ARCHAEOLOGICAL ASSESSMENT

TE PUWAHA, CASTLECLIFF PORT, WHANGANUI

PREPARED FOR WHANGANUI DISTRICT COUNCIL

Subsurface Ltd
Archaeological Services

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Draft:	20 October 2021	Dodd
Review:	21 October 2021	Justice /Faithfull (MDL)
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INTRODUCTION

BACKGROUND

Whanganui District Council are proposing a redevelopment of the council owned land, and port facilities at Castlecliff. This area includes evidence and remnants of pre-1900 features including reclamation land (1884), and features related to the former Heads wharf and Railway station (1884).

Physical evidence of activity pre-dating 1900 are protected under the archaeological provisions of the *Heritage New Zealand Pouhere Taonga Act* 2014. It is a legal requirement to obtain an archaeological authority before undertaking ground disturbance works that have potential to modify archaeological deposits. The purpose of this assessment is therefore to:

- identify potential for pre-1900 archaeological features within the project area which includes the reclamations, wharf structures, and coastal marine area;
- assess the effects on archaeological values for the sites identified; and
- inform whether an archaeological authority is required before proceeding with earthworks, dredging operations and dismantling of structural elements.

COMMISSION

Subsurface Ltd was contracted by Debbie Anderson on behalf of Whanganui District Council to prepare an archaeological assessment of effects, and if necessary, assist with an application to Heritage New Zealand for a general authority to modify archaeological sites.

METHODOLOGY

This report uses the historic narrative and background research undertaken for a previous assessment commissioned by Whanganui District Council prior to the removal of the WWI era 'Red Shed' (Dodd 2020).

Where relevant to the increased scope, additional research has been carried out with reference to material held in the Heritage New Zealand digital library and with online material including Digital NZ and digitised survey plans accessed through Quickmap. The New Zealand Archaeological Association Site Recording Scheme, Whanganui District Plan and the New Zealand Heritage List/Rārangi Kōrero were reviewed for sites in the vicinity of the port at Castlecliff.

The author inspected the project area on **30 July 2020**, and subsequently on **15 July 2021** both times in the company of representatives of Whanganui District Council.

CONSTRAINTS AND LIMITATIONS

The subsurface nature of archaeological features means that they are often not evident solely based on above ground evidence. For this reason, this assessment necessarily relies in part on historic research and past archaeological recording to inform of the potential for archaeological deposits. This also applies to elements of the wharf structures and reclamations, which may only be exposes as these features are being dismantled. Some preliminary inspection may give an indication of the types of features that are likely to be encountered, but more detailed recording will be necessary once further elements are exposed.

While this assessment covers aspects of the Māori history in the wider area, and assesses archaeological values associated with Māori sites, cultural values have not been assessed. This can only be provided by tangata whenua.

STATUTORY CONTEXT

There are two main pieces of legislation in New Zealand that control work affecting archaeological sites. These are the *Heritage New Zealand Pouhere Taonga Act* 2014 (HNZPTA) and the *Resource Management Act* 1991 (RMA).

Heritage New Zealand administers the HNZPTA. It contains a consent (authority) process for any work affecting archaeological sites, where an archaeological site is defined as:

(a) any place in New Zealand, including any building or structure (or part of a building or structure), that:

> (i) was associated with human activity that occurred before 1900 or is the site of the wreck of any vessel where that wreck occurred before 1900; and
> (ii) provides or may provide, through investigation by archaeological methods, evidence relating to the history of New Zealand; and

(b) includes a site for which a declaration is made under section 43(1)

Any person who intends carrying out work that may damage, modify or destroy an archaeological site, or to investigate a site using invasive archaeological techniques, must first obtain an authority from Heritage New Zealand. The process applies to sites on land of all tenure including public, private and designated land. The HNZPTA contains penalties for unauthorised site damage or destruction. The archaeological authority process applies to all sites that fit the HNZPTA definition, regardless of whether:

- The site is recorded in the New Zealand Archaeological Association Site Recording Scheme or listed by Heritage New Zealand,
- The site only becomes known about as a result of ground disturbance, and/or
- The activity is permitted under a district or regional plan, or a resource or building consent has been granted.

Heritage New Zealand also maintains a list of Historic Places, Historic Areas, Wāhi Tūpuna, Wāhi Tapu and Wāhi Tapu Areas. The New Zealand Heritage List/Rārangi Kōrero can include archaeological sites, and its purpose is to inform members of the public about such places and be a source of information for the purposes of the Resource Management Act 1991.

The RMA requires City, District and Regional Councils to manage the use, development, and protection of natural and physical resources in a way that provides for the wellbeing of today's communities while safeguarding the options of future generations. The protection of historic heritage from inappropriate subdivision, use, and development is identified as a matter of national importance (section 6f). Historic heritage is defined as those natural and physical resources that contribute to an understanding and appreciation of New Zealand's history and cultures, derived from archaeological, architectural, cultural, historic, scientific, or technological qualities. Historic heritage includes:

- historic sites, structures, places, and areas
- archaeological sites;
- sites of significance to Māori, including wāhi tapu and wāhi tūpuna;
- surroundings associated with the natural and physical resources (RMA section 2).

These categories are not mutually exclusive, and some archaeological sites may include above-ground structures or may also be places that are of significance to Māori. Where resource consent is required for any activity, the assessment of effects is required to address cultural and historic heritage matters.

Statutory acknowledgements are outlined in various Claims Settlement Acts and may apply when consents or archaeological authorities are being sought for activities in certain areas. The purpose of a statutory acknowledgement is to formally acknowledge statements of association between iwi and specific places, including areas of land or bodies of water. They also require the notification of consent applications to the relevant iwi authority. The Whanganui District Plan Appendix D lists statutory acknowledgements from the *Ngaa Rauru Kiitahi Claims Settlement Act* 2005, the *Ngāti Apa (North Island) Claims Settlement Act* 2010 and the *Te Awa Tupua (Whanganui River Claims Settlement)* Act 2017.

The port at Castlecliff is not affected by statutory acknowledgements under these Acts. However, the *Ngaa Rauru Kiitahi Claims Settlement Act* 2005 references Kaihau a Kupe and Kokohuia in its description of the statutory acknowledgement over the adjoining Coastal Marine Area, and the Ngā Rauru Kītahi Puutaiao Management Plan references Pungarehu, Kaihau a Kupe and Kokohuia when describing their tribal boundaries, and the Castlecliff Coastal Reserve Management Plan in instruments administered by the Whanganui District Council in relation to which they wish to be involved (Te Kaahui o Rauru 2017:9, 37).

LOCATION AND GEOGRAPHY

The port at Castlecliff is located on the northern (true right) side of the Whanganui River approximately one kilometre inland from the Heads (Figures 1-3). The port is approximately three kilometres WSW of the Whanganui town centre. The Te Puwaha project area encompasses an area extending from Heads Road down the eastern side of Tod Street, and the water front sections owned by the Whanganui District Council leased to the port. The legal descriptions are Lots 1 & 2 DP 19936, Lots 1 & 2 DP 548636, Secs 1-3 SO 548624, Pt Lot 1 Deposited Plan 89274, Lot 2 DP 81330, Lots 6 & 7 DP 435979, Wellington Land District. The combined land area is 7.2163 hectares in extent and owned by the Whanganui District Council.

The proposed dredge area is in two parts, 1) within the existing basin and 2) at the bar. The discharge locations include the eastern beach, the southern side of the basin training wall and two locations within the river where it will be carried out to sea.

Figure 1: *Location of project area. See Figure 2 for detail.*

SOILS AND GEOLOGY

The geography of the Castlecliff area can be characterised as uplifted marine terraces, overlaid with Holocene period black sand. The geological unit for Castlecliff fixed dune deposits (Q1d) with remnant cliffing of the wave cut Rapanui marine terrace (Townsend, Vonk and Kamp 2008:30; Cowie, J. and I. Campbell, 1965; Burgess 1971:23). Due to their young nature, the naturally formed topsoils in the dune areas are likely to be poorly developed, with thicker, better formed soils occurring on the exposed marine terrace remnants. The area also includes reclamation fill, dating to late nineteenth and early twentieth centuries.

Figure 2: Aerial photography (2017) showing extent of project area covered by this report in red

Figure 3: Detail of Figure 2 showing project area in red

PROPOSED WORKS

The proposed works which are the subject of this assessment have been outlined as follows:

The works will include the removal and of wharves 2 and 3 and replacement with new structures built on the existing footprint. A hard stand of 3098m2 and boat hoist will be installed between the two new wharves, a replacement revetment wall will be installed between wharf 3 and the adjacent public boat ramp, and abandoned marina piles will be removed from the port basin. Treatment system for the stormwater falling on wharves 2 and 3 is being incorporated into the project.

WHARVES.

The redevelopment of the wharves and port areas includes the following:

- The removal and reinstatement of Wharf 2 and Wharf 3 with replacement wharves likely to be constructed of concrete or timber, and the associated revetment and retaining wall systems under the wharves along the CMA/Awa interface. The proposed wharf structures and locations are shown in Figures 4 and 5.
- Undertaking earthworks and land stabilisation immediately adjacent to and/or beneath the wharves with sheet piles. The concept design plans for the earthworks and sheet piling are shown in Figures 6 and 7.
- Installation of boat hoist supporting infrastructure as a component of the wharf remediation, located partly within the CMA/Awa to support a circa 360 tonne vessel travel lift hoist. This will be located in the elbow between Wharf 2 and Wharf 3 and be a concrete structure. Refer Figures 8 and 9 for the diagram of the boat hoist structure.
- Removal of abandoned marina piles located between the existing boat ramp and adjacent Wharf 3.
- An area of historic erosion between the Public Boat Ramp (located east of Wharf 3) and Wharf 3 will be addressed with the installation of a replacement revetment wall.

It was previously thought that repair of these structures was an option, but they have since been found to be in a more advanced state of disrepair and decay than expected. The victory shed presently occupying No.3 wharf has also found to be severely undermined and will be demolished. The removal of these structures will also require the presently unstable reclamations to be made good.

HARDSTAND

Development of a hardstand in the area between Wharf 2 and Wharf 3 which includes:

- Earthworks and land disturbance underneath the hardstand footprint to address historical land stability and possible contamination issues. The earthworks details including methodology and any mitigation required will be confirmed by the relevant technical advisor.
- Provision for specified activities to be undertaken at the commercial hard stand area – providing for all types of vessel building and maintenance activities including vessel washdown, antifouling, vessel painting and paint preparation and abrasion blasting. The area will also be used for activities associated with the loading and unloading of vessels.

- A purpose-built wastewater treatment plant will be installed to manage discharges associated with the above-mentioned activities before it is discharged into the reticulated waste-water network system. Proposed servicing plans are shown in Figure 8.
- Solutions for the collection and management of stormwater run-off /discharges from the hardstand, wharves and adjoining areas, the Marine Precinct and the boat wash system are still being developed. Stormwater will be collected and managed via a purpose-built water treatment plant, to treat the water for storage, reuse and retention before discharging to the Council's wastewater system for all rainfall events up to the 1:100-year event. Very high overflows (over the 1:100-year event may be discharged to the CMA/Awa. Details of the treatment plant and the quality of the water to be discharged will be provided when available.
- Sheet piling of the quay face is proposed along the hardstand area to integrate with any sheet piling beneath Wharves 2 and 3.

RECLAMATION / RECREATIONAL BEACH AREA

The project also includes development of a new recreational area that will accommodate a beach, flexible event lawn zone, an ecological park/wetland area, and the car parking area immediately east of the event lawn. No built structures are currently proposed as part of this recreational beach area. This recreational beach area will be developed to the east of the boat ramp and will comprise an extension of the horseshoe shaped bay in this area. It will be developed by way of a reclamation using the dredge spoil material from the primary maintenance dredging of the Priority Dredged Area.

The reclamation is expected to require between 95,000 –150,000 m^3 of dredge spoil to create, subject to how far west the reclamation extends.

BASIN DREDGING AND SPOIL DISCHARGE

The project includes the following activities associated with dredging:

- Primary maintenance dredging and ongoing maintenance dredging of the Port operational areas within the Coastal Marine Area ("CMA")/Awa to enable safe vessel access to the wharves, public boat ramp and associated maneuvering areas. The dredge areas are shown as the Priority Dredged Area, the Future Dredged Area and Proposed Recreational Dredged Area, in Figure 11.
- The final dredge spoil disposal site options are also shown on the dredging plan (Figure 11) as the numbers 1 through 8, and the quantities of spoil expected to be discharged at these sites (on an annual basis) will be informed by the technical assessments and in partnership with Te Mata Pūau.
- Indicative volumes of spoil from the primary maintenance dredging are:
    - Between 40,000m^3 - 60,000m^3 within the Priority Dredged Area; and
    - Between 280,000 – 370,000m^3 within the Future Dredged and Recreational Dredged Areas.
- Based on an accumulation rate of 1.6m per year, the indicative annual maintenance volumes of:
    - the Priority Dredged Area is expected to be up to 27,000m^3; and
    - the Future Dredged and Recreational Dredged area is expected to be up to 100,000m^3.
- Note that the term to be sought for the dredging activity consent is yet to be decided upon.

