



# **Conservation Management Plan - draft**

**Seatoun Wharf, Seatoun, Wellington**

**May 2021**

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# 1 Introduction

## 1.1 Brief

This Conservation Management Plan was commissioned by Joel de Boer, Project Manager – Marine and Coastal, Parks, Sport & Recreation, Wellington City Council in an email of 4 May 2021.

## 1.2 Background to the plan

The Wellington City Council (WCC) propose to carry out remedial and upgrade works to the wharf<sup>1</sup>. The works require a Resource Consent and this draft Plan fulfils condition 20 of the approved Consent, WGN200116<sup>2</sup>. Heritage conditions comprise the following:

At least 30 working days prior to the commencement of the *remedial works* the consent holder shall submit a draft Conservation Management Plan (DCMP) to the *Manager* for certification. No *remedial works* may commence until the consent holder has received written notification that the DCMP has been certified by the *Manager*. The DCMP shall be prepared by a suitably qualified conservation practitioner and shall contain at a minimum the following sections:

- a History and description of the wharf and surrounds;
- b Statement of significance;
- c Heritage inventory (including a detailed hierarchy of existing heritage fabric);
- d Influences on conservation policy;
- e Conservation policy relevant for guiding the remedial works (with a full conservation policy section to be completed after the remedial works); and
- f Remedial works specification [note this is for non-structural work].

Matters to be included in the plan:

- g A Temporary Protection Plan that identifies potential risks and outlines measures to reduce the potential for damage to the heritage fabric of Seatoun Wharf during the proposed work. The plan should include how the work will be supervised and a decision-making process for managing problematic issues.

This draft Plan comprises items a to g. Item c comprises a description of the wharf and its elements, rather than a list, which will be updated as a heritage inventory at the completion of the works. The remedial work specifications cover the repair of non-structural timber. Structural repairs can only be specified by an engineer.

## 1.3 Methodology

A conservation plan is a guide to the long term care of a heritage place by owners, managers and users; in particular it acts to ensure that the heritage values associated

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<sup>1</sup> The remedial and upgrade works are described in section 5.1 of this Plan

<sup>2</sup> Greater Wellington Regional Council Resource Consent, WGN200116, granted 21 January 2021





with these places are maintained or, where warranted, enhanced. Within such plans the conservation policies and actions recommended relate to the established range and extent of heritage values identified, and are determined through an assessment of the degree of potential threat to those values. Their selection is also informed by the *ICOMOS New Zealand Charter for the Conservation of Places of Heritage Value*, which outlines appropriate principles to assist owners, managers and heritage professionals to conserve and manage heritage places throughout New Zealand. (ICOMOS, Charter for the Conservation of Places of Cultural Heritage Value, 2010).

This Conservation Plan aligns with the methodology described in J.S. Kerr's *The Conservation Plan; A Guide to the Preparation of Conservation Plans for Places of European Cultural Significance* (National Trust of Australia, 1990), but has been adapted to meet New Zealand requirements. Consistent with this guide, the plan contains the following sections:

- History of the place: an outline of the physical and social history and significant people or organisations associated with the building and setting;
- Describing the place: a summary of relevant place related information associated with the building (e.g. legal description, land area, controlling authorities, zoning) as well as a description of its development, construction, materials and setting;
- Assessing the place: an assessment of the heritage values and degree of significance attributable to the building and setting based on the criteria contained in the Greater Wellington Regional Policy Statement (RPS);
- Conservation considerations: an outline of the key legislative/non-legislative requirements and potential threats that have a bearing on the future management of the building;
- Managing the place: a description of policies and prioritized actions to guide future management and conservation of the building in a way that respects and retains its assessed heritage values.

#### **1.4 Photographic sources**

The author took contemporary photographs. The sources of other photographs are identified under each photo.

#### **1.5 Copyright**

This plan is the copyright of Ian Bowman, architect and conservator.

#### **1.6 Contributors to the plan**

Historian John Martin researched and wrote the history of the building. Ian Bowman, architect and conservator, compiled and wrote the remainder of the plan.

#### **1.7 Scope and limitations**

This plan does not assess archaeological or tangata whenua values as these are outside the expertise of the authors. This plan is not a structural or fire safety survey and does not address specific issues of Building Act compliance. Access to the underside of the wharf was restricted to the south end of the approach wharf only. The condition and proposed remedial works discussed in the Plan are based on reports and

drawings prepared by Beca. No detailed specifications are available as yet from Beca.

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draft



## 2 History of the place

### 2.1 Background

The eastern side of the Miramar peninsula was extensively populated in pre-European times. Above a spring in Worser Bay (Te Puna o Tinirau/Te Puna a Tara) on the ridge was the Te Whetu-kairangi pa. Seatoun Flat where kumara and potatoes were grown was named Maraenui and the beach was known as 'Kirikiri-tatangi' (a rattling sound of the waves on a gravel beach).<sup>3</sup> The foreshore of Seatoun was called Te Turanga O Kupe and Pinnacle Rock Te Aroaro O Kupe. One of Seatoun's early residents estate agent Hector McLeod contributed the archaeological section to Eldson Best's classic work *The Land of Tara and They Who Settled It* on Maori occupation of Te Whanganui-a-Tara/Wellington. He lists the extensive archaeological evidence for occupation of this area including pa and kainga sites, adzes, knives, fish hooks, bones etc. Eldson Best wrote of the Tu-te-Kawa hapu (Ngai Tahu and Ngati Kahungunu) who had kainga from Paikakawa to Kakariki (Worser Bay) and around to Omarukaikuru (Point Jerningham).<sup>4</sup>

James Coutts Crawford who had arrived from Australia at the same time as the New Zealand Company began to settle Wellington. He bought five country sections of a hundred acres on what became known as Watt's (Miramar) peninsula and established a cattle and sheep farm there on the five hundred acres, living at 'Glendavar' at the northern end of the shallow lake ('Burnham Water').



Figure 1 Glendavar, ATL, A-229-009

Over time Crawford acquired the entire peninsular and in 1872 named it 'Miramar'. In 1849 he drove a tunnel through the ridge between it and Evan's Bay to drain the lake. Over the next decade the lake dried out and became part of the farm and was also used as a racecourse for the town.

In the 1870s Crawford began to sell off parts of his estate. At that time the only

<sup>3</sup> Eldson Best, *The Land of Tara and They Who Settled It*, part V (place names), part VI (H.N. McLeod). Eldson Best, 'Miramar island and its history', *TNZI*, vol 54, 1923.

<sup>4</sup> *NZM*, 24 August 1894. *EP*, 13 August 1931. See also *EP*, 18 March 1907 which reports on finds made by Henry M. Christie around Wellington including some in Seatoun.

people in the Seatoun area were those at the pilot station and farm workers together with a few Maori families in bays.

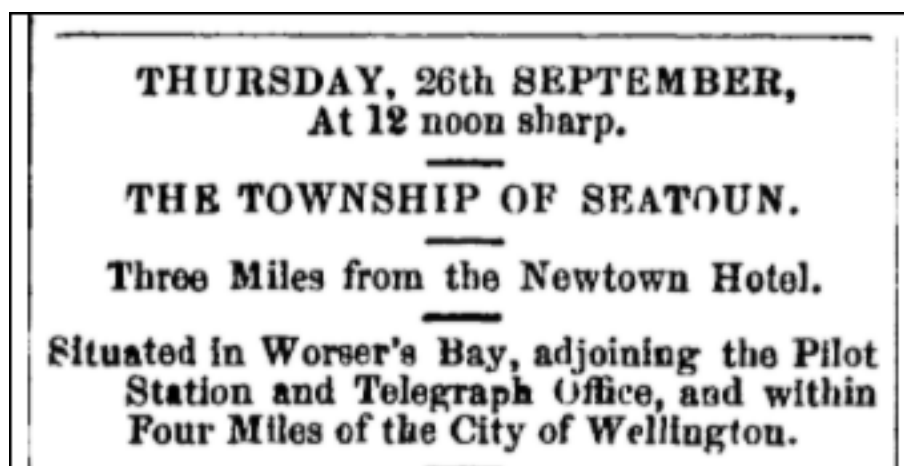


Figure 2 *EP*, 13 September 1878

In 1878 Crawford put a hundred acres of his estate divided into quarter-acre lots by surveyor E.H. Beere up for auction as 'Seatoun township' on the Flat.<sup>5</sup> The Crawford family had owned a place called Easter Seaton (not

'Seatoun') in Forfarshire, Scotland.<sup>6</sup> In true booster fashion the advertisement glowingly said that the township had been laid out for roads with easy curves for steam trams, reserves for four churches, schools, sports grounds and a public park of twenty acres. The bay boasted a safe anchorage, abundant fishing and a mile-long 'beautiful sandy beach', a scarce commodity in Wellington's rugged harbour.

The area, having been Crawford's farm and inaccessible had remained undeveloped with few living there. Wellington's pilot worked from Worser Bay living in a cottage built in 1866.<sup>7</sup> The bay was named after the first pilot James 'Worser' Heberley who worked from there in the first years of the New Zealand Company settlement. Heberley and his Maori relatives lived at Karaka Bay in raupo dwellings.

Recognising its inaccessibility Crawford had reportedly spent more than £6,000 on roading in preparation for its sale but as his family was to acknowledge he had put far too high a price on the land that he was trying to dispose of.<sup>8</sup>

Nonetheless substantial parts were eventually sold to some of Wellington's wealthier citizens seeking an investment in the future, some perhaps living there through the year if there was a way to commute back to town or having an eye to building summer residences. Purchasers numbered politician W.B.D. Mantell, merchant Constantine E. (Con) Zohrab, surveyor E.H. Beere (who worked with Crawford to put it on the market), merchant W.H. Levin, and businessman Charles Plimmer and

<sup>5</sup> *EP*, 13, 28 September, 3 October 1878. He raised £3,500 in selling three-quarters of the sections.

<sup>6</sup> Elsdon Best, 'Miramar island and its history', *TNZI*, vol 54, 1923. p. 790. *NZT*, 18 November 1904. There is no 'Seatoun' in Scotland.

<sup>7</sup> Pilot's cottage. <https://www.wellingtoncityheritage.org.nz/buildings/151-300/203-pilots-cottage-marine-parade?q=>

<sup>8</sup> John Struthers, *Miramar Peninsula*, Wellington, Wright and Carman, 1975, after p. 168, maps of Maori settlement and early years of Seatoun.



his wife.<sup>9</sup> When Crawford died in 1889 two of his sons Alec (A.D.) and Charles (C.J.) took over the running of his Miramar estate.

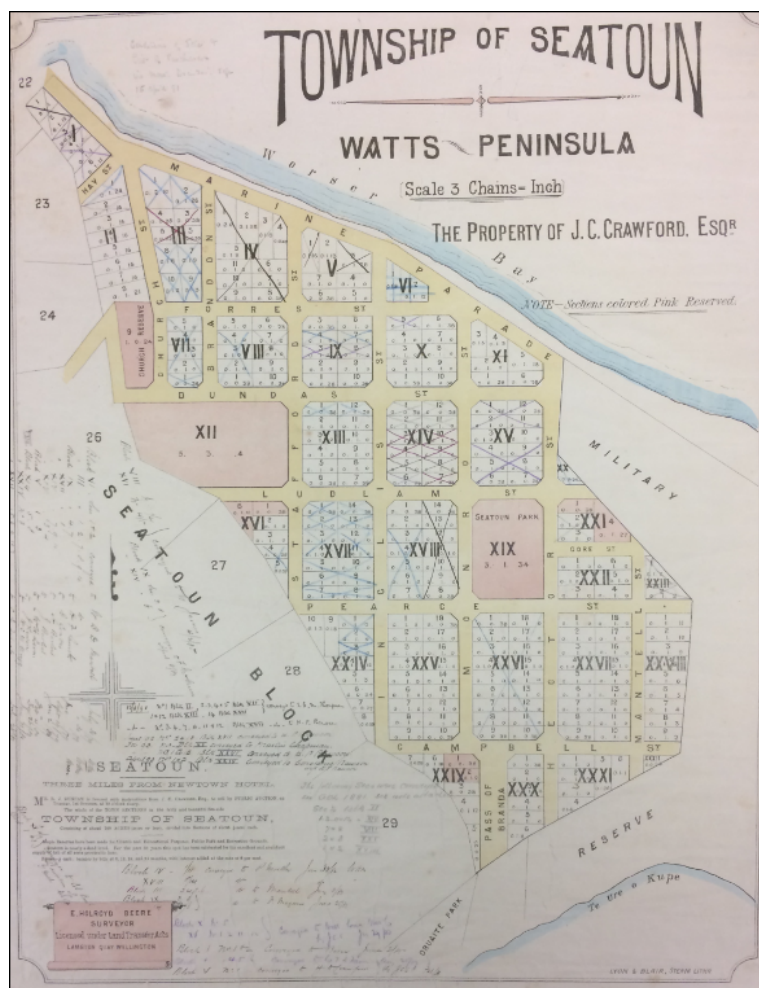


Figure 3 Crawford's 1878 sale of Seatoun, ATL, MapColl 832.4799gbbd Se 1878

The Seatoun Road Board (as part of Hutt County) formed in 1889 included H.D. Crawford, Plimmer and Zohrab. The ambitious Road Board with some influential Wellington businessmen aboard was keen to develop the area. It lobbied for a road across the head of Evans Bay to improve accessibility. A road was formed in 1891 from Kilbirnie and over the hill about a mile below the pilot station.<sup>10</sup> Dentist Herbert P. Rawson went onto the Board in 1891. He and his wife bought up a substantial number of sections in Seatoun township in the early 1890s and they and Zohrab began clearing their sections in order to build residences.<sup>11</sup>

By that time people were beginning to live in Karaka Bay and Worser Bay which had a shop and hall linked to town by coach.<sup>12</sup> Seatoun while flat and expansive was largely scrub and sandhills with a small lagoon. A son of Captain Shilling in charge of the Worser Bay pilot station remembered Seatoun Flat before it became a seaside resort: 'A favourite playing place ... was at Seatoun. The land there was nothing more than a windswept arm of heaped-up sand-hills and tawhiri scrub, providing an ideal place for children to engage in every imaginable game, from battles-royal to digging up rabbits, hundreds of which overran the place.'<sup>13</sup> Doris Gordon remembered as a child spending time at a holiday home in Karaka Bay around the turn of the

<sup>9</sup> ATL, MapColl 832.4799gbbd Se [1879-93] 10635. *Cyclopedia of NZ*, Wellington, vol 1, 1897, p. 720. Bob O'Brien, *TV, 4WD, WWW: Seatoun and the Bays After 1958*, Wellington, Dorset Enterprises, 2003, pp. 72-3.

<sup>10</sup> *EP*, 30 November 1891. For a general discussion of the opening up of Miramar peninsula in the late nineteenth century, Adrian Humphris and Geoff Mew, *Ring Around the City - Wellington's New Suburbs, 1900-1930*, Wellington, Steele Roberts, 2009, chapters 2 and 3.

<sup>11</sup> *EP*, 30 November 1891. O'Brien, *TV*, p. 205.

<sup>12</sup> Bob O'Brien, *Waka, Ferry, Tram: Seatoun and the Bays Before 1958*, Wellington, Dorset Enterprises, 2001, pp. 86, 89.

<sup>13</sup> J.M. and B.M. Kenneally, *Early Days on the Miramar Peninsula*, Wellington, Colonial Associates, 1981, p. 44..



twentieth century, getting there on Marshall's 'bus' – a coach that cost 1s 6d from the Royal Oak Hotel in town with men having to disembark on all the hills to push: 'the swaying coach, the smell of lanterns, the crack of the whip and the spectacle of father and ten men helping to push the bus up the slippery gradient of the Miramar saddle [Awa Road]'.<sup>14</sup>



Figure 4 Seatoun in the 1890s, ATL, PAColl-7081-06

By that time people were beginning to live in Karaka Bay and Worser Bay which had a shop and hall linked to town by coach.<sup>15</sup> Seatoun while flat and expansive was largely scrub and sandhills with a small lagoon. A son of Captain Shilling in charge of the Worser Bay pilot station remembered Seatoun Flat before it became a seaside resort: 'A favourite playing place ... was at Seatoun. The land there was nothing more than a windswept arm of heaped-up sand-hills and tawhiri scrub, providing an ideal place for children to engage in every imaginable game, from battles-royal to digging up rabbits, hundreds of which overran the place.'<sup>16</sup> Doris Gordon remembered as a child spending time at a holiday home in Karaka Bay around the turn of the twentieth century, getting there on Marshall's 'bus' – a coach that cost 1s 6d from the Royal Oak Hotel in town with men having to disembark on all the hills to push: 'the swaying coach, the smell of lanterns, the crack of the whip and the spectacle of father and ten men helping to push the bus up the slippery gradient of the Miramar saddle [Awa Road]'.<sup>17</sup>

## 2.2 The wharf

In 1894 the Road Board began to consider building a wharf; the following year the Harbour Board undertook soundings in the bay in preparation.<sup>18</sup> In 1897 the Road

<sup>14</sup> Struthers, *Miramar Peninsula*, pp. 40-1, from Doris Gordon, *Backblocks Baby-Doctor*, 1955.

<sup>15</sup> Bob O'Brien, *Waka, Ferry, Tram: Seatoun and the Bays Before 1958*, Wellington, Dorset Enterprises, 2001, pp. 86, 89.

<sup>16</sup> J.M. and B.M. Kenneally, *Early Days on the Miramar Peninsula*, Wellington, Colonial Associates, 1981, p. 44..

<sup>17</sup> Struthers, *Miramar Peninsula*, pp. 40-1, from Doris Gordon, *Backblocks Baby-Doctor*, 1955.

<sup>18</sup> NZT, 19 July 1894. *EP*, 9 August 1894. WCA, AC046-2945, soundings at Seatoun wharf site, 1895. For a synopsis of the history of the wharf, see Chris Cochran, Michael Kelly and Andy Dodd, 'Coastal historic heritage of the Wellington region', 2014, pp. 199-207, Seatoun wharf



Board (chaired by Con Zohrab) had a road built by cutting through the ridge from Evans Bay to Miramar and over a spur on Seatoun Hill.<sup>19</sup> The Harbour Board agreed to a wharf as long as it was similar to the Williams wharf at Day's Bay. In 1898 E.H. Beere on behalf of interested local residents (headed by director of the Bank of New Zealand William Watson) designed a wharf at Seatoun for £750-800 but the Harbour Board declined to contribute to its cost and the project lapsed.<sup>20</sup> A road was put along the foreshore and along the tops of the hills where in 1897 land had been sold what was called the Overton and Seatoun Extension blocks.<sup>21</sup> A further sale in these blocks took place in 1900. By this time Seatoun and Worser Bay were being described as 'popular seaside resorts'.

Rawson was a key mover. He had established a dairy farm in Seatoun and would develop an impressive estate that would become a landmark. Purchasing more land from the Crawfords and Zohrab he built a large country residence with trees, gardens, shrubberies, greenhouses, a tennis court and gazebo. Watson also set himself up with a summer house there.<sup>22</sup> But before the turn of the twentieth century the number living in Seatoun year-round was still relatively small. In 1898 Edward Gawne who had bought some sections in the township began operating a large two-storey hydropathic boarding-house resort ('Babington House') using spring water and sea water on the foreshore corner where Forres Street became Monro Street.<sup>23</sup> James Muir advertised 'Russian vapour baths' and hot and cold salt water baths there.

A meeting in early 1900 of Seatoun, Worser Bay and Karaka Bay residents was chaired by woolbroker Arthur Mabin who worked for Levin and Co. The meeting endorsed investigating a ferry service through a committee that also included Karaka Bay resident and auctioneer Frederick Townsend (who would become Miramar's Mayor) and E.F.G. Zohrab (Con's son).<sup>24</sup> Con Zohrab had died in 1897. Discussions were held with William's ferry company and the Harbour Board.

J.H. Williams ran a successful ferry service to Day's Bay. In 1900 with patronage increasing due to the interest in excursions and expansion of seaside resorts he floated his business to form the Wellington Steam Ferry Co.<sup>25</sup> Investors included some prominent Wellingtonians together with the Crawford brothers and Rawson. The intention was to develop the Day's Bay estate and expand the ferry service to other areas. Williams became its managing director with Rawson as chairman of directors. The ferry company said that it would provide a service if wharves were built; however the Harbour Board would not contribute while the Crawfords were blocked by the government from building a private wharf at Miramar.<sup>26</sup> The Road Board went to the government which said it would issue an Order-in-Council so that the Board could take out a loan and build the wharves under license to the Harbour Board.

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<http://www.gw.govt.nz/assets/Plans--Publications/Regional-Plan-Review/Coastal-Historic-Heritage-of-the-Wellington-Region.pdf>

<sup>19</sup> *EP*, 25 May, 6, 16 July 1897, 24 February, 7 May, 23 August 1898. *NZT*, 20 September, 6 October 1897.

<sup>20</sup> *EP*, 15 February 1898. *NZT*, 23 February, 25 March 1898.

<sup>21</sup> *EP*, 17 September 1897, 20 January 1900. Struthers, *Miramar Peninsula*, p. 37.

<sup>22</sup> *Free Lance*, 31 January 1903. *Cyclopedia of NZ*, Wellington, vol 1, 1897, p. 805.

<sup>23</sup> *EP*, 29 August 1898, 5 November 1901. O'Brien, *Waka*, pp. 85-6.

<sup>24</sup> *EP*, 30 April 1900.

<sup>25</sup> *NZT*, 16 February 1900. *EP*, 16 February 1900, prospectus, 26 July 1922. ArchNZ, CO-WW3445, box 54, 1900/12, Wellington Steam Ferries. [Graeme Andrews], 'The story of the Wellington ferries', *Sea Fare*, vol 2, no 4 [1972].

<sup>26</sup> *EP*, 19 June 1900.

The Road Board, chaired by Rawson and with the Crawford brothers and Fort Zohrab as members, moved to build wharves at Seatoun and Karaka Bay by borrowing £2,750, with the Crawfords paying for a ferry wharf at Miramar. It was confident that the scheme would pay and that ratepayers would not have to levy a rate. A meeting in September 1900 approved the proposal followed by a ratepayer poll that overwhelmingly endorsed the plan.<sup>27</sup>

By this time the demand to get out to the bays during summer had increased so much that the three 'brakes' on the route could not cope. Designed to carry less than twenty people they were jam-packed with up to thirty. There were more than a hundred households in Worser Bay with about 150 people a day going into the city in summer and 70 in winter.<sup>28</sup> It was also remarked with some astonishment at the numbers of young men, satchels on shoulders, driving, walking and bicycling out beyond Miramar to their whares and baches, 'going forth to the verge of the waves to spend their leisure wisely and well'.<sup>29</sup> Families were doing likewise. Some had made the bays their permanent homes and Seatoun township was becoming established with trees and gardens.

Seatoun and Karaka Bay wharves were designed by engineer James E. Fulton at a cost of £75. Although the lowest tender of well-known contractors John McLean and Sons was well above the estimated cost the Road Board decided to go ahead. The firm was one of the country's biggest and most successful contracting firms with an established record of wharf-building for the Wellington Harbour Board.<sup>30</sup> McLean built the wharves for £3,020 (based on an initial loan of £2,750 from the government supplemented by £275, all to be paid by local rates over twenty-six years).<sup>31</sup> Work soon began in May 1901 with wharf timber piled along the shore. Much of the piles and structure was of ironbark and totara was used in the superstructure. Wellington Harbour Board licensed the Road Board to run the wharf for fourteen years at a peppercorn rental of £1 enabling the Road Board to exact tolls for passengers and goods.<sup>32</sup> The tolls were later promulgated through by-laws for the wharf.

