross bracing).	Poor condition. Many broken or not present in the tidal zone	
Piles	Approximately 230 piles. Poor condition due to Teredo worm damage and general decay.	All piles that have not been repaired since 2015 are assumed to need repair.
Remaining gate posts	Assumed as poor.	The gate posts which were severely rotted were removed in late 2021. The others are in poor condition below ground.
Pickets		All are recent (2013) and in reasonable condition
Bollards	Poor.	Several have been cut immediately below deck level. The remaining are not suitable for berthing.

5.1.7 Potential Threats and Risk Management

Threats to historical and cultural heritage are many and varied. They may be from natural occurrences such as severe weather events; or from threats caused by people (human-induced) such as poor maintenance, visitor impacts or inappropriate digging at an archaeological site. Whatever the cause, they have the potential to impact the heritage values of a place and the people who live in, work or visit them. They may also present opportunities to enhance a heritage place or further protect heritage values. Threats typically include:

Natural threats include:

- Climate change and severe weather events
- Seismic activity or tsunami. Due to the current condition of the piles the wharf is particularly seismically vulnerable. Severe slumping has already occurred in late 2020 following a moderate earthquake.
- Effects of decay such as weathering or pests.

Human-induced threats include:

- poor maintenance or neglect
- damage from fire (deliberate, or accidental)
- damage due to tourism, visitor impacts, and recreation

Opportunities) include:

- the opportunity for greater understanding of the history
- the opportunity to increase facilities for use

Risk management

While a risk management plan may be developed as a separate document, a general understanding of the potential risk to a place is important when preparing a conservation plan.[108] The conservation plan should identify areas of potential risk and put forward possible actions or solutions to mitigate these risks. Managing risk to people (users or visitors) should be the priority.

By taking action at an early stage and planning for the impact of potential risks the resilience of a place can be increased in the long term. It is also useful to consider risk when undertaking work to a place as it may be cost effective to implement risk mitigation measures at the same time.

Disaster response

Due to its geographic location New Zealand experiences a high level of seismic activity. For this reason, it is important to develop solutions and methods for managing the risk this poses, both before and after an event. Consideration will also need to be given to the risk of possible secondary events such as tsunami, liquefaction, or fire.

It is therefore necessary to consider:

- procedures for the evacuation of a place in the event of an emergency
- the possibility of restricted access and making places secure in the short term
- the ready availability of information such as site plans and engineering reports that can be provided to emergency management personnel (these could be appended to the conservation plan)
- developing good working relationships with skilled contractors who can be called upon in the event of an emergency
- providing regular training and exercises for delegated staff to improve effectiveness of response during an emergency
- planning for longer term recovery once a civil defence emergency is over.

5.2 Sustainability and Climate Change

Reducing the carbon intensity and embodied energy of construction work is also an important consideration to balance with conservation. This is particularly important in light of the Climate Change Response (Zero Carbon) Amendment Act 2019, which has

108 Refer Heritage New Zealand Risk Management Guidance

set a target for New Zealand to ‘reduce net emissions of all greenhouse gases (except biogenic methane) to zero by 2050’.

While restoring existing buildings is inherently more sustainable than demolishing and building new, some traditional building materials (concrete, metals) have a high embodied energy. It is therefore important that materials are carefully selected to maintain and improve the historic qualities of a structure while also responding to any environmental goals.

In addition, some traditional materials are no longer available, or may not be ethical or sustainable choices. The balance of the need for matching material for a heritage building versus the value of not creating a demand for an unsustainable resource must be considered. This applies to be NZ materials such as native timbers, as well as internationally sourced materials such as rainforest timbers.

6 Conservation Policies

This section sets out a rationale and appropriate policies to guide future work on the Petone Wharf , and to ensure that any changes are carried out in a way that respects its cultural heritage values.

These Policies relate directly to the clauses of the ICOMOS NZ Charter 2010, with text from the Charter footnoted. Policies are in bold, and in frames.

Purpose of Conservation

6.1 Purpose of Conservation

6.1.1 Policy: Use of Conservation Plan

Use this Conservation Plan.

The purpose of conservation is to care for places of cultural heritage value and the Conservation Plan is the recognised guiding document.

Conservation Principles

6.2 Understanding Cultural Heritage Values

6.2.1 Policy: Basis of Policies

In the event of items not being covered or if policies conflict, refer back to Section 4 'Significance' to understand the values that have generated these policies.

> *Conservation of a place should be based on an understanding and appreciation of all aspects of its cultural heritage value, both tangible and intangible.*[109]

Commentary

Section 4 of this Conservation Plan sets out the basis for the assessed cultural heritage values. This understanding of the cultural heritage value is the key to appropriate implementation of these policies.

6.3 Indigenous Cultural Heritage

6.3.1 Policy: Conservation of places with indigenous cultural heritage

The conservation of places with significance to Tangata Whenua must be made in association with Tangata Whenua communities.

> *Te Tiriti o Waitangi is the founding document of our nation. Article 2 of the Treaty recognises and guarantees the protection of tino rangatiratanga, and so empowers kaitiakitanga as customary trusteeship to be exercised by tangata whenua. This customary trusteeship is exercised over their taonga, such as sacred and traditional places, built heritage, traditional practices, and other cultural heritage resources. This obligation extends beyond current legal ownership wherever such cultural heritage exists.*[110]

[109] ICOMOS NZ Charter, part clause 2.

[110] ICOMOS NZ Charter, part clause 3.

Commentary

Article 2 of Te Titiriti guarantees certain roles to tangata whenua which are relevant to the Petone Wharf. This obligation extends beyond current legal ownership where such cultural heritage exists.

Early discussion of factors that may lead to change is essential to allow equal participation in the generation of solutions.

Protocols of access, authority, ritual, and practice are determined at a local level and should be respected.

6.4 Planning for conservation

6.4.1 Policy: Conservation Plan

All conservation work should be based on a conservation plan that identifies the cultural heritage value, and significance of the place, and follow the conservation policies.

> *Conservation should be subject to prior documented assessment and planning*[111]*.*

Commentary

As the setting of Petone Wharf is significant, this policy is relevant for any work to the vicinity of the Wharf ie, the Conservation Plan should be used to inform and guide work to the larger setting of the Petone Wharf ie within 50m each side and to the road.

Although some repair and maintenance work may seem minor it shall follow the Conservation Plan guidelines to avoid the setting of inappropriate precedents, or gradual impacts on heritage significance.

6.4.2 Policy: Appropriate standards

Appropriate conservation standards should be maintained whenever work is carried out.

Commentary

As a way of maintaining the integrity of the place all work should conform to principles set out in the ICOMOS New Zealand Charter and be in accordance with international standards for the conservation of places having cultural significance.

Sites that have the potential to reveal archaeological information shall be discussed with relevant authorities and archaeological consultants engaged.

6.4.3 Policy: Consultation

Consultation with affected or interested parties should commence before options or solutions are generated.

Commentary

Discussion with a wide range of groups provides a comprehensive and inclusive brief as the basis for any conservation work.

Respect is shown to consulting parties by ensuring the consultation precedes the generation of options or solutions.

Consultation should be planned to be ongoing throughout a conservation project.

[111] ICOMOS NZ Charter, part clause 4.

6.4.4 Policy: Review of Conservation Plan

This conservation plan should be reviewed from time to time and amended as necessary.

Commentary

No conservation plan should ever be considered to ever be a final or completed document. Rather it should be viewed as a "working document". The conservation plan for the Petone Wharf should be reviewed from time to time, say every ten years, and amended as required to incorporate new information, and also for revision of policies to ensure best practise solutions.

6.4.5 Policy: Review of proposals

Proposals for work on the Petone Wharf should be reviewed by relevant authorities.

Commentary

Any proposals for work on the Petone Wharf should be discussed at an early stage with organisations such as the Greater Wellington Regional Council, and the Lower Hutt City Council to ensure that the work is generally in accordance with the heritage requirements of their Plans.

The consultation set up with Tangata Whenua under 6.3 is assumed to have started prior to the development of proposals, and to be continuing in parallel to the above reviews.

6.5 Respect for surviving evidence and knowledge

6.5.1 Policy: Retain significant fabric

Significant fabric should be retained wherever possible as a means of preserving overall significance. Any intervention should be undertaken with regard to the significance of individual elements as noted in the Inventory.

> *Conservation maintains and reveals the authenticity and integrity of a place, and involves the least possible loss of fabric or evidence of cultural heritage value.*[112]

Commentary

- Exceptional Significance. Elements having high significance should be subjected to as little intervention as possible. Intervention should be limited to processes of stabilisation, maintenance, repair, restoration or reinstatement
- Considerable Significance. These elements should be retained unless extraordinary circumstances require their removal. Any intervention should be limited to processes of maintenance, repair or restoration.
- Some significance. Where possible, these elements should generally be retained in their present form. A greater degree of intervention may be permitted to accommodate, for example a new use.
- Not Relevant. These elements are generally not significant but allow the structure to function. They may be retained, providing fabric of greater significance is not obscured or removed.

6.5.2 Policy: Fabric from different periods

The contribution of fabric from different periods to the overall significance should be considered.

[112] ICOMOS NZ Charter, part clause 5.

The conservation of a place should identify and respect all aspects of its cultural heritage value without unwarranted emphasis on any one value at the expense of other.[113]

Commentary

The overall significance of a place is derived from its evolution over different periods, which is seen in the accumulation of fabric from different ages. The contribution of later fabric needs to be considered and recognised. Later fabric can detract from heritage values or can contribute to an understanding of the evolution of the place.

Removal of material may be considered if assessment shows that its removal would not lessen the cultural heritage values of the place. If material is removed it must be documented and consideration should be given to leaving some remnant to illustrate and provide evidence of that iteration.

6.5.3 Policy: Evidence of function

The past and current function of the Wharf should be part of the continuing story.

Commentary

Evidence relating to the Wharf's working life is valuable and should be identified and protected. This could include physical items such as signs, bollards, but also patterns of wear and use (ie cart tracks).

6.6 Minimum Intervention

6.6.1 Policy: Retain Fabric

Solutions that do not fundamentally change or remove original fabric are preferred.

Work undertaken at a place of cultural heritage value should involve the least degree of intervention consistent with conservation and the principles of this charter.[114]

Commentary

Once original fabric is removed it is generally lost. Even if stored on site or remotely, the connection and relevance is weakened, and the material is at higher risk of being discarded.

Original material that remains insitu is more likely to survive.

Changes to original fabric alter the 'evidence' of the fabrics composition, location, and relationship to adjacent items.

6.6.2 Policy: Reversible solutions

Solutions that can be installed and removed without affecting original fabric are preferred.

Commentary

A reversible solution leaves the original fabric largely intact while the new solution provides the strength, waterproofing, security etc.

[113] ICOMOS NZ Charter, part clause 5.

[114] ICOMOS NZ Charter, part clause 6

Reversible solutions should be designed to be removed with only minor effects on the heritage material. This allows for new, or improved solutions to be installed in the future.

Reversible solutions sometimes, but not always, have visual and aesthetic impact, and this needs to be balanced against the ongoing use and future of a structure.

The previous solution of adding new piles adjacent to failed piles is an example of this.

6.7 Physical Investigation

Physical investigation of a place provides primary evidence that cannot be gained from any other source. [115]

6.7.1 Policy: Physical Investigation

Physical onsite investigation shall be used to confirm information from other sources, and to provide primary evidence.

Commentary

The place should be investigated by non-invasive methods (drawings, photographs, surveys, scans etc) initially.

Invasive investigation that involves damage to fabric should only be used where critical to establish condition.

Physical investigation should be minimal, discretely located, and based on research and knowledge of material experts. Suitable repairs should be made to ensure weatherproofing etc.

6.8 Use

The conservation of a place of cultural heritage value is usually facilitated by the place serving a useful purpose.[116]

6.8.1 Policy: Viable Uses

The Petone Wharf should have an appropriate ongoing use to continue its significance, and as a means of aiding its survival

Commentary

A heritage structure should wherever possible, continue to be used for its original purpose. This maintains and reinforces its significance.