Figure 4: Proposed earthworks and coastal marine boundary (supplied Whanganui District Council)

Figure 5: Coastal and marine boundary (supplied Whanganui District Council)

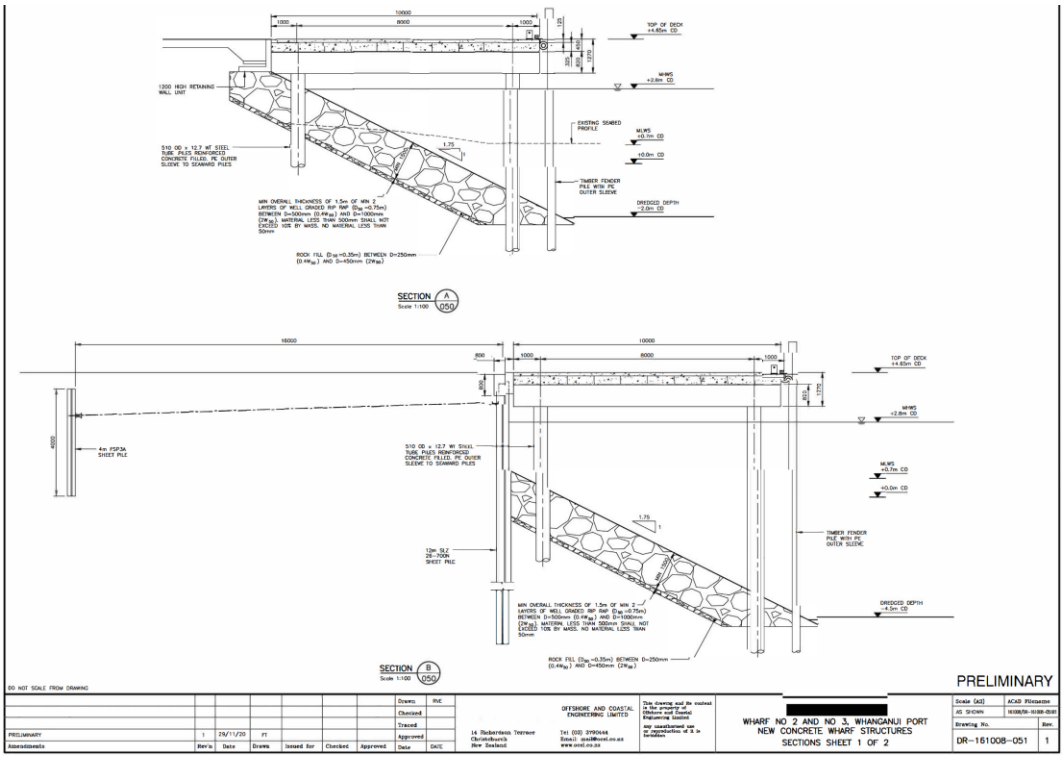

Figure 6: Proposed new wharf structures (supplied Whanganui District Council)

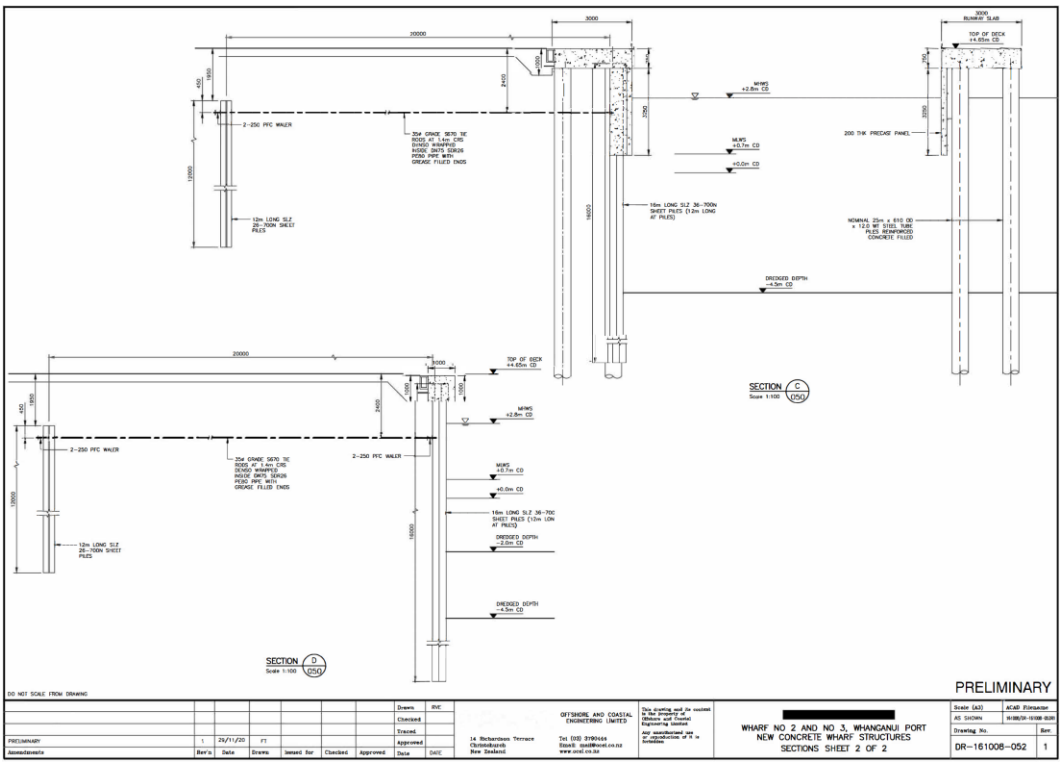

Figure 7: Arrangement of sheet piles (supplied Whanganui District Council)

Figure 8: Proposed locations of services associated with transformer and WWTP (supplied Whanganui District Council)

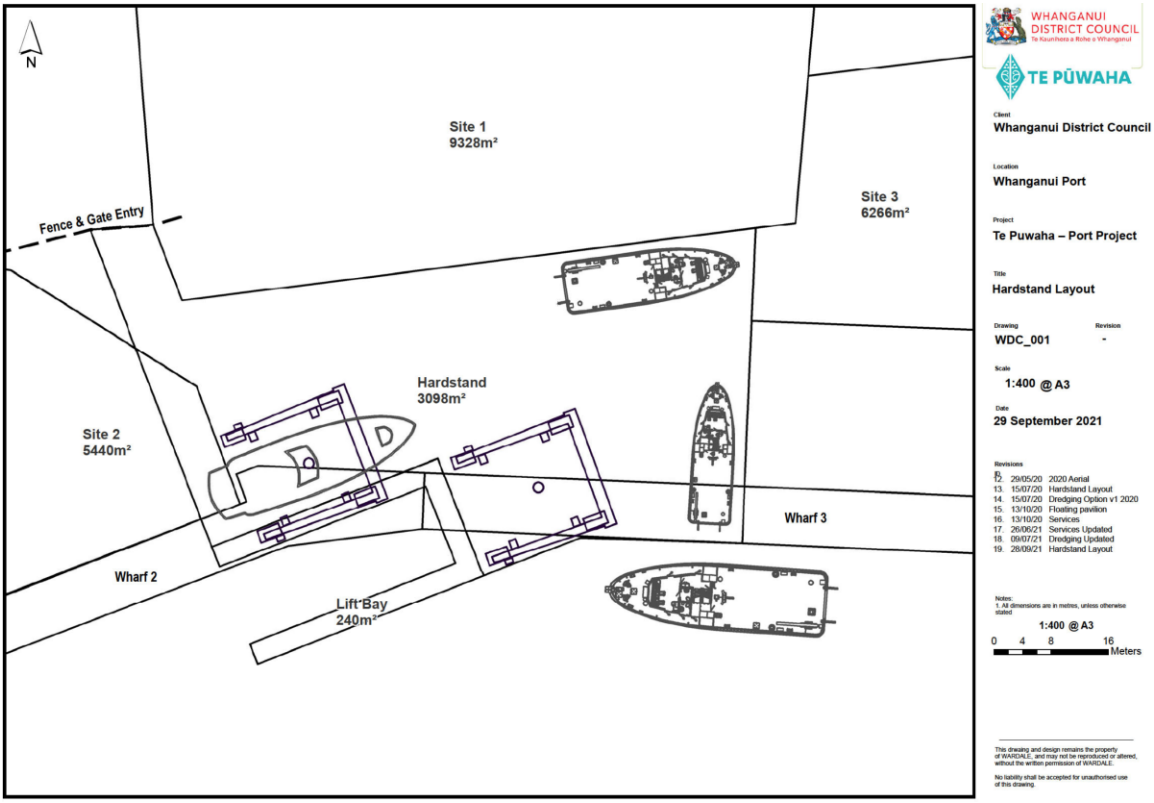

Figure 9: Proposed hardstand (supplied Whanganui District Council)

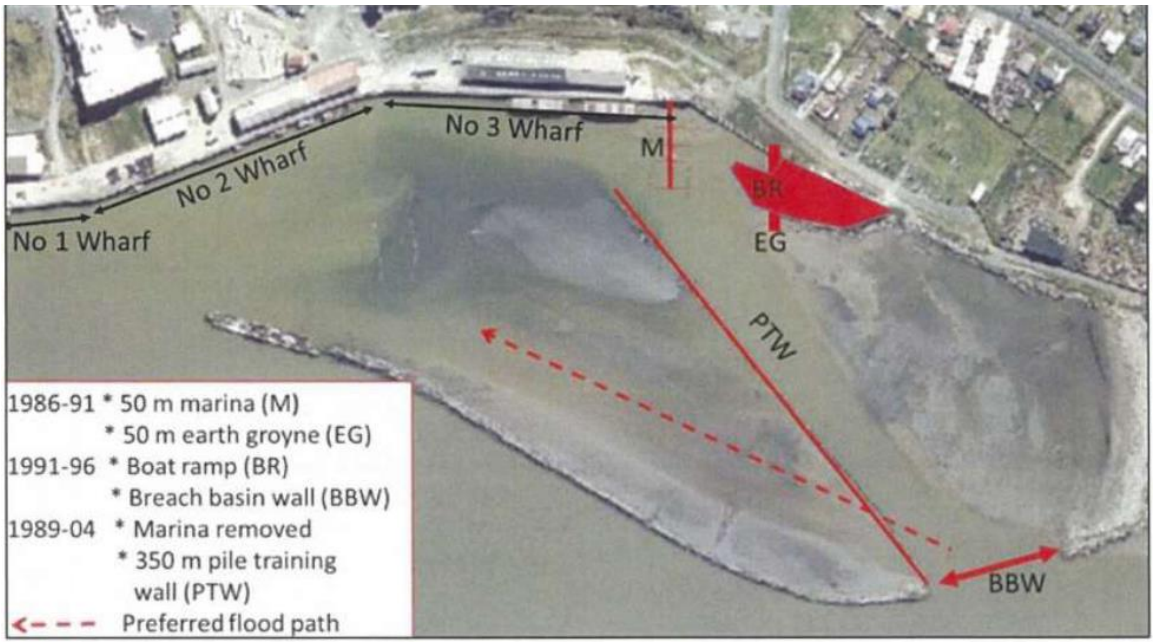

Figure 10: Locations of wharves and more recent structures in the CMA (supplied Whanganui District Council)

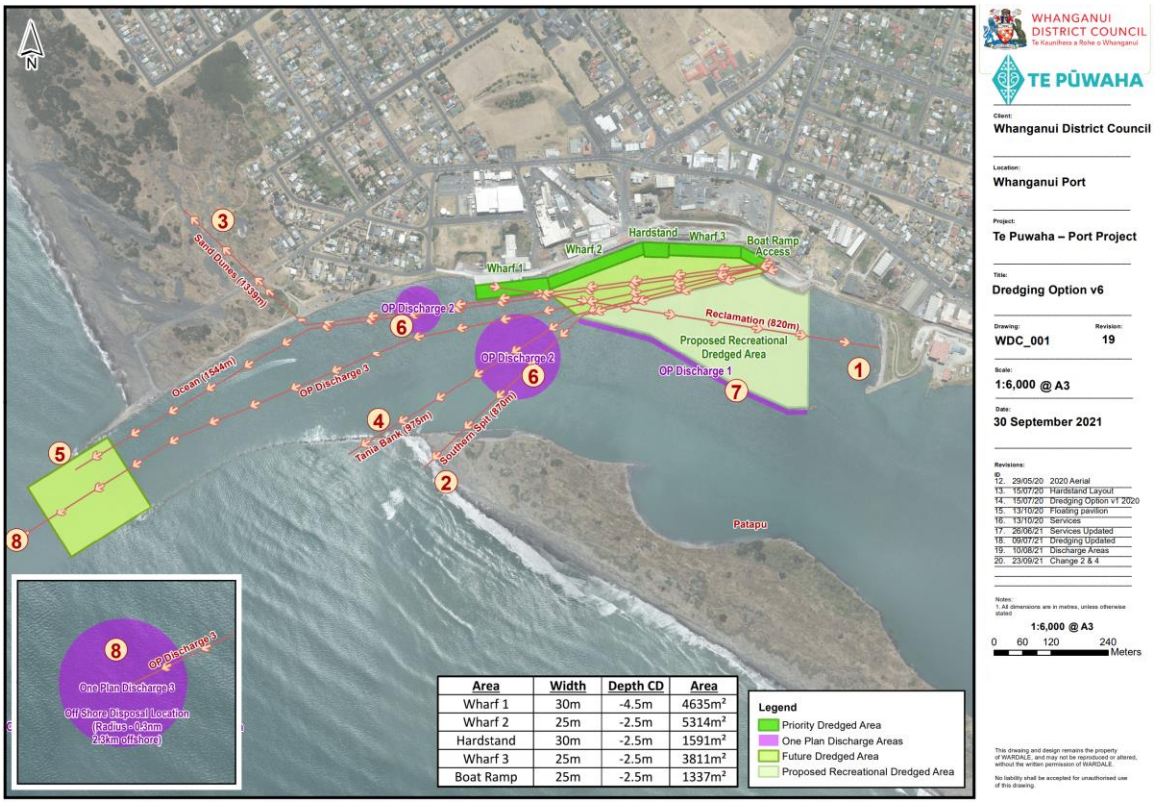

Figure 11: Proposed dredge area and spoil locations (supplied Whanganui District Council)

MĀORI OCCUPATION

The initial settlement of New Zealand from East Polynesia is believed to have occurred by AD1250-1300 (c.800 BP/750 cal. BP) (Higham and Jones 2004:232). This is supported by environmental studies which show widespread forest clearance and establishment of fern species around AD1200-1400 (McGlone and Wilmshurst 1999:12). Rivers like the Whanganui were focal points for early settlement because they provided ready access to the interior (Anderson 2015:59).