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<sup>27</sup> *EP*, 17, 25 September 1900.

<sup>28</sup> *NZT*, 18 May 1900. *EP*, 19 June 1900.

<sup>29</sup> *NZT*, 21 May 1901.

<sup>30</sup> John McLean, *Pioneer Contractors: The Story of John McLean and Sons*, Wellington, Jon McLean, 2002, pp. 45-7. *DNZB*, Neil McLean entry.

<sup>31</sup> *EP*, 8 October 1900. *NZT*, 21 May 1901. *NZ Mail*, 14 February 1901. WHB, *Annual Report 1899*, p. 8; 1900, pp. 6-7. SRB minutes, 28 August, 24, 27 September, 2 October 1900.

<sup>32</sup> WCA, 00002:20:168, WHB/SRD lease and license, 1 April 1901; WCA, AC006:1:20, Seatoun, Karaka, Miramar wharf bylaws, 1 June 1903.





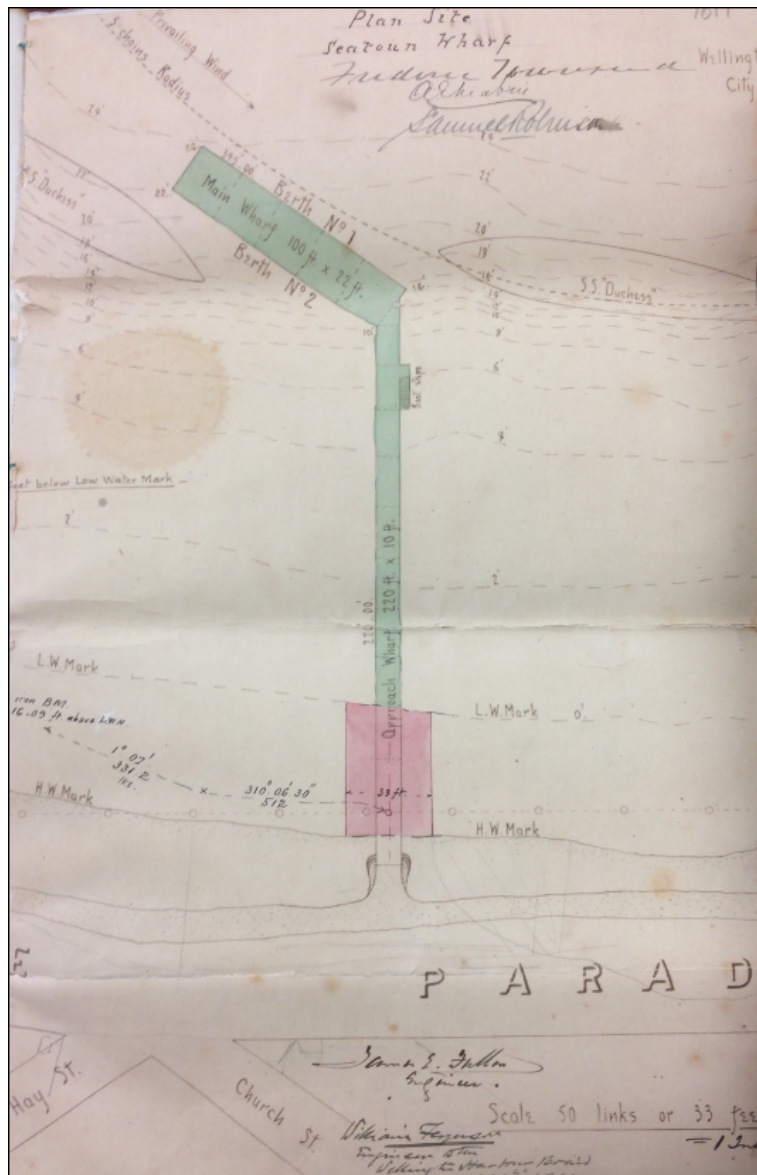


Figure 5 Plan of site of wharf, WCA, 00002:20:1681

Rawson and some other Seatoun residents probably presumed that they would have the ferry service to themselves but at the beginning of 1901 Rawson left for England and Townsend took over the Road Board.<sup>33</sup> In Rawson's absence the ground shifted. Mabin and Townsend joined Zohrab on the Road Board in 1901 and formed their own rival Miramar Ferry Company that brought a ferry steamer (*Loyalty*) over from Sydney.<sup>34</sup> (Mabin was the brother of Fort Zohrab's wife Blanche.<sup>35</sup>) Company supporters within the local community demanded that Rawson resign from the Road Board. The company's proclaimed objective was to run regular ferry services to the wharves with fares fixed to

encourage people to live in district and travel freely.<sup>36</sup> Its directors included Watson, Townsend, Fort Zohrab and Mabin together with Captain Eckford who brought the *Loyalty* over from Sydney, operated the coastal vessel *Opawa* and had cross Cook Strait trading interests.<sup>37</sup> Company shares were largely taken up by Seatoun area residents, together with the Crawford brothers, the Evans Bay and Miramar Estate and the Miramar Land Company syndicates and directors Mabin, Watson, Townsend and Eckford prominent.

### 2.3 Ferry service

The daily ferry service commenced on 7 October 1901 with the Miramar Ferry Company's steamer *Loyalty* leaving the Seatoun wharf at 7 am and getting into town

<sup>33</sup> NZT, 19 November 1900, 15 January 1901.

<sup>34</sup> NZT, 7 May 1901.

<sup>35</sup> EP, 15 April 1901.

<sup>36</sup> ArchNZ, CO-WW3445, box 63, 1901/26, Miramar Ferry Co. EP, 30 August 1901. NZM, 4 September 1901.

<sup>37</sup> EP, 20 September 1901. NZT, 21 September 1901.

in 35 minutes.<sup>38</sup> The *Loyalty* during weekdays made five trips with one additional trip on Wednesdays, with six trips on Saturdays and three on Sundays. Doris Gordon had the job of ‘lantern girl’ for the *Loyalty* in its early years. With a southerly gale ‘the berthing became as exciting as a Christchurch Cup meeting, but berth her we always did!’<sup>39</sup>



Figure 6 *Admiral* at Seatoun wharf, c. 1906, ATL, ½-091610-F

Wellington Steam Ferries also began a service amid ‘rigorous’ exchanges of correspondence between the two companies. The Miramar Ferry Company was allotted the eastern or outside parts of the two wharves and Wellington Steam Ferries the western or inner sides.<sup>40</sup> Wellington Steam Ferries contended that there should be ‘free trade’ on the service and accused the Miramar company of wanting a monopoly.<sup>41</sup> There was keen competition and sufficiently heavy loadings at peak times that officials had to police the numbers aboard. With vessels filling up at the city’s Ferry Wharf ‘there was a race to leave first in order to obtain a better wharfage at the end of the wharf at Seatoun’.<sup>42</sup> Over Christmas Wellington Steam Ferries also ran special trips at a cut price with the *Countess* and *Duco* to cater to the demand. Business was frantic – the Miramar Ferry Company carrying about 1500 on the *Loyalty* and *Opawa* on Boxing Day.

The ferry war heated up. In 1902 the Miramar Ferry Company purchased the *Admiral* in Auckland to add to the service.<sup>43</sup> Wellington Steam Ferries purchased an acre and a half near the wharf for two-storey tea-rooms with verandah and shop together with two levels of tea-rooms accommodating sixty.<sup>44</sup> Rawson was reported as saying when the *Loyalty* passed his ferry with its passengers cheering: ‘That old tub!

<sup>38</sup> *EP*, 4, 7 October 1901. *NZT*, 14 April 1902.

<sup>39</sup> Struthers, *Miramar Peninsula*, pp. 40-1, from Doris Gordon, *Backblocks Baby-Doctor*, 1955.

<sup>40</sup> SRB minute book, 18 November 1901.

<sup>41</sup> *NZT*, 10 December 1901.

<sup>42</sup> Struthers, *Miramar Peninsula*, pp. 44, 50. David Johnson, *Wellington Harbour*, Wellington, Wellington Maritime Museum Trust, 1996, pp. 220, 246-8, 347-8.

<sup>43</sup> *EP*, 12 April 1902. *NZT*, 14 April 1902.

<sup>44</sup> *EP*, 6 December 1901. O’Brien, *Waka*, p. 83.



I'll run her off in less than a week, take my word for it'.<sup>45</sup> Rawson was not re-elected to the Board in heated elections in 1902; the two successful candidates stated: 'REMEMBER – The Miramar Ferry Company is yours, and despite efforts to wipe it out it still survives and serves you well. ANY ONE who would throw the Ferry Services of this harbour into the hands of the old monopoly would do us an irreparable injury'.<sup>46</sup>



Figure 7 TL, Eph-A-FERRY-1906-01

The Road Board minute book recorded the monthly passenger totals for both companies; they indicate that in the first year regular year-round patronage was about 2-3,000 with the peak monthly figures of December to February climbing to 7-8,000 in January.<sup>47</sup> The ferry service evidently greatly boosted the attractiveness of sections for when Bethunes put twelve sections in the township up for auction in 1902 they all sold for good prices, Watson, Townsend and Zohrab amongst the purchasers.<sup>48</sup>

Although the end of the wharf had been laid off at an angle intended to head into the prevailing northerly winds it was found that the seas did not approach at the same angle and ferries berthing on the eastern side were 'exposed to the violence of the seas'. When seas were heavy ferries were unable to use the wharf. The Road Board investigated whether the outer end of the wharf could be modified and if the cost was not too high ratepayers would be called to sanction a loan but in the end it decided not to modify the wharf.<sup>49</sup> At first supplejack fenders were used before more conventional woven rope fenders were employed.<sup>50</sup> Roadman John O'Brien was paid a small amount to light the wharf by acetylene, check its life buoys and clean the wharf. In 1904 electric lighting was installed.

<sup>45</sup> NZT, 10, 11, 23, 27 December 1901. EP, 10, 21 December 1901.

<sup>46</sup> EP, 1 May 1902.

<sup>47</sup> WCA, 00357, Seatoun Road Board minute book, 27 July 1899 to 6 December 1904.

<sup>48</sup> EP, 6, 13 March 1902.

<sup>49</sup> WHB Annual Report, 1901, p. 7. EP, 12 February 1902, 29 June 1903. SRB minute book, 13 January, 5 July 1903, 11 January 1904.

<sup>50</sup> EP, 13 November 1901.

A small cluster of the houses, cottages and boarding houses developed close by the wharf. There was also an accommodation house and tearooms on Inglis Street.<sup>51</sup> Seatoun was described as a 'marine suburb' – the 'beautiful climate of Seatoun, its delightful sea bathing, its wonderful fishing grounds, the charms of its scenery'.<sup>52</sup> George Perry who worked as a tailor in a factory in town before the ferries took a horse-drawn cart to work over the precipitous Awa Road in Worser Bay; if he worked late he would walk home. With the ferry he was able 'to go to town every day by boat, leaving Seatoun at 7.00 am. On one occasion he slept in, the boat tooted for him, his family waved a lantern from the window to let the captain know that he was on his way, and he got to the wharf on time'.<sup>53</sup> The more athletic youngsters who missed the ferry at Seatoun might sprint around to Karaka Bay in the hope that it would not have departed before they arrived; otherwise it was a two and a half hour wait for another one.<sup>54</sup>

Soon Seatoun was becoming 'one of the most prominent holiday-spots ... a favourite spot for picnickers' and very popular for summer houses with people going to work in town by bicycle, bus or steamer.<sup>55</sup> The park was frequently used for picnics, band recitals, athletics and cricket matches and football and rugby in winter, while there were annual military camps there. D Battery in camp there held military sports not long after the wharf opened with the two companies competing for patronage.<sup>56</sup> The event attracted large numbers, the Wellington Naval Band played, and the ladies of the area provided afternoon tea for the artillerymen after their exertions. Following the military sports in Seatoun on Wellington anniversary day in 1903 the Miramar Ferry Company ran 'moonlight excursions' to Seatoun with the military in camp, with a searchlight display, heavy gun firing and a mock attack on the forts.<sup>57</sup> Further military sports were run the following Saturday.

Despite the optimism of the ferry companies significant changes in transport would soon affect use of the wharf. The Road Board became the Miramar Borough Council in 1904, a controversial move opposed by Hutt County and the Wellington Steam Ferry Company alleging the move was inspired by 'speculative' interests. Locals felt that the county which was raising its contribution significantly was spending the money elsewhere. The Road Board had planned to become a borough for some time but did not have the required population base and did not want to wait for the next census to demonstrate its case; the 1901 Census yielded a population of 432 even though there were many more during the summer.<sup>58</sup> In some secrecy it lobbied the government. Mabin and Townsend organised the petition of residents for a borough – supported by the Crawford brothers and Watson, arguing that by 1904 there were 250 dwellings and 1,250 residents in the area.<sup>59</sup> A meeting of ratepayers approved the move and the government agreed. Miramar Borough immediately began pushing for a tramway service.

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<sup>51</sup> *EP*, 11 February 1905.

<sup>52</sup> ATL, MapColl 832.4799gbbd Se 1903 2958.

<sup>53</sup> O'Brien, *Waka*, p. 85, Cliff Perry reminiscence.

<sup>54</sup> O'Brien, *TV*, p. 225, Bill Murie.

<sup>55</sup> *NZT*, 21 December 1901.

<sup>56</sup> *EP*, 6, 9 December 1901. *NZT*, 9 December 1901.

<sup>57</sup> *EP*, 11, 13 February 1903.

<sup>58</sup> ArchNZ, IA1, 1904/3407, Wellington Steam Ferries petition to Colonial Secretary, 23 July 1904, petition of Road Board and residents, 18 August 1904. SRB minute book, 25 July 1901. *NZT*, 1 December 1904.

<sup>59</sup> ArchNZ, IA1, 1904/3407, Road Board to Colonial Secretary, 23 August, 12 September 1904.





By now there was talk of a tramline link with Seatoun and the Miramar Ferry Company was in financial difficulty despite two further share issues. In 1903 monthly winter patronage had dropped to less than 2,000 and the peak for the 1903-4 summer was just over 4,500. In 1904 winter numbers dropped further to less than 1,500. While some cargo was carried this was only a supplement to the main business. The Borough offered to buy out the ailing Miramar Ferry Company but the cost asked was too high. The two ferry companies merged in 1906 as Wellington Harbour Ferries with erstwhile Miramar Ferry Company heads Watson, Zohrab and Mabin to the forefront of the new company. Wellington Steam Ferries major shareholder Williams was bought out and the Miramar Ferry Company's business purchased for £4,460 and the *Admiral* ferry.<sup>60</sup> Watson became a director and Zohrab its manager.



Figure 8 ATL, *Guide to Harbour Resorts*, Wellington Harbour Ferries, 1907

The two wharves on 1 August 1906 reverted to the Harbour Board in a deal in which it took on payment of the outstanding loans and paid £675 to Miramar Borough on the basis that the wharves, shelter sheds and land were worth £3,000.<sup>61</sup> Part of the deal was that a strip of land at the foot of Seatoun wharf would be handed over to the Harbour Board. The width of Marine Parade was reduced to give the Harbour Board 6.3 perches together with another 9.3 perches bought from the Crawfords to create a strip for wharf facilities.<sup>62</sup>

<sup>60</sup> ArchNZ, CO-WW3445, box 102, 1906/19, Wellington Harbour Ferries. *EP*, 29 January 1924, 19 November 1930.

<sup>61</sup> WHB, *Annual Report* 1906, p. 7. *EP*, 4 June 1928.

<sup>62</sup> WCA, AC133-LT 63/3, plan.

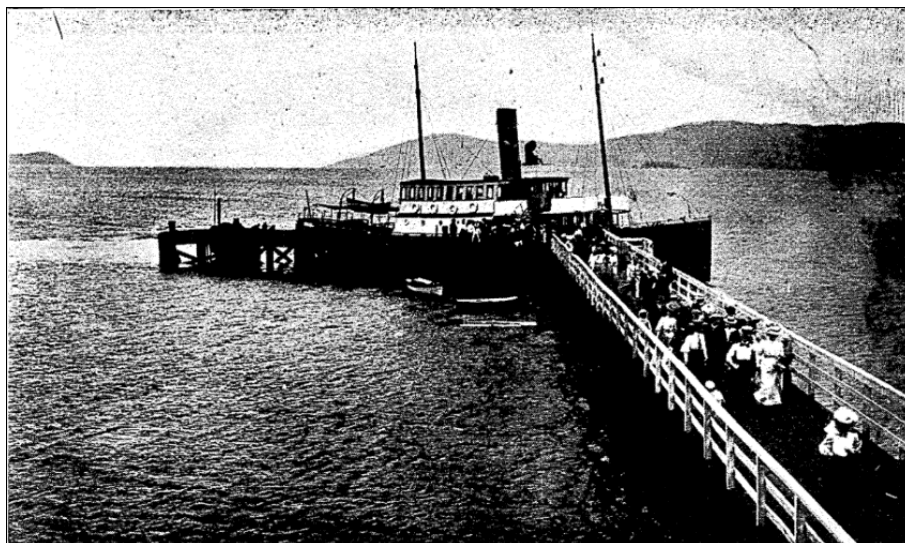


Figure 9 Seatoun wharf and ferry, *NZ Mail*, 28 August 1907

Ferry facilities were improved. The Wellington ferry terminal had only two berths and had to be extended considerably.<sup>63</sup> The Harbour Board evidently feeling optimistic about further development of the ferry services planned to double the length of the wharf. It had already contracted John McLean and Sons in 1905 at a cost of £1,400 to lengthen the ferry wharf in town by 120 feet to provide two extra berths. Miramar Borough erected a shelter shed for the Seatoun wharf in 1906; it had a weighing machine in it for goods passing over the wharf.<sup>64</sup> In 1907 Miramar Borough erected a bathing shed near the wharf.

On its formation Miramar Borough considered the best means of communication with the Miramar peninsula – was it by sea or by a tramway system connecting with the Newtown terminus?<sup>65</sup> Running a ferry service was estimated to cost £20,000; a tramline was favoured and a poll for a loan of £23,000 received strong ratepayer support. The Crawford brothers and three land syndicates in the area put up £21,500. Construction of the tunnel began in 1906 and was finished in late 1907 with trams soon conveying passengers to town. The link by tram accelerated the development of Seatoun considerably even though the time taken on the single line (with loops) was actually longer than the ferry trip.<sup>66</sup>

From 1908 competition by the trams made an impact on the profitability of the ferries and the service was cut back.<sup>67</sup> Nevertheless in the following three years patronage on the service was ‘steady’ and earnings were maintained even if the Rona Bay and Day’s Bay services were more profitable.<sup>68</sup> In 1911-12 at the peak excursion period of Christmas-New Year the firemen and deckhands employed by the company (influenced by the ‘Red’ Federation of Labour and the wave of strikes) threatened to strike for higher wages and fewer hours and then had the dispute taken over by the Federation of Labour.<sup>69</sup> The subsequent agreement on wages and

<sup>63</sup> WHB *Annual Report*, 1902, p. 9; *Annual Report*, 1906, p. 4.

<sup>64</sup> SRB minute book, 15 December 1902, 8 January 1903. *EP*, 16 December 1905. *NZT*, 29 May 1907. *Dom*, 18 February 1910.

<sup>65</sup> Struthers, *Miramar Peninsula*, pp. 45-7.

<sup>66</sup> J.M. and B.M. Kenneally, *On the Edge of Our City*, Wellington, Colonial Associates, 1984, p. 3.

<sup>67</sup> *EP*, 22 May 1908.

<sup>68</sup> *EP*, 29 May 1911.

<sup>69</sup> *NZT*, 23, 29 December 1911, 1, 3 January 1912. *EP*, 5, 27 January 1912.



working conditions was reckoned to cost the company another £800 per annum.

In 1912 Eastbourne Borough (formed in 1906 and wanting a municipalisation of the ferries) asked the Harbour Board to lobby for legislation that would enable harbour



Figure 10 The new tram tunnel to Seatoun, ATL, ½-091609-F

boards to operate ferries but the Harbour Board was not interested.<sup>70</sup> The ferry company made an offer to sell its steamers to Eastbourne Borough and it agreed to take the *Duchess* and *Cobar* subject to a ratepayer poll. By now the company was beginning to struggle having experienced bad weather over the usually lucrative summer holidays and it asked Miramar Borough to subsidise the service if it wanted it continued.<sup>71</sup> As tram fares went up local residents petitioned Miramar Borough to subsidise the ferry service – ‘communication with the city by boat would be stopped; and property would suffer in value’.<sup>72</sup> The borough investigated retaining the ferries and considered a subsidy of £200 per annum but a counter petition from Karaka Bay residents stopped the move. They felt that the existing service was inadequate and not worth supporting. In 1913 the company sold Eastbourne Borough the ferries for £13,250 after another bad year: coal prices, increased wages and bad weather again on most public holidays.<sup>73</sup> The service to Seatoun and Karaka Bay was terminated and the company wound up.<sup>74</sup> Zohrab operated other vessels for towage and general harbour work.

As Seatoun grew those early investors began to put sections on the market. Contractor Maurice T. McGrath Rawson put up 38 sections near the wharf up for auction in 1903.<sup>75</sup> Rawson, who owned nearly all of the land south of the park, began to sell off his dairy land during the First World War for ‘spec built’ houses as did others further north.<sup>76</sup> He also developed parts of his homestead block including ‘Rawson Place’ for grander, individually designed residences. Blocks away from the

<sup>70</sup> WHB *Annual Report*, 1912, p. 11. *EP*, 22, 23 August 1912.

<sup>71</sup> *EP*, 25 May 1912. *Dom*, 15 November 1912.

<sup>72</sup> *Dom*, 7 February 1913. *NZT*, 21 February 1913.

<sup>73</sup> *NZT*, 15 October 1913.

<sup>74</sup> *EP*, 29 August 1913. For a short period during summer in 1924 Eastbourne ran ferries via Seatoun and Karaka Bay but this was not profitable and was not repeated. *EP*, 19 January, 23 February, 15, 22 March 1924.

<sup>75</sup> O’Brien, *Waka*, pp. 88-9, 115.

<sup>76</sup> O’Brien, *TV*, p. 205.

wharf and beach were auctioned off following the introduction of trams. In 1918 31 sections adjacent to the tram terminus and tunnel were put on the market.<sup>77</sup>



Figure 11 Group of swimmers, c. 1910, Seatoun beach, ATL, 1/1-019830-G

## 2.4 Subsequent use

Seatoun wharf remained in use by ferries for excursions and for general recreational purposes. Swimming races and carnivals were held from the wharf.<sup>78</sup> From the 1920s for some time swimmers competed over half a mile from the wharf to Worser Bay for the Blair Cup.<sup>79</sup> Fishing was popular with a favourite spot for moki being the 'Wreck' between the wharf and Steeple Rock.<sup>80</sup> Some big catches were recorded: in 1911 a skate of more than a hundred lb and in 1927 a 40-50 lb groper.<sup>81</sup>

The wharf may well have been used in relation to the military activities south of Seatoun. Areas of the peninsula were designated military reserves and used for exercises. A cluster of housing to the south of the township emerged before the First World War. Just after the outbreak of war as part of the Expeditionary Force more than 150 troops and horses of the Otago and Canterbury Mounted Rifles encamped at Seatoun later drafts of troops trained in the park.<sup>82</sup> During the war gun emplacements for six-inch guns and twelve-pounders were constructed at Fort Ballance (north of Scorching Bay) and Dorset Point just south of Seatoun. During the 1920s the Fort Ballance guns were transferred to Point Dorset which became Fort Dorset. Seatoun Park was again used during the Second World War as an encampment for troops.