In the case of Petone Wharf, the use has been a mix of commercial transportation of goods and passengers, and recreation.

Potential uses shall:

- Requires a minimum of modification.
- Be viable for the long-term.
- Activate the wharf, preferably not just in daylight hours.
- Include public access.
- Encourage use by a wide range of cultures, abilities, ages etc.
- Not to detract from the significance of the place.

[115] ICOMOS NZ Charter, part clause 7

[116] ICOMOS NZ Charter, part clause 8

6.9 Setting

Where the setting of a place is integral to its cultural heritage value, that setting should be conserved with the place itself. [117]

6.9.1 Policy: Preserve Setting

The setting shall be preserved.

Commentary

An authentic setting enhances the cultural significance of a place and increases the integrity of the whole. For Petone Wharf, this is the location and link to the shore, and the visibility and drama of being the only item on the shore line.

The Wharf is one of the few physical remnants of Petone's industrial aspirations in the 1880-1920 period . Its story is mixed with that of the Gear Meatworks, Odlins Timber, and the railway line that used to run along the sand dunes.

6.9.2 Policy: Reconstruct Setting

Any reconstruction of setting shall be based on evidence, and add to the overall significance.

Commentary

Reconstruction of setting could link to the wider context of Petone's commercial/industrial past and to other heritage stories.

6.10 Relocation

Not applicable to Petone Wharf.

6.11 Documentation and Archiving

The cultural heritage value and cultural heritage significance of a place, and all aspects of its conservation, should be fully documented to ensure that this information is available to present and future generations.[118]

6.11.1 Policy: Recording of Conservation Processes

Conservation processes and other activities involving intervention should be recorded and archived.

Commentary

A record should be made of the whole wharf prior to any major work, and of discrete areas as required for smaller work, including repair and maintenance.

Recording is particularly important in areas where changes are occurring or where fabric is being removed or modified.

Decisions that affect the heritage significance of the structure shall be clearly explained and documented.

Records shall be to archival standards and placed in an appropriate archive. This will ensure that a comprehensive account of the place is maintained for future reference.

[117] ICOMOS NZ Charter, part clause 9

[118] ICOMOS NZ Charter, part clause 11

6.12 Recording

Refer to above.

6.13 Fixtures, Fittings, and Contents

Fixtures, fittings, and contents that are integral to the cultural heritage value of a place should be retained and conserved with the place.[119]

6.13.1 Policy: Fixtures, fittings and contents

Fixtures, fittings and contents identified as significant in this Plan, as well as additional that may be discovered, are best retained insitu.

Commentary

For Petone Wharf, attention should be paid to the fixings, signage, and original finishes. Original markings or graffiti are also important.

Specialist conservators should be used for items as required ie metal work.

Conservation Processes and Practice

6.14 Conservation Plans

6.14.1 Policy: Conservation Plan.

All conservation work should be based on this Conservation Plan. Other management documents should refer to, and be guided by, this Conservation Plan.

6.15 Conservation Principles

6.15.1 Policy: Materials and Workmanship

Materials and workmanship for new or reconstructive work where significance is being recovered should be of a standard comparable with the original building.

Commentary

Any new work should respect the original structures architectural integrity and character in terms of detailing or use of materials. It should not require the removal of historic fabric, particularly that of exceptional or considerable significance.

The default positions is that new materials shall match existing. If materials are not available, or there are other reasons for an alternative (ie H&S, sustainability), options shall be evaluated for least overall effect on significance.

Although new work may be similar to the original, it should be discernible as such on close inspection so as not to confuse new work with the original. Repairs should be dated on the reverse or concealed side.

New elements may be contemporary in style while still being sympathetic to the structure.

6.15.2 Policy: Remedial Work

Remedial work should be carried out as required. Materials used should be consistent with the historic fabric and original construction techniques should be replicated where appropriate.

[119] ICOMOS NZ Charter, part clause 13

Commentary

Remedial and repair work should respect the original structures architectural integrity and character in terms of detailing or use of materials. The minimum amount of original material should be removed to effect a repair.

The default positions is that new materials shall match existing. If materials are not available, or there are other reasons for an alternative (ie H&S, sustainability), options shall be evaluated for least overall effect on significance.

Repairs should be dated on the reverse or concealed side.

New elements may be contemporary in style while still being sympathetic to the building.

6.16 Professional Trade and Craft Skills

6.16.1 Use competent tradespeople

All aspects of conservation work should be planned, directed, supervised, and undertaken by people with appropriate conservation training and experience directly relevant to the project.[120]

Commentary

Where the immediate users/owners of the building cannot safely or competently carry out necessary maintenance or stabilisation or repair, either due to lack of training or the appropriate equipment, a professional should be contracted to carry out the work.

Contractors must have proven competency to undertake works identified and such works should be specified to ensure that they are carried out so as to reduce direct, or indirect damage to significant fabric.

All such works shall be informed by further detailed analysis and research, and the principles of the ICOMOS (NZ) Charter.

6.16.2 Remedial work

Remedial work should be carried out as required. Materials used should be consistent with the historic fabric and original construction techniques should be replicated where appropriate.

Commentary

Remedial work to the Petone Wharf should aim to preserve as much significant fabric as possible and particularly original fabric. Significant fabric should only be replaced where it has ceased to function satisfactorily or where it is placing other fabric at risk. Material that has weathered but which is still in sound condition should be respected as evidence of the Wharf's history.

Remedial work should match original work and use original construction techniques and detailing. Timber sizes and finishes should match the original. Timber species is ideally per the original, or if this is not available or appropriate, as similar as possible.

6.17 Degrees of Intervention

Following research, recording, assessment, and planning, intervention for conservation purposes may include, in increasing degrees of intervention:

(i) ***preservation****, through stabilisation, maintenance, or repair;*

(ii) ***restoration****, through reassembly, reinstatement, or removal;*

(iii) ***reconstruction****; and*

[120] ICOMOS NZ Charter, part clause 16

(iv) ***adaptation****.* [121]

6.17.1 Policy: Degree of intervention

Remedial work should be carried out as required. Materials used should be consistent with the historic fabric and original construction techniques should be replicated where appropriate.

Commentary

Do the minimum necessary intervention.

The areas of high value should be restored where this is appropriate but otherwise should be modified as little as possible so as to maintain and enhance its heritage value.

All historic fabric must be regarded as integral to the area of which it is a part and be conserved with that space.

Changes to the structure which are necessary to make it functional, to improve its safety and to comply with code requirements, should be confined as far as possible to areas of low value.

6.17.2 Policy: Refer to Inventory

Refer to the 4.1.3 Inventory for level of cultural heritage value of each significant space, and element.

6.17.3 Policy: Refer to Table

Refer to the Table 6.24 Table of Appropriate Conservation Processes for what degree of intervention is appropriate for that particular space or element.

Commentary

The default position is to prefer the least intervention

6.17.4 Stabilisation

Stabilisation means the arrest or slowing of the processes of decay. [122]

Stabilisation work shall do no damage to fabric.

Commentary

Methods used to stabilise decay should be passive and operate on the principle of providing a barrier between the fabric and the agent of decay. Stabilisation should be fully reversible, so to allow for any subsequent repairs.

6.17.5 Maintenance

The building should be regularly maintained according to a proper cyclical maintenance programme.

Regular maintenance is an essential part of the management of a place's significance. It is a form of preventative conservation' where the risk of deterioration is managed. Preventing the causes of deterioration rather than treating the symptoms is the most

[121] ICOMOS NZ Charter, part clause 17

[122] ICOMOS NZ Charter, part clause 18i

effective means of preserving significance and protecting original or significant fabric.[123]

Commentary

A planned regime of regular repair and maintenance will slow down the processes of decay and is an important weapon in any effort to preserve fabric in an historic building. It is recommended that a maintenance plan be prepared and implemented for the Petone Wharf once remedial work has been completed.

6.17.6 Repair

Repair means making good decayed or damaged fabric. [124]

When repair is necessary, the work should be carried out in a manner that respects the original fabric.

Commentary

Introduced materials should match the original materials as closely as possible in strength, colour, texture, and detailing.

New materials should be documented and distinguishable from original by experts, and should be date stamped.

Traditional materials and methods should be given preference in conservation work.

6.18 Restoration

The process of restoration typically involves reassembly and reinstatement and may involve the removal of accretions that detract from the cultural heritage value of a place. [125]

6.18.1 Reassembly and reinstatement

It is preferable to reassemble original material and reinstate it in the original location than to introduce new material (known as reconstruction).

Commentary

Restoration is appropriate when the original intent is clearly documented and can be followed.

Typically, reassembly is more appropriate for a discrete portion of a place.

6.18.2 Removal of fabric

Fabric removed from the structure shall be recorded before, and during removal.

Commentary

Existing fabric may need to be removed if it is unsound or dangerous.

Existing fabric identified in the Conservation Plan as detracting from the cultural heritage values may be removed.

Consideration should be given to storing samples of removed material such as typical timber portions, fixings, bollards etc.

[123] ICOMOS NZ Charter, part clause 18

[124] ICOMOS NZ Charter, part clause 18

[125] ICOMOS NZ Charter, part clause 18

6.19 Reconstruction

Reconstruction is distinguished from restoration by the introduction of new material to replace material that has been lost.[126]

6.19.1 Policy: Reconstruction

Reinstatement is based on factual evidence of the item being reconstructed with regard to material, size and location.

Commentary

Reconstruction can apply to original features, layouts etc.

Reconstruction is appropriate if it supports the function, integrity, or understanding and enhances the cultural values of a place.

Reconstruction must not diminish the existing cultural heritage value.

6.19.2 Policy: Return to earlier form

Where appropriate, consideration should be given to returning all or parts of the Petone Wharf to known earlier forms.

Commentary

Returning an historic structure to an earlier form can be a legitimate way of recovering cultural significance. Any return to an earlier form should, however, always be based on available evidence such as historic photographs and drawings.

In this case, the original form of the entire wharf, gates, and sheds is well documented.

6.20 Adaptation

The conservation of a place of cultural heritage value is usually facilitated by the place serving a useful purpose.[127]

6.20.1 Policy: Adaptation to support use

Proposals for adaptation of a place may arise from maintaining its continuing use, or from a proposed change of use.

Commentary

Changes to the structure, which are necessary to improve its functionality, safety or to comply with code requirements, should be the minimum necessary to achieve the stated goal, and should be substantially reversible.

6.20.2 Policy: Adaptation to be compatible

New work should complement and support the original form and fabric.

Commentary

Any alterations or additions should be compatible with the original form and fabric of the place, and should avoid inappropriate or incompatible contrasts of form, scale, mass, colour, and material.

New work should not necessarily replicate the original material or design. However, new work in areas of significant heritage values should generally match the original more closely, while still allowing differentiation between original and new.

[126] ICOMOS NZ Charter, part clause 20

[127] ICOMOS NZ Charter, part clause 21

Change should be carried out in a way that respects the cultural heritage values and has least impact on fabric of high cultural value.

6.20.3 Policy: Differentiation of new work

New work should be able to be differentiated from original work by design or material variations or be clearly identified with physical markings to new material (date stamping).

Commentary

Markings can be concealed inside new work or located where they do not detract from the overall cultural significance.

6.21 Policy: Non-intervention

In some circumstances, assessment of the cultural heritage value of a place may show that it is not desirable to undertake any conservation intervention at that time.[128]

Not applicable.

6.22 Interpretation

Interpretation actively enhances public understanding of all aspects of places of cultural heritage value and their conservation.[129]

6.22.1 Policy: Provide Interpretive Material

Appropriate interpretative material should be provided to communicate the significance of the place.

Commentary

Visitors to any historic place generally seek to have an enriching experience and the value of this depends, to a large extent, on the quality of the interpretive material provided.