Although the lands around the Whanganui River mouth have been much contested over time, present day mana whenua have a long-standing association with the area which can be traced back to the earliest arrivals. Traditions recall the ancestor, Kupe, travelling up the Whanganui River as far as Kauarapāoa. The wider Castlecliff area is known as Kai Hau o Kupe, in reference to Kupe's landing there and briefly enforced stay while he waited for the rough seas to settle and allow crossing of the river bar (Smart and Bates 1972:20). Early tribal groups in the area include Ngā Paerangi and Te Kāhui Rere who are said to have been resident around Whanganui when it was explored by Turi of the *Aotea* canoe. The ancestor Tamatea-pōkai-whenua of the *Tākitimu* canoe is said to have bestowed the name for Pūtiki (Te-Pūtiki-wharanui-a-Tamatea-pōkai-whenua) which was to become one of the principal settlements at the mouth of the Whanganui River (Young 2005).

Ngā Rauru Kītahi, whose traditional lands extend from Pātea to Whanganui, derive their ancestry from Rauru Kītahi, who was a grandson of the navigator Toitehuatahi (Kingi 2005).[1] Tūpoho, whose traditional lands extend around the lower reaches of the Whanganui River from Kai Iwi to Whangaehu, whakapapa to Te Āti Haunui-a-Pāpārangi who was a contemporary of Turi. The descendants of Te Āti Haunui-a-Pāpārangi are the people of the Whanganui River (Young 2005).

One of the Ngā Rauru settlements at Castlecliff was known as Pungarehu. Pungarehu has been described as a fishing pā formerly positioned in the vicinity of the Pilot Station at Castlecliff, now the vicinity of the Morgan and Treganna Street intersection (Smart and Bates 1972:30; Sole 2008:8).

The name Pungarehu is also used in reference to the ashes of the Ngā Rauru ancestor Tutemangarewa, who was burnt/cremated after the battle of Kokohuia[2] (Taylor and Sutton 2019:17, citing Waitai and Hawira 2007).

EUROPEAN ARRIVAL

The earliest European arrivals at Whanganui were the traders and missionaries. An 1814 map attributed to the mission ship *Active* shows the Whanganui River marked as the Knowsley River (Smart and Bates 1972:45). Rev Henry Williams first visited Pūtiki-wharanui in December 1839, and he later sent John Mason to establish a mission station there early the following year.

In December 1839 Edward Jerningham Wakefield visited Kai Hau o Kupe, which he later recalled in his book Adventure in New Zealand:

[1] http://www.rauru.iwi.nz/tkor-about/#Te Paepae accessed 20.10.2017

[2] Also known as the battle of Waipuna, between Ngāti Pāmoana of Pūtiki and Ngā Rauru at present day Balgownie (Pokiha 1970)

"At daybreak next morning a whole fleet of canoes went out to sea to fish. Together with Wide-awake's party, there were at least fifty sail. At the flood, which was in the afternoon, they all entered the river, and proceeded to fish for the kawai, large shoals of which had come in with the tide."

He went on to describe the temporary nature of the fishing camps:

"He [Te Kuru] explained to me, that none of the natives lived permanently near the sea-side; but that their pas and cultivations were far up the river, among the mountainous country, which they consider more fertile as well as more secure from hostile attacks. These villages near the sea were only used during this season, when the fish abound and the constant fine weather allows the almost daily exit of the canoes. At the end of the summer they return up the river with large stores of dried fish. I now understood why these villages were so poorly built and badly fenced. I had not seen a good house in either of them; and the fences, instead of being formed of high strong wooden uprights, as I had seen them in other pas, were made of reeds and grass, supported on weak sticks to the height of four feet; evidently calculated for no other purpose than that of breaking the force of the sea-breezes. I now understood that these were mere temporary villages used for fishing." (Wakefield 1845 vo1 1:242-243).

In May 1840 Wakefield attempted to purchase 40,000 acres of land in the vicinity of Whanganui on behalf of the New Zealand Company. Although the purchase was not approved by the newly formed colonial government, prospective settlers started arriving in Whanganui from February 1841 (Smart and Bates 1972:50-53). The town was established on the western side of the river, while Māori continued to occupy a number of settlements in the vicinity, the largest of which was Pūtiki. By about 1845, there were about 200 European settlers, while the local Māori population at the River mouth numbered around 4000 (Cowan 1923 I:135-36).

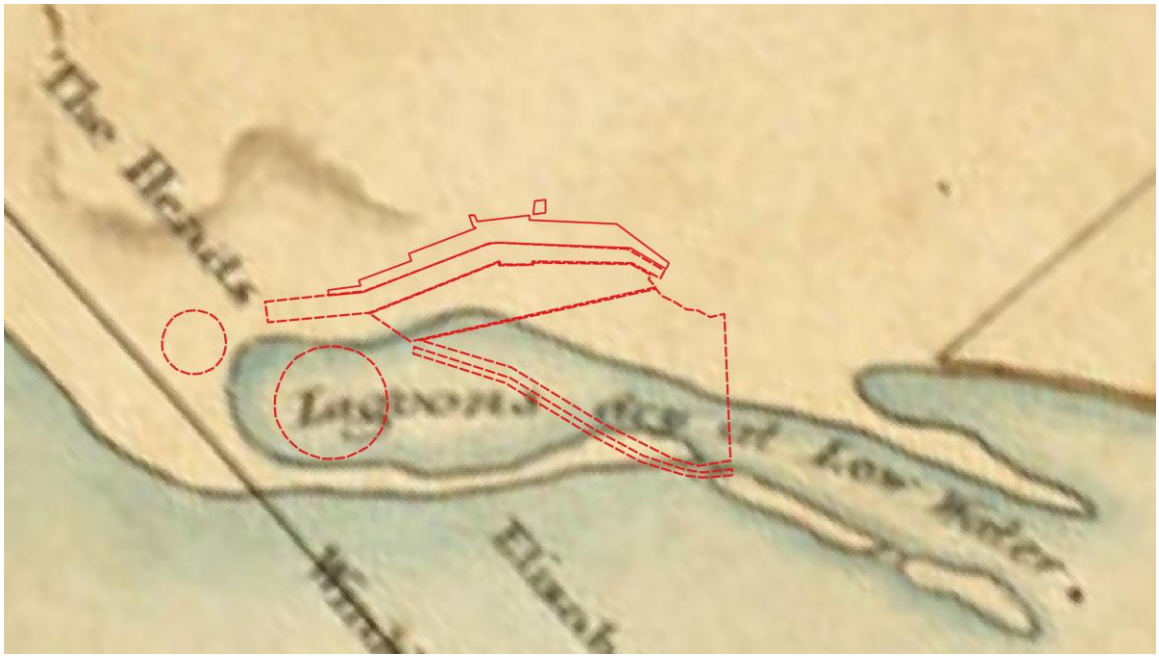

Figure 12: Detail from plan of the country sections in the district of Wanganui, c.1842.[3] *This plan appears to have been reproduced from the NZ Company plan by Samuel Brees (see also SO10416, RP549c). A notable difference is the topographic addition of a promontory at 'the Heads' and 'Landguard'*

[3] Auckland Libraries Heritage Collection NZ Map 5508; Special Collections F 995.44 bje ca.1842
https://kura.aucklandlibraries.govt.nz/digital/collection/maps/id/234

By mid-1841 a shore whale fishery was operating at the mouth of the river. It appears to have been intermittently operating, and on both sides of the river at Castlecliff and South Beach (Smart and Bates 1972:92; Sole 2008:45; Prickett 2002:101 citing Burgess 1997). There was apparently no shore whaling in June 1844 (Taylor and Sutton 2019:20), but a short time later Rev. Richard Taylor mentions in his diary there being two boats employed whaling at the river mouth in August 1844 (Taylor ms vol.3 p-16-17).

The Crown 'purchase' of Whanganui which allowed settlers more secure tenure, at least in the short term, was concluded in 1848 (Smart and Bates 1972:77). The Crowns agent, Donald McLean, with the assistance of Richard Taylor negotiated boundaries for 80,000 acres of land around the lower Whanganui River between Kai Iwi and Whangaehu including areas set aside as reserves. For the first forty years the settlement relied on the river port alongside the town. The first jetty was located at the front of Taylor and Watt's warehouse on Taupo Quay (Attwell 2006:21). Whanganui was declared a port of entry in 1855 and a customs house was located on the corner of St Hill Street and Taupo Quay by 1857 (Goater 2009:59).

The first harbour navigation aid at the Heads was a 28-foot high pole erected on the cliff edge in 1842 (*New Zealand Gazette and Wellington Spectator* 04.05.1842). Vessels were advised to enter the harbour with the pole bearing N.½ W at a distance of ¾ mile. From 1856, communications signaling between the Heads and the town utilised a semaphore system between the Heads and flagstaff at the York stockade (Sole 2008:80). Other early wharves included the Commercial wharf at the end of Wilson Street, ferryman's jetty at the end of Victoria Street and the government wharf (Attwell 2006:25).

Figure 13: Detail of 1850 Admiralty chart showing the entrance to the Whanganui River.[4]

PILOT STATION (1855)

The signal station at the Heads was established in 1855, with the intention of appointing a pilot service in the immediate future (*Nelson Examiner and New Zealand Chronicle* 12.01.1856, p.4). According to Sole (2008:80-81), the first pilot was John McLaren, who held that post for 17 years.

[4] New Zealand, North and Middle Island. Sheet 5, Cook Strait and the coast to Cape Egmont / surveyed by Captn. J.L. Stokes ... [et al.], HMS Acheron, 1849-51; engraved by J. & C. Walker. John Lort Stokes 1811-1885; E. J Powell; J. & C. Walker (Firm); Great Britain. Hydrographic Office London: Hydrographic Office of the Admiralty, 1858. Accessed at https://natlib-primo.hosted.exlibrisgroup.com/primo-explore/fulldisplay?vid=NLNZ&docid=NLNZ_ALMA21237363130002836&context=L&search_scope=NLNZ

Figure 14: Early photo of Castlecliff prior to construction of wharf (Harding & Denton Collection, Wanganui District Library NZC 2.1.141)

Figure 15: Pilot station and flagstaff (Harding & Denton Collection, Wanganui District Library NZC 2.1.142)

HEADS REDOUBT (1860)

At the outbreak of the Taranaki wars in the 1860s tenders called for the erection of a blockhouse at the Heads, and for erecting of palisading for the same (*Wanganui Chronicle* 16.08.1860, p.1).[5] The successful tenderer was G. Roberts, T. Higgie, B. Hood and S. Oliver for £497 (*Wanganui Chronicle* 23.08.1860, p.2). The stated purpose of the blockhouse was to keep navigation open in case of hostilities (*Wanganui Chronicle* 02.08.1860, p.2). It was reported as largely completed by December later that year (*Wanganui Chronicle* 29.11.1860, 3).

Following the battle of Moutoa in May 1864, where Pūtiki forces defended the colonial settlement from a Hauhau attack led by led by Mātene Te Rangitauira of Taumaranui, the Heads redoubt was re-occupied by Captain Sir Robert Douglas (*Wanganui Chronicle* 11.05.1864, p.3)

"The town was further guarded, at the intimation of the threatened attack by the fanatics, by parties of the 57th posted—one, 57 strong, under Major Hazzard, about three miles up the river; another of the same strength, under Capt. Clarke, in a redoubt built by them on the top of a commanding eminence about : ½ miles from town on the Taranaki side ; and a third of 25 men under Capt. Sir Robert Douglas, in a blockhouse at the Heads, about four miles below the town. These posts were chosen with great judgement by Lieut-Colonel Logan, the Commander of the Garrison, and are still occupied" (*Wanganui Chronicle* 08.06.1864, p.2).

A sale notice in the Wanganui Herald for *"the Block House and all into it belonging, situate at the Wanganui Heads"* (*Wanganui Herald* 26.03.1870, p.3). It appears that it was not removed and the fate of the blockhouse is alluded to in the newspapers a few years later:

"If the Government were to send an Inspector of Pilot Stations and see what was necessary, they would find that the pilot has not a place to live in, only a stockade that was built for the troops, while one half of this building hangs over the cliff, a height of 100 feet from the sea level. He has to go to town to sleep. It is not likely he is going to huddle into the shed that the other three men have to put up with, a place measuring 22 x 10 feet. The public can see that the miserable Government is to blame for the neglect of duty." (*Evening Post* 29.04.1873, p.2).