The area witnessed a number of shipping mishaps some of which involved the wharf. In 1905 as the scow *Oban* was being towed into harbour in a howling northerly

<sup>77</sup> ATL, MapColl 832.4799gbbd Se [ca. 1918] 9720.

<sup>78</sup> *EP*, 20 February 1911. *Dom*, 18 March 1911. *NZT*, 17 October 1911.

<sup>79</sup> *EP*, 22 February 1923, 25 March, 4 October 1924, 1 March 1927.

<sup>80</sup> *EP*, 4 December 1937.

<sup>81</sup> *EP*, 10 April 1911, 4 April 1927.

<sup>82</sup> *NZT*, 29 September, 6, 7 October 1914. O'Brien, *TV*, pp. 106, 112, 115.





three lost their lives when the scow foundered.<sup>83</sup> The *Oban* grounded semi-submerged about three hundred yards off Seatoun wharf and after a cargo of coal was removed was dragged close to the wharf where water was pumped out. In 1921 the *Rona* grounded on Steeple Rock close by but was hauled free with only minor damage. In 1947 the *Wanganella* became stuck on Barrett's Reef for three weeks during which time huge numbers made a trip out to see the sight; Seatoun profited from the passing trade.<sup>84</sup>

Drownings and rescues from the wharf appeared from time to time in the papers – doubtless other dramas of the wharf were unrecorded. In 1903 an eight-year-old boy fell into the water and was rescued by one of the crew of the *Loyalty*.<sup>85</sup> Shortly thereafter the four-and-a-half year old daughter of Captain Hargraves of the *Loyalty* fell into the water and was retrieved unconscious. A Mr and Mrs Lawrence thanked a ship's captain and crew for rescuing their 'little boy' at the wharf during WWII and a four-year old boy drowned by falling off the wharf a few years later.<sup>86</sup>

In 1968 Seatoun wharf was in the middle of tragedy when the *Wahine* sank at nearby Steeple Rock with the loss of 51 lives.<sup>87</sup> Ambulances, police and army vehicles together with many rescuers crowded around Seatoun wharf and beach. A number of small boats went out from Worser Bay and Seatoun. Two of *Wahine's* lifeboats got to Seatoun. Pilot boats, Wellington airport's Zodiac rescue inflatable and other small craft also picked up people in the water. But the tide and wind meant that many were swept eastwards and ended up on the rugged eastern side of the harbour beyond Eastbourne. A memorial garden to the *Wahine* wreck including a salvaged anchor was created in Churchill Park on the foreshore.

In 1966 and again in 2004 the wharf was upgraded with piles, some kerbing, steps and balustrade rails replaced. Other piles were concrete encased.



Figure 12 Survivors from *Wahine* at Seatoun wharf, ATL, 36MM-01168-18-F

<sup>83</sup> *EP*, 2, 3, 4, 17 January 1906.

<sup>84</sup> O'Brien, *Waka*, p. 83. Johnson, *Wellington Harbour*, pp. 347-8.

<sup>85</sup> *EP*, 30 November 1903, 20 April 1904.

<sup>86</sup> *EP*, 31 December 1942, 19 March 1945.

<sup>87</sup> Max Lambert, *The Wahine Disaster*, Wellington, Reed, 1970, esp. chapters 10 and 11.



Figure 13 *Wahine* survivors are carried off Seatoun Wharf, 10 April 1968, <https://nzhistory.govt.nz/media/photo/wahine-survivors-at-seatoun-wharf>

## 2.5 Chronology of events

Date	Event
1878	James Coutts Crawford puts 'Seatoun township' on the market
1889	Seatoun Road Board formed
1891	Seatoun Road Board had road formed to vicinity of Seatoun
1894	Seatoun Road Board considered wharf in vicinity of Seatoun
1895	Wellington Harbour Board took soundings off Seatoun foreshore
1897	Seatoun Road Board developed new access road to Seatoun
1898	E.H. Beere and local Seatoun residents planned a wharf
1897	sale of land in Overton and Seatoun Extension blocks
1900	meeting of residents and ratepayer poll endorsed ferry service; discussions with government, Harbour Board and Wellington Steam Ferries
1901	Seatoun (and Karaka Bay) wharves designed by James E. Fulton and built by John McLean and Sons for 3,020.
1901	ferry service began in October with competing companies Miramar Ferry Co. and Wellington Steam Ferry Company

Date	Event
1904	electric lighting installed on the wharf
1904	Seatoun Road Board became Miramar Borough
1905	scow <i>Oban</i> foundered with loss of three lives and grounded off Seatoun wharf to be salvaged
1906	the two ferry companies merged as Wellington Harbour Ferries; the wharf was handed over to the Wellington Harbour Board
1906	shelter shed erected at the wharf
1907	tram service commenced to Seatoun
1912	negotiations between Wellington Harbour Ferries and Eastbourne Borough as the company struggled financially
1913	Wellington Harbour Ferries sold ferries <i>Duchess</i> and <i>Cobar</i> to Eastbourne Borough and terminated the regular ferry service to Seatoun wharf and others on the peninsula
1921	<i>Rona</i> grounded on Steeple Rock
1941	<i>Wanganella</i> grounded on Barrett's Reef
1966	Major repairs, including replacing half of the piles
1968	<i>Wahine</i> sank off Steeple Rock; loss of 51 lives
2004	Further upgrading of wharf
2008	Resumption of ferry service from wharf connecting with Days Bay

## 2.6 People and organisations of significance<sup>88</sup>

Date	Owner
James E Fulton	Engineer who designed the wharf as well as the Miramar Wharf and Karaka Bay Wharf.
Neil Mclean	Builder of the wharf, as well as the Miramar Wharf and Karaka Bay Wharf.
James Coutts Crawford	Original owner of the peninsula, named the Miramar Estate.
J H Williams	Owner and operator of ferry service between Day's Bay, Wellington and Seatoun, became Wellington Steam Ferry Co.,

<sup>88</sup> See appendix 3

investors including Crawford Sons and Herbert P Rawson.

Herbert P  
Rawson

Dentist, Chair Seatoun Road Board, owner of large estate in Seatoun including dairy farm, investor in Wellington Steam Ferry Co., promoted building of a wharf.

Alec (A.D.)  
and Charles  
(C.J.)  
Crawford

Sons of J C Crawford who took over running the Miramar Estate and investors in Wellington Steam Ferry Co, members of Seatoun Road Board, promoted building of a wharf.

Wellington  
Harbour  
Board

Owner of the wharf.

Constantine E.  
(Con) Zohrab  
and his son  
E.F.G. (Fort)  
Zohrab

Con Zohrab owned sections in Seatoun and was a member of the Seatoun Road Board. His son, Fort, continued the work of his father on the Board and formed the Wellington Steam Ferry Company which merged with the Miramar Ferry Company forming the Wellington Harbour Ferries for which Fort was the manager.



## 3 Describing the place

### 3.1 Summary Description

#### 3.1.1 Ownership

The Wellington City Council is the owner of the wharf.

#### 3.1.2 Statutory recognition of the wharf

The wharf is listed in Chapter 21 Appendix of the Wellington City District Plan as follows:

Location	Object and date of construction	Map ref	Symbol ref
Seatoun	Seatoun Wharf (this item is listed for information purposes only. The jurisdiction for this item under the RMA 1991 lies with the Wellington Regional Council)	7	51

The wharf is not listed with Heritage New Zealand Pouhere Taonga (HNZPT).

The 2008 Regional Coastal Plan for the Wellington Region lists Seatoun Bay wharf in Appendix 4 Features and buildings of historic merit, page 239. The Proposed Natural Resources Plan 2015 (PNRP) for the Wellington Region lists the wharf in Schedule E2: Historic heritage wharves and boatsheds.

### 3.2 Design

#### 3.2.1 Description

Two drawings for the wharf were prepared by James E Fulton; sheet one showing an elevation of the approach wharf and site plan while sheet two shows plans, sections, details and part elevations.

The following is a description of the wharf based on these drawings. A number of elements have been changed over time or were not implemented according to the drawings.

The drawings show that the wharf comprises a 220 feet long by 10 foot wide approach wharf at right angles to Marine Parade leading to the main wharf which is 100 feet long by 22 feet wide and at approximately 55 degrees to the approach wharf. Two berths are shown, with berth number one on the seaward side of the main wharf and berth number two on the inner side of the main wharf.

The main wharf has five bays with pairs of piles in each bay and raking piles at each end and in the centre. The piles are joined with waler beams and overlapping joists that run along the length of the wharves. There is horizontal diagonal cross (deck) bracing in each bay between piles and vertical diagonal bracing at the end of the wharf. Each pile has a timber fender attached on the seaward side of the wharf.

The main wharf has 4 inch decking, four pairs of bollards, perimeter kerbing and a wrought iron ladder at the end. An asphalt coating has been applied to the timber deck. The approach wharf has handrails along its length on both sides with steps to

the water side near the junction with the main wharf.

Each pile, waler and part of the vertical diagonal bracing is shown dotted, presumably indicating where copper sheathing should be installed.



Figure 14 Seatoun wharf 1916, showing cross bracing of the approach wharf, the tea rooms, changing shed and shelter, ATL 1/4-018521-G

Today the wharf maintains the same design but with a number of members replaced, removed or potentially not installed. These elements include:

- approximately two thirds of the kerbing and packing is now tanalised pine
- two steel bollards and no timber bollards
- two steel ladders and no wrought iron ladders
- the steps on the approach wharf are now tanalised pine
- approximately one third of the railings on the approach wharf are now painted tanalised pine
- ten of the piles on the approach wharf are now concrete encased
- rubber tyres have been fixed to the perimeter joists to absorb impact loads from boats berthing at the jetty and no timber (noted above as being supplejack) fenders are apparent
- there are four pairs of diagonal timber bracing between the eastern most piles on the main wharf and no cross bracing is apparent
- asphaltic surface over the decking has been added
- a light standard has been fitted at the north eastern end of the main wharf (a light was obviously installed as Roadman John O'Brien was employed to light an acetylene light which was then replaced in 1904 by an electric light, while figure 12 shows at least two light poles)
- life buoys were originally fixed to the wharf but do not currently exist
- the west end piles on the main wharf have pairs of rectangular section timber



reinforcing piles either side

- no walers are apparent

Figures 14 and 15 show a number of light fittings which were not original and are no longer on the wharf. Some copper sheathing remains on the perimeter joists of the main wharf and some piles.

Access to the underside of most of the approach wharf and the main wharf was not possible to confirm other elements. A full heritage inventory will be completed following completion of projects works anticipated to start mid 2021 after which this plan will be updated.



Figure 15 Wharf showing newly built passenger shelter, 1904, PAColl-7489-95

### 3.3 Materials specified for the wharf

Ironbark, an Australian hardwood from the *Eucalyptus sideroxylon* (red iron bark) or , *Eucalyptus Paniculata* (grey iron bark) tree, was specified for most of the wharf.

Totara was specified for a number of other elements including:

- decking,
- braces
- wheel guard packing
- walings
- posts
- handrails to the steps
- ballast planking to the approach wharf

Bolts and pointed pile shoes to the piles are iron. Some bolts are also noted as being

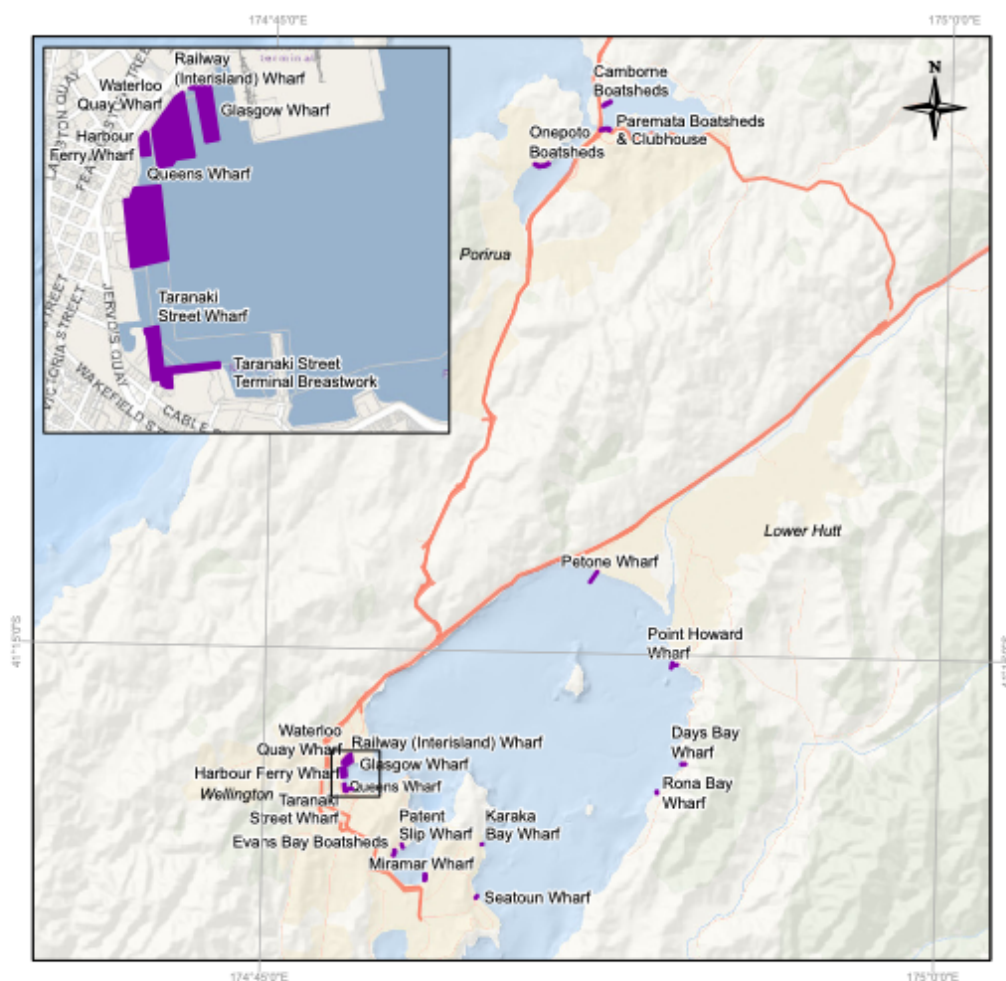
muntz metal, a form of brass with 60% copper, 40% zinc and a small amount of iron) and piles are shown as having “m.m. sheathing” (likely to be copper sheathing).

### 3.4 Listed wharves in New Zealand

There are six wharves listed in Appendix 4 Features and Buildings of Historic Merit listed in the Wellington Regional Coastal Plan and 13 wharves in Schedule E2: Historic heritage wharves and boatsheds in the PNRP. There are 17 wharves listed with Heritage New Zealand. See appendix 3 for these lists.

## Historic heritage wharves and boatsheds (Schedule E2)

Map 9



This version of the map is not complete. The version of this map available online through the online web map viewer shows the complete, detailed information on a GIS overlay that is not shown on this hard copy. The online version is available on the Council's website at <https://mapping.gw.govt.nz/gwrc/> (select theme Natural Resources Plan) and can be accessed from the Council offices or public library.

■ Significant structure    — State Highway



Basemap: World Oceans Base  
Projection: NZTM 2000



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Figure 16 Historic wharves and boatsheds, Greater Wellington Regional Council, PNRP, Schedule E2





## 4 Assessing the place

### 4.1 Outline heritage values<sup>89</sup>

Based on the Greater Wellington Regional Policy Statement (RPS) heritage assessment criteria, the history above and the *Thematic Heritage Study of Wellington*, WCC, January 2013, the wharf has the following heritage values:

Criteria	Sub criteria	Value
(a) historic values	(i) themes	<p><i>Transport</i></p> <p>The wharf is associated with the commuter ferry service to the city for seven years between 1901 and 1913, occasional weekend services and more recently from 2008 when the service also connected with Days Bay.</p> <p><i>Settlement patterns</i></p> <p>Initially an area of isolated farmland, the wharf enabled the growth and development of Seatoun for both recreation and residential use.</p> <p><i>People and the nation, harbour</i></p> <p>The wharf is one of a number of wharves built around the harbour from 1862 when Queens Wharf was built. It is also related to the history of the wharves at Karaka Bay, Days Bay, Rona Bay, and Miramar all of which developed with the establishment of commuter ferry services.</p>
		<p>(ii) events</p> <p>The most important event associated with the wharf was landing of passengers rescued following the <i>Wahine</i> sinking in 1968.</p> <p>Other lesser events with which the wharf is associated include the opening of the wharf in 1901 and its use for ferry services between 1901 and 1913.</p>
		<p>(iii) people</p> <p>The wharf is associated with locally significant businessmen who were instrumental in its construction, particularly Neil McLean, Herbert Rawson and Fort Zohrab. It is also associated with nationally significant engineer, James Fulton who designed the wharf.</p> <p>The wharf is associated with the Wellington Harbour Board, who took over ownership in</p>

<sup>89</sup> Wellington City Council, *Methodology and guidance for evaluating Wellington's historic heritage*, draft v2, February 2020

Criteria	Sub criteria	Value
		1906, which was responsible for harbour developments from 1880 until 1989.
	(iv) social	<p>The wharf enabled the transformation of Seatoun from an isolated harbour enclave to a popular residential suburb and for seaside recreation.</p> <p>The construction of the wharf was enabled by a combination of local investors, residents and local bodies with the wharf facilitating the growth of the seaside suburb.</p> <p>The initial popularity of the ferry service saw the municipalisation of the wharf when the Harbour Board took over the wharf in 1906.</p>
(b) physical values	(i) archaeological	Not assessed.
	(ii) architectural	<p>The wharf is a fine example of a timber wharf of the early Edwardian period using Australian hardwoods and New Zealand totara, although a softwood it is very durable.</p> <p>Extending north from Seatoun's long beach into Worsler Bay, it has landmark qualities from its high visibility, length, form and use of materials.</p>
	(iii) townscape	The townscape values of the wharf relate to its landmark qualities discussed above.
	(iv) group	The wharf is one of six listed in the Wellington Regional Coastal Plan and 13 listed in the PNRP. The wharf is particularly associated with those built at Karaka Bay, Rona Bay and Days Bay, all of which were built to enable ferry services for both recreation and commuting services.
	(v) surroundings	The surroundings of the wharf comprise the beach and enclosing hills to the south and west. This setting contributes to its townscape and landmark values.
	(vi) scientific	The wharf has no known scientific values.
	(vii) technological	The wharf uses typical materials and technology for the period, although the retention of some of the original copper sheathing is not common. That it has survived for 120 years is testament to the quality of the engineering and use of high

Criteria	Sub criteria	Value
		quality materials.
	(vii) integrity	The wharf has generally high levels of integrity with retention of its design and form, most structural members, decking, most of the handrails and piles, although many are now concrete encased.
	(ix) age	The use of the wharf as a berth for passenger ferries maintains authenticity of use.  The wharf is not particularly old in the context of human occupation of Wellington, however, it has age value in being now 120 years old. It is a similar age to other wharves built within the harbour for passenger ferry services.
(c) social values	(i) sentiment:	Without a survey of the current users and residents of the wharf, it is unknown whether the structure has sentimental values. However, it is presumed that the wharf holds special sentimental values to the surviving <i>Wahine</i> passengers who came ashore on or alongside the wharf in 1968.
	(ii) recognition	It is presumed that the wharf is well known to Seatoun residents and ferry passengers.
	(ii) sense of place/continuity	Given that the wharf has survived for 120 years and has been used for ferry services to Wellington and Days Bay over that time, the structure represents the continuity of use and landmark qualities over that period.
	(d) tangata whenua values	Not assessed.
	(e) rarity	The structure is one of 13 statutorily recognised wharves in the Wellington region under the PNRP.
	(f) representativeness	The structure is representative of timber wharf construction of the period used for small ferry commuter services.

## 4.2 Summary of significance

The Seatoun wharf has high regional significance for its historic values as a ferry

landing which enabled the development of Seatoun from an area of isolated farmland to a popular seaside destination and residential suburb. In this history is also linked with similar wharves in Karaka Bay, Bays Bay and Rona Bay.

Local historic figures associated with its establishment and operation include Herbert Rawson, Fort Zohrab and Alec and Charles Crawford. The wharf is also a surviving example of the expertise of nationally significant engineer, James Fulton, and the skills of builder, Neil Mclean, the quality of whose work is demonstrated by the wharf having survived for 120 years.

The wharf was a focus for rescuers during the *Wahine* sinking in 1968.

The wharf has high landmark values as a focal point of its appealing beach setting.

Draft

## 5 Conservation issues

### 5.1 Influences on conservation policy

#### *Owner's requirements<sup>90</sup>*

The aim of the project is to renew the wharf so it can continue to be used as a ferry terminal safely and extend the assets life, while prolong its heritage, social and recreational value.

#### *Building condition<sup>91</sup>*

In 2017 Beca were commissioned by the WCC to report on the condition of the Seatoun wharf. They found:

advanced degradation of piles within the tidal zone and deterioration of the decking. Based on the outcome of these inspections it was identified that the Seatoun Wharf required urgent repairs and strengthening works as the wharf is in regular use for ferry passengers and the local Seatoun community.

Following discussions between Beca and the author from 2019 an approach was agreed whereupon as much original fabric would be retained, deteriorated fabric would be replaced like-for like, piles would be retained but jacketed and splash zone deterioration repaired. In addition, pairs of steel H piles would underpin front row piles but located under mean high water to mitigate wave action while new fenders would be installed to the seaward side of the main wharf to resist breasting loads from moored boats. Other work recommended by Beca, due to extensive deterioration include:

- replacement of existing bracing;
- replacement of existing bearers;
- replacement of approach wharf outer deck joists;
- replacement of all main wharf deck joists;
- replacement of decking;
- piece by piece replacement of kerbing and handrails.

A draft timber repair specification is included for non-structural timber elements of the wharf.

#### *Legislation*

##### **Heritage New Zealand Pouhere Taonga Act 2014 (HNZPTA)**

The building is not entered on the NZ Heritage List/Rārangī Kōrero (the List).

The List is an important repository of information about historic places,

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<sup>90</sup> Email from Joel de Boer to Ian Bowman 27 May 2021

<sup>91</sup> Beca, *Draft – Design Basis Statement – WCC Seatoun Wharf Repairs*, prepared for the Wellington City Council, 4 February 2019

historic areas, wāhi tūpuna, wāhi tapu and wāhi tapu areas throughout New Zealand. However, it should be noted that entry on the List:<sup>92</sup>

- does not equate to automatic protection;
- does not directly create regulatory consequences or legal obligations on property owners;
- does not directly create specific rights or control over property; and
- can result in heritage properties being considered for inclusion in district plan heritage schedules under section 74(2)(b) of the Resource Management Act.

The wharf was built in 1901 and is therefore not considered an archaeological site under Part 3 of the HNZPTA. However when any works are undertaken in, around, or under the wharf, workers should be alert to any items of archaeological interest.

### **Building Act 2004 (BA)**

The BA regulates all building work in New Zealand and outlines the functions of territorial authorities as building consent authorities.

In exercising functions under the BA, building consent authorities need to ensure that buildings/structures are safe, promote physical independence and wellbeing, and are designed, constructed and able to be used in ways that promote sustainable development. They are also required to take into account the principles in section 4, which include the need to facilitate the preservation of buildings of significant cultural, historical or heritage value and the importance of recognising any special traditional and cultural aspects of the intended use of a building/structure.