Interpretive material should aim to tell a story and engage the attention of the visitor by being informative and well presented.

Interpretation type should be appropriate to the place, and be located in a convenient and visible location that does not obscure valuable heritage material.

Physical interpretation shall be separate from the place or attached in a way that is fully reversible.

6.23 Risk mitigation

Places of cultural heritage value may be vulnerable to natural disasters such as flood, storm, or earthquake; or to humanly induced threats and risks such as those arising from earthworks, subdivision and development, buildings work, or wilful damage or neglect.[130]

6.23.1 Policy: Risk Management

Places of cultural heritage value should be managed with awareness of the potential risks, and strategies for response to disasters.

[128] ICOMOS NZ Charter, part clause 22

[129] ICOMOS NZ Charter, part clause 23

[130] ICOMOS NZ Charter, part clause 24

Commentary

Planning for risk mitigation and emergency management is necessary.

Risk to the property can be categorised into three groups:

a. Catastrophic events such as earthquake, tsunami, fire, flood, storm which have a significant impact on heritage values and or fabric.

b. 'One-off' events caused by fire, flood, vandalism and theft etc. that have local or low impact on heritage values.

c. Cumulative damage caused by poor maintenance, poor architectural detailing, or visitor 'wear and tear'.

6.24 Table of Appropriate Conservation Processes

		CULTURAL HERITAGE VALUE OF ELEVATION, SPACE OR FABRIC:				
		EXCEPTIONAL	CONSIDERABLE	SOME	NOT RELEVANT	NEGATIVE
DEGREE OF INTERVENTION	Preservation Maintenance Maintenance means regular and on-going protective care of a place to prevent deterioration and to retain its cultural heritage value. Stabilisation Stabilisation means the arrest or slowing of the processes of decay. Repair Repair means to make good decayed or damaged fabric using identical, closely similar, or otherwise appropriate material.	Essential	Essential	Essential	Allowed with restrictions Allowed to maintain function of place. Work shall not change significance to negative or impact on items with greater significance.	Not allowed Removal highly recommended to lessen negative impact on significance of place.
	Reconstruction Reassembly Reassembly means to put existing but disarticulated parts of a structure back together. Reinstatement Reinstatement means to put material components of a place, including the products of reassembly, back in position.	Encouraged as recommended by Conservation Policies	Encouraged as recommended by Conservation Policies	Encouraged as recommended by Conservation Policies	Allowed with restrictions Allowed to maintain function of place. Work shall not change significance to negative or impact on items with greater significance.	Not allowed Removal highly recommended to lessen negative impact on significance of place.
	Restoration Restoration means to return a place to a known earlier form, by reassembly and reinstatement, and/or by removal of elements that detract from its cultural heritage value.	Encouraged as recommended by Conservation Policies	Encouraged as recommended by Conservation Policies	Encouraged as recommended by Conservation Policies	Allowed with restrictions Allowed to maintain function of place. Work shall not change significance to negative or impact on items with greater significance.	Not allowed Removal highly recommended to lessen negative impact on significance of place.
	Adaptation Adaptation means the process(es) of modifying a place for a compatible use while retaining its cultural heritage value. Adaptation processes include alteration and addition.	Allowed, with restrictions For the purpose of safeguarding the building or to meet statutory requirements. Any such modification shall only be carried out if no other reasonable alternative is possible, be the minimum necessary, reversible, and as discreet as possible.	Allowed For purposes of distinct functional improvement or to meet statutory requirements. Adaptations should if possible have value for a wide range of potential uses over a long period of time. Any such modification shall be the minimum necessary, reversible, and as discreet as possible.	Allowed For purposes of general functional improvement or to meet statutory requirements. Adaptations should if possible have value for a wide range of potential uses over a long period of time. Any such modification shall be the minimum necessary.	Allowed with restrictions Allowed to maintain function of place. Work shall not adversely affect the significance or impact on items with greater significance.	Allowed Removal is recommended; however, adaptation is allowed for distinct functional improvement, provided this also lessens the negative impact on the significance of the place.
	Reuse of fabric	Discouraged However, if fabric is removed due to an alowed intervention above, the reuse of fabric is encouraged.	Allowed with restrictions If fabric is removed due to an allowed intervention above, the reuse of fabric is encouraged.	Allowed For the purpose of functional improvement.	Allowed Reuse allowed provided this results in no change of significance to place.	Allowed Removal is recommended; however, adaptation is allowed for distinct functional improvement, provided this also lessens the negative impact on the significance of the place.
	Removal of fabric	Strongly discouraged Removal of the minimum amount of fabric only permitted for allowed interventions.	Discouraged Removal of the minimal amount of fabric only permitted for allowed interventions above.	Allowed with restrictions Removal of fabric only permitted for allowed interventions above.	Encouraged. Removal encouraged if replaced with more appropriate items.	Encouraged

7 Implementation of Conservation Policies

7.1 Continue Past Uses

The wharf is currently closed due to safety concerns. Prior to this it was open to the public for promenading, fishing, picnicking etc, as well as for the occasional docking of ferries, and private vessels. It is understood that this use will be reinstated once the Wharf is safe for use and this is encouraged.

7.2 Enhance Past Uses

Consideration should be given to creating zones of use, or additional facilities to increase the value of the wharf to the community and encourage use. This could include seating, shelter, lighting, water supply etc.

7.3 Extended Uses

Small scale commercial uses can be considered to activate the wharf and strengthen public use. This could include a small shop (ie. coffee, icecream). Consideration could be given to facilitating the use of non-permanent 'carts' on the wharf.

7.4 Condition of Fabric

Reuse original or early fabric in original location wherever possible. Where original or early fabric cannot be reused in the original position, reuse in another location.

7.5 The Wharf Shed in Storage

Checked and document this fabric to record the fabric, and to determine its likely age and significance. Consideration should be given to reuse of this fabric based on the above.

7.6 Setting

The landscape design of the wharf entry area off The Esplanade should be re-designed to emphasise the Wharf entry, railway etc, and to include interpretation on the history of the area.

7.7 Gates

There is strong evidence of the form, detail, and location of the original gates/entry area. Reconstruction is recommended as way of regaining significance.

7.8 Sheds

There is strong evidence of the form, detail, and location of the two sheds, and they were long present on the Wharf. Reconstruction of one or both sheds is recommended, particularly if this supports the ongoing use of the Wharf.

7.9 Handrails

There is strong evidence of the design of the original handrail, gates, and decking and these items are recommended for reconstruction.

7.10 Concrete decking

Removal of the concrete decking is recommended in favour of existing or new timber decking.

7.11 Platform

The new lower platform of the wharf has grid flooring on steel beams and timber piles. It would be profligate to replace this at this time, however timber construction is more appropriate and is recommended for future additions or alterations of this type.

7.12 Structural upgrade

The *%NBS* should be confirmed, and any necessary upgrading undertaken to a minimum of 34% NBA & preferably more.

7.13 Form

The length, and form of the wharf are important. The wharf is often viewed from the side, and the rhythm, sizes, and arrangement of the substructure is part of its recognisable character. We recommended that repair work continue to match these existing parameters.

7.14 Interpretation - General

It is suggested that appropriate interpretive material be provided describing the history of pre-European Pito-one, and the post -European history of Petone.

7.15 Interpretation – Specific

It is recommended that the structure of the wharf is explained graphically, along with its construction, maintenance, and the physical pressures on a wharf structure.

7.16 Recommendation for Management and Future Care

It is recommended that to produce and adhere to a maintenance plan that addresses:

Day-to-day maintenance. This is a very important part of maintenance. Those working or visiting the Wharf should pay attention to any evidence of deterioration or risks posed to the structure and either undertake appropriate actions to remedy the problem, or report it to someone capable of resolving the issue.

Systematic Cyclical Maintenance. This involves tasks scheduled to be carried out at regular intervals. This will include simple maintenance such as painting, but will also include regular assessments by a structural engineer and planned structural maintenance.

7.17 Risk Management

A risk assessment should be prepared for the site and building to identify risks to the structure and how these can be managed.

8 Appendices

8.1 Sustainable Management of Historic Heritage Guidance Information Sheet 2.

New Zealand Historic Places Trust Pouhere Taonga

Sustainable Management of Historic Heritage Guidance

Information Sheet 2

Assessment criteria to assist in the identification of Historic Heritage Values

The following best practice criteria are promoted by the NZHPT for use by local authorities and communities to encourage a systematic and transparent approach to identification and assessment of historic heritage.

Physical values

Archaeological information: Does the place or area have the potential to contribute information about the human history of the region, or to current archaeological research questions, through investigation using archaeological methods?

Architecture: Is the place significant because of its design, form, scale, materials, style, ornamentation, period, craftsmanship or other architectural element?

Technology and Engineering: Does the place demonstrate innovative or important methods of construction or design, does it contain unusual construction materials, is it an early example of the use of a particular construction technique or does it have the potential to contribute information about technological or engineering history?

Scientific: Does the area or place have the potential to provide scientific information about the history of the region?

Rarity: Is the place or area, or are features within it, unique, unusual, uncommon or rare at a district, regional or national level or in relation to particular historical themes?

Representativeness: Is the place or area a good example of its class, for example, in terms of design, type, features, use, technology or time period?

Integrity: Does the place have integrity, retaining significant features from its time of construction, or later periods when important modifications or additions were carried out?

Vulnerability: Is the place vulnerable to deterioration or destruction or is threatened by land use activities.

Context or Group: Is the place or area part of a group of heritage places, a landscape, a townscape or setting which when considered as a whole amplify the heritage values of the place and group/ landscape or extend its significance?

Historic values

People: Is the place associated with the life or works of a well-known or important individual, group or organisation?

Events: Is the place associated with an important event in local, regional or national history?

Patterns: Is the place associated with important aspects, processes, themes or patterns of local, regional or national history?

Acknowledgements

This assessment criteria to assist in the identification of historic heritage values is based on Proposed Change No.1 to the Bay of Plenty Regional Policy Statement (Heritage Criteria), Environment Bay of Plenty Regional Council, November 2005 and advice provided by Karen Greig and Lynda Walter, Insitu Heritage Ltd

Source: NZHPT, *Sustainable Management of Historic Heritage Guidance Series,* Discussion Paper No.1, Historic Heritage Principles and Issues, 3 August 2007

The NZHPT welcomes any feedback and comments on this information sheet.

Comments can be provided to information@historic.org.nz. (Attention: Sustainable Heritage Guidance)

Cultural values

Identity: Is the place or area a focus of community, regional or national identity or sense of place, and does it have social value and provide evidence of cultural or historical continuity?

Public esteem: Is the place held in high public esteem for its heritage or aesthetic values or as a focus of spiritual, political, national or other cultural sentiment?

Commemorative: Does the place have symbolic or commemorative significance to people who use or have used it, or to the descendants of such people, as a result of its special interest, character, landmark, amenity or visual appeal?

Education: Could the place contribute, through public education, to people's awareness, understanding and appreciation of New Zealand's history and cultures?

Tangata whenua: Is the place important to tangata whenua for traditional, spiritual, cultural or historical reasons?

Statutory recognition: Does the place or area have recognition in New Zealand legislation or international law including: World Heritage Listing under the World Heritage Convention 1972; registration under the Historic Places Act 1993; is it an archaeological site as defined by the Historic Places Act 1993; is it a statutory acknowledgement under claim settlement legislation; or is it recognised by special legislation?

8.2 Calibre Consulting ‘2021 Wharf Condition Report’

4.1 to 4.4 inclusive.

4. PETONE WHARF

4.1 Description

Petone Wharf is a linear wharf, 393m long. The approach is 283m long x 4.6m wide and the pier head is 110m long x 10.1m wide. The total area of wharf deck is approximately 2500m².

The wharf is a traditional cross-braced timber trestle on timber piles, the original piles being of Ironbark or Jarrah and the original pile caps, wales, braces, beams and fenders being Ironbark. The decking on the pier head is reinforced concrete, cast on flat steel sheeting, whilst on the approach, a concrete deck overlies the original timber decking. The pier head is higher than the approach and the last four bays of the approach between gridlines 44 and 48 ramp upwards to meet the pier head.