"He further states that during the period he has been employed at the pilot station, he has closely watched the gradual though rapid demolition of the Castle Cliff, and his description of the area which this bluff formerly represented, as compared with the present superficial extent), and of the repeated compulsory removals of the flag-staff and signal-men's quarters, as foot by foot the steep precipice overlooking the entrance approached/ the buildings, finally their original sites disappearing forever, would lead one to suppose that Mr Blackett's prophecy is correct, which fortells the ultimately inevitable destruction of " the entire cliff or range yet remaining, unless measures be taken to prevent it." (*Wanganui Herald* 04.06.1874, p.2).

ENGINEERING WORKS 1865-1880

The first recommendations for engineering improvements along the Whanganui River were made by James Balfour in 1865, Balfour recommended protective works to stabilize erosion of the 'clay bluff' at the river mouth, which subsequently known as the Castlecliff (Burgess 1971:9), similar advice was reiterated in by another consultant engineer, John Blackett 1874 (Taylor and Sutton 2019:21-22). The formation of the harbour Board in 1876, saw the appointment of engineers Barr and Oliver who recommended training walls to ensure that breaches of the spit did not occur lessening the flow of water over the bar. These works occurred in 1880.

[5] Previously reported by Smart as having been constructed in 1868 in response to the threat from Titokowaru, but this is incorrect (see also Prickett 2016:182)

Figure 16: Harbour Board endowment transferred by Wanganui Harbour and River Conservators Board Act 1876 (Whanganui Regional Museum map 1957.96, reproduced from Taylor and Sutton 2019).

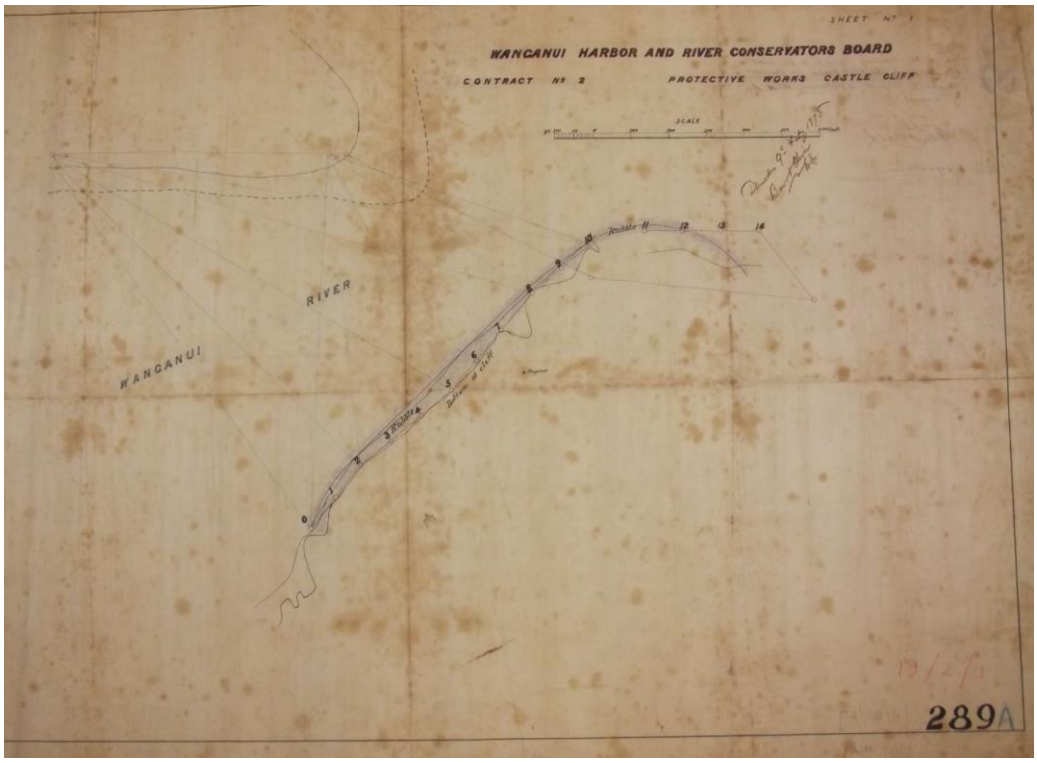

Figure 17: Castlecliff protective works proposed 1878 (WDC Archives 00057-0-7-20-6, reproduced from Taylor and Sutton 2019).

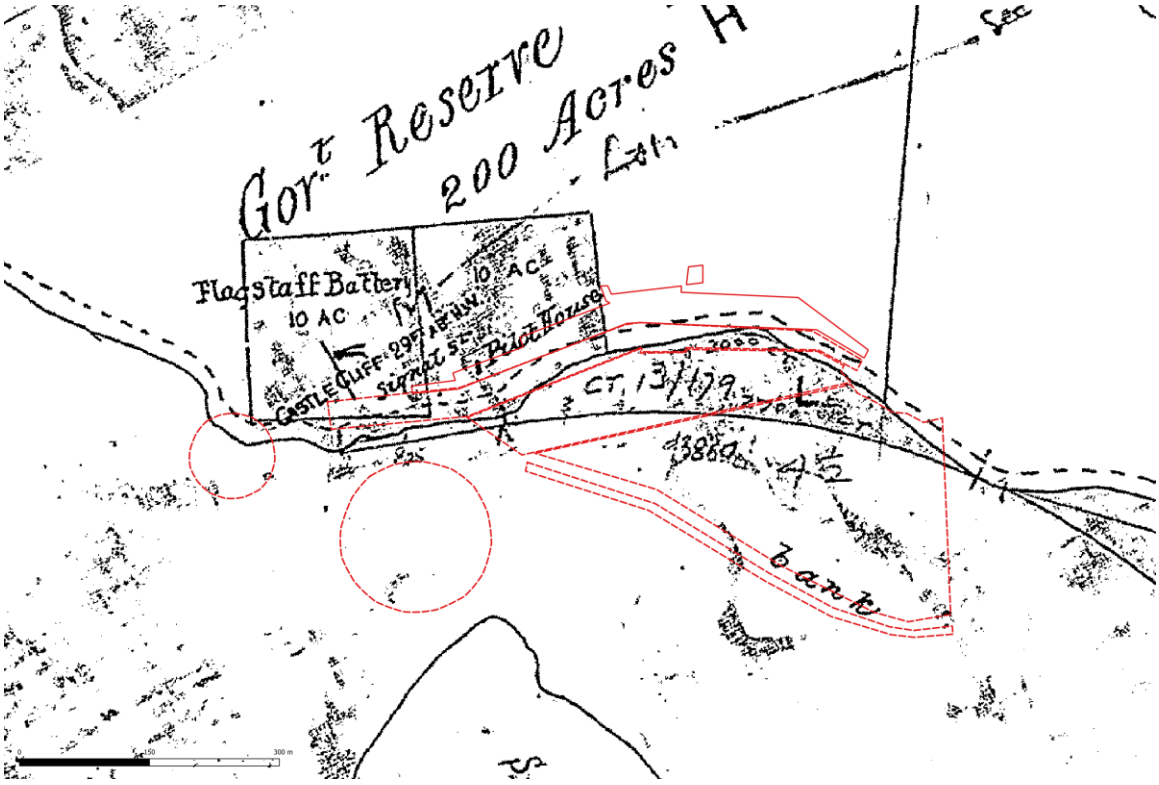

Figure 18: Detail of SO 11206 (1881)

Figure 19: Heads wharf being constructed in May 1884 (Harding & Denton Collection, Wanganui District Library, NZC2.1.271)

CASTLECLIFF PORT (1882)

The development of wharf facilities and a rail link to Castlecliff was proposed in 1881, Engineer Lloyd Hassell was employed by the Harbour Board to design the moles at the river mouth, and a programme of dredging was implemented between 1881-1883 (Burgess 1971:10).

A goods shed was erected at the wharf by 1891, but shortly after it was completed the verandah had to be reduced in size to allow for the passage of railway cars (*Wanganui Herald* 05.05.1891, 2).

The 1897 *Cyclopedia of New Zealand* entry for the Harbour Board describes the port facilities by the turn of the century:

"Wanganui Harbour Board. This body, which exercises control over the port of Wanganui, which extends from the Heads to the limit of tidal water, a point about fourteen miles inland from the mouth of the river, was formed in January, 1877. Having obtained borrowing powers from Parliament, the Board floated in London £,60,000 worth of debentures £,100,000 authorised by law), and with the proceeds undertook the work of improving the navigation of the river. Training-walls have been constructed in the river, from the town to Landguard Bluff, the cliff at the Heads has been protected by stone pitching, and a breakwater 900 feet long has been run out from the cliff in the direction of the bar. Dredging operations have been carried out between the training-walls, with the object of giving the same depth of water in the channel as obtains on the bar outside. Ample wharfage accommodation has been provided in connection with the railway terminus at Wanganui, and there is a commodious wharf at the Heads adjoining the Meat Freezing Company's works."

In 1903, an engineers report described the wharf as being 320 feet in length, and noted:

"The present wharf is constructed of piles in cross bays with lower and upper walings and braces, stringers, and decking, all of totara, which appears to be in a good state of preservation, except where eaten away by toredoes. The back of the wharf is formed by being planked up, and filled in with earth, which has had the effect of unduly straining the whole structure, bending the inner piles, and in one or two instances breaking them. This form of construction is not suitable for permanent structures; the backing should be entirely self-supporting." (*Wanganui Chronicle* 10.10.1903, p.7).

HEADS RAILWAY COMPANY (1884)

In April 1882 Heads Railway Company was formed for the purpose of providing a link between the town and the new deep-water port (Attwell 2006:56). The company was able to lease land from the Harbour Board endowment, and in July 1884 tender for the construction of the railway was awarded to Messrs O'Conner and Bradley.

In May 1889 the assets of the Heads Railway Company were sold to the newly formed Castlecliff Railway Company (Sole 2008:170). The terminus was initially sited at the new wharf, and by 1890 buildings included the station, a station house, engine shed and goods shed (SO13044). The contractor engaged to relocate the railway station was Nicholas Meuli (Sole 2008:170).

Washouts caused by severe flooding damage to the lines between 1904 and 1907 (Sole 2008:174; *Wanganui Herald* 10.05.1906, p.7), despite this the first decade of the twentieth century saw the peak of the railway and additional stops were added at Calton, Gonville, Balgownie, Imlay, Abbot and Castle Terrace (Cassels 1984:107-108). The Castlecliff Railway Company operated until 1956 when it was incorporated into New Zealand Rail.

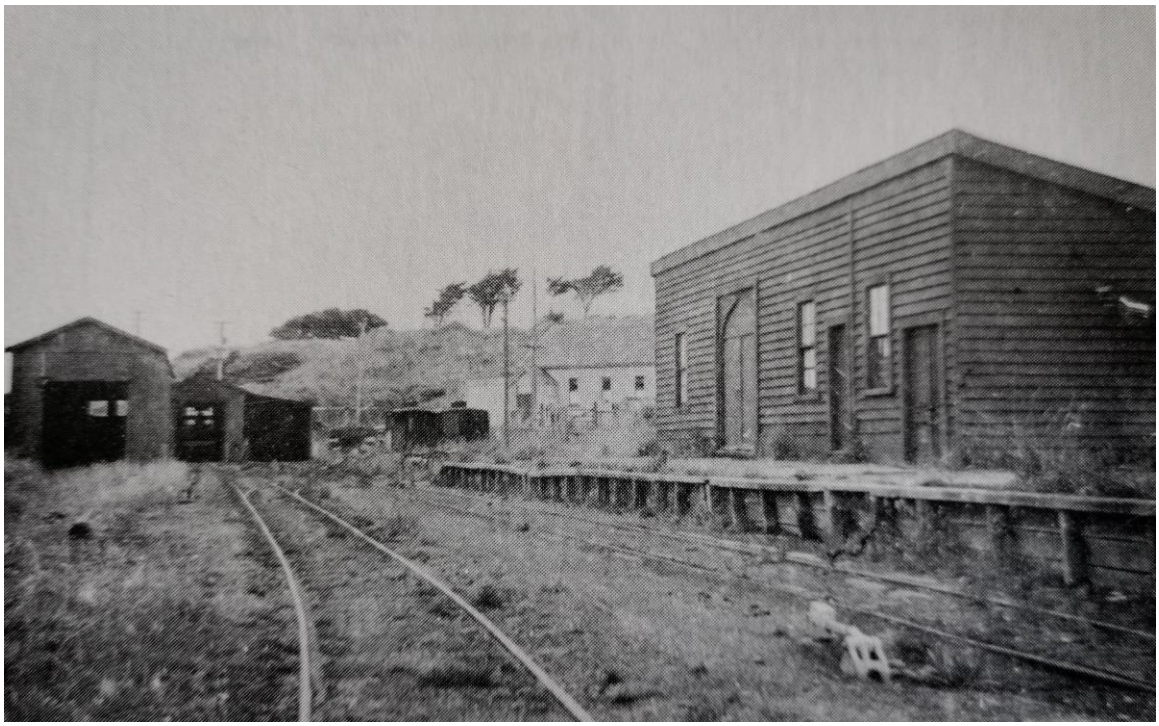

Figure 20: Castlecliff railway station and platform in 1941 looking NW towards engine shed (reproduced from Cassels 1984)