Regardless, there can be tensions between the requirements of the BA and the purpose and principles of the RMA and HNZPTA. The tension stems from the focus on ensuring building safety, amenity and access under the BA, and protecting historic heritage under the RMA and promoting minimal change to heritage buildings under the HNZPTA.

Although the general repair, maintenance and replacement of existing building components are exempted from building consent, building work involving any alteration to the wharf is likely to require a building consent and will need to comply with the requirements of the BA.

### **Resource Management Act 1991 (RMA)**

Under section 6(f) of the RMA the protection of historic heritage from inappropriate subdivision, use and development is a matter of national importance.

Historic heritage is further defined<sup>93</sup> as those natural and physical resources that contribute to an understanding and appreciation of New Zealand's history and cultures, derived from the associated archaeological, architectural,

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<sup>92</sup> Refer <http://www.heritage.org.nz/the-list/about-the-list>; accessed August 2016

<sup>93</sup> Refer s.2, RMA



cultural, historic, scientific or technical qualities they possess. Such resources include:

- Historic sites, structures, places and areas;
- Archaeological sites;
- Sites significant to Maori, including wahi tapu; and
- Surroundings associated with these resources.

The requirement to protect historic heritage is largely facilitated through the policy and regulatory framework contained in policy statements and district plans prepared and administered by local authorities, including the need for a resource consent to be sought and obtained for any works that could have an adverse effect on identified heritage values. In preparing or changing their district plans territorial authorities are also required to have regard to any relevant entry on the New Zealand Heritage List/Rārangī Kōrero.<sup>94</sup>

### ***Local and regional authority plans***

The Seatoun Wharf, although listed on the Wellington District Plan, is controlled by the Wellington Regional Council under the Proposed Natural Resources Plan, Chapter 5.7.7.

Under Chapter 5.7.7 Heritage Structures, Rule 168, repairs are considered a permitted activity if:

- (e) the alteration is contained within the form of the existing structure and there is no increase in the length, width, or height of the existing structure, and
- (f) the altered components should be of original or similar material, texture, form and design as the original it replaces, and
- (g) the number of components altered should be substantially less than existing number of components, and
- (h) the alteration does not include the partial or total demolition of any structure....

Under Rule 169, additions or alterations are considered a restricted discretionary activity if:

- (f) the activity shall comply with the coastal management general conditions specified above in Section 5.7.2.

Matters for discretion

1. Use of the structure
2. Effects on public access
3. Effects on public open space and visual amenity
4. Effects of disturbance, deposition and discharge associated with construction
5. Effects on the historic heritage values of structures identified in Schedule E1 (heritage structures) or Schedule E2 (wharves and boatsheds)

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<sup>94</sup> Refer s.74(2)(b)(iia), RMA

6. Lighting and noise
7. Effects on coastal **natural processes** including effects on shoreline stability in the vicinity and adjacent areas

Under Rule 171, additions or alterations are considered a discretionary activity if the activity is not permitted by Rule 168 or Rule 169.

Under Rule 172, removal, demolition or replacement of structures is considered a discretionary activity if the activity is not permitted by Rule 169.

### ***International conservation recommendations***

#### **ICOMOS NZ Charter 2010**

The International Council on Monuments and Sites (ICOMOS) is a non-governmental body organised through UNESCO, which promotes the practice and standards of conservation through its international and national committees. Each committee is required to determine standards for conservation in its member country. The New Zealand National Committee of ICOMOS is recognised by HNZPT, the Department of Conservation and many local authorities as the body which sets conservation standards and ethics for conservation in New Zealand. In 2010 the New Zealand National Committee published a revised *ICOMOS New Zealand Charter*, the purpose of which is to act as the guiding standard for conservation in New Zealand (refer Appendix 3).

The Conservation Plan has been prepared to comply with the principles outlined in the *ICOMOS New Zealand Charter (2010)*. All future decisions relating to the conservation of the building should be made according to the Charter principles, including ensuring that any proposed interventions are consistent with the accepted international conservation practice outlined in the Charter.

The key principles in the Charter can be summarised as follows:

- All work should be thoroughly documented;
- Any conservation work undertaken should be the minimum necessary and reversible where possible;
- Any changes should retain the significance of the place;
- Any change should be based on evidence, not conjecture;
- Prevention of further deterioration is desirable;
- Conservation work that would enable renewal of a significant use is desirable;
- Reconstruction may be desirable to improve interpretation; and
- Conservation work that helps to minimise identified risks or threats to the place is desirable.

Additional ICOMOS Charters and recommendations relevant to conserving the structure include the Riga Charter on Authenticity and Historical Reconstruction in Relation to Cultural Heritage (2000), the Nara Document





(1994) and the World Management Guidelines for World Cultural Heritage Sites (ICCRUM, UNESCO, ICOMOS) of 1993 by Sir Bernard Feilden and Jukka Jokilehto.

## **Authenticity**

Herb Stovel paraphrases Jukka Jokilehto's chapter on 'Treatments and Authenticity' in the *World Heritage Operational Guidelines* in explaining the relationship between authenticity and intervention strategies. These strategies:

... must maintain authenticity by maximizing retention of historical material, by ensuring harmony with original design and workmanship, by not allowing new additions to dominate over the original fabric but respecting the archaeological potential meeting the test of authenticity in design, material, workmanship or setting. ... Jokilehto introduces a process for defining appropriate treatments whose first priority is to establish, safeguard and maintain the cultural resource values... and which seeks to ensure that all conservation treatments (e.g. protection, consolidation or restoration) guarantee the protection of the authenticity of the heritage site, prolonging the duration of the authenticity of its integrity and preparing it for interpretation. (Stovel, *Origins and Influence of the Nara Document on Authenticity*, 2008)

## **5.2 Threats to heritage values**

A key component of the management of heritage structures is identification of areas of vulnerability to their associated heritage values and implementation of appropriate actions to avoid, remedy or mitigate any actual or potential damage. The primary threats to the wharf are highlighted below under the following themes:

- loss of heritage value, significance and authenticity;
- maintenance, upgrading of facilities and services
- management;
- damage caused by natural and human processes;
- ongoing use;
- legislative influences;
- information loss and recording;
- interpretation;
- monitoring.

Corresponding policies to address the impact of these threats are set out below.

<b>Threat</b>	<b>Description</b>
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Loss of heritage values, significance and authenticity

- |    |  |
|----|--|
| a) | Insensitive or inappropriate investigations, remedial work, maintenance, strengthening, restoration, reconstruction, or deterioration through neglect is likely to adversely affect identified physical and cultural values of the wharf and its authenticity. |
|----|--|

Threat	Description
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- b) Further loss of authenticity and integrity of James Fulton’s design, through major intervention or small, incremental changes could contribute to a cumulative loss of remaining fabric and heritage values.
- c) Inappropriate modifications to the immediate or wider environment is likely to reduce the authenticity of the wharf’s setting and impact on its physical values.

Maintenance, upgrading of facilities and services

- d) New electrical, security or lighting services may be required in the future. There is a possibility that any modifications could have an adverse impact on the heritage values of important fabric.
- e) The wharf requires on-going maintenance and repair. Inadequate design or quality of repair and maintenance may result in the excess removal of heritage fabric, thereby leading to a reduction in the heritage value of corresponding fabric.

Management

- f) The way in which works or activities are conceived and/or executed will have a bearing on the authenticity and integrity of the wharf. This may include, for example, works that are poorly specified, delays in undertaking required maintenance/repairs and unsympathetic remedial or restorative work.
- g) A lack of adequate and secure funding to cover items such as conservation, ongoing maintenance and insurance can put its physical condition, protection and interpretation at risk.
- h) The insensitive design and installation of temporary or changing elements such as signage and wayfinding, can have an impact on its fabric and diminish the visibility and appreciation of the wharf and its elements.
- i) Employing contractors with little or no training and experience of built heritage conservation to undertake work on the wharf is likely to impact on its associated heritage values, significance and authenticity.

Damage caused by natural and human processes

- j) Climate change and associated extreme weather events are now increasingly common and can have a detrimental effect on the physical condition of wharf fabric.
- k) Wellington is in a high risk seismic area, meaning there is a high risk of a significant seismic event, which could cause damage to the wharf.
- l) The materials used in the construction of the heritage elements are vulnerable to deterioration from natural processes such as sunlight, wind, rainfall, and storms.
- m) As a publicly accessible structure there is a risk from vandalism which can involve graffiti or more serious, permanent damage.

Ongoing use



Threat	Description
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- n) Increasing demands on the use of the wharf, such as larger boats or more frequent use, may require works that are incompatible with the heritage values of the wharf.

#### Legislative influences

- o) The requirement for statutory compliance with existing and future changes in legislation affecting wharves, such as changes to the Building Act, may impact on the authenticity, heritage values and significance of the wharf.

#### Information loss and recording

- p) Inadequate or insufficient recording of interventions such as modification, maintenance or repair can present future challenges regarding the nature and timing of prior work that has been undertaken. This could lead to confusion regarding determination of what is original or later fabric and compromise the ability to monitor the efficacy of previous interventions.
- q) Failure to record interventions could result in a diminished understanding of allied heritage values and the success or otherwise of the interventions.

#### Understanding of heritage values

- r) A lack of adequate or thorough understanding of the heritage values of the wharf and their interpretation may result in a reduction in its heritage and amenity values and an inadvertent loss of heritage fabric and/or loss of heritage protection and use.

#### Monitoring

- s) Without regular monitoring of cultural heritage fabric, appropriate conservation actions may not be able to be designed and implemented within necessary timeframes.

## 6 Managing the place

### 6.1 Explanation

The conservation policies and actions outlined in 6.2 and 6.3 below have been developed in response to the significant heritage values associated with the wharf identified in section 4.2, and the potential threats to these values identified in section 5.2.

To help put the policies into context and to facilitate their implementation alongside each policy is the relevant threat/s to which they are a response along with their relative priority. The priorities have been assessed and assigned using the following graduated scale:

- Immediate – As soon as possible;
- Urgent – Within three months;
- Necessary – Within one to three years;
- Needed – To be implemented when the circumstances require;
- Desirable – Whenever possible, or as funding permits;
- On-going – Implemented over time as funding permits.

### 6.2 Policies

Policy No.	Policy	Priority	Threat being addressed
General			
6.2.1	The policies identified in this plan should be adopted by those responsible for the façades so that there is agreement on use, tenure, future management, maintenance, repair and other conservation interventions.	Immediate	All
6.2.2	All conservation work including investigations, remedial work, maintenance, strengthening, restoration, and reconstruction should be consistent with the <i>ICOMOS NZ Charter for the Conservation of Places of Cultural Heritage Value</i> 2010 including minimum, identifiable and reversible interventions to ensure the survival of and on-going use of the wharf.	On-going	All
6.2.3	Retention and conservation of the extant form, fabric specified and design features as designed by James Fulton should be a prevailing consideration in any future decisions on modifying the structure.	Needed, on-going	a, b, d, e, f, g, h, l, m, n, o

Conservation including maintenance and repair

*Skills*



Policy No.	Policy	Priority	Threat being addressed
6.2.4	All design, planning, documentation and resulting conservation interventions such as maintenance, repair and stabilisation work should be undertaken or supervised by competent people with appropriate built heritage conservation qualifications, training and experience, including tradespeople and/or conservators.	Needed, on-going	a, d, e, f, h, i
<i>Stabilisation, maintenance and repair</i>			
6.2.4	All investigative works should be of a non-destructive nature or the minimum required where this is impracticable; any such works should also be discretely located, based on the advice of a person with appropriate built heritage conservation qualifications and experience.	Needed, on-going	a, b
6.2.5	Any future structural design work commissioned should comply with national and international best practice guidelines relevant to timber heritage structures as 6.2.2.	Needed, on-going	a, b, c, d, e, f,
6.2.6	Maintenance and repair should be undertaken commensurate with the condition of heritage fabric. It should be carried out within appropriate timeframes and to a high standard to ensure the wharf is maintained in a good condition.	Immediate, on-going	e, j, l
<i>Restoration/reconstruction, adaptation</i>			
6.2.7	Existing heritage values should not be reduced and, wherever possible, heritage values should be enhanced by the restoration/reconstruction of elements and fabric based on the original James Fulton design for the wharf.	Desirable	a, b, l
6.2.8	Wherever possible, restoration/reconstruction of any original fabric should be undertaken in a manner that enables any changes to be reversed in future.	Desirable	a, b, p, q
6.2.9	Any new services (e.g. navigation lighting, general lighting) introduced should ideally be located to avoid negative visual and physical impacts on the wharf. Redundant non-original	Needed, on-going	d, o

Policy No.	Policy	Priority	Threat being addressed
	services should be removed.		
<i>Archaeological impacts</i>			
6.2.10	The wharf is not an archaeological site under the HNZPT Act, however workers should be vigilant for any potential archaeological items when working on the wharf.		a, f, p, q, s
<i>Protection of fabric</i>			
6.2.11	Protective measures should be designed and implemented to ensure that the wharf and fabric is appropriately safeguarded from potential threats such as natural hazard events (e.g. storms, earthquakes) or human induced damage (e.g. vandalism, fire). Increased maintenance and repairs is likely because of climate change.	Immediate	a, b, j, k, l, s
<i>Setting</i>			
6.2.12	Any future development around the immediate environs of the wharf should respect the heritage values of the wharf, its curtilage, character and context.	Needed, on-going	c
<i>Legislative protection</i>			
6.2.13	Retention of the wharf on the heritage lists administered by WCC and GWRC should continue given the wharf's significant regional heritage value.	Needed, on-going	r
<i>Management and use</i>			
<i>Use</i>			
6.2.14	Retention of the wharf as a ferry landing is strongly encouraged but also allowing popular recreational uses, such as fishing, to continue when appropriate in order to maintain heritage values and significance.	On-going	r
6.2.15	Any existing uses that are incompatible with the identified heritage values of the wharf should either be relocated or discontinued.	Desirable	r
<i>Planning and management</i>			
6.2.16	On-going management and conservation of the wharf should be undertaken in a systematic and co-ordinated manner, including suitable provision being made for such matters as	Needed, on-going	a, b, f, g, i, j, k, l, s



Policy No.	Policy	Priority	Threat being addressed
	routine maintenance and recovery in the event of a natural disaster.		
6.2.17	Those responsible for managing the wharf should be knowledgeable about it and its associated heritage values, while also having the capability to competently manage a heritage structure.	Needed, on-going	f, g, h, i
6.2.18	Adequate conservation safeguards should be included in all contract and tender documentation consistent with the heritage values of the wharf and the policies and actions contained in this Plan.	Needed, on-going	f, h, I, s
<i>Funding</i>			
6.2.19	Make adequate funding provision available to facilitate the effective, on-going conservation of the wharf.	Immediate, on-going	g
<i>Statutory requirements</i>			
6.2.20	All statutory requirements should be complied with, and careful attention applied to any requirements that have the potential to compromise the character and integrity of original fabric or matching replacement fabric.	Needed, on-going	n, o
<i>Interpretation and signage</i>			
6.2.21	Provide appropriate interpretation of the wharf through on-site, published and/or web based formats.	Desirable, on-going	r
6.2.22	Any new signage should follow historic precedence and relevant design guides.	Desirable, on-going	h, r
<i>Documentation and monitoring</i>			
6.2.23	The wharf should be documented to ensure that an accurate, up to date record is available in the event of damage/loss resulting from vandalism, theft, arson or natural disaster.	Needed, on-going	p, q, s
6.2.24	All work to the wharf, including maintenance, repair, restoration, reconstruction and adaptation, and any associated advice should be appropriately recorded and/or documented.	Needed, on-going	p, q, s
6.2.25	To reduce loss of heritage value and inform	Needed,	s



Policy No.	Policy	Priority	Threat being addressed
	prioritisation of future conservation works the condition of the wharf should be regularly monitored and re-evaluated as part of an ongoing programme of condition assessment.	ongoing	

### 6.3 Actions

Action No.	Action	Priority
General		
6.3.1	The Conservation Plan is a 'living document' and should be reviewed every 10 years at a minimum, following major work or as new material information comes to light.	Needed and on-going
6.3.2	All interventions should be consistent with the principles and practices noted in the ICOMOS International Wood Committee <i>Principles for the conservation of wooden built heritage</i> , 2017.	Needed and on-going
Protection		
6.3.3	Undertake on-going monitoring of the PRNP to ensure that the existing level of protection afforded the wharf and setting is maintained or enhanced.	Needed, on-going
Conservation including repair and maintenance		
<i>Repair and maintenance</i>		
6.3.4	Retain original fabric unless it is in a severely deteriorated condition, its removal is required to meet legislative requirements or for critical health and safety reasons.	Desirable
6.3.5	Repair and re-use rather than replace, however sound matching material from other structures can be used.	Desirable
6.3.6	Where only isolated fabric is deteriorated, retain sound fabric in-situ and repair around the sound fabric. Where extensive areas of fabric, such as decking, is deteriorated, it is acceptable to remove all fabric and relay sound fabric together with new matching fabric elsewhere.	Desirable
6.3.7	Any repairs or replacement of seriously deteriorated fabric should match the original in material (e.g. copper sheathing) timber species (e.g. ironbark, totara), form, dimensions, texture, and colour.	Desirable
6.3.8	Continue to regularly monitor and update the condition	Necessary



Action No.	Action	Priority
	of the wharf to enable a regular repairs schedule to be drawn up and implemented.	
6.3.9	Prepare and implement a preventative cyclical maintenance plan relating to all external fabric of high-exceptional heritage value identified in this Plan, and review the plan on a 3 yearly basis to ensure it remains relevant.	Necessary, on-going
6.3.10	Use traditional techniques and materials to conserve original fabric unless modern techniques and materials offer significant conservation benefits.	Desirable
6.3.11	Discreetly label any new/replacement fabric introduced to enable it to be easily recognised as such on inspection.	Needed, on-going
6.3.12	Review activities and associated budgets relating to the maintenance of all fabric, but particularly original fabric on an annual basis.	Necessary on-going
<i>Restoration, reconstruction, adaptation</i>		
6.3.13	Only minor adaptation needed to meet essential statutory or operational requirements should be considered. Where this is the case the advice of an appropriately qualified and experienced conservation architect should be sought.	Needed, on-going
6.3.14	The installation of railings other than where they are currently located should be avoided as the authenticity of the design of the wharf would be affected.	Desirable
6.3.15	Consider, and, if appropriate, prepare and implement a timeline for restoration and/or reconstruction of the following key elements by: <ul style="list-style-type: none"> <li>• timber bollards</li> <li>• light fitting</li> <li>• lifebuoy (s)</li> <li>• cross bracing, walers and other structural elements that have been lost over time to regain the original visual appearance</li> <li>• fenders</li> </ul>	Desirable
6.3.16	New ladders should match the design of the original, where possible, otherwise where these are not compliant with current codes, they should be discreet and coloured dark to reduce their visual impact	Desirable

Action No.	Action	Priority
6.3.17	Ideally the original timber decking surface, cambered as per James Fulton's original design, should be maintained rather than a coating that will obscure the decking.	Desirable
6.3.18	The installation of recreational items such as fish filleting boards and seating should be avoided as they would introduce visual clutter, they may attract vandals and may not actually be warranted. Fish filleting boards and hoses were installed on the Petone Wharf and were not used or were vandalised.	Desirable
<i>Signage</i>		
6.3.19	Any new signage shall be discreet and follow the appropriate guidelines including: <ul style="list-style-type: none"> <li>Wellington City Council, <i>Central Area Urban Design Guide for Signs</i>, Guidelines for specific types of signs, Signs and Heritage, 2012</li> <li>New Zealand Historic Places Trust, <i>Sustainable Management of Historic Heritage Guidance Information Sheet 21, Assessing impacts of advertising signs on historic heritage</i>", 2007</li> <li>Jackson, Rachel, Lawrance, Caroline, <i>Conserving Historic Signs, Conservation Guidelines for Historic Signs and New Signs on Heritage Buildings</i>, Heritage Office, New South Wales Heritage Office, 2006.</li> </ul>	Needed, on-going
<i>Structural issues</i>		
6.3.20	Any new structural work required on the wharf should be designed in conjunction with a person appropriately qualified, experienced and trained in built heritage conservation to ensure it is consistent with established conservation principles and practices and the policies contained in this Plan.	Needed, on-going
6.3.21	Retention of the original structure and fabric is paramount and when designing any new structure it should augment the original rather than replace it.	Desirable
6.3.22	Where original structural elements are redundant but in good condition, these shall be retained in-situ	Desirable
6.3.23	Further concrete encasement of piles should be avoided as these are visually distracting. Repair or replacement of piles with ironbark is preferred.	Desirable

#### Planning and management



Action No.	Action	Priority
<i>Funding</i>		
6.3.24	<p>Based on the findings of the condition survey and actions identified in the cyclical preventative maintenance plan, prepare a long-term conservation budget for the wharf to enable the effective implementation of suggested repair and maintenance works.</p> <p>The budget should be reviewed annually to ensure the timely and systematic prioritisation of these works.</p>	Needed and on-going
<i>Management</i>		
6.3.25	Ensure suitable training in the use and application of this Plan by those responsible for oversight and management of the wharf.	Needed, on-going
6.3.26	<p>Ensure design, documentation, and contract observation for any intervention so that:</p> <ul style="list-style-type: none"> <li>• it clearly sets out the heritage expectations sought for any future work, including appropriate conservation safeguards;</li> <li>• contractors are appropriately trained and supervised to undertake work on a heritage structure; and</li> <li>• appropriate induction training is provided prior to commencement of any works.</li> </ul> <p>A person appropriately qualified, experienced and trained in built heritage conservation should provide advice.</p>	Needed, on-going
<i>Setting</i>		
6.3.27	Management of the setting of the wharf should be informed by and be consistent with appropriate guidelines such as Historic England, <i>The Setting of Heritage Assets</i> , December 2017.	Needed and on-going
6.3.28	Should a shelter for ferry patrons or changing sheds be required, the location and general form of these two structures should inform the new design.	Desirable
6.3.29	Any other structures on the seaward side of the beach should be avoided as these may reduce the landmark values of the wharf	Desirable
<i>Disaster planning</i>		
6.3.30	Prepare and implement a Disaster Management Plan for the wharf which covers such matters as evacuation,	Urgent, on-going

Action No.	Action	Priority
	<p>emergency equipment storage and the emergency salvage of significant fabric in the event of an earthquake.</p> <p>The plan should be reviewed on an annual basis to ensure its continued relevance.</p>	
6.3.31	<p>Future impacts from climate change should be modelled and where these impact the wharf, consultation with a suitably experienced conservation architect should be undertaken to assist in any design work that might be required.</p>	Desirable
6.3.32	<p>Protection of the wharf against fire is paramount. Appropriate advice should be taken to consider the risk and design appropriate measures that can be visually and structural integrated with the wharf.</p>	
6.3.33	<p>As New Zealand is a signatory to the Hague Convention, which identifies and protects cultural property from unnecessary demolition following a major natural event such as an earthquake or tsunami, display the Hague symbol on the exterior of the wharf to alert relevant authorities to its heritage significance.</p> <p>Notify relevant authorities such as Civil Defence should also be notified of the significance of the wharf and the implications of the Hague Convention, and advise that the Hague symbol will be displayed on the wharf.</p>	Desirable
Interpretation		
6.3.34	<p>Consider the preparation and implementation of an Interpretation Plan for the wharf consistent with this Plan.</p>	Desirable
6.3.35	<p>Update existing published and/or web based formats drawing on information contained in this Plan or other related documents.</p>	Desirable, on-going
Documentation and monitoring		
6.3.36	<p>Undertake appropriate documentation including 3-D scanning, measured drawings and photography to appropriate standards including:</p> <ul style="list-style-type: none"> <li>• HNZ Archaeological Guidelines Series, <i>Investigation and Recording of Buildings and Standing Structures</i>. Heritage New Zealand, 2014</li> <li>• Heritage Information Series, <i>Photographic Recording of Heritage Items Using Film or Digital</i></li> </ul>	Needed and on-going



Action No.	Action	Priority
	<p><i>Capture</i>, Heritage Office, Department of Planning, Parramatta NSW, 2006</p> <ul style="list-style-type: none"> <li>English Heritage, <i>Understanding Historic Buildings A guide to good recording practice</i>, English Heritage, 2006</li> <li>ICOMOS, <i>Principles for the recording of monuments, groups of buildings and sites</i>, 1996</li> </ul>	
6.3.37	<p>Ensure documentation relevant to the wharf and any associated work commissioned (e.g. condition reports, maintenance plans), is retained, compiled, entered on a database and stored in a manner that facilitates its long-term survival, accessibility and easy retrieval, particularly in the event of an emergency or a natural disaster.</p>	Needed, on-going

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# Appendix 1

## ICOMOS New Zealand Charter for the Conservation of Places of Cultural Heritage Value Revised 2010

### Preamble

New Zealand retains a unique assemblage of **places of cultural heritage value** relating to its indigenous and more recent peoples. These areas, **cultural landscapes** and features, buildings and **structures**, gardens, archaeological sites, traditional sites, monuments, and sacred **places** are treasures of distinctive value that have accrued meanings over time. New Zealand shares a general responsibility with the rest of humanity to safeguard its cultural heritage **places** for present and future generations. More specifically, the people of New Zealand have particular ways of perceiving, relating to, and conserving their cultural heritage **places**.