A sequence of moderate earthquakes occurred at the end of 2020 which caused several piles on the approach to fail. The worst affected area was around 150m from the start of the wharf where a 500mm slump in the deck was observed over the failed piles. The deck was jacked level and the piles repaired in February - March 2021, however the wharf remains closed due to the poor condition of the piles on the wharf head.

4.1.1 Original Construction

The original construction drawings and specification have been obtained from former Wellington Harbour Board records, these are dated 1907 indicating the wharf was constructed at that time. Photographs taken shortly after the wharf was built are consistent with the drawings, and many of the original features remain despite extensive repairs and maintenance.

The piles were sheathed in copper from below seabed to just above MHWL for protection against worm attack. Similarly, many braces have been sheathed at their lower end within the tidal zone. The sheathing is shown on both the 1907 construction specification and drawings.

Petone wharf was built with an office at the north west corner of the wharf head, the original drawings show a timber frame structure 3.5m long by 2.5m wide. There were windows in each wall and a sarked roof with a partially vaulted ceiling, the building was removed and replaced at an unknown date.

4.1.2 Additions / modifications

The wharf head has been extensively repaired with almost every structural element replaced or relocated. The majority of cap beams are between 100 and 500mm below the stringer beams, it is likely the cap beams were lowered (or replaced) due to the top of the piles being in poor condition. The bracing would have been moved or replaced at the same time, it is most likely this work was completed in the early 1960's when the concrete deck was built. The piles beneath the pier head on grid lines B and E are not shown on the original drawing and in general are located off-grid, it is not known when these were added.

The construction specification for the installation of the concrete deck has been found, it is dated March 1960 and the current form of the structure is consistent with the wharf as described in this document. At construction joints within the concrete topping, degradation of the inner deck beams was observed due to the joints leaking. New stringer beams were added between grids 49 and 50 in 2018 due to severe decay from freshwater ingress.

A small building was located at the start of the wharf head until 2017, in the same place as the original office. The building differed significantly from the office, it was smaller, had no windows and the roof was inclined perpendicular to the roof of the original building. The building was damaged in the Kaikoura earthquake, it was already in poor condition so was removed with the walls, suspended timber floor and roof trusses placed in storage.

A new steel access platform (jetty) and ladder supported by 5 new piles was constructed around 2013 at the beach end of the wharf head. This jetty replaced the previous timber structure that was in very poor condition. The jetty is no longer used by the East by West ferry and is only visited occasionally by recreational boat users. The jetty was damaged by the Kaikoura earthquake and is in moderate condition.

The stairs to the cart refuge located 140m from the start of the wharf were removed around 10 years ago, the piles at the bottom of the stairs were cut below seabed in 2018.

4.2 Survey

Calibre completed inspections by boat and by walking on the wharf, a dive inspection of the wharf was completed by Undersea Construction on the area below the low water line. The dive report is included in Appendix D.

All structural members above water level were visually inspected by boat at both high and low tide. A dive inspection was completed and marine growth was scraped from piles in the tidal zone where there is a high incidence of decay. Handrails, ladders, lights and services were inspected, but not tested.

Calibre have installed survey points over each pile on the wharf head and began monitoring vertical movement to identify structural issues on a yearly basis. Results from the most recent level survey of the wharf head were used to identify areas of concern.

4.3 Survey Results

The condition of the wharf generally gets worse as you get further from the beach. Many timber members show signs of deterioration, with capping beams and corbels having extensive rot at the end of the wharf.

The condition of the piles has declined significantly since the last dive inspection was completed in 2018. Nine piles had failed around the cart refuge and were repaired in February – March 2021, the failed piles were found to have severe loss of section due to teredo worm. It is likely that other piles on the wharf will have similar hidden deterioration. The dive inspection noted the piles on the wharf head to be in poor condition, the piles located along the western edge and outer half of the wharf head are generally in poor or very poor condition.

Figure 4 Dip in wharf deck over grid 28, and a length of the removed pile from this location showing severe deterioration from teredo worm

The edge beams at the head of the wharf are showing widespread degradation, many of the beams along the western side of the wharf have lost structural integrity, four on the wharf head were replaced in 2018. The inner beams are generally in much better condition and with the exception of the innermost bent on the wharf head where there is decay due to freshwater ingress from above.

A large proportion of the edge beams on the approach require replacement, there is vegetation growing on many of these beams, which retains moisture, accelerating decay.

The steel access platform (jetty) is in moderate condition, with deformation of steel beams and rust. The structure is vulnerable to earthquakes as it straddles the wharf head and approach, which move differently during an earthquake. It was damaged during the Kaikoura earthquake with some beams remaining twisted.

The usage of the wharf is less onerous than the intended design use providing redundancy, however there are clusters of piles that have failed or are on the verge of failure.

The deck on the wharf head is not level, which is primarily due to historic pile failures. In 2019, survey marks were installed over each pile by Calibre, these are surveyed for vertical movement on an annual basis. The most recent survey indicated minor vertical movement around pile 63F, the dive survey confirmed the two closest piles are at the point of failure and the pile cap has failed. The difference between the highest and lowest point on the wharf head is around 0.25m. The wharf head was built higher than the approach, which has a noticeable ramp at the end.

The concrete deck is in reasonable condition, areas have been removed for pile repairs and the concrete and reinforcement were noted to be sound. The construction joints are leaking which has accelerated decay of the timber below.

There are two ladders on the wharf head. The ladder at the end of the wharf on pile 66D is in a very poor condition below the high-water line and should be removed or replaced if this part of the wharf is re-opened. The ladder on the fender at pile 58F is in moderate condition.

The streetlights and other furniture are in moderate - good condition. The lighting below the deck has not worked for several years, the cabling is broken hanging from the underside of the deck. It is unclear if the cables are live, we recommend loose / broken cable should be removed.

4.4 Structural Assessment

The wharf is currently closed, and significant repairs are needed to achieve a Light Recreational Wharf standard.

The wharf approach consists of two piles on each bent, whereas the wharf head typically has rows of six piles. This results in the approach being more vulnerable to damage in the event of pile failures as there is little redundancy.

The piles on the approach which were repaired in early 2021 after deteriorating due to teredo worm, we are recommending only vehicles essential for repairs and maintenance activities are permitted on the wharf, this is subject to an inspection of the piles below by divers no more than 3 months before the work is undertaken.

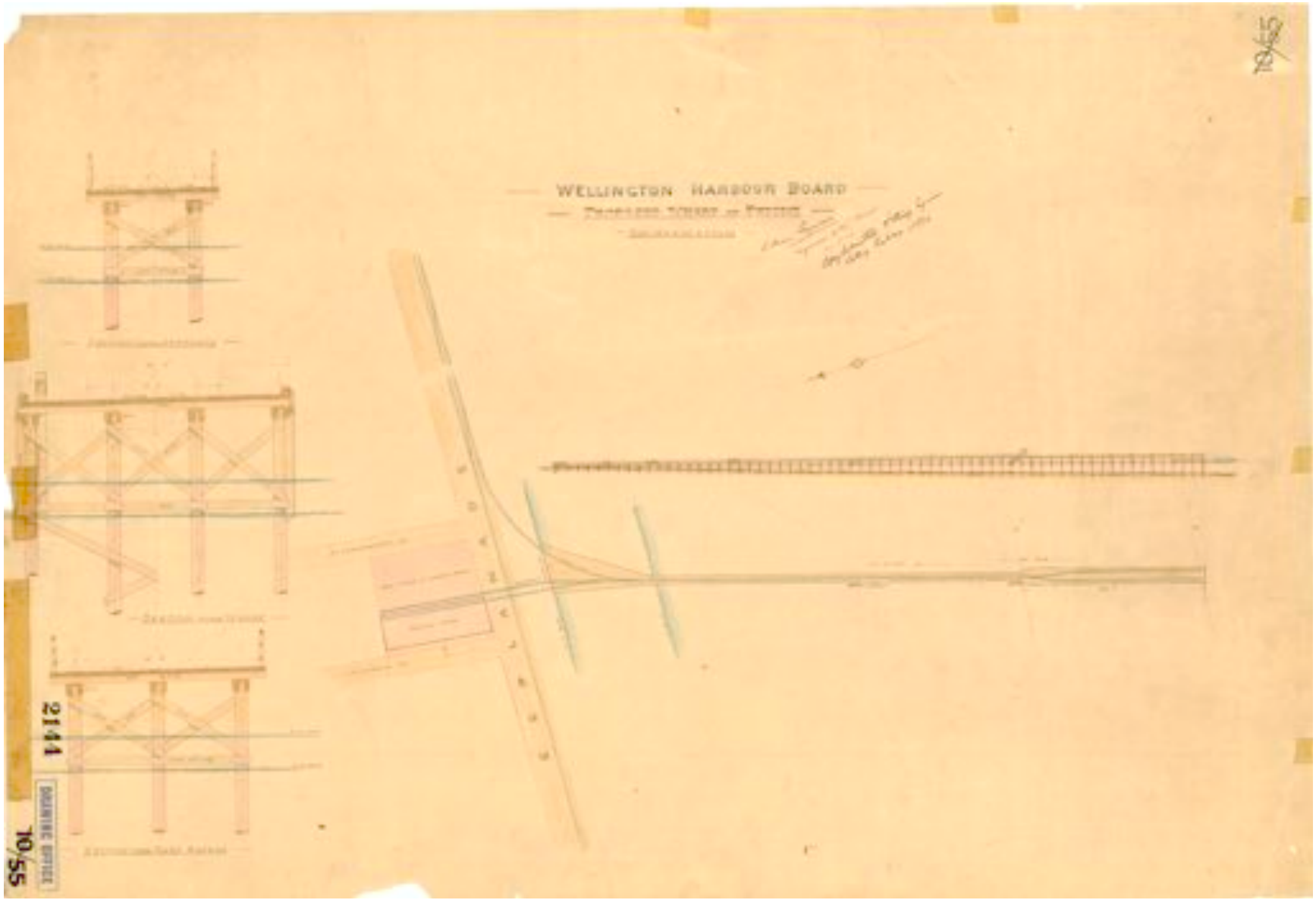
The horizontal bracing on the underside of the deck and vertical bracing on the piles is in poor condition. Many of the vertical bracing members are broken in the tidal zone and the horizontal bracing has been removed in some areas reducing redundancy in the lateral load resisting structure.

Whilst the concrete deck provides redundancy against localised pile failures, vertical movement (slumping) in the deck was detected above a cluster of several failed piles. The deck is unable to support the weight of vehicles, vehicle access should only be allowed once repairs are undertaken.

Due to the number of failed piles and poor condition of the bracing, the berthing of vessels is not to be permitted until the wharf is refurbished. The bollards to the wharf are in poor condition, several bollards have been cut immediately below deck level where concrete encasement pile repairs were completed. These bollards would have little strength but no action is recommended as the wharf is shut.