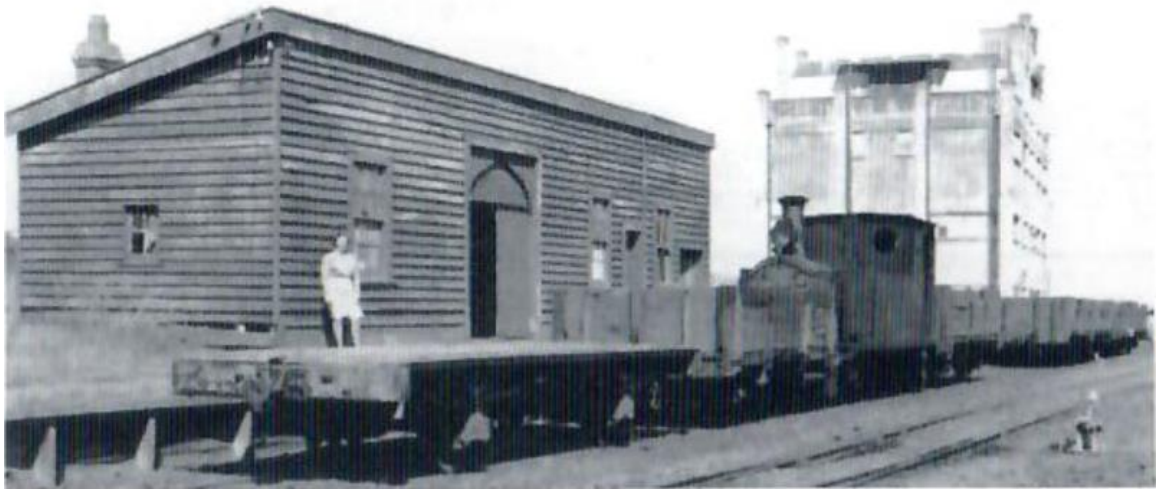

Figure 21: Castlecliff railway station in December 1946 looking opposite direction (reproduced from Sole 2008:175)

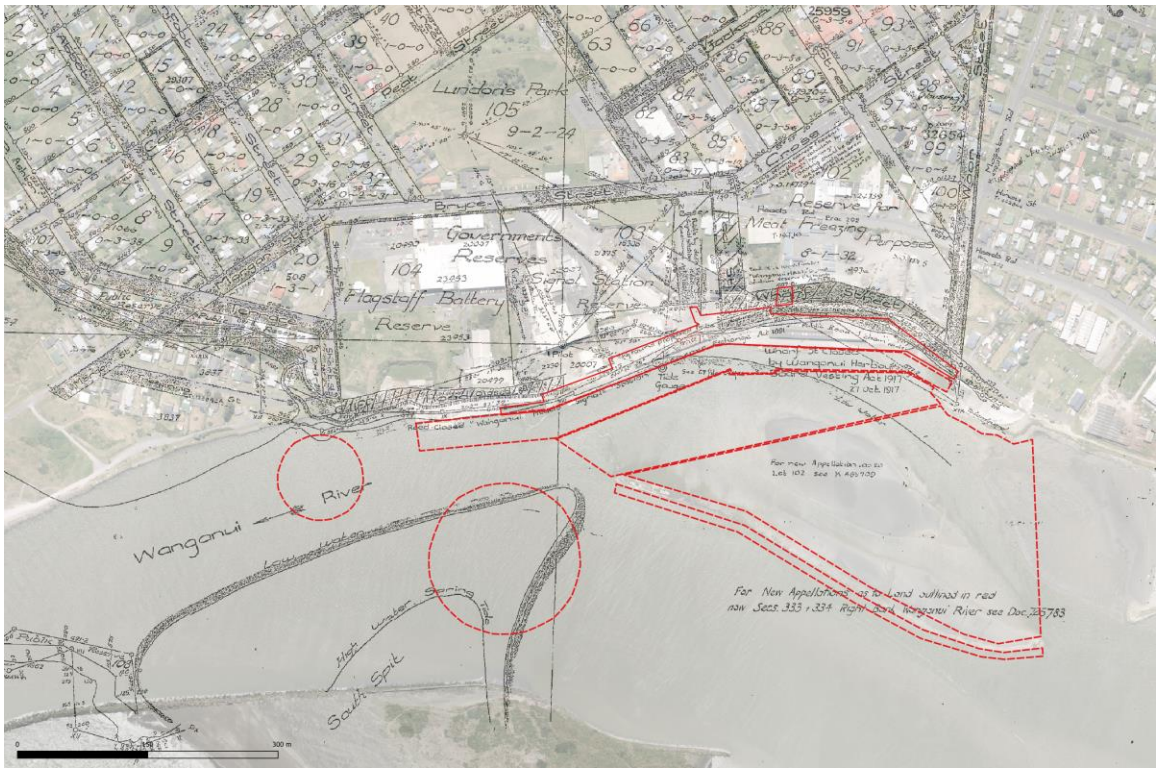

Figure 22: Detail from DP264 (1883) showing original subdivision of the Castlecliff area for the Harbour Board

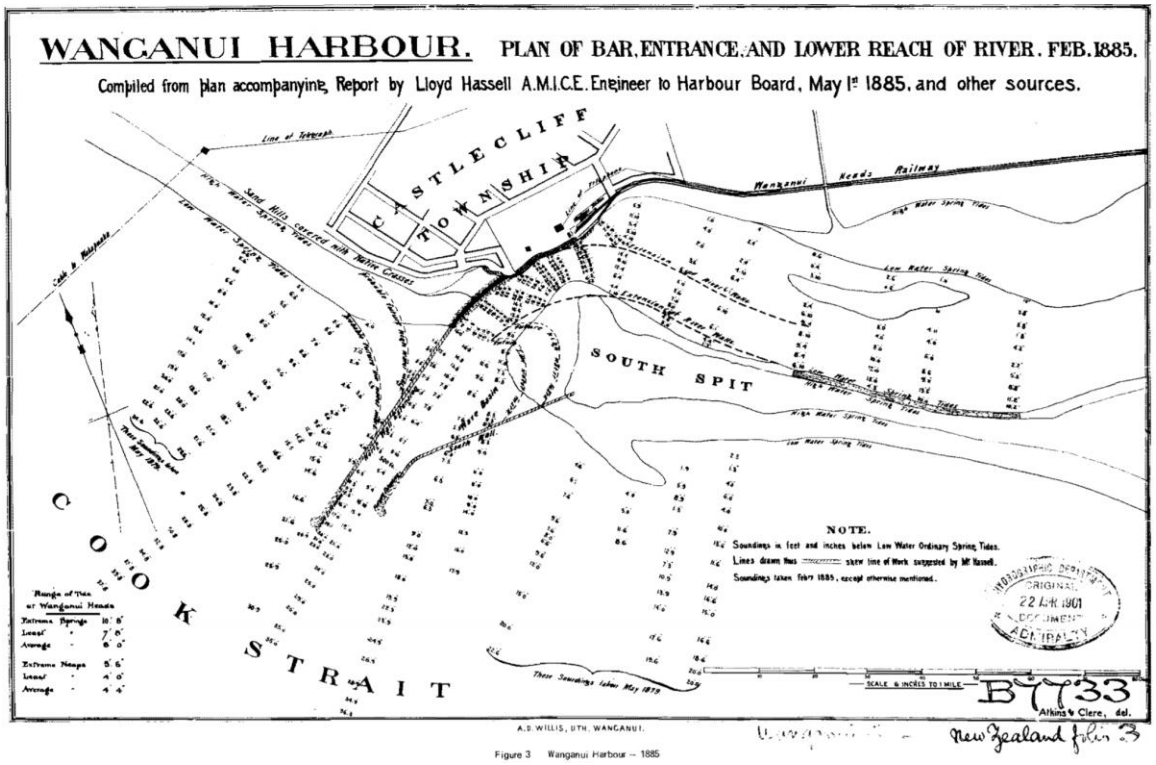

Figure 23: Plan of harbour 1885 reproduced from Burgess, shows buildings associated with the railway

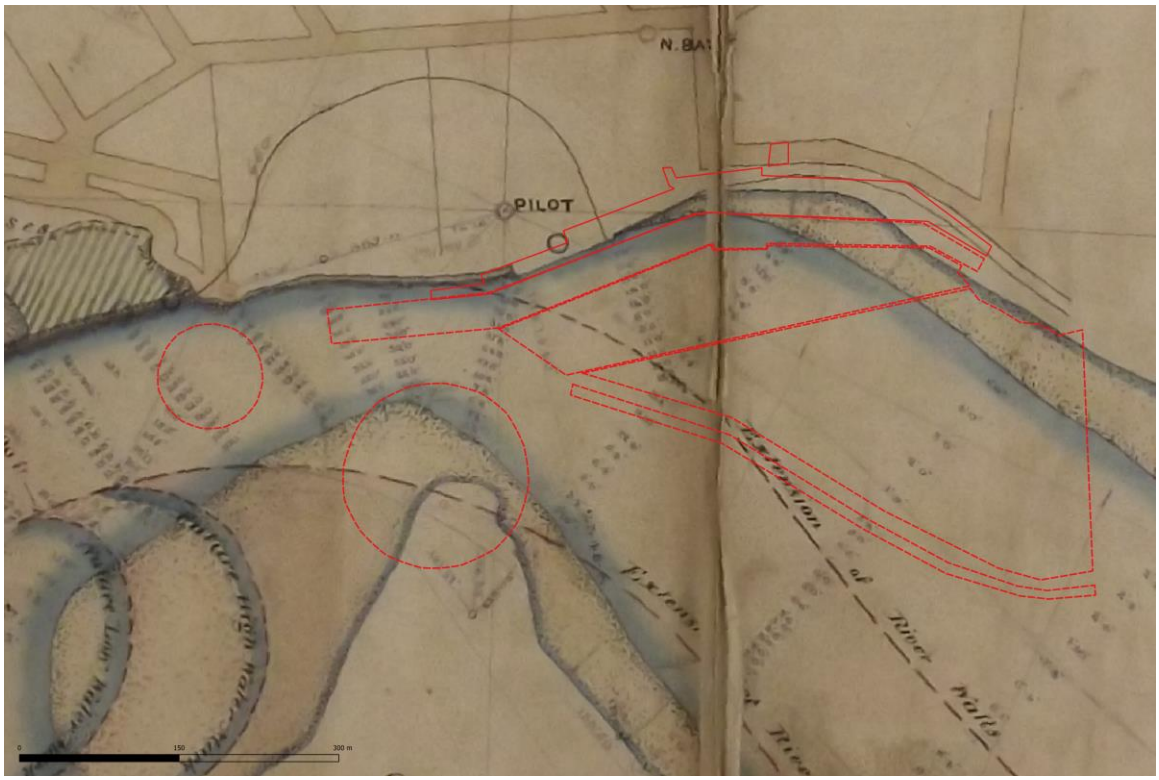

Figure 24: Detail of Feb 1885 plan of Wanganui Harbour

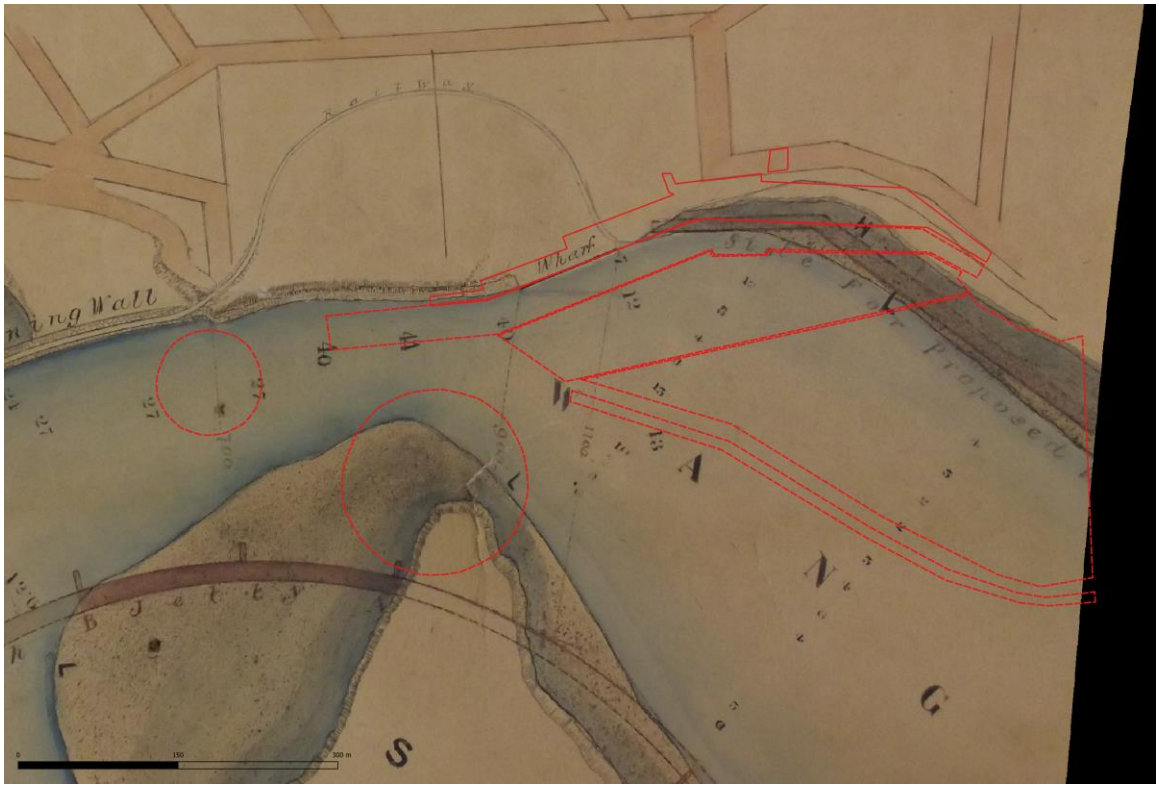

Figure 25: Detail of 1890 Hardy Johnston plan of the Mouth of the Wanganui River showing Proposed Piers

FREEZING WORKS (1890)

Following news of the first successful export of frozen sheep meat from New Zealand to England in 1881, a meeting was held in Whanganui on 2 August 1882 to establish if there was sufficient interest to develop a local frozen meat export industry (Sole 2008:180). After an initial setback caused by shipping company Shaw-Savill and Albion refusing to include Whanganui as a port of loading, the Wanganui Meat Freezing Company was formed in June 1890. A freezing reserve of 13-acres was established behind the wharf in 1890 (SO 13044), and arrangements were made with Tyser Co Ltd to ship produce between Castlecliff and London (Sole 2008:181).