Following the spirit of the International Charter for the Conservation and Restoration of Monuments and Sites (the Venice Charter - 1964), this charter sets out principles to guide the **conservation of places of cultural heritage value** in New Zealand. It is a statement of professional principles for members of ICOMOS New Zealand.

This charter is also intended to guide all those involved in the various aspects of **conservation** work, including owners, guardians, managers, developers, planners, architects, engineers, craftspeople and those in the construction trades, heritage practitioners and advisors, and local and central government authorities. It offers guidance for communities, organisations, and individuals involved with the **conservation** and management of cultural heritage **places**.

This charter should be made an integral part of statutory or regulatory heritage management policies or plans, and should provide support for decision makers in statutory or regulatory processes.

Each article of this charter must be read in the light of all the others. Words in bold in the text are defined in the definitions section of this charter.

This revised charter was adopted by the New Zealand National Committee of the International Council on Monuments and Sites at its meeting on 4 September 2010.

### Purpose of conservation

#### 1. The purpose of conservation

The purpose of **conservation** is to care for **places of cultural heritage value**.

In general, such **places**:

- (i) have lasting values and can be appreciated in their own right;
- (ii) inform us about the past and the cultures of those who came before us;
- (iii) provide tangible evidence of the continuity between past, present, and future;
- (iv) underpin and reinforce community identity and relationships to ancestors and the land; and
- (v) provide a measure against which the achievements of the present can be compared.

It is the purpose of **conservation** to retain and reveal such values, and to support the on-going meanings and functions of **places of cultural heritage value**, in the interests of present and future generations.

### Conservation principles

#### 2. Understanding cultural heritage value

**Conservation** of a **place** should be based on an understanding and appreciation of all aspects of its **cultural heritage value**, both **tangible** and **intangible**. All available forms of knowledge and evidence provide the means of understanding a **place** and its **cultural heritage value** and **cultural heritage significance**. **Cultural heritage value** should be understood through consultation with **connected people**, systematic documentary and oral research, physical investigation and **recording** of the **place**, and other relevant methods.

All relevant **cultural heritage values** should be recognised, respected, and, where appropriate, revealed, including values which differ, conflict, or compete.

The policy for managing all aspects of a **place**, including its **conservation** and its **use**, and the implementation of the policy, must be based on an understanding of its **cultural heritage value**.

#### 3. Indigenous cultural heritage

The indigenous cultural heritage of **tangata whenua** relates to **whanau**, **hapu**, and **iwi** groups. It shapes identity and enhances well-being, and it has particular cultural meanings and values for the present, and associations with those who have gone before. Indigenous cultural heritage brings with it responsibilities of guardianship and the practical application and passing on of associated knowledge, traditional skills, and practices.

The Treaty of 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.



Particular **matauranga**, or knowledge of cultural heritage meaning, value, and practice, is associated with **places**. **Matauranga** is sustained and transmitted through oral, written, and physical forms determined by **tangata whenua**. The **conservation** of such **places** is therefore conditional on decisions made in associated **tangata whenua** communities, and should proceed only in this context. In particular, protocols of access, authority, ritual, and practice are determined at a local level and should be respected.

#### 4. Planning for conservation

**Conservation** should be subject to prior documented assessment and planning.

All **conservation** work should be based on a **conservation plan** which identifies the **cultural heritage value** and **cultural heritage significance** of the **place**, the **conservation** policies, and the extent of the recommended works.

The **conservation plan** should give the highest priority to the **authenticity** and **integrity** of the **place**.

Other guiding documents such as, but not limited to, management plans, cyclical **maintenance** plans, specifications for **conservation** work, interpretation plans, risk mitigation plans, or emergency plans should be guided by a **conservation plan**.

#### 5. Respect for surviving evidence and knowledge

**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**. Respect for all forms of knowledge and existing evidence, of both **tangible** and **intangible values**, is essential to the **authenticity** and **integrity** of the **place**.

**Conservation** recognises the evidence of time and the contributions of all periods. 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 others.

The removal or obscuring of any physical evidence of any period or activity should be minimised, and should be explicitly justified where it does occur. The **fabric** of a particular period or activity may be obscured or removed if assessment shows that its removal would not diminish the **cultural heritage value** of the **place**.

In **conservation**, evidence of the functions and intangible meanings of **places** of **cultural heritage value** should be respected.

#### 6. Minimum intervention

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.

**Intervention** should be the minimum necessary to ensure the retention of **tangible** and **intangible values** and the continuation of **uses** integral to those values. The removal of **fabric** or the alteration of features and spaces that have **cultural heritage value** should be avoided.

#### 7. Physical investigation

Physical investigation of a **place** provides primary evidence that cannot be gained from any other source. Physical investigation should be carried out according to currently accepted professional standards, and should be documented through systematic **recording**.

Invasive investigation of **fabric** of any period should be carried out only where knowledge may be significantly extended, or where it is necessary to establish the existence of **fabric** of **cultural heritage value**, or where it is necessary for **conservation** work, or where such **fabric** is about to be damaged or destroyed or made inaccessible. The extent of invasive investigation should minimise the disturbance of significant **fabric**.

#### 8. Use

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

Where the **use** of a **place** is integral to its **cultural heritage value**, that **use** should be retained.

Where a change of **use** is proposed, the new **use** should be compatible with the **cultural heritage value** of the **place**, and should have little or no adverse effect on the **cultural heritage value**.

#### 9. Setting

Where the **setting** of a **place** is integral to its **cultural heritage value**, that **setting** should be conserved with the **place** itself. If the **setting** no longer contributes to the **cultural heritage value** of the **place**, and if **reconstruction** of the **setting** can be justified, any **reconstruction** of the **setting** should be based on an understanding of all aspects of the **cultural heritage value** of the **place**.

#### 10. Relocation

The on-going association of a **structure** or feature of **cultural heritage value** with its location, site, curtilage, and **setting** is essential to its **authenticity** and **integrity**. Therefore, a **structure** or feature of **cultural heritage value** should remain on its original site.

Relocation of a **structure** or feature of **cultural heritage value**, where its removal is required in order to clear its site for a different purpose or construction, or where its removal is required to enable its **use** on a different site, is not a desirable outcome and is not a **conservation** process.

In exceptional circumstances, a **structure** of **cultural heritage value** may be relocated if its current site is in imminent danger, and if all other means of retaining the **structure** in its current location have been exhausted. In this event, the new location should provide a **setting** compatible with the **cultural heritage value** of the **structure**.

## 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.

**Documentation** includes information about all changes to the **place** and any decisions made during the **conservation** process.

**Documentation** should be carried out to archival standards to maximise the longevity of the record, and should be placed in an appropriate archival repository.

**Documentation** should be made available to **connected people** and other interested parties. Where reasons for confidentiality exist, such as security, privacy, or cultural appropriateness, some information may not always be publicly accessible.

## 12. Recording

Evidence provided by the **fabric** of a **place** should be identified and understood through systematic research, **recording**, and analysis.

**Recording** is an essential part of the physical investigation of a **place**. It informs and guides the **conservation** process and its planning. Systematic **recording** should occur prior to, during, and following any **intervention**. It should include the **recording** of new evidence revealed, and any **fabric** obscured or removed.

**Recording** of the changes to a **place** should continue throughout its life.

## 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**. Such fixtures, fittings, and **contents** may include carving, painting, weaving, stained glass, wallpaper, surface decoration, works of art, equipment and machinery, furniture, and personal belongings.

**Conservation** of any such material should involve specialist **conservation** expertise appropriate to the material. Where it is necessary to remove any such material, it should be recorded, retained, and protected, until such time as it can be reinstated.

## Conservation processes and practice

### 14. Conservation plans

A **conservation plan**, based on the principles of this charter, should:

- (i) be based on a comprehensive understanding of the **cultural heritage value** of the **place** and assessment of its **cultural heritage significance**;
- (ii) include an assessment of the **fabric** of the **place**, and its condition;
- (iii) give the highest priority to the **authenticity** and **integrity** of the **place**;
- (iv) include the entirety of the **place**, including the **setting**;
- (v) be prepared by objective professionals in appropriate disciplines;
- (vi) consider the needs, abilities, and resources of **connected people**;
- (vii) not be influenced by prior expectations of change or development;
- (viii) specify **conservation** policies to guide decision making and to guide any work to be undertaken;
- (ix) make recommendations for the **conservation** of the **place**; and
- (x) be regularly revised and kept up to date.

### 15. Conservation projects

**Conservation** projects should include the following:

- (i) consultation with interested parties and **connected people**, continuing throughout the project;
- (ii) opportunities for interested parties and **connected people** to contribute to and participate in the project;
- (iii) research into documentary and oral history, using all relevant sources and repositories of knowledge;
- (iv) physical investigation of the **place** as appropriate;
- (v) use of all appropriate methods of **recording**, such as written, drawn, and photographic;
- (vi) the preparation of a **conservation plan** which meets the principles of this charter;
- (vii) guidance on appropriate **use** of the **place**;
- (viii) the implementation of any planned **conservation** work;
- (ix) the **documentation** of the **conservation** work as it proceeds; and
- (x) where appropriate, the deposit of all records in an archival repository.

A **conservation** project must not be commenced until any required statutory authorisation has been granted.

### 16. Professional, trade, and craft skills

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.

All **conservation** disciplines, arts, crafts, trades, and traditional skills and practices that are relevant to the project should be applied and promoted.

### 17. Degrees of intervention for conservation purposes



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
- (iv) **adaptation**.

In many **conservation** projects a range of processes may be utilised. Where appropriate, **conservation** processes may be applied to individual parts or components of a **place of cultural heritage value**.

The extent of any **intervention** for **conservation** purposes should be guided by the **cultural heritage value** of a **place** and the policies for its management as identified in a **conservation plan**. Any **intervention** which would reduce or compromise **cultural heritage value** is undesirable and should not occur.

Preference should be given to the least degree of **intervention**, consistent with this charter.

Re-creation, meaning the conjectural **reconstruction** of a **structure** or **place**; replication, meaning to make a copy of an existing or former **structure** or **place**; or the construction of generalised representations of typical features or **structures**, are not **conservation** processes and are outside the scope of this charter.

## 18. Preservation

**Preservation** of a **place** involves as little **intervention** as possible, to ensure its long-term survival and the continuation of its **cultural heritage value**.

**Preservation** processes should not obscure or remove the patina of age, particularly where it contributes to the **authenticity** and **integrity** of the **place**, or where it contributes to the structural stability of materials.

### i. Stabilisation

Processes of decay should be slowed by providing treatment or support.

### ii. Maintenance

A **place of cultural heritage value** should be maintained regularly. **Maintenance** should be carried out according to a plan or work programme.

### iii. Repair

**Repair** of a **place of cultural heritage value** should utilise matching or similar materials. Where it is necessary to employ new materials, they should be distinguishable by experts, and should be documented. Traditional methods and materials should be given preference in **conservation** work.

**Repair** of a technically higher standard than that achieved with the existing materials or construction practices may be justified only where the stability or life expectancy of the site or material is increased, where the new material is compatible with the old, and where the **cultural heritage value** is not diminished.

## 19. 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**.

**Restoration** is based on respect for existing **fabric**, and on the identification and analysis of all available evidence, so that the **cultural heritage value** of a **place** is recovered or revealed. **Restoration** should be carried out only if the **cultural heritage value** of the **place** is recovered or revealed by the process.

**Restoration** does not involve conjecture.

### i. Reassembly and reinstatement

**Reassembly** uses existing material and, through the process of **reinstatement**, returns it to its former position.

**Reassembly** is more likely to involve work on part of a **place** rather than the whole **place**.

### ii. Removal

Occasionally, existing **fabric** may need to be permanently removed from a **place**. This may be for reasons of advanced decay, or loss of structural **integrity**, or because particular **fabric** has been identified in a **conservation plan** as detracting from the **cultural heritage value** of the **place**.

The **fabric** removed should be systematically **recorded** before and during its removal. In some cases it may be appropriate to store, on a long-term basis, material of evidential value that has been removed.

## 20. Reconstruction

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

**Reconstruction** is appropriate if it is essential to the function, **integrity**, **intangible value**, or understanding of a **place**, if sufficient physical and documentary evidence exists to minimise conjecture, and if surviving **cultural heritage value** is preserved.

Reconstructed elements should not usually constitute the majority of a **place** or **structure**.

## 21. Adaptation

The **conservation** of a **place of cultural heritage value** is usually facilitated by the **place** serving a useful purpose. Proposals for **adaptation** of a **place** may arise from maintaining its continuing **use**, or from a proposed change of **use**.

Alterations and additions may be acceptable where they are necessary for a **compatible use** of the **place**. Any change should be the minimum necessary, should be substantially reversible, and should have little or no adverse effect on the **cultural heritage value** of the **place**.

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. **Adaptation** should not dominate or substantially obscure the original form and **fabric**, and should not adversely affect the **setting** of a **place** of **cultural heritage value**. New work should complement the original form and **fabric**.

## 22. 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. This approach may be appropriate where undisturbed constancy of **intangible values**, such as the spiritual associations of a sacred **place**, may be more important than its physical attributes.

## 23. Interpretation

Interpretation actively enhances public understanding of all aspects of **places** of **cultural heritage value** and their **conservation**. Relevant cultural protocols are integral to that understanding, and should be identified and observed.

Where appropriate, interpretation should assist the understanding of **tangible** and **intangible values** of a **place** which may not be readily perceived, such as the sequence of construction and change, and the meanings and associations of the **place** for **connected people**.

Any interpretation should respect the **cultural heritage value** of a **place**. Interpretation methods should be appropriate to the **place**. Physical **interventions** for interpretation purposes should not detract from the experience of the **place**, and should not have an adverse effect on its **tangible** or **intangible values**.

## 24. 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 works, or wilful damage or neglect. In order to safeguard **cultural heritage value**, planning for risk mitigation and emergency management is necessary. Potential risks to any **place** of **cultural heritage value** should be assessed. Where appropriate, a risk mitigation plan, an emergency plan, and/or a protection plan should be prepared, and implemented as far as possible, with reference to a conservation plan.

## Definitions

For the purposes of this charter:

**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.

**Authenticity** means the credibility or truthfulness of the surviving evidence and knowledge of the **cultural heritage value** of a **place**. Relevant evidence includes form and design, substance and **fabric**, technology and craftsmanship, location and surroundings, context and **setting, use** and function, traditions, spiritual essence, and sense of place, and includes **tangible** and **intangible values**. Assessment of **authenticity** is based on identification and analysis of relevant evidence and knowledge, and respect for its cultural context.

**Compatible use** means a **use** which is consistent with the **cultural heritage value** of a **place**, and which has little or no adverse impact on its **authenticity** and **integrity**.

**Connected people** means any groups, organisations, or individuals having a sense of association with or responsibility for a **place** of **cultural heritage value**.

**Conservation** means all the processes of understanding and caring for a **place** so as to safeguard its **cultural heritage value**.

**Conservation** is based on respect for the existing **fabric**, associations, meanings, and **use** of the **place**. It requires a cautious approach of doing as much work as necessary but as little as possible, and retaining **authenticity** and **integrity**, to ensure that the **place** and its values are passed on to future generations.

**Conservation plan** means an objective report which documents the history, **fabric**, and **cultural heritage value** of a **place**, assesses its **cultural heritage significance**, describes the condition of the **place**, outlines **conservation** policies for managing the **place**, and makes recommendations for the **conservation** of the **place**.

**Contents** means moveable objects, collections, chattels, documents, works of art, and ephemera that are not fixed or fitted to a **place**, and which have been assessed as being integral to its **cultural heritage value**.

**Cultural heritage significance** means the **cultural heritage value** of a **place** relative to other similar or comparable **places**, recognising the particular cultural context of the **place**.

**Cultural heritage value/s** means possessing aesthetic, archaeological, architectural, commemorative, functional, historical, landscape, monumental, scientific, social, spiritual, symbolic, technological, traditional, or other **tangible** or **intangible values**, associated with human activity.

**Cultural landscapes** means an area possessing **cultural heritage value** arising from the relationships between people and the environment. **Cultural landscapes** may have been designed, such as gardens, or may have evolved from human settlement and land use over time, resulting in a diversity of distinctive landscapes in different areas. Associative



**cultural landscapes**, such as sacred mountains, may lack **tangible** cultural elements but may have strong **intangible** cultural or spiritual associations.

**Documentation** means collecting, **recording**, keeping, and managing information about a **place** and its **cultural heritage value**, including information about its history, **fabric**, and meaning; information about decisions taken; and information about physical changes and **interventions** made to the **place**.

**Fabric** means all the physical material of a **place**, including subsurface material, **structures**, and interior and exterior surfaces including the patina of age; and including fixtures and fittings, and gardens and plantings.

**Hapu** means a section of a large tribe of the **tangata whenua**.

**Intangible value** means the abstract **cultural heritage value** of the meanings or associations of a **place**, including commemorative, historical, social, spiritual, symbolic, or traditional values.

**Integrity** means the wholeness or intactness of a **place**, including its meaning and sense of **place**, and all the **tangible** and **intangible** attributes and elements necessary to express its **cultural heritage value**.

**Intervention** means any activity that causes disturbance of or alteration to a **place** or its **fabric**. **Intervention** includes archaeological excavation, invasive investigation of built **structures**, and any **intervention** for **conservation** purposes.

**Iwi** means a tribe of the **tangata whenua**.

**Kaitiakitanga** means the duty of customary trusteeship, stewardship, guardianship, and protection of land, resources, or **taonga**.

**Maintenance** means regular and on-going protective care of a **place** to prevent deterioration and to retain its **cultural heritage value**.

**Matauranga** means traditional or cultural knowledge of the **tangata whenua**.

**Non-intervention** means to choose not to undertake any activity that causes disturbance of or alteration to a **place** or its **fabric**.

**Place** means any land having **cultural heritage value** in New Zealand, including areas; **cultural landscapes**; buildings, **structures**, and monuments; groups of buildings, **structures**, or monuments; gardens and plantings; archaeological sites and features; traditional sites; sacred **places**; townscapes and streetscapes; and settlements. **Place** may also include land covered by water, and any body of water. **Place** includes the **setting** of any such **place**.

**Preservation** means to maintain a **place** with as little change as possible.

**Reassembly** means to put existing but disarticulated parts of a **structure** back together.

**Reconstruction** means to build again as closely as possible to a documented earlier form, using new materials.

**Recording** means the process of capturing information and creating an archival record of the **fabric** and **setting** of a **place**, including its configuration, condition, **use**, and change over time.

**Reinstatement** means to put material components of a **place**, including the products of **reassembly**, back in position.

**Repair** means to make good decayed or damaged **fabric** using identical, closely similar, or otherwise appropriate material.

**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**.

**Setting** means the area around and/or adjacent to a **place** of **cultural heritage value** that is integral to its function, meaning, and relationships. **Setting** includes the **structures**, outbuildings, features, gardens, curtilage, airspace, and accessways forming the spatial context of the **place** or used in association with the **place**. **Setting** also includes **cultural landscapes**, townscapes, and streetscapes; perspectives, views, and viewshafts to and from a **place**; and relationships with other **places** which contribute to the **cultural heritage value** of the **place**. **Setting** may extend beyond the area defined by legal title, and may include a buffer zone necessary for the long-term protection of the **cultural heritage value** of the **place**.

**Stabilisation** means the arrest or slowing of the processes of decay.

**Structure** means any building, standing remains, equipment, device, or other facility made by people and which is fixed to the land.

**Tangata whenua** means generally the original indigenous inhabitants of the land; and means specifically the people exercising **kaitiakitanga** over particular land, resources, or **taonga**.

**Tangible value** means the physically observable **cultural heritage value** of a **place**, including archaeological, architectural, landscape, monumental, scientific, or technological values.

**Taonga** means anything highly prized for its cultural, economic, historical, spiritual, or traditional value, including land and natural and cultural resources.

**Tino rangatiratanga** means the exercise of full chieftainship, authority, and responsibility.

**Use** means the functions of a **place**, and the activities and practices that may occur at the **place**. The functions, activities, and practices may in themselves be of **cultural heritage value**.

**Whanau** means an extended family which is part of a **hapu** or **iwi**.

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# Appendix 2

## ICOMOS International Wood Committee Principles for the conservation of wooden built heritage

Adopted by ICOMOS at the 19<sup>th</sup> General Assembly in Delhi, India, December 2017.

### PREAMBLE

These Principles have been written with the objective of updating the “Principles for the Preservation of Historic Timber Structures” adopted by ICOMOS at the 12th General Assembly in Mexico, October 1999. The updating process began in Guadalajara, Mexico (2012), Himeji, Japan (2013) and continued in Falun, Sweden (2016).

This document seeks to apply the general principles of the Venice Charter (1964), the Declaration of Amsterdam (1975), the Burra Charter (1979), the Nara Document on Authenticity (1994) and related UNESCO and ICOMOS doctrines concerning the protection and conservation of the wooden built heritage.

The purpose of this document is to define the basic principles and practices applicable in the widest variety of cases internationally for the protection and conservation of the wooden built heritage with respect to its cultural significance.

The words “wooden built heritage” refer here to all types of wooden buildings and other wooden structures that have cultural significance or are parts of historic places, and includes temporary, movable and evolving structures.

The word “values” in this document refers to aesthetic, anthropological, archaeological, cultural, historical, scientific and technological heritage values. These Principles apply to wooden architecture and structures with historic value. Not all buildings are made entirely of wood and due regard should be paid to the interaction of wood with other materials in the construction.