8.3 Original Drawings


WELLINGTON HARBOUR BOARD
PETONE WHARF
2145
T1/55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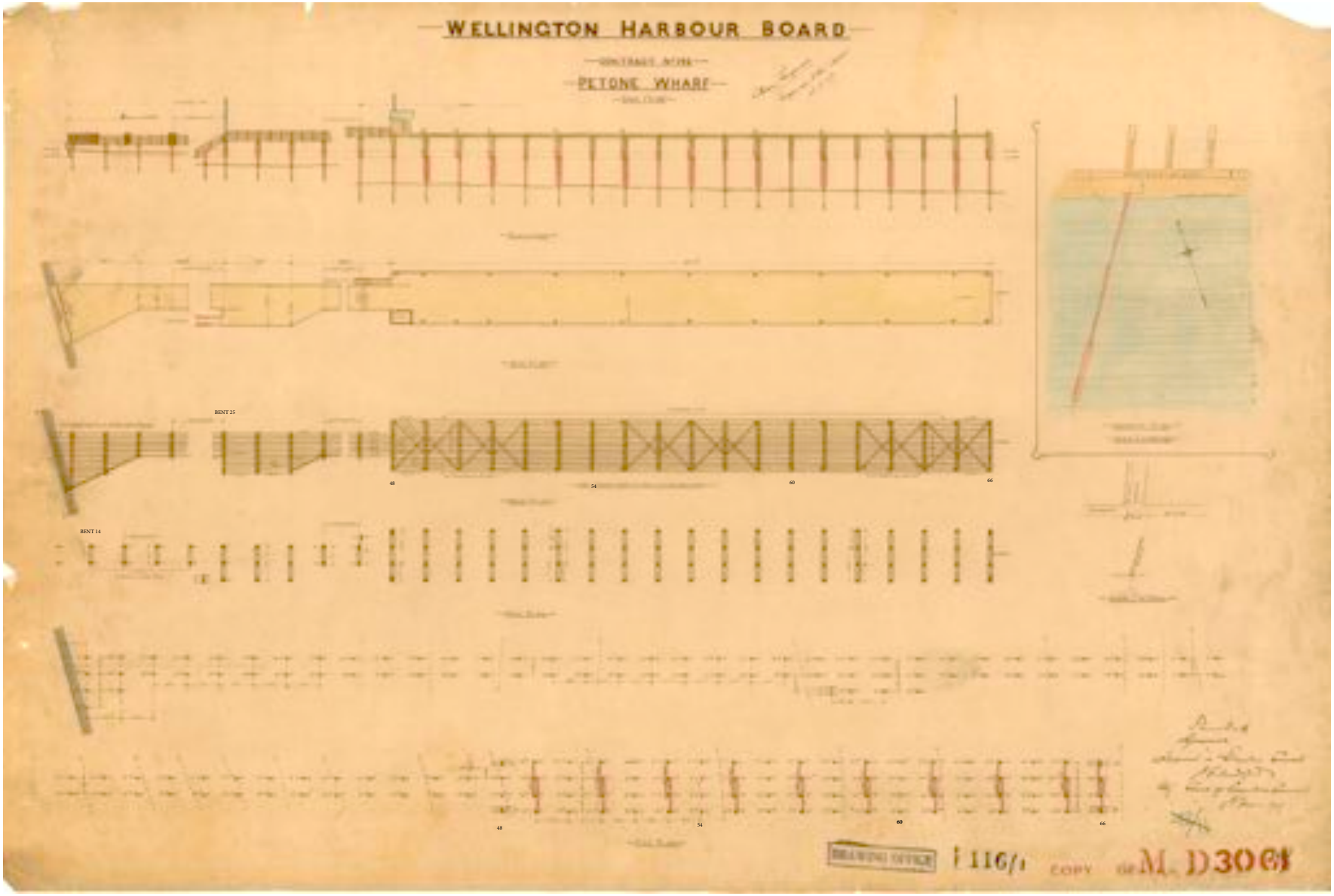
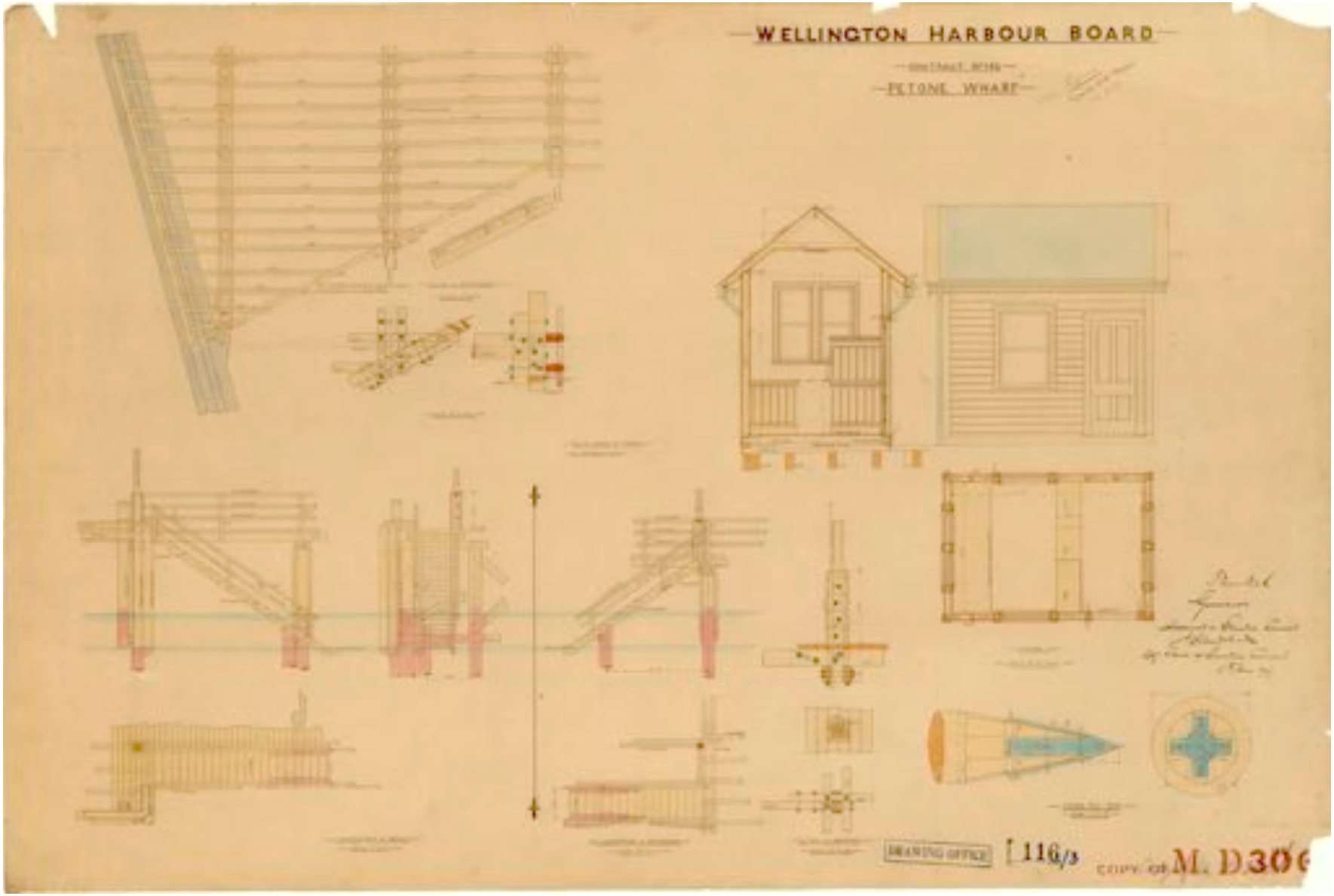
2141
10/55


WELLINGTON HARBOUR BOARD
PETONE WHARF
BENT 25
BENT 14
48
54
60
66
BREAKING OFFICE
116/1
COPY OF M. D3061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PETONE WHARF
DRAWING OFFICE
116/3
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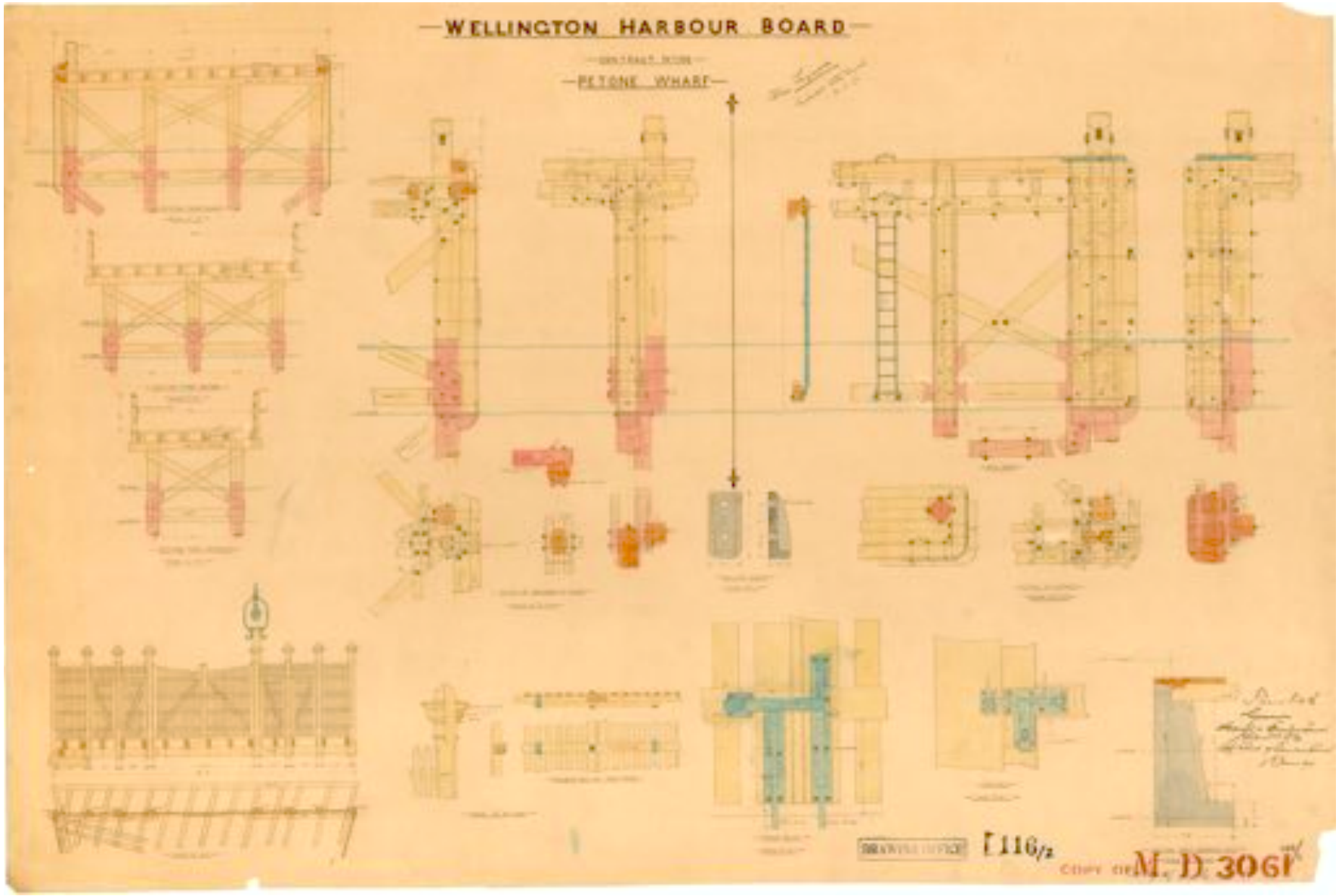
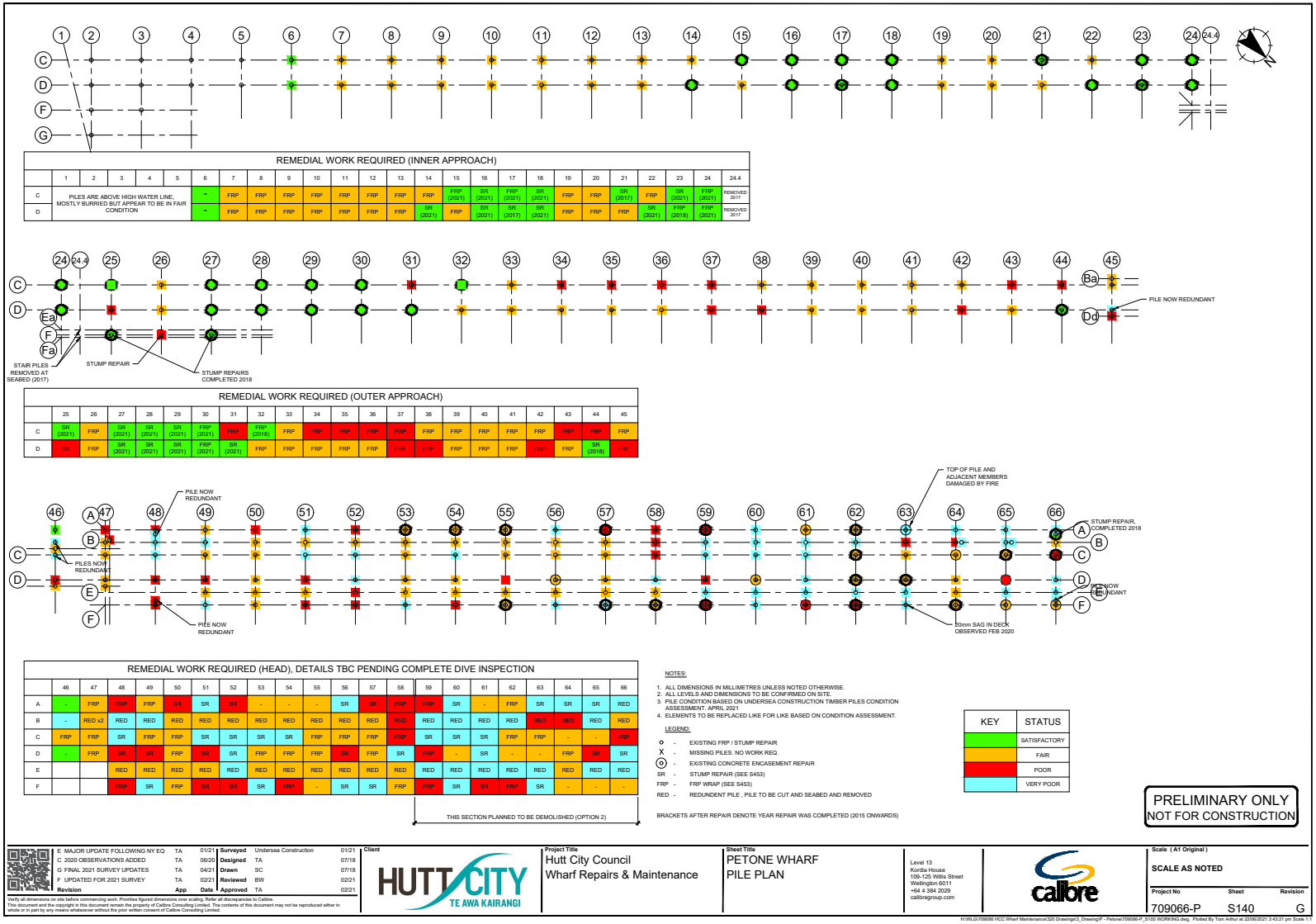