The development of this area necessitated the relocation of the railway station (new location shown on Leslie Reynolds 1895 plan (Figure 18). Additional excavations were made into the Castlecliff marine terrace behind the wharf to make way for new buildings:

"The directors of our Freezing Company are certainly to be complimented upon securing Messrs Jamieson and Jamieson as contractors. They commenced the work of removing the sand and blue clay behind the station on the 20th, and already over fifty feet of the hill has been carted away to make a firmer surface soil to the surrounding depths of sand. The engine shed has been taken from its well-known resting place and placed temporarily and bodily some 50 yards up the line; single lines will be laid from what we may call the railway embankment through a cutting which has been effected in the low sand hill on the Wanganui side of the Railway Station, and carried nearly one hundred yards in the direction of the hotel almost parallel with Denby's line. Mr N. Meuli, who has the contract for removing the Railway Station to a position intermediate between the hotel and its present site, will probably commence that task next week." (*Wanganui Herald* 31.10.1890, p.2).

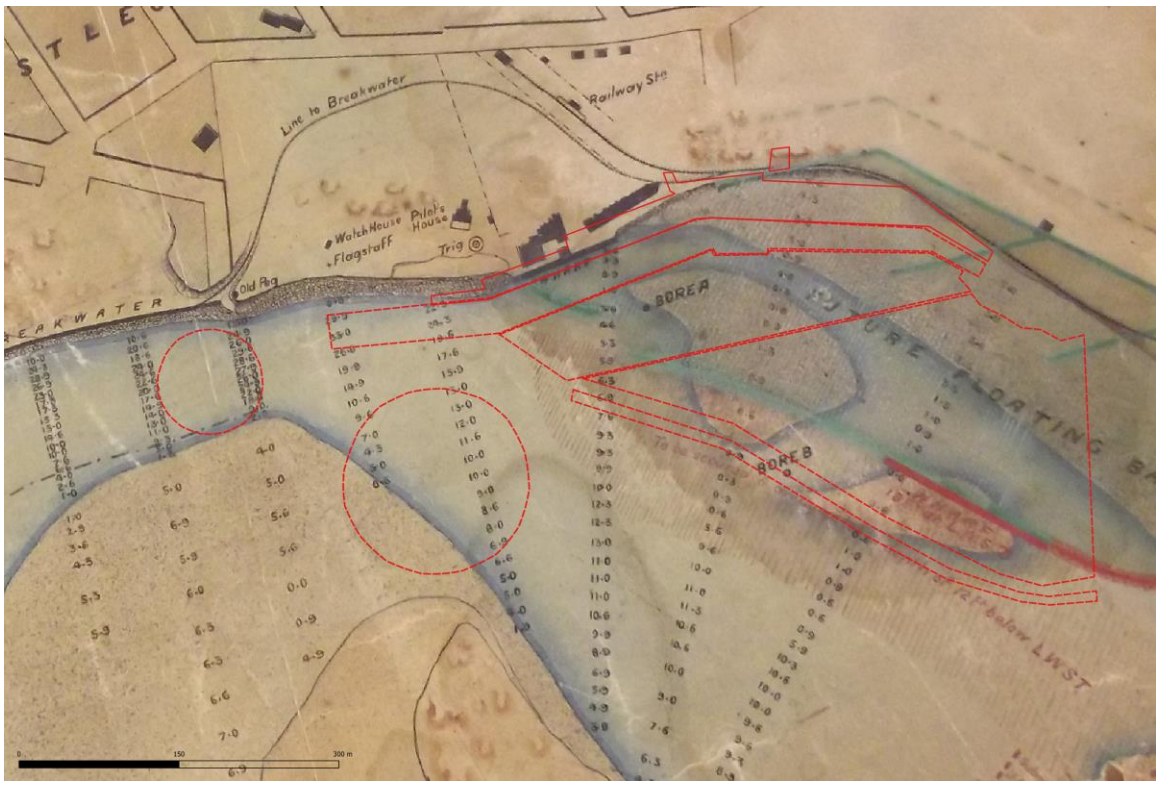

Figure 26: Detail of 1895 Leslie Reynolds plan of the Lower Portion Wanganui Estuary

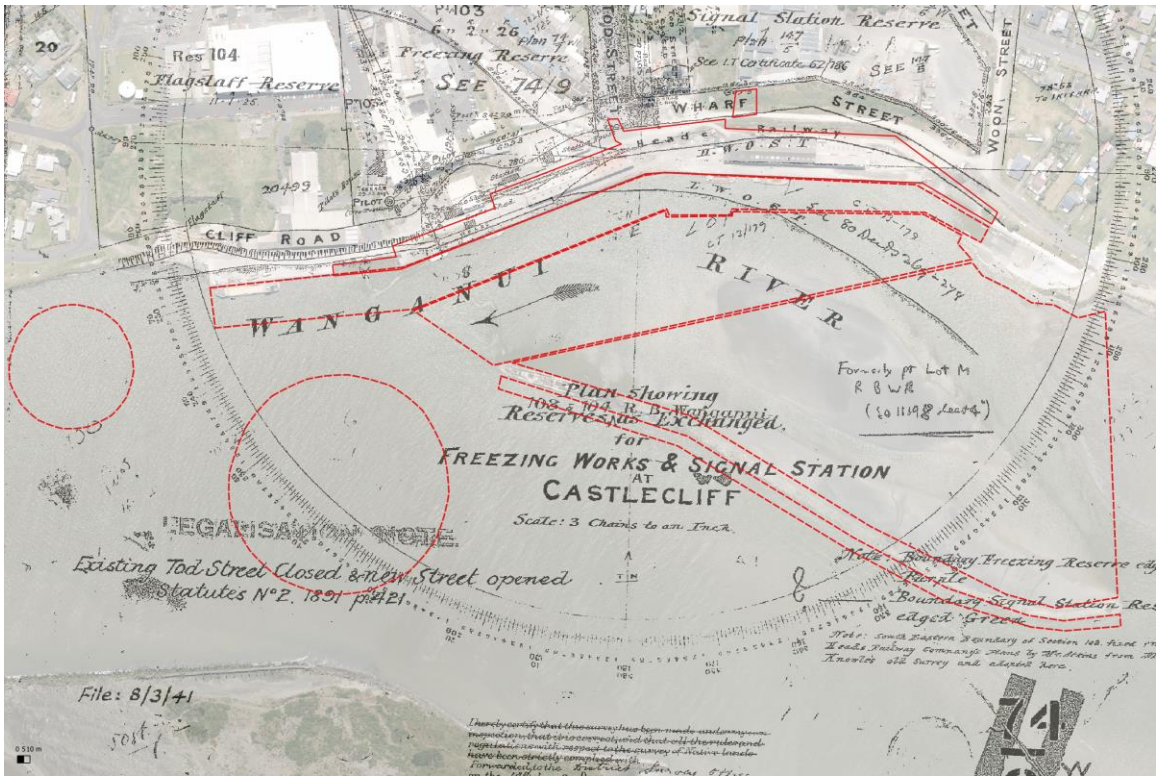

Figure 27: Detail of SO 13044 (1890). Note the signal station reserve is now relocated along with Tod Street to make way for the Freezing Reserve.

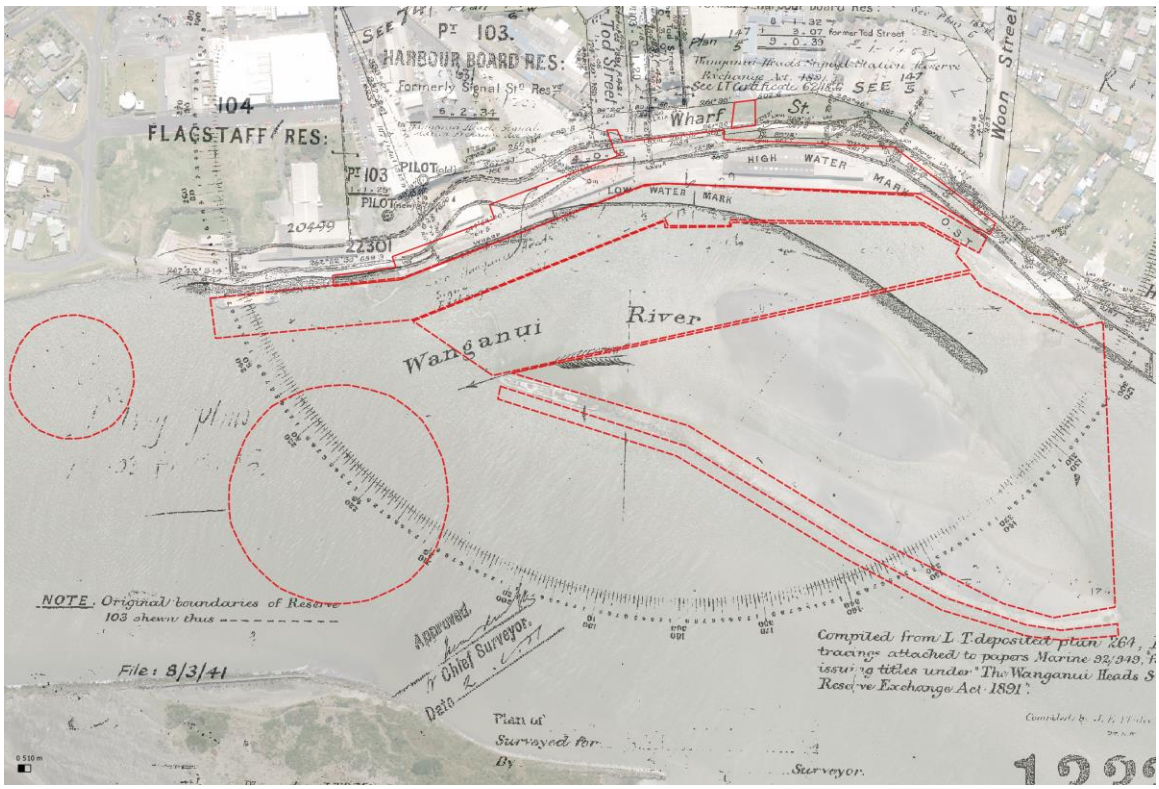

Figure 28: Detail of SO 13337 (1897)

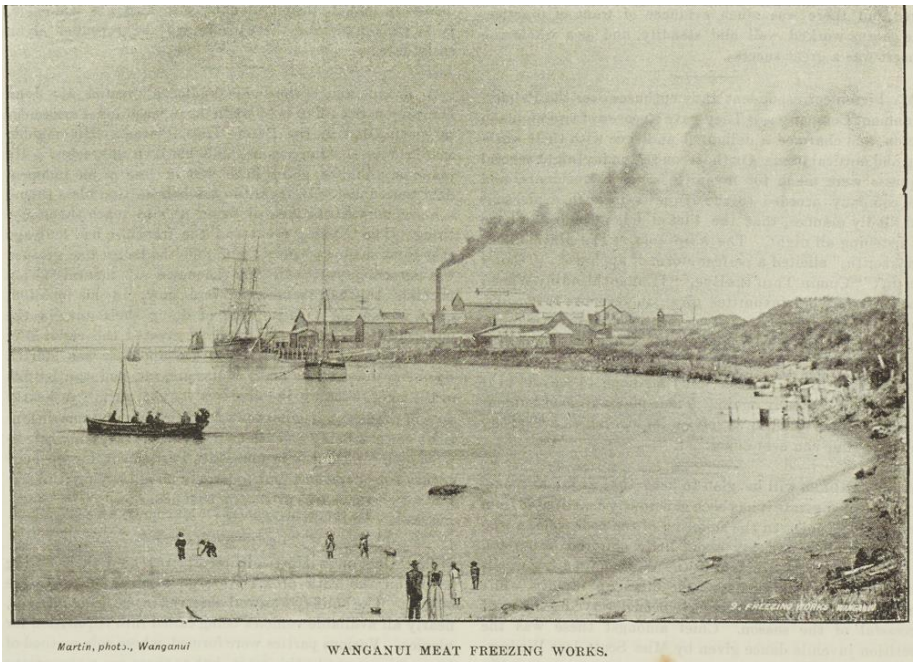

Figure 29: New Zealand Geographic image published 2 December 1893 showing the Castlecliff port area.[6]