The Principles:

- recognize and respect the importance of the wooden built heritage, its structural systems and details from all periods as part of the cultural heritage of the world;
- take into account and respect the great diversity of the wooden built heritage, and any associated intangible heritage;
- recognize that wooden heritage provides evidence of the skills of craftworkers and builders and their traditional, cultural and ancestral knowledge;
- understand the continuous evolution of cultural values over time and the need to periodically review how they are identified and how authenticity is determined in order to accommodate changing perceptions and attitudes;
- respect different local traditions, building practices and conservation approaches, taking into account the great variety of methodologies and techniques that could be used in conservation;
- take into account and respect the various historically used species and qualities of wood;
- recognize that wood constructions provide a valuable record of chronological data concerning the whole building or structure;
  
- take into account the excellent behaviour of wood structures in withstanding seismic forces;
- recognize the vulnerability of structures made wholly or partially of wood in varying environmental and climatic conditions, caused by (among other things) temperature and



- humidity fluctuations, light, fungal and insect attacks, wear and tear, fire, earthquakes or other natural disasters, and destructive actions by humans;
- recognize the increasing loss of historic wooden structures due to vulnerability, misuse, loss of skills and knowledge of traditional design and construction technology, and the lack of understanding of the spiritual and historic needs of living communities;
  - recognize the relevance of community participation in protection of the wooden heritage, its relation with social and environmental transformations, and its role in sustainable development.

## INSPECTION, SURVEY AND RESEARCH

1. The condition of the structure and its components, including previous works, should be carefully recorded before considering any action.
2. A thorough and accurate diagnosis should precede any intervention. This should be accompanied by an understanding and analysis of the construction and structural system, of its condition and the causes of any decay, damage or structural failure as well as mistakes in conception, sizing or assembly. The diagnosis must be based on documentary evidence, physical inspection and analysis and, if necessary, measurements of physical conditions using non-destructive testing (NDT), and if necessary on laboratory testing. This does not preclude carrying out minor interventions and emergency measures where these are necessary.
3. This inspection may not be sufficient to assess the condition of the structure adequately where it is concealed by other elements of the fabric. Where the significance of the covering allows, consideration may be given to its local temporary removal to facilitate the investigation, but only after full recording has been carried out.
4. “Invisible” (hidden) marks on old wooden parts must also be recorded. “Invisible” marks refers to features such as scribe marks, level and other marks used by carpenters in setting out the work (or in subsequent works or repairs) and which were not intended to be visible features of the structure.

## ANALYSIS AND EVALUATION

5. The primary aim of conservation is to maintain the authenticity of the historic fabric. This includes its configuration, materials, assembly, integrity, architectural and cultural heritage values, respecting changes through history. To do so one should retain as far as possible all its character-defining features.

Character-defining features may comprise one or more of the following:

- a the overall structural system;
- b non-structural elements such as facades, partitions, stairs;
- c surface features;
- d decorative treatment of the carpentry;
- e traditions and techniques;
- f the materials of construction, including their quality (or grade) and particular characteristics.

6. The value of these character-defining features must be determined in order to formulate any intervention plan.

## INTERVENTIONS

7. The first stage in the process of intervention should be to devise a general strategy for the conservation of the building. This needs to be discussed and agreed by all parties involved.

8. The intervention strategy must take into account the prevailing cultural values.

9. The original function of a structure should be maintained or restored except in cases when the intervention would be too extensive and prejudicial to the authenticity of the structure.

10. Interventions may take the form of:

- a simple repairs using either traditional carpentry techniques or compatible modern fasteners;
- b the strengthening of the structure using traditional or compatible materials and techniques;
- c the introduction of a supplementary structure that will relieve the present structure of load.

The choice of which intervention to use should be determined by selecting that which best protects the structure's cultural significance.

11. Interventions should preferably:

- a be the minimum necessary to ensure the physical and structural stability and the long-term survival of the structure or site as well as its cultural significance;
- b follow traditional practices;
- c be reversible, if technically possible;
- d not prejudice or impede future conservation work should this become necessary;
- e not hinder the possibility of later access to evidence exposed and incorporated in the construction;
- f take environmental conditions into account.

12. Interventions should follow the criteria of the minimal intervention capable of ensuring the survival of the construction, saving as much as possible of its authenticity and integrity, and allowing it to continue to perform its function safely. However, that does not preclude the possible partial or even total dismantling of the structure if:

- a repairs carried out in situ and on original elements would require an unacceptable degree of intervention;
- b the distortion of the structure is such that it is not possible to restore its proper structural behaviour;



c inappropriate additional work would be required to maintain it in its deformed state.

Decisions regarding the appropriateness of any dismantling should be considered within each cultural context, and should be aimed at best protecting the authenticity of the building.

In addition, decisions should always consider and evaluate the potential for irreversible damage to the wood, as well as to wood joints and connections (such as nails) during the dismantling intervention.

13. As much as possible of the existing members should be retained. Where replacement of a member or part of a member is necessary it should respect the character and significance of the structure. In cultures where the tradition exists, aged building parts from other structures might be used in the intervention.

14. Any replacement timber should preferably:

- a be of the same species as the original;
- b match the original in moisture content;
- c have similar characteristics of grain where it will be visible;
- d be worked using similar craft methods and tools as the original.

15. No attempt should be made to artificially age replacement timber. The new components should not aesthetically undermine the whole. Colouring the replaced members to match the current colour of the original may be permitted in specific cases when not doing so would unacceptably impair the aesthetic understanding and cultural significance of the structure.

16. New members or parts of members may be discreetly marked, so that they can be identified at a later date.

17. Consideration of specific values may be required to evaluate the cultural significance of some wooden built heritage, such as temporary and evolving buildings.

18. In the case of interventions, the historic structure should be considered as a whole. All materials, including structural members, in-fill panels, weather-boarding, roofs, floors, doors and windows, etc, should be given equal attention. In principle, as much as possible of the existing material, as well as earlier repair works, should be retained if they do not prejudice the stability of the structure. Conservation should also include surface finishes such as plaster, paint, coating, wall-paper, etc. The original materials, techniques and textures should be respected. If it is considered strictly necessary to renew or replace deteriorated surface finishes, the use of compatible materials and techniques is desirable.

19. When considering structural members it should be noted that:

- a if a structure has a satisfactory performance, and if the use, the actual conditions and loading regime are unchanged, the structure can be made adequately strong by simply repairing/stabilizing recent strength-reducing damage and failure;
- b if recent alterations have been made, or any proposed change of use would impose a more onerous loading, the potential load-bearing strength should be estimated by structural analysis before considering the introduction of any further reinforcement.

20. On no account should interventions be carried out simply to enable the structure to meet the requirements of modern building codes.

21. All interventions must be justified based upon sound structural principles and usage.

22. No attempt should be made to “correct” deflections that have occurred over time, and which have no structural significance, and present no difficulties of use, simply to address present-day aesthetic preferences.

### PRESENT-DAY MATERIALS AND TECHNOLOGIES

23. Present-day materials and technologies should be chosen and used with the greatest caution and only in cases where the durability and structural behaviour of the materials and construction techniques have been satisfactorily proven over a sufficiently long period of time.

24. Utilities should be installed with respect for the tangible and intangible significance of the structure or site.

25. Installations should be designed so as not to cause changes to significant environmental conditions, such as temperature and humidity.

26. The use of chemical preservatives should be carefully controlled and monitored and should be used only where there is an assured benefit, where public and environmental safety will not be affected and where there is the expectation of significant long-term improvement .

### RECORDING AND DOCUMENTATION

27. A record should be made of all materials used in interventions and treatments, in accordance with Article 16 of the Venice Charter and the ICOMOS Principles for the Recording of Monuments, Groups of Buildings and Sites. All relevant documentation, including characteristic samples of redundant materials or members removed from the structure, and information about relevant traditional skills and technologies, should be collected, catalogued, securely stored and made accessible as appropriate. The documentation should also include the specific reasons given for the choice of materials and methodologies in the conservation work.

28. All the above documentation must be retained both for future maintenance of the building and as an historical record.

### MONITORING AND MAINTENANCE

29. A coherent strategy of regular monitoring and day-to-day maintenance must be established in order to delay the need for larger interventions and ensure the continuing protection of wooden built heritage and its cultural significance.

30. Monitoring should be carried out both during and after any intervention to ascertain the effectiveness of the methods used and to ensure the long-term performance of the timber and any other materials used.

31. Records of any maintenance and monitoring should be kept as part of the documented history of the structure.

### HISTORIC FOREST RESERVES



32. Because wooden structures may be in a vulnerable state, but still part of a living heritage and contributing to society, the availability of suitable timbers is essential for their conservation. Therefore the crucial role that forest reserves play in the self-sustaining cycles of maintenance and repair of these wooden structures should be recognized.

33. Institutions responsible for the conservation of monuments and sites should encourage the protection of original woodland reserves and establish stores of seasoned timber appropriate for the conservation and repair of the wooden built heritage. This policy should foresee the need for large properly seasoned wooden elements in future repairs. However, such policies should not encourage the extensive substitution of authentic elements of historic structures, but rather constitute a reserve for repairs and minor replacements.

## EDUCATION AND TRAINING

34. It is essential to record, preserve and recover the traditional knowledge and skills used in constructing historic wooden architecture.

35. Educational programmes are an essential part of raising awareness of wooden heritage by encouraging recognition and understanding of values and cultural significance. These programmes are the foundation of a sustainable conservation and development policy. A comprehensive and sustainable strategy must involve local, regional, national and international levels and should include all relevant officials, professions, trades, the community and other interested parties.

36. Research programmes (particularly at regional level) to identify the distinctive characteristics, and social and anthropological aspects of the wooden built heritage, buildings and sites, are to be encouraged.

## GLOSSARY OF TERMS

Construction (noun): the manner in which materials are ordered, assembled, and united into a whole<sup>1</sup>; the act of constructing; the thing built. (See also "Structure" below).

Cultural significance: the aesthetic, historical, archaeological, anthropological, scientific, technological, social, spiritual or other intangible heritage values of a structure or site for past, present or future generations.

Evolving buildings: those that retain an active social role in present-day society closely associated with a traditional way of life, and in which the evolutionary process is still in progress. At the same time such structures exhibit significant material evidence of their evolution over time.

Fabric: all the physical material of the structure or site including components, fixtures, contents and objects. Intangible heritage: the traditional processes associated with the creation and use of the wooden built heritage.

Reinforcement: actions carried out to increase the structural efficiency of an element, an ensemble of elements, or a structure.

Repair: every action aimed at recovering the structural efficiency, aesthetic integrity and/or completion of them, of a part or the whole of a wooden built heritage. This involves a painstaking intervention in the historic fabric, aiming at replacing only decayed parts and otherwise leaving the structure and the materials intact.

Structure (noun): a stable assembly of elements designed and constructed to function as a whole in supporting and transmitting applied loads safely to the ground<sup>2</sup>.

Temporary structures: those which are built, used and disassembled periodically as part of a culture's or nation's ceremonies or other activities and embody traditions, craftsmanship and traditional knowledge.

<sup>1</sup>Ching, Francis D K (1995) A Visual Dictionary of Architecture. New York: John Wiley & Sons. <sup>2</sup>Ibid.

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*Draft*





## Appendix 3

### Wharves listed on the HNZPT list

Wharf name	Location	Date of construction	Category	List Number
Big Omaha Wharf	Big Omaha Wharf Road, Whangateau	1924	2	7409
Burke Street Wharf	Waiotahi Creek Rd, Thames	1868	2	4666
Days Bay	Days Bay, Lower Hutt	1895	2	3574
Eastbourne Ferry Terminal Building (Former) and Ferry Wharf	Waterloo Quay; Kumototo Laneway, Wellington	1912	2	7807
Hokianga Sawmill Company Wharf (Former)	Kohukohu Road, Kohukohu	1878	2	3947
Motueka Wharf	Motueka Quay, Motueka	1887	2	2985
Ōamaru Harbour Breakwater and Macandrew Wharf	Waterfront Road, Oamaru	1871	1	4882
Old Stone Wharf	Ferry Landing Whitianga	1871	1	4675
Onekaka Wharf and Remnant of Tramline	Onekaka	1924	2	5126
Port of Invercargill Jetty	21 Stead Street, Invercargill	1861	2	3261
Queens Wharf	Quay Street, Auckland	1907	1	9500
Rona Bay Wharf	Rimu Street, Eastbourne	1906	2	7474
Shortland Wharf	Jellicoe Crescent, Thames	1867	2	4672
Stone Jetty, Boulder Wharf	Mount Maunaganui	1888	2	4569

Tokomaru Wharf	Waima Road, Waima, Tokomaru Bay	1911	2	3565
Tolaga Bay Wharf	Wharf Road, Tolaga Bay	1926-29	1	3516
Wharf	Wharf Road, Hicks Bay	Ca 1910-1920	2	3483

### Wharves listed in Appendix 4 of the Wellington Regional Coastal Plan

Wharf name	Location	Type
Seatoun Wharf	Seatoun	Wharf
Karaka Bay Wharf	Karaka Bay	Wharf
Boating Jetty	Evans Bay	Jetty
Days Bay Wharf	Days Bay	Wharf
Petone Wharf	Petone Foreshore	Wharf
Wharves and Wharf Edges shown on Planning Map 4D in Appendix 7	Tug Wharf to Overseas Passenger Terminal	Wharves

### Wharves listed in PNRP Schedule E2: Historic heritage wharves and boatsheds

Name	Location	Significant values
Miramar Wharf	Evans Bay	The Miramar Wharf is significant for its association with early ferry services to Miramar and with the Miramar Gasworks, which operated for much of the early It is also associated with the development of the suburb, and with other industry and commerce. While the structure is technically interesting, and is well known because of its location, it has modest visual qualities.
Railway Wharf	Lambton Harbour	Railway Wharf is a structure of some historic significance, as the second deep-water wharf built in Wellington, and with a long and varied history as trading ship berthage, coal wharf and later inter-island ferry terminal. It is an important element in the group of working wharves in the inner harbour.
Waterloo Quay Wharf	Lambton Harbour	Waterloo Quay Wharf is a structure of some antiquity and historic significance, based mainly on its 19th and early 20th century uses
Ferry Wharf	Lambton Harbour	Together with the associated Eastbourne Ferry Terminal building, Ferry Wharf has strong historic values for the part it has played in the



Name	Location	Significant values
		development and enjoyment of one of Wellington's most popular beaches and residential areas at Eastbourne.
Queens Wharf	Lambton Harbour	Queens Wharf is one of the oldest structures in Wellington, and is a place of high heritage value both locally and in a national context. It is particularly important for its long history at the centre of waterfront development and activity, and by extension, the growth and development of the city. It has technological significance for its early use of heavy timber in its construction. The area is a prominent landmark on the waterfront, surrounded by important and interesting old buildings that relate directly to the wharf and its use.
Taranaki Street Wharf	Lambton Harbour	Taranaki Street Wharf is a structure of some significance to Wellington, having been used continuously for wharfage since its construction in 1906. Although altered and incorporated into larger landscaping changes in more recent times, it retains much of its original fabric, various parts of which are on public display. It is today one of the most visited of Wellington's wharves due to its central position in the most popular area of the waterfront.
Patent Slip Wharf	Evans Bay	The Evans Bay Patent Slip was a significant political achievement for the time, and also a major engineering achievement, nationally and internationally. The seven cogwheel winch, rated for a pull of 2,000 tons, was the largest Kennards ever produced; the underwater construction was the first such large scale work in New Zealand. The slip helped build Wellington's maritime economy over the long period of its operation
Seatoun Wharf	Seatoun	The Seatoun Wharf has strong historical value for its origins and the early role it played in the commuter ferry service to the city. A prominent feature in a picturesque setting, the wharf has high townscape value. Social values are also very high.
Karaka Bay Wharf	Karaka Bay	The Karaka Bay Wharf has strong historical value for its origins and the early role it played in the commuter ferry service to the city. Today its townscape value is very high, its picturesque qualities on a rocky shoreline, close to houses and cliffs, being unmatched elsewhere in the harbour. Social values are also very high.
Petone Wharf	Petone	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.
Point Howard Wharf	Seaview	The Point Howard Wharf has strong historical value for its origins in construction and use in servicing the oil industry. It is important technically as an intact example of heavy timber wharf construction from the 1930s, and it has visual qualities for its form and detail.

Name	Location	Significant values
		Social values are modest.
Days Bay Wharf	Days Bay	The Days Bay wharf has strong historic values for the role it has played in the development and enjoyment of one of Wellington's most popular beaches and residential areas, and for its physical (especially technical) values. It is an authentic timber structure, dating from the late, and is the best recognised landmark of the Eastern Bays of the harbour.
Rona Bay Wharf	Rona Bay	The Rona Bay Wharf is a place of historical and cultural heritage significance. This timber wharf played a role in the early 20th century development of Eastbourne with its ferry service than ran up until the end of the 1940s. The wharf area has aesthetic appeal and continues to be used for recreational purposes by the local community.



## Appendix 4

### Detailed biographies of significant people and organisations associated with the building

#### *James Fulton*<sup>95</sup>

James Fulton was one of New Zealand's foremost civil engineers and is associated with railway design across New Zealand.

Fulton was born in Outram, Otago and trained as a cadet with the Public Works Department in Wellington from 1874. He was transferred to Napier the following year and promoted to Assistant Engineer in 1878. He went into private practice in 1880 and received commissions to, among other things, sound the Bay of Islands and survey the Kaihu railway for a public company. He became resident engineer for the construction of the Palmerston-Waikanae section of the Wellington-Manawatu Railway (1882-1889), eventually becoming Manager and Locomotive Superintendent of the Manawatu Railway (1889-1897). In 1897 he resigned and re-entered private practice.

Fulton designed the Kelburn Cable Car, the original Kelburn viaduct across Tinakori Gully, the Ballance Bridge over the Manawatu, the Otaki, Ohau, Rangitikei, Lower Shotover and other bridges. He surveyed and built the Taupo-Totara Timber Company's Putaruru to Mokai light railway of 80 kilometres, and surveyed the Tongariro Timber Company's railway. He founded the Fulton Bequest for the New Zealand Society of Civil Engineers (now the New Zealand Institution of Engineers).

Image: Portrait of James Edward Fulton (left) and Francis John Fulton in c.1870. (National Library reference: Brown, William Edmond, 1840?-1922. Brown, William Edmond 1875-1885 : Portrait of James and Francis Fulton. Ref: PA2-0319. Alexander Turnbull Library, Wellington, New Zealand.

#### *James Coutts Crawford*<sup>96</sup>,

JC Crawford was a Scotsman, former decorated naval officer, geologist, an explorer and farmer who is considered to be Wellington's first settler. On arriving in Wellington he purchased five land orders from the New Zealand Company, comprising 500 country acres and five town acres. He owned the land where the town of Kilbirnie is located and which Crawford named after a town of the same name in Ayrshire<sup>97</sup>. He settled on and farmed the Miramar Peninsula, while also carrying out geological surveys of the lower North Island, preparing maps and reports on Wellington's geology<sup>98</sup>. He was appointed Provincial Geologist in 1861, and was

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<sup>95</sup> <https://wellingtoncityheritage.org.nz/architects/james-edward-fulton>

<sup>96</sup> L. Rosier. 'Crawford, James Coutts - Crawford, James Coutts', from the Dictionary of New Zealand Biography. Te Ara - the Encyclopedia of New Zealand, updated 30-Oct-2012 URL: <http://www.TeAra.govt.nz/en/biographies/1c26/crawford-james-coutts>

<sup>97</sup> <http://www.teara.govt.nz/en/wellington-places/page-3>

<sup>98</sup> <http://www.teara.govt.nz/en/geological-exploration/page-2>

a member of the Legislative Council, a resident magistrate and sheriff of Wellington.

From the 1870s he developed the Miramar Peninsula as Wellington began to expand, including roads, selling more than two hundred acres in Kilbirnie in 1876 and putting a hundred acres on the site of what would become Seatoun on the market in 1878. When Crawford died in 1889 two of his sons Alec (A.D.) and Charles (C.J.) took over the running of his Miramar estate and looked for development opportunities including selling their entire property to the City Council and building a wharf at Miramar. The Council was unable to purchase their land so they sold it to syndicates. Not able to build the Miramar Wharf privately they turned to the Seatoun Road Board (Charles Crawford being a member) and, with authorisation from the



Figure 17 James Coutts Crawford, ATL, 1/1-013727-G

Wellington Harbour Board, the brothers provided the funds for the wharf to be built under the aegis of the Board. The brothers who had already invested in the Wellington Steam Ferry Company in 1900 then invested in its competitor the Miramar Ferry Company the following year. Together with land syndicates in the area they also put up money for constructing a tram line to Miramar and Seatoun. Charles Crawford became Mayor of Miramar Borough.

### ***J H Williams***<sup>99</sup>

J H Williams built the college building and his family has been associated with Days Bay and seafaring in and around Wellington for over a century. Williams Park, next to Wellesley College, was named after Captain Williams, J H Williams's father, and the Missions to Seamen Building in Wellington was constructed as a memorial to him.

Captain Williams was a coal trader and founded the Black Diamond Line in the 1870's. Following his emigration to New Zealand in 1861 he purchased an interest in the barque Anne Melhuish that traded between Newcastle in New South Wales and Auckland. He soon purchased other ships, which formed the Black Diamond Line and the routes expanded to include the West Coast. His interests in coal then became land based when he purchased the Koranui coalmine and associated railway line at Greymouth<sup>100</sup>. In 1886 he sold the coal interests to the Westport Coal Company and the shipping line to the Union Steamship Company<sup>101</sup>.

In 1884 he began the Wellington Ferry Services, having owned a ship repairing yard at Te Aro where the first Eastbourne ferries, the Moa and the Mana were constructed. Captain Williams was a Wellington Harbour Board member and a Justice of the Peace.

His son J H Williams took over running the services after his father's death in 1890.

<sup>99</sup> [https://www.wikiwand.com/en/Ferries\\_in\\_Wellington](https://www.wikiwand.com/en/Ferries_in_Wellington)

<sup>100</sup> *ibid*

<sup>101</sup> *ibid*



John launched the Eastbourne Ferry service after having bought Days Bay and constructed the wharf and pavilion there by 1894. This service was popular and up to 8000 people per Sunday used the service for picnicking at Days Bay.

James Herbert Williams (c. 1858–1915), the son of Captain W. R. Williams, was for many years connected with his father's business. The younger Williams subsequently acquired the local tug and ferry service which he conducted for a number of years. It eventually developed into the Wellington Steam Ferry Company Limited which developed Day's Bay Estate into a popular resort. Williams died at his residence, 22 Hobson Street, Thorndon, on 19 January 1915.[25] J. H. Williams held the piloting and tugboat contract at Wellington between 1894 and 1899 with the tugs Duco and Mana.[26] In 1900 he sold his business including the resort of Days Bay to his Wellington Steam Ferry Company.[27]

### ***Neil McLean***

John McLean and Sons was one of New Zealand's biggest and most successful contracting firms with an established record of wharf-building for the Wellington Harbour Board.<sup>102</sup> Neil McLean, son of John, took over the firm with his brother in 1886 building railways, bridges and tunnels around the country. Neil McLean moved to Wellington and in 1895-6 bored the tunnel through Mount Albert to Kilbirnie that was the key element of Wellington's long-awaited sewerage system. At the same time he was much engaged in developing Wellington's wharves including the extension of Queen's Wharf in 1894-5, Day's Bay Wharf in 1895, the ferry wharf in 1896-7 (lengthened in 1905), Glasgow Wharf in 1899-1901, a rebuilt Railway Wharf in 1903-5 and Clyde Quay Wharf (the first ferro-concrete wharf in the country) in 1907-10. He constructed the Miramar, Karaka Bay and Seatoun wharves in 1901.