WELLINGTON HARBOUR BOARD
PETONE WHARF
T 116/2
COPY OF M. D. 3061

8.4 Current Drawings

Attached is a selection of the current drawing set from Calibre Consulting Ltd. including wharf plans and elevations of bents in the approach, cart refuge, and head.


REMEDIAL WORK REQUIRED (INNER APPROACH)
REMEDIAL WORK REQUIRED (OUTER APPROACH)
REMEDIAL WORK REQUIRED (HEAD), DETAILS TBC PENDING COMPLETE DIVE INSPECTION
PILES ARE ABOVE HIGH WATER LINE, MOSTLY BURRIED BUT APPEAR TO BE IN FAIR CONDITION
STAIR PILES REMOVED AT SEABED (2017)
STUMP REPAIR
STUMP REPAIRS COMPLETED 2018
PILE NOW REDUNDANT
TOP OF PILE AND ADJACENT MEMBERS DAMAGED BY FIRE
STUMP REPAIR, COMPLETED 2018
PILES NOW REDUNDANT
50mm SAG IN DECK OBSERVED FEB 2020
THIS SECTION PLANNED TO BE DEMOLISHED (OPTION 2)
NOTES:
1. ALL DIMENSIONS IN MILLIMETRES UNLESS NOTED OTHERWISE.
2. ALL LEVELS AND DIMENSIONS TO BE CONFIRMED ON SITE.
3. PILE CONDITION BASED ON UNDERSEA CONSTRUCTION TIMBER PILES CONDITION ASSESSMENT, APRIL 2021
4. ELEMENTS TO BE REPLACED LIKE FOR LIKE BASED ON CONDITION ASSESSMENT.
LEGEND:
EXISTING FRP / STUMP REPAIR
MISSING PILES. NO WORK REQ.
EXISTING CONCRETE ENCASEMENT REPAIR
SR - STUMP REPAIR (SEE S453)
FRP - FRP WRAP (SEE S453)
RED - REDUNDENT PILE , PILE TO BE CUT AND SEABED AND REMOVED
BRACKETS AFTER REPAIR DENOTE YEAR REPAIR WAS COMPLETED (2015 ONWARDS)
KEY
STATUS
SATISFACTORY
FAIR
POOR
VERY POOR
PRELIMINARY ONLY
NOT FOR CONSTRUCTION
E MAJOR UPDATE FOLLOWING NY EQ TA 01/21
C 2020 OBSERVATIONS ADDED TA 06/20
G FINAL 2021 SURVEY UPDATES TA 04/21
F UPDATED FOR 2021 SURVEY TA 02/21
Revision App Date
Surveyed Undersea Construction 01/21
Designed TA 07/18
Drawn SC 07/18
Reviewed BW 02/21
Approved TA 02/21
Client
HUTT CITY TE AWA KAIRANGI
Project Title
Hutt City Council
Wharf Repairs & Maintenance
Sheet Title
PETONE WHARF
PILE PLAN
Level 13
Kordia House
109-125 Willis Street
Wellington 6011
+64 4 384 2029
calibregroup.com
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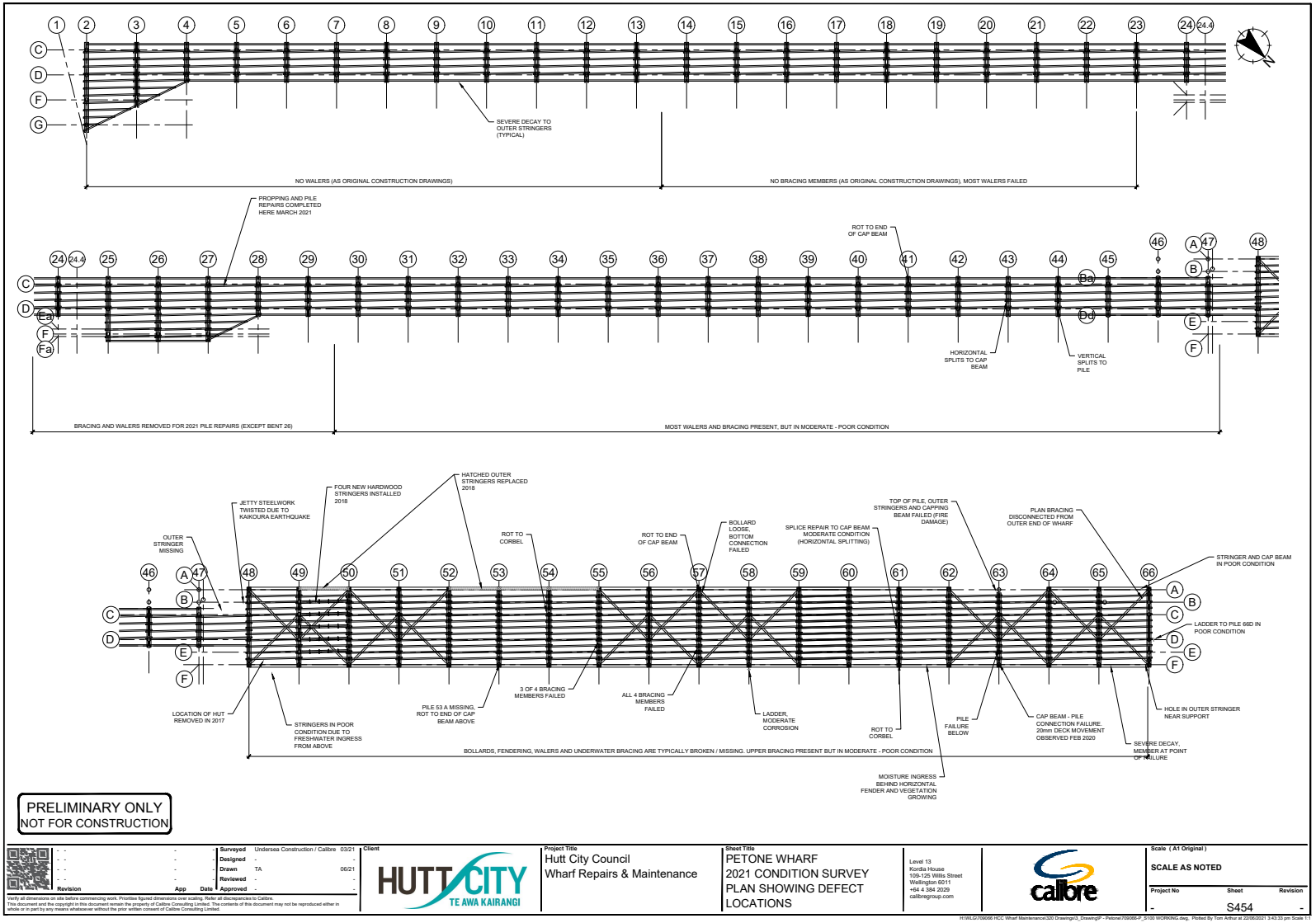
Scale (A1 Original)
SCALE AS NOTED
Project No 709066-P
Sheet S140
Revision G


SEVERE DECAY TO OUTER STRINGERS (TYPICAL)
NO WALERS (AS ORIGINAL CONSTRUCTION DRAWINGS)
NO BRACING MEMBERS (AS ORIGINAL CONSTRUCTION DRAWINGS), MOST WALERS FAILED
PROPPING AND PILE REPAIRS COMPLETED HERE MARCH 2021
ROT TO END OF CAP BEAM
HORIZONTAL SPLITS TO CAP BEAM
VERTICAL SPLITS TO PILE
BRACING AND WALERS REMOVED FOR 2021 PILE REPAIRS (EXCEPT BENT 26)
MOST WALERS AND BRACING PRESENT, BUT IN MODERATE - POOR CONDITION
OUTER STRINGER MISSING
JETTY STEELWORK TWISTED DUE TO KAIKOURA EARTHQUAKE
FOUR NEW HARDWOOD STRINGERS INSTALLED 2018
HATCHED OUTER STRINGERS REPLACED 2018
ROT TO CORBEL
ROT TO END OF CAP BEAM
BOLLARD LOOSE, BOTTOM CONNECTION FAILED
SPLICE REPAIR TO CAP BEAM MODERATE CONDITION (HORIZONTAL SPLITTING)
TOP OF PILE, OUTER STRINGERS AND CAPPING BEAM FAILED (FIRE DAMAGE)
PLAN BRACING DISCONNECTED FROM OUTER END OF WHARF
STRINGER AND CAP BEAM IN POOR CONDITION
LADDER TO PILE 66D IN POOR CONDITION
LOCATION OF HUT REMOVED IN 2017
STRINGERS IN POOR CONDITION DUE TO FRESHWATER INGRESS FROM ABOVE
PILE 53 A MISSING, ROT TO END OF CAP BEAM ABOVE
3 OF 4 BRACING MEMBERS FAILED
ALL 4 BRACING MEMBERS FAILED
LADDER, MODERATE CORROSION
ROT TO CORBEL
PILE FAILURE BELOW
CAP BEAM - PILE CONNECTION FAILURE, 20mm DECK MOVEMENT OBSERVED FEB 2020
HOLE IN OUTER STRINGER NEAR SUPPORT
SEVERE DECAY, MEMBER AT POINT OF FAILURE
BOLLARDS, FENDERING, WALERS AND UNDERWATER BRACING ARE TYPICALLY BROKEN / MISSING. UPPER BRACING PRESENT BUT IN MODERATE - POOR CONDITION
MOISTURE INGRESS BEHIND HORIZONTAL FENDER AND VEGETATION GROWING
PRELIMINARY ONLY
NOT FOR CONSTRUCTION
Surveyed Undersea Construction / Calibre 03/21
Designed -
Drawn TA 06/21
Reviewed -
Approved -
Revision App Date
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Client
HUTT CITY TE AWA KAIRANGI
Project Title
Hutt City Council
Wharf Repairs & Maintenance
Sheet Title
PETONE WHARF
2021 CONDITION SURVEY
PLAN SHOWING DEFECT LOCATIONS
Level 13
Kordia House
109-125 Willis Street
Wellington 6011
+64 4 384 2029
calibregroup.com
calibre
Scale (A1 Original)
SCALE AS NOTED
Project No Sheet Revision
- S454 -
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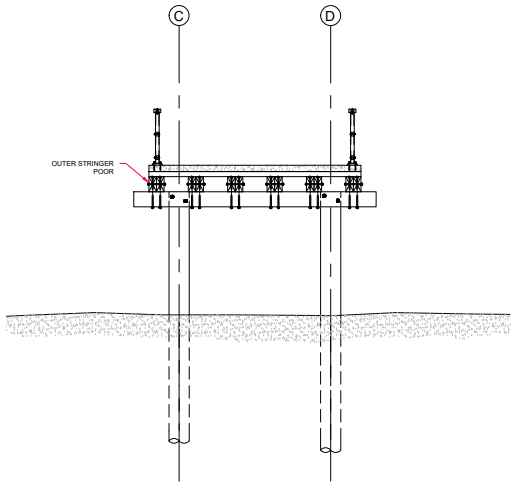