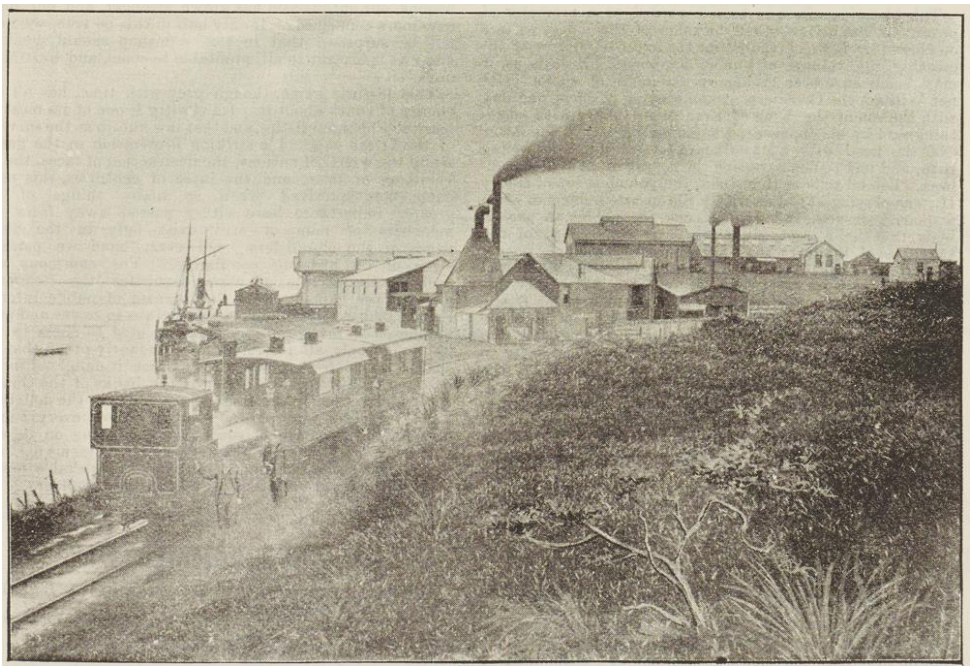

Figure 30: New Zealand Geographic image published 2 December 1893 showing the Castlecliff works.[7]

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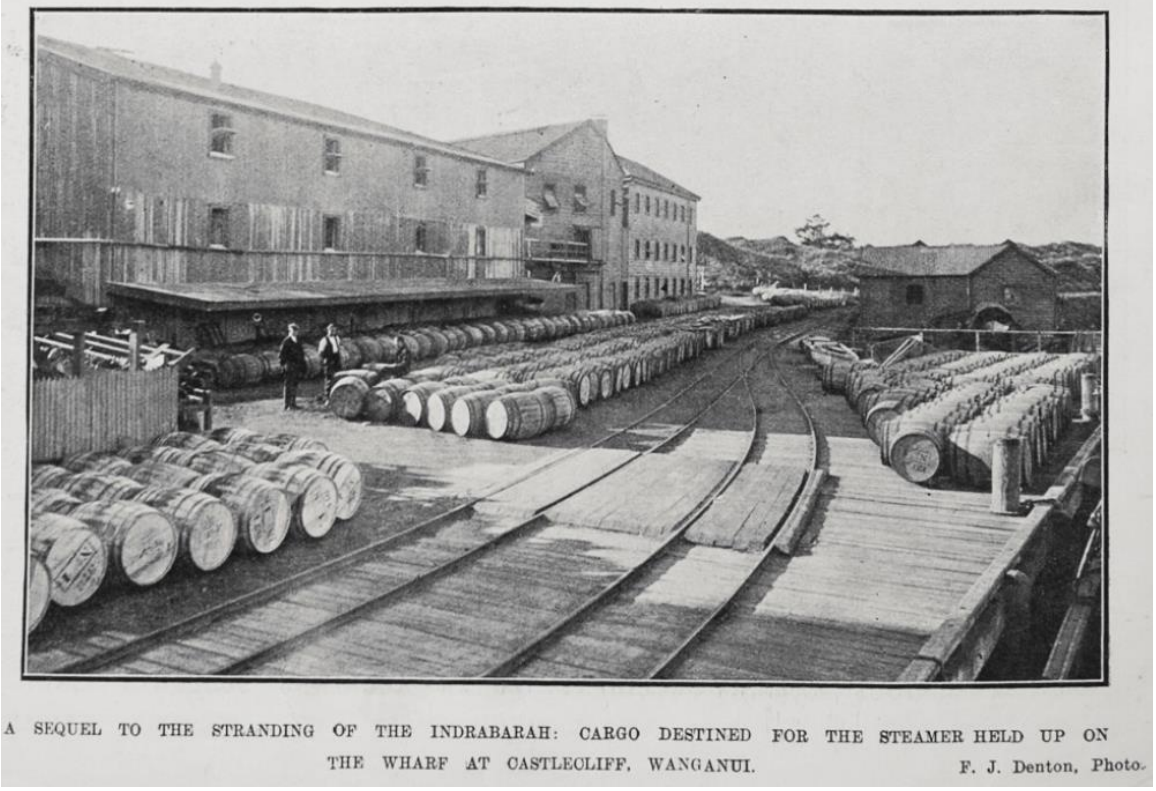
[6] Auckland Libraries Heritage Collections NZG-18931202-460-3 http://www.aucklandcity.govt.nz/dbtw-wpd/exec/dbtwpub.dll?BU=http%3A%2F%2Fwww.aucklandcity.govt.nz%2Fdbtw-wpd%2FHeritageImages%2Findex.htm&AC=QBE_QUERY&TN=heritageimages&QF0=ID&NP=2&MR=5&RF=HIORecordSearch&QI0=%3D%22NZG-18931202-460-3%22

[7] Auckland Libraries Heritage Collections NZG-18931202-461-3 http://www.aucklandcity.govt.nz/dbtw-wpd/exec/dbtwpub.dll?BU=http%3A%2F%2Fwww.aucklandcity.govt.nz%2Fdbtw-wpd%2FHeritageImages%2Findex.htm&AC=QBE_QUERY&TN=heritageimages&QF0=ID&NP=2&MR=5&RF=HIORecordSearch&QI0=%3D%22NZG-18931202-461-3%22

Figure 31: Wanganui Meat Freezing Company works c.1890s, the Heads wharf and area now occupied by red shed is right of frame (reproduced from Sole 2008:182)

Figure 32: Heads wharf probably during the first decade of the twentieth century. Reproduced from Sole 2008:84



A SEQUEL TO THE STRANDING OF THE INDRABARAH: CARGO DESTINED FOR THE STEAMER HELD UP ON THE WHARF AT CASTLECLIFF, WANGANUI. F. J. Denton, Photo.

Figure 33: The Meat Works buildings fronting onto the wharf Auckland Weekly News June 1913.[8]

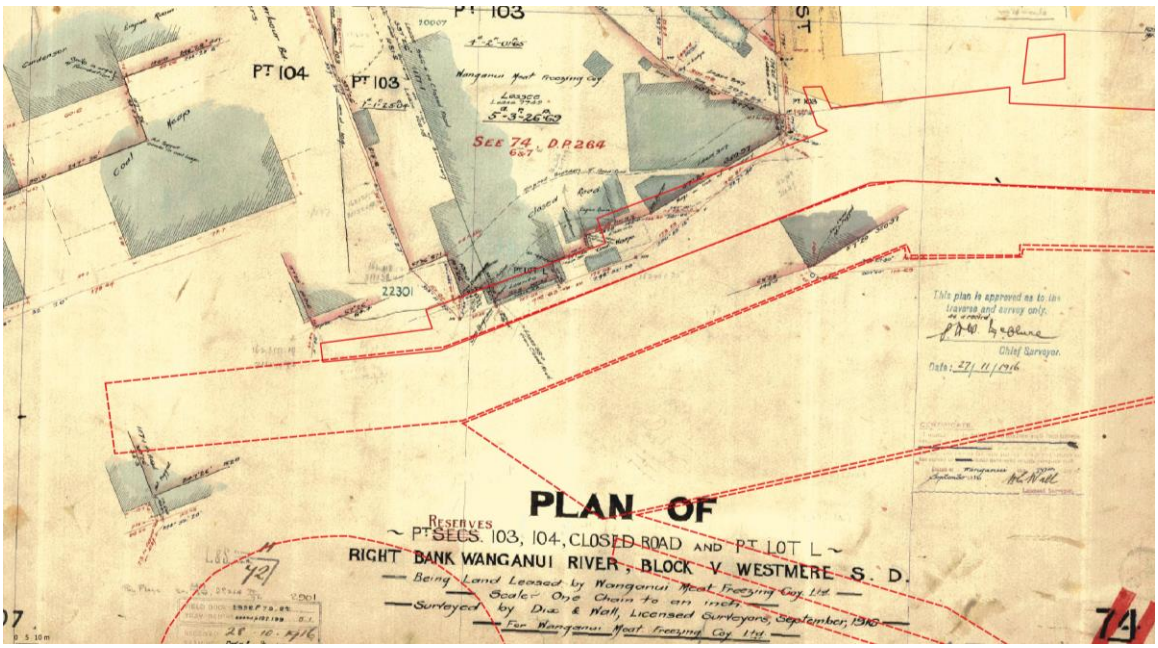


Figure 34: Detail of SO 17107 (1916)

[8] http://www.aucklandcity.govt.nz/dbtw-wpd/exec/dbtwpub.dll?BU=http%3A%2F%2Fwww.aucklandcity.govt.nz%2Fdbtw-wpd%2FHeritageImages%2Findex.htm&AC=QBE_QUERY&TN=heritageimages&QF0=ID&NP=2&RF=HIORecordSearch&MR=5&QI0=%3D%22AWNS-19130605-12-7%22; see also Denton, Frank James, 1869-1963. Barrels of tallow on the wharf at Castlecliff, Wanganui. Ref: 1/1-017355-G. Alexander Turnbull Library, Wellington, New Zealand. /records/22802279

An extension to the western end of the wharf was carried out in 1908, and attention turned again to the lack of storage shed facilities at the port (*Wanganui Herald* 07.08.1909, p.4; *Wanganui Chronicle* 04.07.1908, p.8). The *Wanganui Herald* reported on its progress:

"*At Castlecliff, all the piers on the 100 ft wharf extension had been driven, leaving six in the approach to complete the filing. The balance of the hardwood required to complete the wharf had not come to hand, though ordered nine months ago. Bluegum sheeting had been ordered and was expected about the middle of March."* (*Wanganui Herald* 07.03.1908, p.2).

This was a reoccurring issue for the port for several years, until the wharf shed that would later become known as the Red Shed was built in 1917:

"The clearing of the site for the Wanganui Meat Freezing Company's big cool storage addition at Castlecliff is serving a double purpose. The clay from the site is being deposited between the wharf extension and the shore, and the ground thus reclaimed will prove most useful to the Harbour Board for storage purposes, at the same time opening a way to the wharf where the dredge is to be moored when it arrives. The new shed which the Harbour Board is erecting at Castlecliff has a frontage of 289 feet to the new wharf, with a depth of 41 feet. It will be 14 feet high, and capable of holding five rows of bales of wool, or a total capacity of 8000 dumped bales of wool. The foundations for the dumping plaat are being put in by Mr John Jones, who has successfully coped with the water difficulties, which the man in the street (or it might be more correct to say, the man on the wharf) predicted would be almost insurmountable. When completed, the shed will materially assist in relieving the storage pressure. It will also prove a tremendous advantage if the Board could expedite the construction of the larger shed at Castlecliff, which it is intended to erect. A lot of preliminary work in levelling the site, etc., has to be done, but even if the building could be erected before the end of next year, it would be of immense benefit to producers and exporters." (*Wanganui Herald* 27.07.1917, p.4).

The Meuli wharf and reclamation was built in 1926. It was named for long time Harbour Board member Nicholas Meuli (1856-1926), the contractor was Mr Moye. The Victory shed which occupies part of the reclamation was built in 1945.