Figure 18  
Neil McLean, *Progress*, 2 September 1907

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<sup>102</sup> John McLean, *Pioneer Contractors: The Story of John McLean and Sons*, Wellington, John McLean, 2002, pp. 45-7. Encyclopedia of NZ, 1966, <https://teara.govt.nz/en/biographies/3m27/mclean-neil/print>



### ***Herbert P. Rawson***

Herbert Rawson was one of New Zealand's foremost dentists and first President of the NZ Dental Association.<sup>103</sup> In the 1890s he bought up sections in Seatoun and was elected to the Seatoun Road Board that developed the area. He had a large country residence in Seatoun and ran a dairy farm there while practising dentistry in central Wellington. Investing in the Wellington Steam Ferry Company he became its chairman of directors and was keen for Seatoun to have a wharf and ferry service. He and others on the Board successfully lobbied for the wharf that was funded by a loan from central government and operated by the Board. For some years the Wellington Steam Ferry Company and its competitor Miramar Ferry Company ran ferry services from the wharf. The two companies merged in 1906 as Wellington Harbour Ferries but in 1913 the ferry service halted as competition from trams proved too much. Rawson remained central to Seatoun's development in selling off his dairy farm and other land for residential purposes.

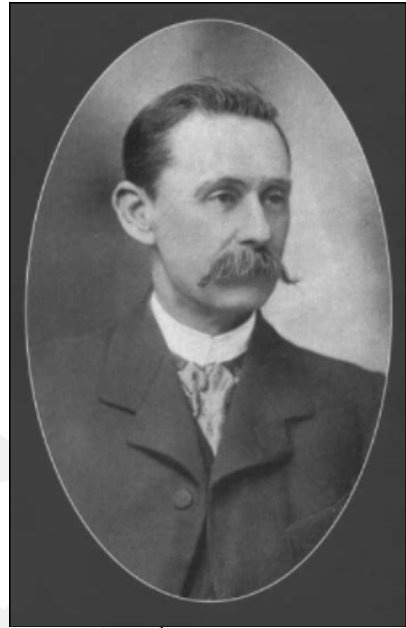


Figure 19 Herbert Rawson, <https://www.ccdhb.org.nz/about-us/history/wellington-hospital-smo-archive/specialty-services/dental-services/senior-dental-appointments/rawson-h-p/>

### ***Constantine E. (Con) Zohrab and his son E.F.G. (Fort) Zohrab***

Merchant Con Zohrab purchased a number of sections in Seatoun and was on the Seatoun Road Board from its formation in 1889.<sup>104</sup> The Board chaired by Zohrab developed roading to Seatoun and began exploring a ferry wharf in 1897. Zohrab died that year; his son Fort who lived in Seatoun picked up where his father had left off; he was elected to the Board and was involved in negotiations for a ferry service and wharf. Zohrab and others formed the rival Miramar Ferry Company that competed with Rawson's Wellington Steam Ferry Company once the wharf was built in 1901. When the two companies merged as Wellington Harbour Ferries in 1906 Zohrab became its manager. Zohrab continued to manage the company in harbour work after the ferry service terminated in 1913. He also sold off land for residential development in Seatoun.



Figure 20 Fort Zohrab, *EP*, 4 August 1933

<sup>103</sup> *EP*, 23 September 1926, obit. Sources as generally used in the history of Seatoun Wharf. Herbert Pearson Rawson, 1853-1926. <https://www.ccdhb.org.nz/about-us/history/wellington-hospital-smo-archive/specialty-services/dental-services/senior-dental-appointments/rawson-h-p/>

<sup>104</sup> Sources as generally used in the history of Seatoun Wharf.





### *The Wellington Harbour Board*<sup>105</sup>

The choice of Wellington as the first NZ Company settlement site was obviously influenced by the qualities of the port. For the first settlers the prime concern was the safe and swift landing of the goods they brought with them and those which followed. For all this activity to be safely carried out, there were specific requirements, including pilots, navigation lights and landing facilities. With conflict between the Company and the Governor, and later between the city and the central government, progress was uneven. In the beginning, goods and passengers were ferried to the beach, and later to the primitive jetties which the early merchants and entrepreneurs provided. The earliest wharf facilities were developed by a variety of individuals, largely to assist their own commercial activities.

Among the first recorded wharves in Wellington were J.H. Wallace's, erected on Thorndon beach, Rhode's Wharf, built by William Barnard Rhodes and John Plimmer's use of the beached hull of the *Inconstant*. Thus the earliest wharves bore names such as Plimmer's, Bethune & Hunter's, or Turnbull's. The first publicly-erected and owned wharf was Queen's Wharf, first used in 1862. The following year the Queens' Bond was built, the forerunner to the later Head Office and Bond Store.

Under the 1852 NZ Constitution Act, provinces controlled harbour activities. With the abolition of the provinces in 1876, there followed a period of indecision and inefficiency. As early as 1877 the Wellington Chamber of Commerce had petitioned central government to establish harbour boards at several ports, including Wellington. Fear of a proliferation of local authorities saw this idea rejected but in 1878 the Harbours Act was passed, under which many of New Zealand's harbour boards were subsequently established. Wellington had its own act, the Wellington Harbour Board Act of 1879, which created a body of appointees representing provincial and commercial interests. It first met on 20 February, 1880.

One of the prime considerations for the new board was the provision of wharves. Growth in trade through the port was growing steadily. In 1883 new Chief Engineer William Ferguson drew up a plan of wharf development which was largely followed for the next 50 years. Up to 1909 all wharves were built in timber and thereafter in concrete.

As well as the matter of wharves, the provision of which had already begun, the Board began a building programme. For the first ten years the Board built warehouses and stores, predominantly in timber, for the storage, organisation and distribution of the goods for which it was responsible. Within decades a range of timber buildings occupied all the wharves and jetties from Taranaki Street to Pipitea Wharf. In 1890 thoughts turned to the erection of a head office, a proposal first officially mooted in 1889. Recently reclaimed land between Jervois Quay and Queen's Wharf was chosen for the site. Designs were prepared by the well-known Wellington architect F. de J. Clere and a contract for the building's erection let to the firm of Carmichael and Son. On July 9 1891 the foundation stone was laid by the Governor-General the Count of Onslow. In attendance were Richard Seddon, Minister of Public Works and Joseph Ward, Postmaster General. Within two years a combined head office and bond store was erected alongside the entrance to Queen's Wharf. Those on the newer wharves along Aotea Quay were largely built in

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<sup>105</sup> I Bowman, Maritime Museum Conservation Plan, 1994

concrete.

As well as berthing facilities, trading operations needed more space than was available along the narrow beach front. Earthquakes helped by raising the coastline between Wellington and the Hutt and by draining the Basin Reserve, but man-made land began to appear in 1852. Reclamation continued for almost all the life of the Harbour Board; it has provided wharves, urban motorways, railways marshalling yards, an airport, a large part of the central business district, and in the future perhaps even a sports stadium.

Wharf developments which followed the construction of Queen's wharf were Railway Wharf, constructed before the establishment of the Harbour Board, Waterloo, Ferry, Glasgow, Taranaki, King's, Clyde Quay, and Ferry wharves. Smaller wharves were constructed for the harbour ferries at Days Bay, Rona Bay, Karaka Bay, Seatoun, Miramar and Petone. The later, extensive reclamations northward towards Kaiwharawhara provided Aotea Quay, the inter-island terminal, and originally the base for the floating dock. Further reclamation eliminated many of the outer wharves, replacing them with the container terminal.

Recreation facilities associated with the Wellington Harbour Board include the small boat facilities at Clyde Quay, Evans Bay and Lowry Bay, the rowing facilities associated with the Wellington Rowing and Star Boating Clubs and the Petone Rowing Club, as well as less formal activities associated with swimming and life-saving. As well as providing areas in Evans Bay and Lyall Bay for airport reclamation, the Harbour Board allowed the use of Evans Bay as a base for flying boats for 5 years from 1949.

Other activities have risen and declined. The development of road and rail travel led to the disappearance of ferries from the harbour, just as the development of long-distance air travel spelled the end of the inter-colonial passenger services to Australia. Conversely, the use of roll-on, or drive-on ferries increased the amount of travel across Cook Strait and caused the construction of specialised facilities, which are now among the harbour's busiest. Also now in almost total decline is coastal shipping, which once saw small vessels trade between Wellington and a number of small ports in both islands. Road and rail, combined with the inter-island ferry service, have been responsible for this decline, and has also led indirectly to the freeing-up, for other purposes, of a great deal of wharf and shed space.

Without doubt, the most significant development in the port's operations in the latter years of the Harbour Board was the move to containerisation of bulk cargoes, in conjunction with the building of a new generation of very large, specialised container ships. The sharply reduced handling time was matched by a demand for different sorts of space and handling equipment and a corresponding reduction in demand for unskilled and casual labour, for so long a distinctive element in waterfront employment.

Key figures in the life and development of the Wellington Harbour Board fall generally into two categories. Firstly, the Board members, particularly the Chairmen. Until the later politicisation of membership, the interests of the Board were tied very closely to the demands of commerce. In particular, chairmen such as the first, W.H. Levin, associated with one of the first substantial merchant houses of the city, T.K. McDonald, auctioneer, M.P. and founder of the Gear Meat Company, Robert Fletcher, chairman during the 1913 Maritime Strike, Sir Charles Norwood, founder



of Dominion Motors, and Rolland O'Regan were clearly concerned for the efficient operation of the port. Their counterparts in the administration included William Ferguson, secretary, engineer and treasurer, James Marchbanks, Chief Engineer and later General Manager and Harold Meachen, also a long-serving general manager.

The final act in this story began with the recommendation by Sir Brian Elwood that, as part of a range of changes to local government institutions and practices, Harbour Boards should be abolished and their functions dispersed, and this took effect from 31 October, 1989. The commercial operations were taken over by Port of Wellington Ltd, whilst a separate Lambton Harbour Development Company took over the task of dealing with land and buildings associated with the Harbour Board, but no longer required for the operations of the Port. Recreation activities became the responsibility of the Wellington and Lower Hutt City Councils respectively, as did any property not owned by the Port of Wellington.

The redistribution of land and improvements of the former Wellington Harbour Board has seen the focus of its use shift to a broader commercial, residential and recreational mix. In the 1970s and 80s many Harbour Board buildings, without a role to play after the huge changes in port usage, were demolished. Despite the losses many Board buildings remain, among them the former Head Office and Bond Store, and most now have greatly different uses from that with which they began their lives.

Therefore, for a period of over 100 years Wellington's Port was the most important transport node in the lower North Island and had a significant role in the economic development of Wellington and the wider area, which it served. The remaining wharves and buildings constructed on it (and those many stores already demolished) are built testimony to the history of Port development while also creating a unique environment in the Wellington area. The buildings originally lined the Quays forming a continuous and substantial built edge to the sea. Wharf sheds also occupied much of the wharves, clearly delineating the wharves' location. While many of the wharf buildings have gone, the remaining groupings of buildings, including the Odmins group and those on Queens wharf retain something of the original density of built form and street/sea edge..

# Appendix 5

## Original drawings

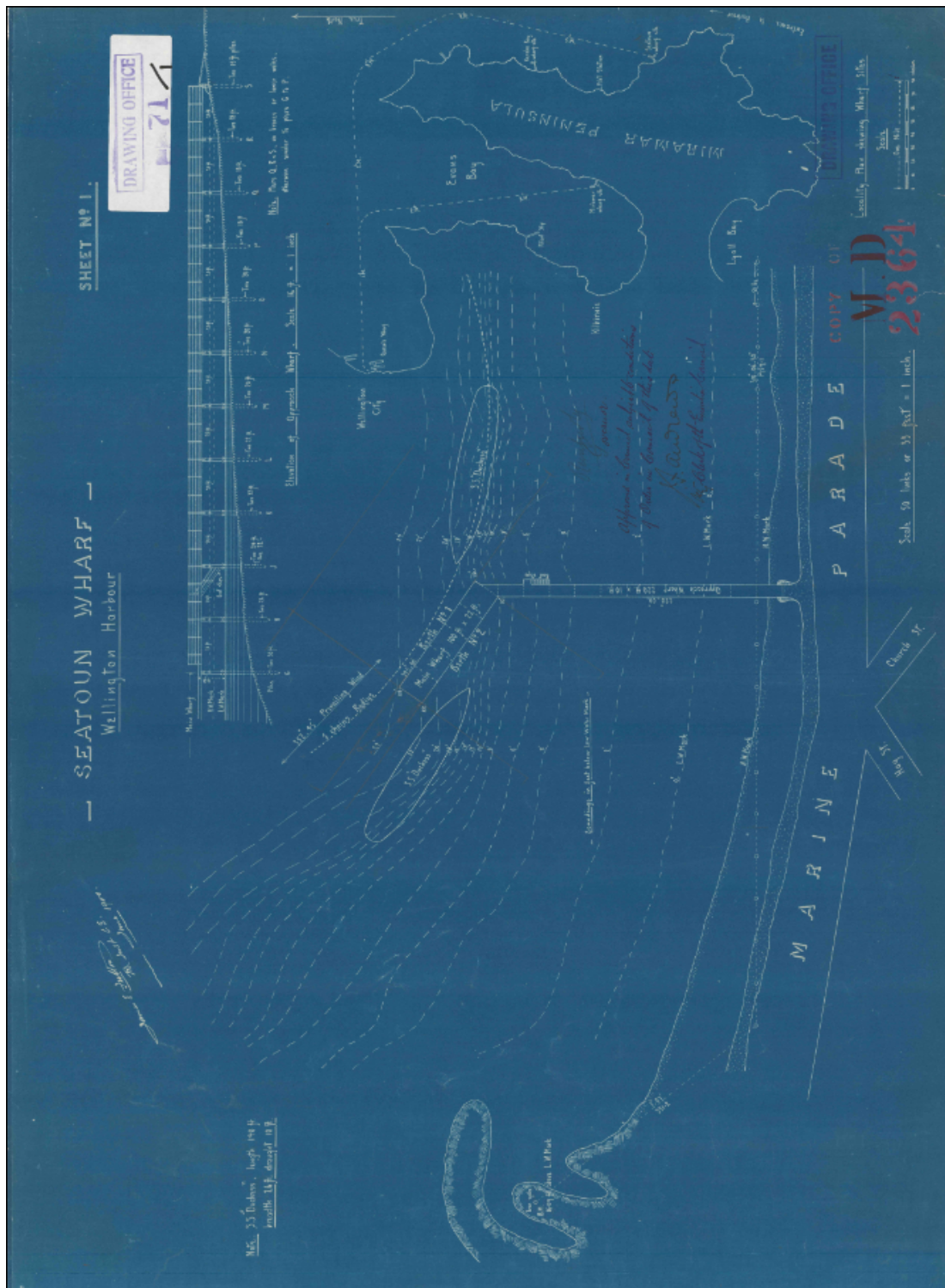


Figure 21 Plans for Seatoun wharf, WCA, AC046-71







# Appendix 6

## Timber repair specification (non structural)

The following specification relates to the conservation of non-structural timber repairs

### 11 GENERAL REQUIREMENTS

#### 11.1 THIS IS A CONSERVATION PROJECT

Do not disturb or damage sound original material.

#### 11.2 HERITAGE STATEMENT

The wharf is of historic value being listed with the Wellington City Council and the Greater Wellington Regional Council.

#### 11.3 PRINCIPLES OF CONSERVATION:

General principles of conservation should be followed when carrying out repairs. These include: reversible interventions where possible; maintaining as much of the original fabric as possible to ensure retention of authenticity of materials; maintenance of authenticity of workmanship, and design. The *ICOMOS New Zealand Charter for the Conservation of Places of Cultural Heritage Value*, 2010 will be followed. Refer also to the *ICOMOS Principles For The Conservation Of Wooden Built Heritage*, Adopted by ICOMOS at the 19th General Assembly in Delhi, India, December 2017 (see appendix 2)

#### 11.4 REPAIR/REPLACEMENT

Piecemeal repairs of deteriorated elements are required over wholesale replacement. The patina of age shall be maintained, however damage, which will impair performance or cause further damage will be repaired. Repairs should be carried out using materials which match those being repaired as closely as possible including material, species, strength, dimension, texture, and profile.

#### 11.5 PROTECT

Protect all existing original finishes, features and components throughout the whole conservation project. The contractor's proposal for protection shall be given for approval to the architect and conservator, before work can begin. Where necessary, and only on the agreement in writing of the architect and conservator, fabric can be removed and stored for reinstatement.

#### 11.6 THE CONTRACTOR

The contractor is to be aware of any historic construction marks, or any unusual features which become apparent during the works. In the event that such features, materials or artifacts are uncovered or discovered during the execution of the work, and these are determined to be or are considered likely to be historically or archaeologically significant, do not disturb the area of the discovery until the owner has had the opportunity to evaluate the found materials. The owner reserves the right to document, or have documented by a professional, the location surrounding conditions and any other circumstances that may be pertinent. The owner reserves the right to retain possession and ownership of the objects, artifacts and historically or archaeologically significant materials.



## 11.7 LARGE AREAS OF NEW WORK

Large areas of new work should have a date stamp showing the month and year of the repair, letters being approximately 10 millimetres high, located in a discrete, unobtrusive position. The architect and conservator is to approve of the positioning of each stamp.

## 11.8 SKILLS REQUIRED

All work is to be carried out by skilled work people with extensive experience in historic buildings and in the specific tasks required in this contract. The curriculum vitae of the foreman must be submitted to the architect and conservator for approval before work can commence.

## 11.34 RESTRICTIONS

Do not:

- smoke on site
- light rubbish fires on the site

## 34 CARPENTRY

### 34.1 TIMBER SELECTION GENERALLY

Species, grade and level of treatment shall be as specified by the engineer. Fixings shall also be as specified by the engineer.

### 34.10 SCOPE OF REPAIR

Refer to Beca scope of the repairs.

### 34.20 REPAIRING ROTTEN TIMBER

Where rot occurs, it should be removed and the area of rot treated with an approved preservative. Approved preservative include:

AP5 from Churton Distributors. The contact is Arthur Reid. P.O. Box 40480 Glenfield, Auckland, 0800 107555, email [churton@churton.com](mailto:churton@churton.com), fax (09) 4784370;

Copper naphenate, or Metalex, can be used but only where the repair is not visible or is to be painted. This is effective but is more toxic to humans and animals than Busan.

### 34.21 THE AREA OF ROT

The area should be cut away within 150 mm and removed from the site and burnt.

### 34.22 WATER REPELLENT

Apply an approved water-repellent coating shall be used where rot has occurred around rusting steel fixings. The coating shall be painted over to all cut ends of repair work and new timber replacing areas of rot prior to painting. An approved coating is CD 50 (modified without colour binding ability) supplied from Churton Distributors. The CD50 should be followed with Pacific Wiping Stain water soluble urethane to ensure compatibility with acrylic paints.

An alternative water repellent is:

1% paraffin wax

10% boiled linseed oil

89% mineral spirits.

#### 34.23 PRESERVATIVE

The preservative and fungicide should flood the area of general rot by three brush or coarse spray applications, according to the manufacturer's specifications. Treatment rates with organic solvent preservative should be at the rate of 1.0 litre per square metre of flooring and 2.0 square metres of framing. Refer to the attached boron treatment sheet for an alternative preservation treatment.

#### 34.24 NEW TIMBER

Ensure that the new timber to be spliced in is well seasoned and has been treated by ten minutes of immersion in preservative, or ten minutes of end grain and three flood coats. Each spray or brush flood coat must be applied before the subsequent one has dried.

#### 34.25 PIECEMEAL REPAIRS

Deteriorated elements should be repaired piecemeal rather than by wholesale replacement. This should be carried out using materials, which match those being repaired as closely as possible including dimension, texture, colour and profile.

#### 34.26 TIGHT JOINTS

Ensure that all joints are tight and firm fitting to prevent water ingress.

#### 34.27 OTHER AREAS OF ROT

The contractor is responsible for identifying and reporting other areas of rot revealed during the works. These areas are to be inspected by the conservator/architect and agreed to before replacement work proceeds.

#### 34.28 REMOVAL OF SCREWS AND NAILS

When removing timber and nails are to be removed, pull them completely through from the back, hacksaw them, off or clenched.

#### 34.30 BORER CONTROL

Apply Rentokil Borer fluid insecticide to infested interior and exterior timber according to the manufacturer's specification, prior to repainting. Cut back badly deteriorated timber as directed by architect and conservator and at least 600 mm past deterioration and remove from structure. Destroy removed timber by burning under safe, supervised, controlled conditions. Application includes for syringe application into flight holes where surfaces have been painted and brush or spray application onto existing uncoated timber or uncoated timber exposed during repairs. Where uncoated timber has been coated with borer fluid, wait for two days to dry before applying coating. Wash exposed surfaces to remove insecticide residue.

#### SPLICING AND REPAIR METHODS

##### 34.31 DOWELS, BOLTS AND CLAMPS:

These techniques are used to improve the performance of a joint, repair a single element which has broken into two or more pieces or to prevent a crack or split from developing further. Dowels can be of approved metal, glass fibre, reinforced polyester, or most suitably, timber. Dowels are inserted with a minimum amount of appropriate adhesive in holes drilled at alternate angles to achieve a dove-tail effect. Metal bolts and timber clamps are surface inlaid. Timber clamps or wedges are a





traditional method of preventing the spread of cracks.

#### 31.32 BOLTING:

Bolting is used where stronger reinforcement than dowelling or wedging is required. Bolt heads and nuts should be concealed by deeply counter sinking and covering with wooden plugs finished flush. Dowels should not be used as plugs due to the possibility of cross-grain shrinkage.

#### 31.33 SPLICING:

Where splicing is used ensure that the replacement timber is well seasoned and, if possible, be stored for several months in the place it will be used. All surfaces of a joint must be in full contact with the adjacent surface to ensure a properly functioning connection. This method of repair is suitable for column bases, beam ends and similar applications.

#### 31.34 LAMINATION:

Lamination is used where there are small areas of deterioration, for filling old pipe and duct chases and where large sizes of suitable material are not available. The deteriorated area of the member is cut back in a series of steps and several layers of wood progressively glued into the opening. Laminates of 27-75 mm thickness are preferred. The joints in laminates should be off set and the grain reversed.

#### 31.35 SPLINTING:

Splinting such as fish plates or gussets can be used to transfer the load of a deteriorated element onto sound adjacent material. Usually these plates are made of timber, plywood, metal or fibreglass and the selection of material shall be approved by the conservator/architect before installation. Splinting shall not be used where the repair is visually intrusive.

#### 31.36 PLUGS:

Plugs must be cut from a piece similar in grain to the piece being conserved. A hole the exact size of the plug, shall be drilled into the place needing repair. The plug is glued into the hole with the grain lined up with that of the piece being repaired. It is better that the plugs are irregular in shape as these will blend in better to the surrounding grain. Do not use round plugs to repair removal of locks. These are likely to fall out.

#### 31.37 REPAIRS:

Where damage occurs to timber, glue elements immediately. Waiting could result in the loss of the piece, or damage to the edges that were glued together, making a clean glue job impossible.

#### 31.38 REMOVAL OF SCREWS AND NAILS:

Always clean the heads of screws before attempting to remove the screw. Always use a screwdriver with a head the same width and thickness of the slot. Use the tip of a soldering iron to apply heat, which may help to remove the screw.

Where nails are to be removed, pull them completely through from the back, hacksaw them, off or clenched.

#### 31.39 REINSTATEMENT OF TIMBER:

When reinstating timber, do not fix mouldings and other non-structural elements to the structure so that the main element cannot move. This is often the cause of splitting and warping of the main timber.

31.41 REPAIR OF POSTS: Repairs shall be carried out using compression joints with the preferred joints the scissor scarf and simpler lap scarf with undercut butts. Some dovetail and mortise and tenon joints are also suitable. The selected repair shall be approved by the conservator/architect before proceeding. Where horizontal loads are present metal or timber fish plates or gussets shall be used. Butt joints shall not be used.