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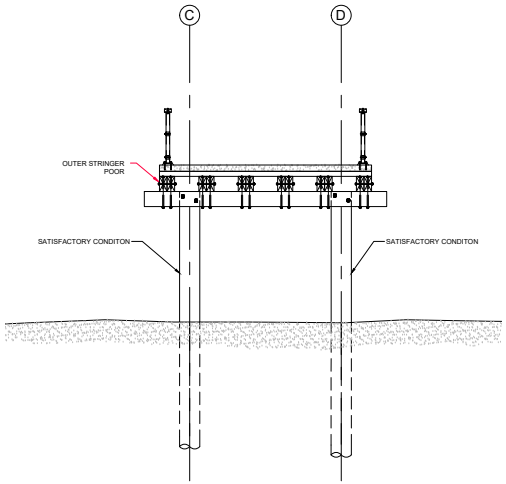

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Revision	App	Date
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Surveyed	Undersea Construction	03/21
Designed	TA	03/21
Drawn	LB	03/21
Reviewed	-	03/21
Approved	-	03/21

Client: HUTT CITY TE AWA KAIRANGI

Project Title: Hutt City Council
Wharf Repairs & Maintenance

Sheet Title: PETONE WHARF
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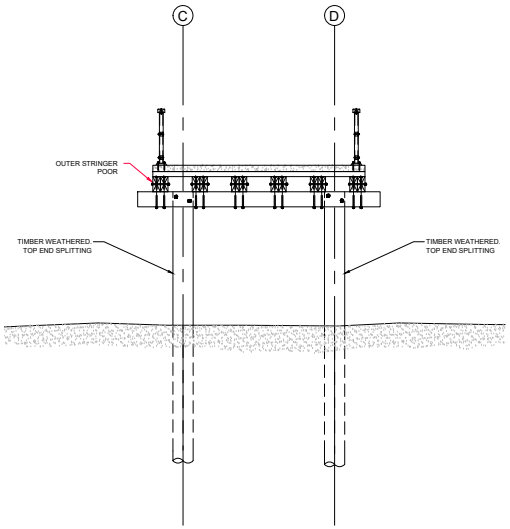

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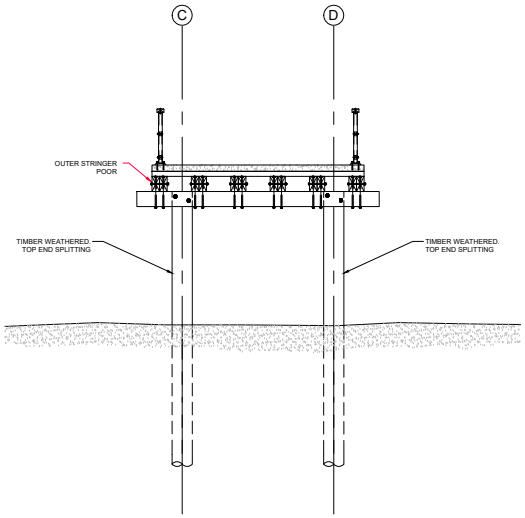

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Surveyed	Undersea Construction	03/21
Designed	TA	03/21
Drawn	LB	03/21
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Project Title: Hutt City Council
Wharf Repairs & Maintenance

Sheet Title: PETONE WHARF
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Project No	Sheet	Revision
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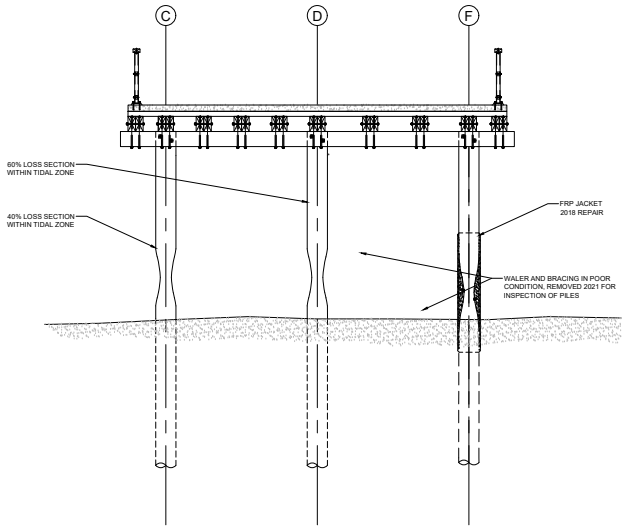

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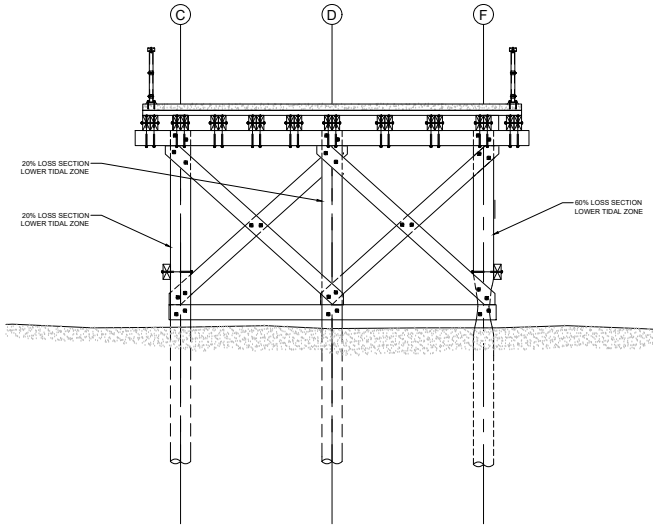

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Surveyed	Undersea Construction	03/21
Designed	TA	03/21
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Approved	-	03/21

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Project Title: Hutt City Council
Wharf Repairs & Maintenance

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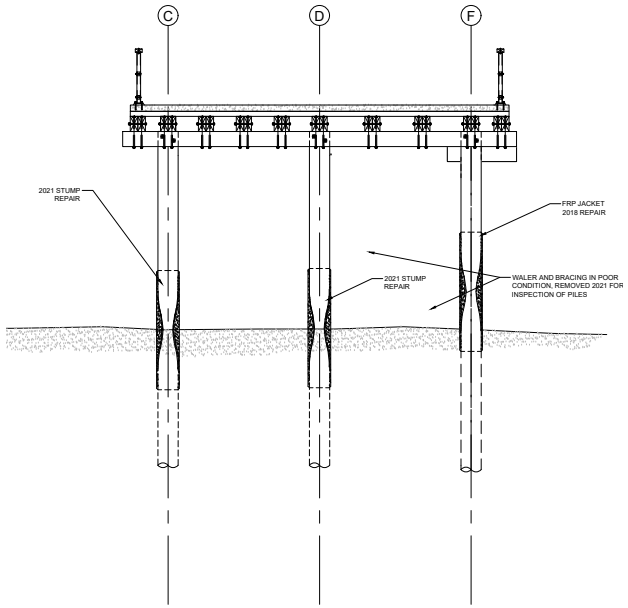

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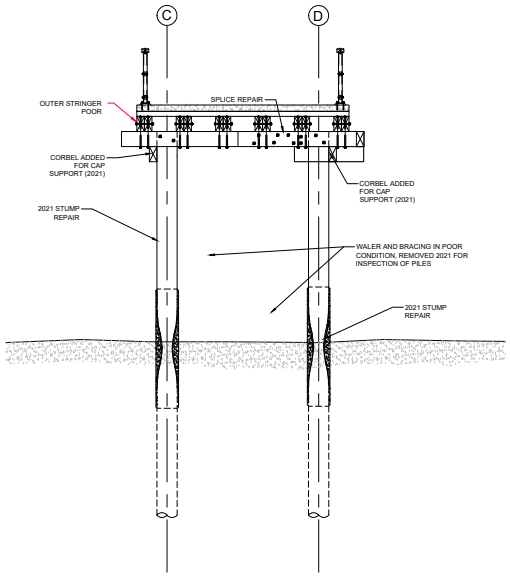

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Reviewed	-	03/21
Approved	-	03/21

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Wharf Repairs & Maintenance

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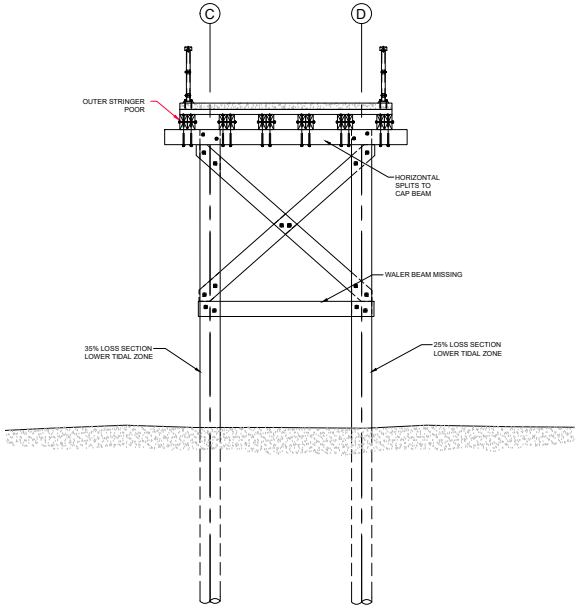

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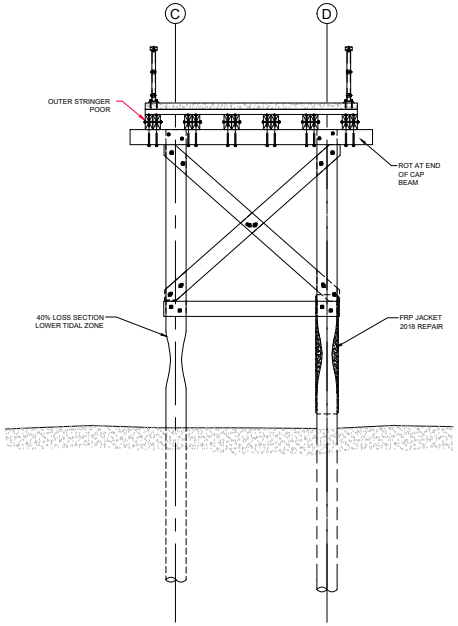

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Surveyed	Undersea Construction	03/21
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Reviewed	-	03/21
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Project Title: Hutt City Council
Wharf Repairs & Maintenance

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Project No	Sheet	Revision
709066-P	S292	A

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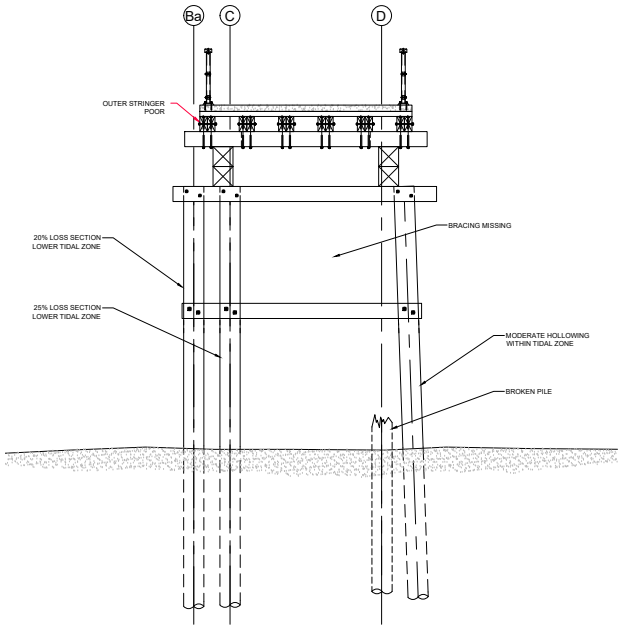

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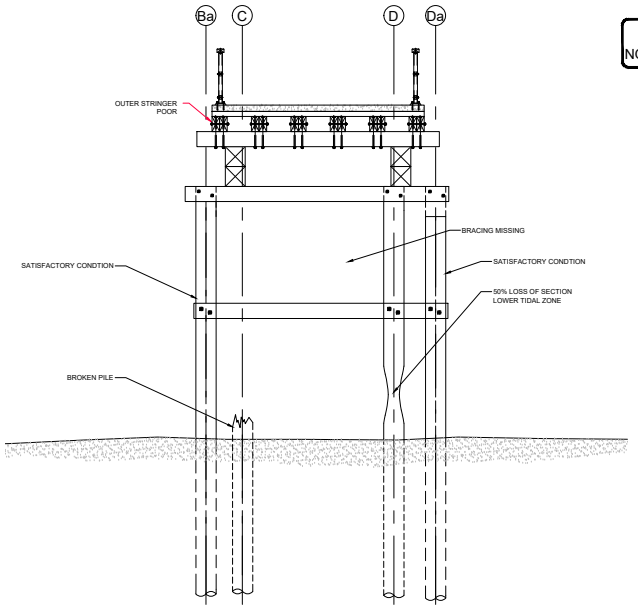

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Revision	App	Date
A FOR REVIEW	-	03/21

Surveyed	Undersea Construction	03/21
Designed	TA	03/21
Drawn	LB	03/21
Reviewed	-	03/21
Approved	-	03/21

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Project Title: Hutt City Council
Wharf Repairs & Maintenance

Sheet Title: PETONE WHARF
BENT NO.45
BENT NO.46

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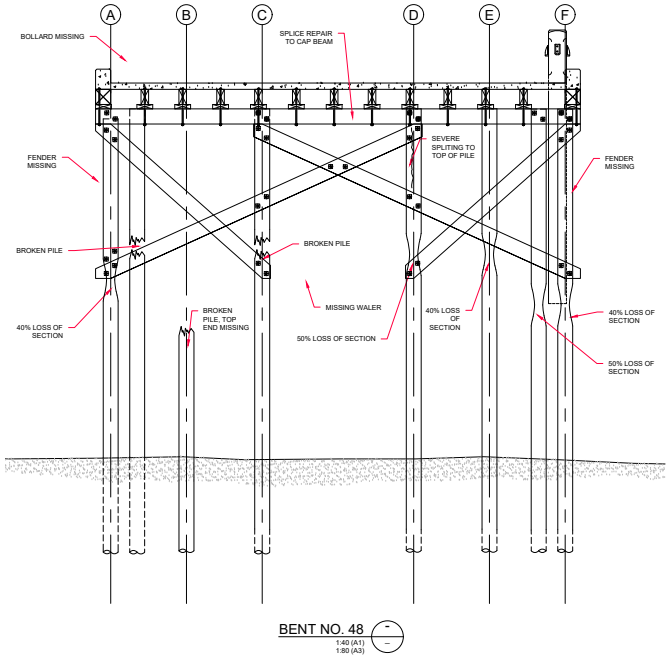

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Revision	App	Date
A FOR REVIEW	-	03/21

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Drawn	LB	03/21
Reviewed	-	03/21
Approved	-	03/21

Verify all dimensions on site before commencing work. Prioritise figured dimensions over scaling. Refer all discrepancies to Calibre.
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Client: HUTT CITY TE AWA KAIRANGI

Project Title: Hutt City Council
Wharf Repairs & Maintenance

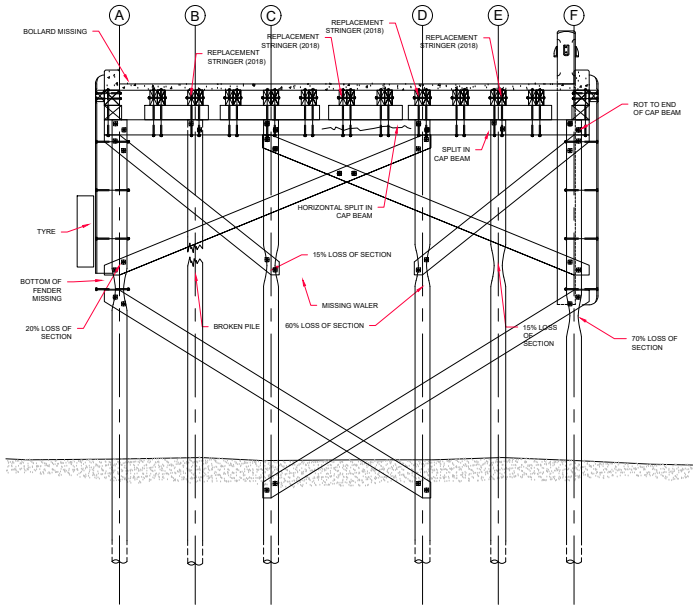
Sheet Title: PETONE WHARF
BENT NO.48

Level 13
Kordia House
109-125 Willis Street
Wellington 6011
+64 4 384 2029
calibregroup.com

Scale (A1 Original): SCALE AS NOTED

Project No	Sheet	Revision
709066-P	S297	A

H:\WLG\709066 HCC Wharf Maintenance\320 Drawings\03_Drawing\P - Petone\709066-P_S100 WORKING.dwg, Plotted By Tom Arthur at 22/06/2021 3:47:32 pm Scale 1:1



BENT NO. 49

1:40 (A1)
1:80 (A3)

NOTES:

1. ALL DIMENSIONS IN MILLIMETRES UNLESS NOTED OTHERWISE.
2. ALL LEVELS AND DIMENSIONS TO BE CONFIRMED ON SITE.
3. DEFECTS NOTED ARE FROM FEB 2021 CALIBRE INSPECTIONS AND APRIL 2021 DIVE INSPECTIONS BY UNDERSEA CONSTRUCTION

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Revision	App	Date
A FOR REVIEW	-	03/21

Surveyed	Undersea Construction	03/21
Designed	TA	03/21
Drawn	LB	03/21
Reviewed	-	03/21
Approved	-	03/21

Client: HUTT CITY TE AWA KAIRANGI

Project Title: Hutt City Council
Wharf Repairs & Maintenance

Sheet Title: PETONE WHARF
BENT NO.49

Level 13
Kordia House
109-125 Willis Street
Wellington 6011
+64 4 384 2029
calibregroup.com

Scale (A1 Original): SCALE AS NOTED

Project No	Sheet	Revision
709066-P	S298	A

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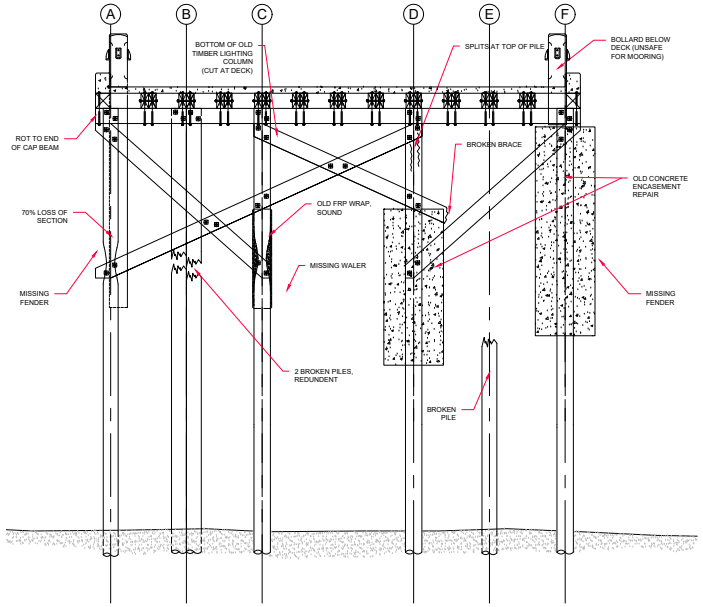

BENT NO. 65

1:40 (A1)
1:80 (A3)

NOTES:

1. ALL DIMENSIONS IN MILLIMETRES UNLESS NOTED OTHERWISE.
2. ALL LEVELS AND DIMENSIONS TO BE CONFIRMED ON SITE.
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Client: HUTT CITY TE AWA KAIRANGI

Project Title: Hutt City Council
Wharf Repairs & Maintenance

Sheet Title: PETONE WHARF
BENT NO.65

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Scale (A1 Original): SCALE AS NOTED

Project No	Sheet	Revision
709066-P	S514	A

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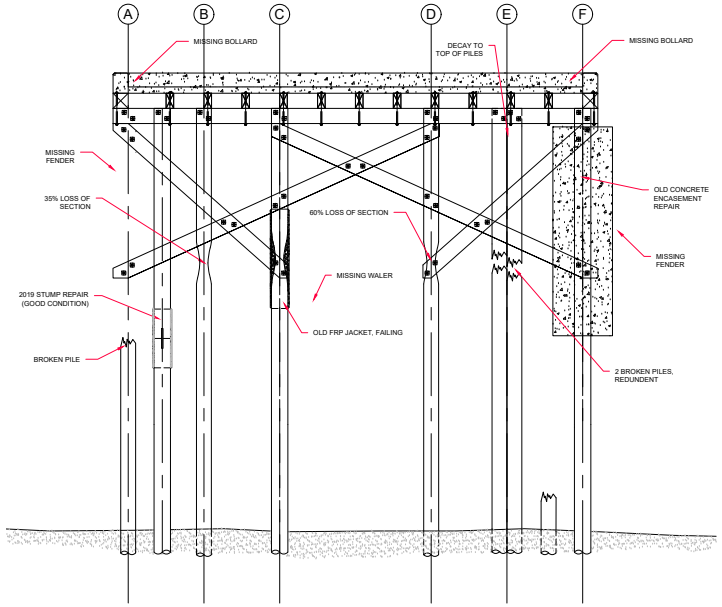

BENT NO. 66
1:40 (A1)
1:80 (A3)

NOTES:

1. ALL DIMENSIONS IN MILLIMETRES UNLESS NOTED OTHERWISE.
2. ALL LEVELS AND DIMENSIONS TO BE CONFIRMED ON SITE.
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Client: HUTT CITY TE AWA KAIRANGI

Project Title: Hutt City Council
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Scale (A1 Original): SCALE AS NOTED

Project No	Sheet	Revision
709066-P	S515	A

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