In situ repairs may be simplified by the use of false tenons, slot mortises or wedge tenons.

Lamination may also be used for the repair of posts.

Adequate propping and bracing should precede all repairs

31.42 BEAMS, JOINTS AND RAFTERS:

Repair can be with joints only where the splice is located near the support points or the loads are not excessive. Traditional joints to be used are the splayed and tabled scarf with undercut butts, lap scarf with bladed butts and scarf with dovetailed butts. A cheaper alternative is the use of lap or scarf joint supplemented with internal plates and countersunk and plugged bolts. Beams are repaired by full length fish plates, lamination, inserting tension rods over fractures or chases or by removing decayed timber and inserting new timber bedded in an approved adhesive.

## 63 PAINTING

### 63.1 QUALIFICATIONS

Carry out work using competent and experienced painters and paperhangers.

### 63.2 HEALTH AND SAFETY

Refer to the requirements of the Health and Safety in Employment Act 1992 and if elimination or isolation is not possible, then minimise the hazards in this work. Refer to BRANZ Bulletin 314 "Removing paint coatings from houses" for the required procedures and precautions when treating or removing lead based paint, burning or sanding off paint, or using solvent based paint removers.

### 63.3 PAINT

As selected and to the paint manufacturer's standards for exterior primers, undercoats, sealers, solvent-borne and water-borne paints.

### 63.4 CONTROL SAMPLES

Before commencement of work the contractor shall complete a 500 mm x 500 mm sample of painting showing correct preparation including feathering of edges for approval. The completed test panels must be submitted for approval by the conservator, architect, and are to be used as the standard reference for acceptance or rejection of all work of this type.

### 63.5 INSPECT SURFACES

Inspect surfaces being painted and report to the owner any that will not, after the preparatory work laid down by the paint manufacturer, allow work of the required



standard. Confirm that all areas have adequate lighting and are sufficiently free of other construction activities to enable painting work to proceed. Check for and remove all redundant fittings and fixtures, and make good to fabric.

#### 63.6 DAMAGED PAINTED SURFACES

Where existing paintwork is crazed or internal peeling, wrinkling or solvent blistering has occurred, remove paint to a good even surface and feather sharp edges.

#### 63.7 FIXINGS

Fixings shall be sufficiently punched or countersunk to hold the stopping, unless originally exposed.

#### 63.9 RUST

Clean down all areas showing rust spots, and apply red oxide/zinc chromate primer.

#### 63.11 MOULD, LICHEN OR MOSS

Areas affected by mould, lichen or moss shall be treated with a fungicidal solution.

#### 63.12 PROTECT

Cover up adjoining surfaces and areas liable to damage or over-painting.

#### 63.14 PRIMING AND SEALING

Ensure that priming and sealing work needed before or during construction is carried out when required.

#### 63.9 ENVIRONMENTAL CONDITIONS

Carry out work within acceptable temperature and humidity limits, with timber dry, all to the requirements of the paint manufacturer.

#### 63.10 SELECTIONS

Confirm all selections, colours and finishes for both paint and wallpaper with the owner.

#### 63.11 SHARP EDGES, CRACKS AND HOLES

Repair as required by the paint manufacturer.

#### 63.12 PREPARE SURFACES

Prepare surfaces as required by the paint manufacturer. Make good all damage and defects.

#### 63.13 STRIP BACK PAINT

Where required by paint manufacturer's guarantee or where the paint is badly deteriorated, strip back paint to a good substrate. Removal of paint from timber can be by scraper, orbital or belt sander, and/or chemical stripper. Where abrasive paint removal is used extreme care must be exercised so that no damage shall be caused to the substrate. Hand sanding of limited areas should be employed. Rotary disc sanding shall be prohibited.

#### 63.14 NAKED FLAME AND HOT AIR GUN

Naked flame or hot air gun means of stripping are prohibited.

#### 63.15 CHEMICAL STRIPPING

Stripping, where considered necessary and approval has been given, shall be carried out by chemical means. Water blasting is not acceptable. Stripping shall be with a methylene chloride based stripper such as Texol by Fraser Brown and Stratmore, or similar. Chemical means of stripping shall be applied in accordance with the manufacturer's instructions. Apply neutralising agents as necessary and thoroughly clean down immediately after paint removal. All recommended precautions for application shall be taken.

#### 63.16 SOUND SUBSTRATE

Where the substrate is sound remove any loose flaking paint by careful hand scraping and to feather edges of firmly adhering layers down to bare areas so that shadow lines are avoided, leaving any original machining marks. Strip back such areas smooth and flush with the base material and reapply a complete paint system to match the surrounding area.

#### 63.17 PAINT APPLICATION

Apply paint by brush and/or roller to suit the location of the coating and to the paint manufacturer's requirements. Do not spray on site without express permission.

#### 63.18 MANUFACTURER'S MANUALS

Refer to the paint manufacturers' manuals and follow their preparation, sequence and application requirements applying to each system. Ensure all paint coats in any system are supplied by the same manufacturer.

#### 63.19 SCUFF BETWEEN COATS

Scuff between all coats to remove any dust pick-up, protruding fibres and coarse particles.

#### 63.20 FINISHED PAINT SURFACES

Finished paint surfaces to show uniformity of gloss and colour, with the correct thickness for each coat, and freedom from painting defects. Ensure finished work is clean and free of any disfigurement.

#### 63.21 CLEAN

Clean adjoining surfaces, glass and fittings of any paint contamination.

#### 63.22 REPLACE

Replace hardware without damage to the hardware or the adjoining surfaces.

#### 63.23 PAINT SYSTEMS, EXTERIOR

To the Resene Paints One-Line specifications as listed for the different substrates. Refer to the Resene manual for the first and second coats of each system to suit the particular substrate and condition.

Substrate	Resene Number	System topcoat	Finish
Timbers	2e 1.1	Hi-Glo D31	Gloss
Timbers - staining	2e 4.5	Woodsmen D57	Flat
Galvanised steel	5e 1.1	Hi-Glo D31	Gloss



Ferrous metals	6e 1.1	Enamacryl D309	Gloss
Totara/matai	9e 1.1	Hi-Glo D31	Gloss

# Specialty Timbers New Zealand

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## Farm Forestry Timbers NZ Specialty Timber Market

### TIMBER PRESERVATION



Although many specialty timbers are **naturally durable**, durability can be variable and some building elements exposed to the weather might require treatment to a hazard class as specified in [NZS 3602](#).

Sapwood of all species is non-durable. Where sapwood is present in timber for structural elements within the building envelope, treatment is necessary to comply with the [building code](#), thus NZS 3602 for an Acceptable Solution.

However, there are concerns about the potential effect on human health and the environment from toxic chemicals used in conventional preservative treatments of timber. Fortunately there are environmentally benign forms of timber preservation available such as Boron treatment, acetate and thermal modification.

In this page: [\[Boron treatment of timber\]](#) [\[Acetylation\]](#) [\[Thermal modification\]](#) [\[Creosote\]](#)

#### BORON TREATMENT OF TIMBER

Boron-based preservative compounds (borates) offer significant environmental and health advantages over other preservatives, with low mammalian toxicity and low environmental impact. Conventional wood preservatives which consist of the active ingredient and a solvent (e.g. LOSP), give more cause for concern because of the organic solvents which carry the chemicals.

Borates are inexpensive highly effective timber preservatives, effective against both fungal and insect attack. They also have flame retardant properties.

Borates are salts of boric acid. Borax is the sodium salt of boric acid and is mined as nearly pure sodium borate. Borax is easily converted to boric acid and other borates. Borax itself has many commercial uses including water softening, and has flame retardant properties. Disodium octaborate tetrahydrate (DOT) is often used as a wood preservative.

Borates are water soluble salts and traditionally water has been used for diffusion of boron into timber. However, this is not always appropriate for seasoned timber where it is not desirable to increase moisture content, such as where dimensional stability is critical, and where grain-raising is to be avoided in joinery products.

All the reviewed scientific data indicates that borates have been proven effective against all known wood destroying organisms were they have been applied, such as in North America, Europe, Japan, Australia and New Zealand.

Borates are odorless and colourless. Proper application lasts for the lifetime of the wood. Repeat treatment is not necessary. However, because boron-based treatment is water-soluble it can be leached out of wood if exposed to excessive moisture. **Borates are not used for preservative treatment of wood exposed to repeated wetting, such as in outdoor settings and other weather-exposed situations.** Borates do not leach out of structural wood under typical conditions and remain available to repel wood-destroying organisms for the life of the building. Leaching is not of concern for borate-treated structural wood as long as the wood is sheltered from rain or sealed against moisture.

H 1.2 treatment under NZS 3640 requires complete sapwood penetration of boron and an average cross section retention of 0.4% BAE (Boric Active Element) of the oven-dried wood. NZS 3640 *Chemical Preservation of Round and Sawn Timber* allows H 1.2 boron treatment of all species for which H 1.2 is specified in [NZS 3602](#). This includes cypress species (macrocarpa, lusitanica, Lawsons cypress) for most structural applications.

Traditionally boron is applied to green sawn timber under dip-diffusion, pressure-diffusion or pressure treatment processes. Allowing the treatment to diffuse for sufficient time until full penetration of sapwood has occurred (usually between two and eight weeks) before seasoning the timber will meet H 1.2 requirements.

Timber is also required under NZS 3640 to be verified as meeting the minimum preservative levels by an independent quality assurance programme.

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#### Glycol borates

Glycols are organic compounds in the alcohol family and are used as penetrants for boron into timber. Ethylene glycol is moderately toxic but propylene glycol is a non-toxic alternative also used in skin creams, food additives and toothpaste. Both forms are effective at carrying borate into wood fibres.

Glycol borates are formulations of inorganic borate salts in a carrier of glycol. The glycol base acts as a carrier ensuring deep penetration of boron but without wetting the timber. Glycol borates are highly effective timber preservatives. Because penetration (diffusion) of boron continues over time these treatments are even suitable for application to completed joinery items.

Glycols break down quickly in the environment and present no environmental hazards.

See [Home-Brew Glycol Solution of Borates](#)

Glycol borates applied to timber may initially penetrate only 3mm into the timber creating a protective envelope around the outside of a piece of timber. When the timber is moistened or wetted, the preservative is diffused into the timber. This is different from treatment systems that conform to NZS 3640, where complete sapwood penetration of boron takes place (H1.2).

Applied industrially with penetrants, glycol borates can meet the requirements of H1.2. Such products currently marketed include Osmose's *Framepro*, Arch Wood Protection NZ Ltd's *FRAMEBOR*, Copcote's *Tru-core* and TimTech's *BG-Dry*.

The performance of any treatment hinges on the level of retention of the active ingredient which must be higher than the lowest expected threshold values. To be effective in controlling decay, timber treatment levels would need to remain above the minimum levels suggested by NZ research (0.15% BAE).

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Hazard classes	
H1.1	Timber used in situations protected from the weather, dry in service and where resistance to borer only is required.
H1.2	Timber used in situations protected from the weather but where there is a risk of moisture exposure conducive to decay.
H3.1	Timber used outdoors above ground, exposed to the weather – generally in non-structural applications; i.e. fascia boards, weatherboards.
H3.2	Timber used outdoors above ground, exposed to weather or protected from the weather but with a risk of water entrapment; i.e. structural applications, decking, fencing and pergolas.

# Appendix 7

## Temporary Protection Plan

### 1. Purpose

#### 1.1 Brief

This Temporary Protection Plan (TPP) was commissioned by Joel de Boer, Project Manager – Marine and Coastal, Parks, Sport & Recreation, Wellington City Council in a contract signed on 3 May 2021.

#### 1.2 Resource Consent requirements

This TPP is required as a condition of Resource Consent for repair works granted by the Greater Wellington Regional Council, WGN200116, Consent Id [36519] Coastal permit granted on 21 January 2021, condition 20, as follows:

A Temporary Protection Plan that identifies potential risks and outlines measures to reduce the potential for damage to the heritage fabric of Seatoun Wharf during the proposed work. The plan should include how the work will be supervised and a decision-making process for managing problematic issues.

#### 1.3 Heritage status and significance

The wharf is listed in Chapter 21 Appendix of the Wellington City District Plan as follows:

Location	Object and date of construction	Map ref	Symbol ref
Seatoun	Seatoun Wharf (this item is listed for information purposes only. The jurisdiction for this item under the RMA 1991 lies with the Wellington Regional Council)	7	51

The wharf is not listed with Heritage New Zealand Pouhere Taonga (HNZPT).

The 2008 Regional Coastal Plan for the Wellington Region lists Seatoun Bay wharf in Appendix 4 Features and buildings of historic merit, page 239. The Proposed Natural Resources Plan 2015 (PNRP) for the Wellington Region lists the wharf in Schedule E2: Historic heritage wharves and boatsheds.

The following is the summary of significance taken from the PNRP.

The Seatoun wharf has strong historical value for its origins and the early role it played in the commuter ferry service to the city. A prominent feature in a picturesque setting, the wharf has high townscape value. Social values are also very high.

#### 1.4 Heritage fabric

All ironbark, totara, metal bollards and original iron/steel fixings are considered as heritage fabric.



## **1.5 Methodology for the TPP**

This TPP has been prepared in accordance with the following two documents:

Christchurch City Council, *Heritage Information, Guideline 14: Temporary Protection of Heritage Items*, Christchurch City Council, n.d.;

Frens, Dale H., *Temporary Protection Number 2, Specifying Temporary Protection of Historic Interiors during Construction and Repair*, US National Park Service Cultural Resources, 1993.

## **1.6 Use of the TPP**

This TPP should be read with and implemented in conjunction with approved site-specific contractor methodologies and health and safety plans. This TPP must be provided to all contractors working on the site. And kept on site for the duration of the works. This TPP is a 'living document' and, where required, will be updated to reflect any changes in the nature of the works as they progress.

This TPP identifies monitoring methods to be used during the course of the repair works. Should there be any changes required to the described processes, works should cease and the architect and conservator and project manager should be approached for further instruction.

## **1.7 Induction**

As described below, prior to commencement of the works, construction staff will, as part of their induction to site, have a detailed briefing on specific requirements for and methods to be employed to protect and conserve the heritage values of the wharf. The briefing will include:

- a description of heritage fabric and methods to be employed for its protection and conservation;
- specific temporary protection and reasons for this
- site-specific methodologies
- protocols for various scenarios such as structure failure/artefacts found etc. and chain of contact required

## 2 Temporary protection plan

The following table outlines measures to reduce the potential for damage to heritage and archaeological fabric during demolition and deconstruction works. It also identifies the mitigating measures to be used during the course of the works.

Activity	Potential risk	Mitigating measures
Documentation deconstruction, recording,	<p>Loss of information including:</p> <ol style="list-style-type: none"> <li>1. a record of existing building site form and heritage fabric.</li> <li>2. loss of understanding where elements were originally situated</li> <li>3. loss of the record of process and discovery</li> </ol>	<p>Develop a full photographic record of the wharf prior to works beginning on site. Photographs to include a survey rod to indicate scale where appropriate.</p> <ol style="list-style-type: none"> <li>1. Prepare a full photographic record of the wharf as it exists <u>prior</u> to any work occurring on site. This shall be carried out according to level 2 of the Heritage New Zealand Archaeological Guidelines Series No. 1, <i>Guide for Buildings Investigation and Recording</i>, 2018.</li> <li>2. Prepare a photographic record of the decayed fabric to be removed as it revealed, fabric that will be stored for re-use and the general progress of the works which will be recorded at agreed regular intervals to compile a complete recording over time.</li> <li>3. Digital photography is acceptable with photographs to be of high definition (e.g. 2 MB minimum) able to be magnified with little loss of detail. Each photograph shall be identified with a unique number on a plan showing the location and angle from which the photograph was taken.</li> <li>4. Where any unattached significant fabric is found during the works (e.g. on the sea floor) the archaeologist and the architect and conservator shall be notified immediately. It shall be recorded as above and accidental discovery protocols identified in the Archaeological Authority shall be followed.</li> </ol>
Documentation and storage of removed items	Evidence of removed material is lost.	<p>Follow appropriate removal and recording processes.</p> <ol style="list-style-type: none"> <li>1. Identify fabric that will be re-used prior to the works taking place.</li> <li>2. Provide a methodology for deconstruction of fabric to be re-used for approval prior to any works taking place.</li> <li>3. All heritage fabric to be removed for later re-use shall be stored for later reinstatement. The store shall be in an approved location, secure from theft and damage, weather proof, and with appropriate environmental conditions.</li> <li>4. Dismantle items in a logical sequence with extreme care and under the constant supervision of a person experienced in repairing historic wharf structures.</li> <li>5. Unbolt bolted connections and unscrew screwed connections. Do not pry apart members whose finish will thereby be damaged by chipping, crazing, or cracking, or whose structural integrity will thereby be impaired.</li> </ol>





Activity	Potential risk	Mitigating measures
		<p>Do not remove nails from woodwork from the finished or exposed side. Drive nails through or pull from the back so the head does not splinter the finished face.</p> <ol style="list-style-type: none"> <li>6. Items shall be uniquely numbered as to their original location and noted on the drawings as well as the element/s they are part of.</li> <li>7. When removed, they shall be described, the date they were removed from their original location and when removed from the store for reinstatement or for conservation away from the site so that every element and its location can be verified on a daily basis.</li> <li>8. The contractor shall prepare an updated log weekly for the architect and conservator.</li> <li>9. The unique numbers shall be fixed on [non-perishable] labels to every element the is deconstructed prior to storage.</li> <li>10. If removed off site, all fabric shall be stored and logged to the same standards. There shall be one person only in charge of the store and log for the duration of the contract. This will ensure that the location of all fabric will be known at any time. The log shall be updated at least weekly.</li> </ol>
Communication and monitoring	Heritage fabric (known or unknown) may be at risk if intentions and subsequent actions are not discussed and actions confirmed by the contractor, client and architect and conservator.	<p>Initiate a heritage site briefing with the contractor.</p> <ol style="list-style-type: none"> <li>1. Initiate an initial 'Heritage Site' briefing to all contractors and consultants involved in site work before work commences.</li> <li>2. Hold a pre-setup site meeting prior to any new work commencing.</li> <li>3. Establish regular meetings with the architect and conservator on site where heritage related issues are discussed and recorded.</li> <li>4. Establish communication procedures for issues arising between site meetings.</li> <li>5. Establish clear communication procedures with regard to heritage matters between all consultants, workers and all sub-contractors on the site.</li> <li>6. Hold all documentation, such as scoping plans, methodologies, archaeological authority, RMA consents, the TPP etc. on site so that it is accessible to all on site.</li> </ol>
Construction	Potential damage on site by inexperienced workers	<p>Appropriate experience.</p> <ol style="list-style-type: none"> <li>1. All workers on the site shall be professional, competent, have experience in working on heritage sites and shall have appropriate levels of expertise and understanding of heritage conservation principles.</li> <li>2. All workers should be familiar with the principles of the ICOMOS NZ Charter 2010.</li> </ol>

Activity	Potential risk	Mitigating measures
Scaffolding	Scaffolding erection and use can damage heritage fabric by overloading surfaces, hitting or scratching surfaces, or falling on heritage fabric	<p>3. All workers will be versed in the specific heritage significance of the site as per the notes under 'Communication'.</p> <p>Avoiding damage from scaffolding.</p> <ol style="list-style-type: none"> <li>1. If scaffolding is required, it is to be freestanding with no fixings to any heritage fabric. All scaffolding ends shall covered with rubber or plastic to prevent damage</li> <li>2. Boarding shall provided to spread any dynamic or point loads.</li> <li>3. Provide kickboards at all levels to assist with the prevention of items falling.</li> </ol>
Protection of heritage fabric	Fabric can be damaged by the works including impacts, overloading, vibration and staining while fabric to be re-used may be lost	<p>Protection</p> <ol style="list-style-type: none"> <li>1. The risk from impacts, overloading, spilled liquids, vibration or any other damage shall be identified and mitigated appropriately.</li> <li>2. Do not store or use equipment or materials that may overload the wharf.</li> <li>3. Where required, temporary shoring shall be installed in such a manner that it will not damage heritage fabric. The architect and conservator shall approve the method of shoring.</li> <li>4. Where fabric is required to be temporarily removed, fixings shall be removed with least damage. For example nails shall be hacksawed off and punched through, screws shall be unscrewed, bolts unbolted.</li> <li>5. The methodology for removal of fabric shall be approved in writing prior by the architect and conservator to any removal taking place Any unavoidably damaged materials shall be replaced matching in all respects including material, profile, colour, texture, strength.</li> <li>6. Only hand demolition measures are to be employed where there is a risk of damaging heritage fabric.</li> <li>7. Do not install fasteners into historic fabric unless with prior approval in writing of the architect and conservator.</li> <li>8. Any machinery that requires the use of oil or other lubricant that may harm or stain heritage fabric, shall have a methodology for use, particularly means of containment, approved in writing by the architect/conservator prior to use. The agreed methodology shall be implemented unchanged for the duration of the contract.</li> <li>9. The engineer shall confirm that any activities that involve vibration will not cause harm to fabric. If necessary vibration monitors will be located at points identified by the engineer in consultation with the architect/conservator to</li> </ol>



Activity	Potential risk	Mitigating measures
Hazardous materials and environment	Hazardous materials may be present on site	<p>ensure no damage.</p> <p>Check for hazardous materials.</p> <ol style="list-style-type: none"> <li>1. Where hazardous materials are found, their removal and clean-up shall be carried out in accordance with statutory requirements. All heritage fabric shall be cleaned carefully to avoid any damage to or contamination of historic fabric.</li> <li>2. Develop an emergency plan for the site that includes for possible emergency situations and responses. There should be adequate equipment on site to cope with emergencies.</li> </ol>
Fire and protection systems	The use of open flame operations, grinding or heat cutting of metals or other hot work may be a source of fire.	<p>Given that the majority of the heritage fabric is of timber, ensure that appropriate fire fighting measures are available at all times.</p> <ol style="list-style-type: none"> <li>1. The contractor is to provide fire-fighting equipment at all times and appropriate to the risk.</li> <li>2. Where there is the use of internal combustion engines, all combustible materials will be stored off site, equipment will not be serviced on site and all exhausts shall be discharged to the exterior.</li> <li>3. All combustible material to be suitably and securely stored away from the building.</li> <li>4. Any hot work must be completed before 2:00 pm, and personnel must remain on site continuously thereafter to check for any hotspots and actively manage any potential risks.</li> <li>5. Suitable fire- fighting equipment must be kept immediately to hand at all times during any hot work, and suitable shielding and protection including flame stop blankets must be in place for surrounding areas in all cases</li> <li>6. This is a 'No Smoking' site.</li> </ol>
Security	After hours construction sites are potential targets to damage and subsequent loss of heritage fabric	<p>Ensure the whole site is secure with fencing and or hoardings during the works to prevent access by unauthorised persons, damage and theft.</p> <ol style="list-style-type: none"> <li>1. Ensure the whole site is secure and monitored at all times during the contract works.</li> <li>2. The security of the contractor's works and all storage areas are the contractor's responsibility.</li> <li>3. Where deemed necessary night lighting, patrols and movement-triggered alarms are to be installed.</li> <li>4. Security shall be reported on at site meetings and take appropriate action as situations require.</li> </ol>
Monitoring	There is risk that work will proceed undocumented or	The architect and conservator is to be informed of any issues raised concerning heritage fabric. The need for a site visit

Activity	Potential risk	Mitigating measures
	without prior agreement resulting in damage and/or loss of heritage fabric	will be determined. The project manager will issue any consequent instructions.

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