Figure 35: Wanganui Harbour 23 November 1921, Castlecliff Wharf, SS Ihumata, SS Waimea SS Calm (framed, has negative) WDC 00058:0:38.[9]

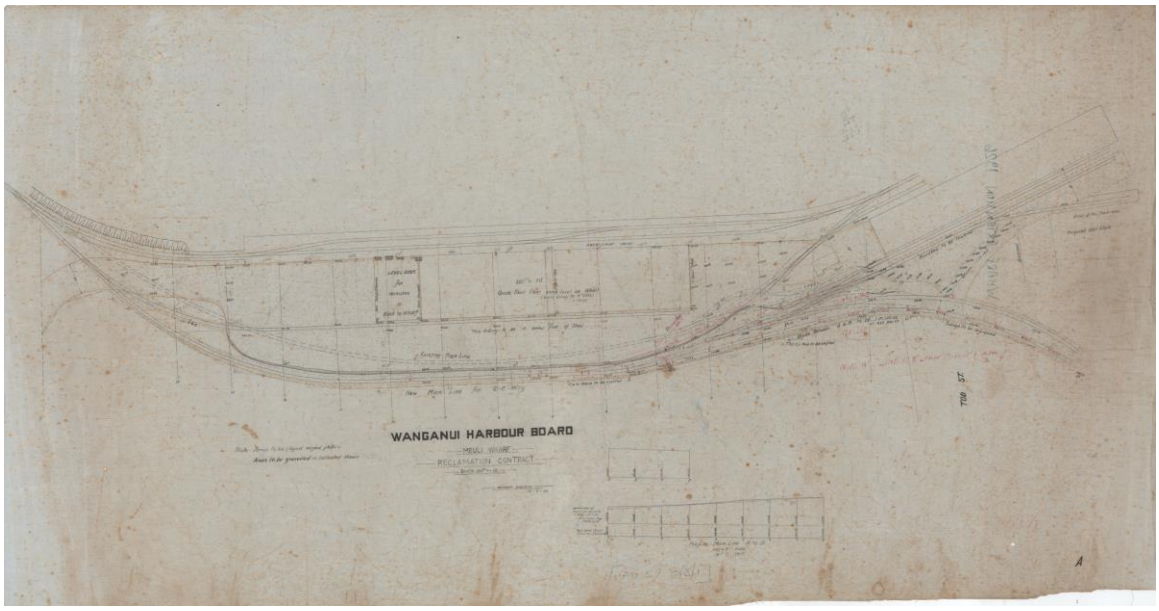


Figure 36: Meuli wharf reclamation plan (1926). Transects are provided on separate sheets for this plan

[9] https://archivescentral.org.nz/whanganui-dc/record/wanganui-harbour-23-november-1921-castlecliff-wharf-ss-ihumata-ss-waimea-ss

Figure 37: Detail of Whites Aviation aerial photo showing Castlecliff wharves in 1948

Figure 38: Detail of Whites Aviation aerial photo showing Castlecliff wharves in August 1958

Figure 39: Detail of Whites Aviation aerial photo showing Castlecliff wharves in 1963

The New Zealand Archaeological Association Site Recording Scheme was first established in the late 1950s, and the earliest recording of archaeological sites around Whanganui was carried out shortly after this (Smart 1960; 1963). This work was the focus of a voluntary archaeological group coordinated by Maxwell Smart who had been curator at the Wanganui Museum, and his son Colin Smart. Early work focused on recording the fishing and defensive pā around the city and lower reaches of the river. This survey work was expanded upon by further archaeological surveys focusing on Māori occupation along the Whanganui River in the following decades (Walton 1979; Hellen and Olsen 1984).

Some of the work carried out by Maxwell Smart was later incorporated into a book he co-authored with Arthur Bates, which includes the following description of Pungarehu pā:

*"**PUNGAREHU:** The most seaward fishing pa of the Ngarauru tribe, and often referred to in the Land Court records of the 1860s's as sited near the Pilot Station at Castlecliff so it would have been near the intersection of Morgan and Tregenna Streets. No visible evidence of this rather exposed fishing village has been discovered but its importance to the Waitotara Maori was significant and its quick access to the ocean fishing grounds was an added advantage."* (Smart and Bates 1972:30).

Mention is also made of Kai Hau o Kupe, referring to the wider area, and to Kokohuia located 'on the Castlecliff side, [of the Balgownie swamp] adjacent to the river bank'

A regional synthesis of archaeological work in the Taranaki and Whanganui Regions was the focus of a Department of Conservation Science and Research publication (Walton 2000). Two of the key thematic focuses in this work were Māori settlement patterns and New Zealand Wars sites. Military sites at Castlecliff have been referenced in national thematic research for New Zealand wars sites (Prickett 2016) and coastal defence (Cooke 2000).

In 2001, the Wanganui District Council commissioned an archaeological scoping study for the District Plan (Taylor and Sutton 2001). Archaeology North was contracted again by the District Council in 2010 to create an inventory of archaeological sites, which included Pungarehu:

"Pungarehu II, Nga Rauru fishing pa at Whanganui River mouth west bank, near Castlecliff Pilot Station (near intersection Morgan and Tregenna Streets) [Smart & Bates 1972: 30]; Te Pungarehu fishing kainga / wahi tapu at mouth Whanganui R in are known as Te Kaihau o Kupe, at the Pilot Station at the Heads [Hawira 2007: 12], Heads Redoubt built on this kainga [Waitai & Hawira 2007: 14, map 22] Te Pungarehu / Okupe (Whanganui Purchase area) seasonal fishing kainga/ wahi tapu of Pukeko & Iti at Heads [Hawira 2007:1 6] map [Waitai & Hawira 2007: 22]." (Horwood and Taylor 2011).

The 2011 inventory also makes specific mention of the absence of recorded sites in the city and acknowledges it as a recording bias rather than an absence of sites:

"Few archaeological sites have been recorded within the Wanganui Central Business District or urban Wanganui, although significant historic archaeological remains are likely to be present there… The inner city urban area is a priority area for development, and a practical method of providing for recognition of urban archaeological and historic sites needs to be determined. Possibly rather than recording individual sites a landscape approach could be useful." (Horwood and Taylor 2011:16).

A limited amount of archaeological monitoring and investigation work on inner city sites in Whanganui has been carried out in the last twenty years but is becoming increasingly common. The most relevant work to date in the Castlecliff area is an archaeological assessment of the north mole carried out by

Archaeology North (Taylor and Sutton 2019). This research included some detail on the port at Castlecliff but was principally focused largely on the coastal works to the west. In 2020 the author prepared an archaeological assessment for the World War 1 era Red Shed which included limited buildings recording (Dodd 2020).

PREVIOUSLY RECORDED SITES AND LISTED PLACES

There are presently 15 recorded archaeological sites at Castlecliff within a kilometre of the project area. Many of these were recorded as a result of research carried out by the author for the Red Shed assessment, and are shown in the figures below:

NZAA	Site type	Location	Recorded by
R22/429	Military (WWII pillbox)	Castlecliff beach	Walton, 2000
R22/430	Military (WWII pillbox)	Castlecliff beach	Walton, 2000
R22/431	Military (WWII pillbox)	Short Street	Walton, 2000
R22/438	Military (WWII pillbox)	Castlecliff beach	Walton, 2000
R22/581	Transport-communication - north mole	Short Street	Taylor, 2019
R22/582	Military (WWII pillbox)	North mole	Taylor, 2019
R22/603	Hulk (Te Anau)	Training wall	Dodd, 2020
R22/604	Military (WWII pillbox)	Lundon Park	Dodd, 2020
R22/605	Transport-communication - Heads wharf	Castlecliff port	Dodd, 2020
R22/606	Transport-communication – Meuli wharf	Castlecliff port	Dodd, 2020
R22/607	Transport-communication – No.1 wharf	Castlecliff port	Dodd, 2020
R22/608	Transport-communication – Castlecliff station	Castlecliff port	Dodd, 2020
R22/609	Transport-communication – watchhouse, flagstaff	Castlecliff port	Dodd, 2020
R22/610	Transport-communication – pilots house	Castlecliff port	Dodd, 2020
R22/611	Industrial – Wanganui Meat Freezing Co	Castlecliff port	Dodd, 2020

Figure 40: Archsite map generated 19 August 2020 showing recorded sites around Castlecliff

A review of the New Zealand Heritage List on-line portal indicates that there appear to be no Castlecliff properties included in the immediate environs of the project area, the nearest being the Braves Softball Club Rooms (former) near the Puriri and Totara Street intersection, Balgownie (No. 5305). Heritage places listed in the Whanganui District Plan in close proximity to the project area are shown and listed in the tables below:

Plan ID	Site type	Location	Recorded by
91	WWII pillboxes	Castlecliff beach	Bowman and Cable, 2012
338	Building – fire station	6 Bryce Street	Bowman and Burr, 2012
K228	Hulk – Te Anau (1879-1924)	Training wall	
K232	Placename - Kaihauokupe	Castlecliff	
K233	Pillbox (R22/431)		
K236	Redoubt (Heads)	Castlecliff	
K237	Kainga - Pungarehu	Morgan Street	
K242	Pillbox (R22/438)		
K245	Pillbox (R22/429)		
K234	Pillbox (R22/430)		

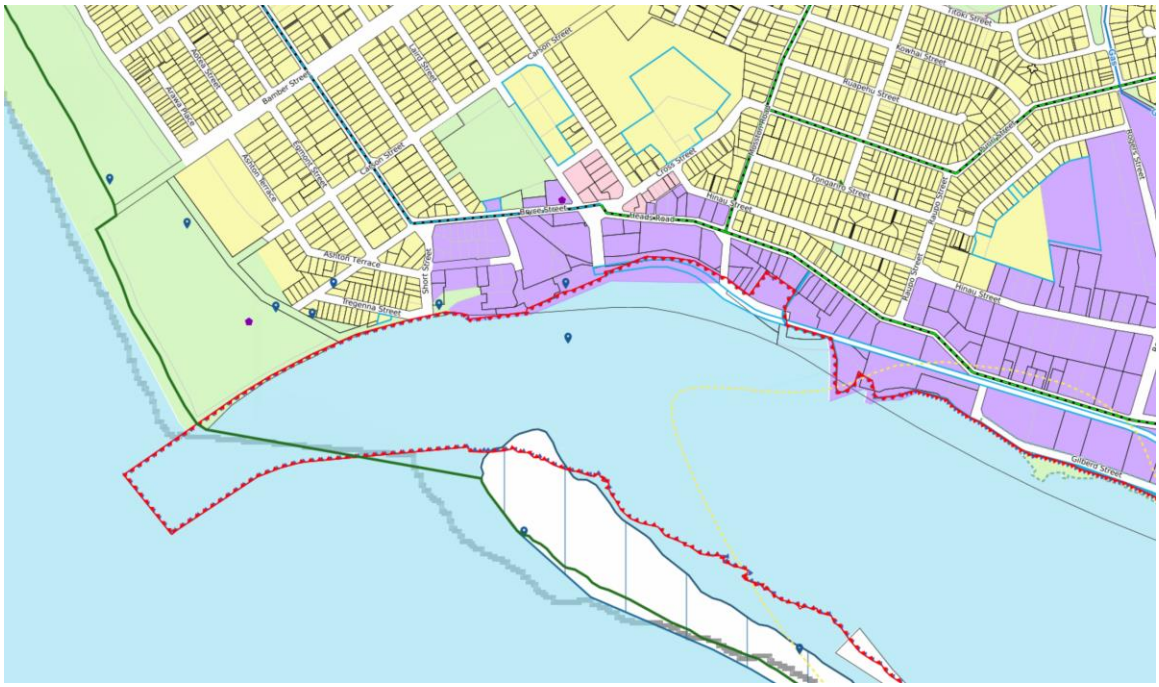


Figure 41: Detail of Whanganui District Plan maps showing scheduled heritage places in the vicinity of the port

There have been at least 29 shipwrecks (or scuttled hulks) around the mouth of the Whanganui River (Figures 42 and 43). The locations for some of these have been entered in the Australian National Historic Shipwrecks database (which currently extends to cover a number of countries in the south Pacific including New Zealand.

Figure 42: Screen grab from Australian National Historic Shipwrecks Database with names of vessels annotated

Name	Built	Wrecked	Type	Tonnage	Location
Surprise	1839	1841	Schooner	30	Castlecliff beach
Rainbow	1846	1846	Schooner	53	Whanganui bar
Governor Grey	1847	1854	Schooner	26	Whanganui bar
Harriet Leathart	1848	1848	Schooner	45	Whanganui bar
Phoebe	1850	1857	Schooner	23	Whanganui bar, south spit
Emily Allison	1850	1865	Three-masted schooner	138	Whanganui
Stormbird	1854	1916	Steamer	96	Whanganui bar, south mole
Daring	1856	1865	Two-masted schooner		Whanganui heads
Charles Edward	1864	1908	Paddle steamer	140	Whanganui, end of breakwater
Moa	1864	1914	Steamer	70	Whanganui, 2½ miles south of heads
Meteor	1864	1873	Schooner	43	Whanganui bar, north spit
Adeona	1836	1865	Schooner	99	Whanganui bar, south spit
Surprise	1847	1865	Schooner	53.6	Whanganui bar, south spit
Maiden City	1853	1878	Schooner	27	Whanganui, 1 mile north of signal station
Mabel Jane	1872	1878	Schooner	38	Whanganui river entrance
Edith May	1875	1892	Schooner	213	Whanganui, 3½ miles north of heads
Grace Dent	1878	1895	Schooner	98	Whanganui heads
Dorset	1883	1917	Steamer	61	Whanganui bar
Mana	1886	1937	Steamer	92	Whanganui River, south spit
Ururoa	1900	1908	Scow	212	Whanganui
Eunice	1902	1917	Auxiliary OEV	190	Whanganui
Cyrena	1913	1925	Steamer	2138	Whanganui
Wetere	1913	1936	Steamer	111	Whanganui, Imlay wharf
Galileo	1914	1939	Ketch	14	Whanganui
Port Bowen	1919	1939	Screw steamer	8267	Whanganui heads (salvaged)
Regina	1948	1963	Fishing boat		Whanganui
Wairoa	1967	1978	Tender		Whanganui River mouth
Wairata		1977	Fishing boat	36	Whanganui, south side of river entrance

Figure 43: Table of shipwrecks from around the Whanganui Heads (after Dodd and Clough 2015)

A review of archival plans shows the movement of the river mouth and Castlecliff shoreline over time and this can in part inform the likelihood of encountering insitu nineteenth century harbour infrastructure (Figure 44). These suggest dynamic river mouth throughout the nineteenth century with mobile sand drifts and spits. The creation of the moles, and training walls in the early twentieth century significantly stabilized this area.

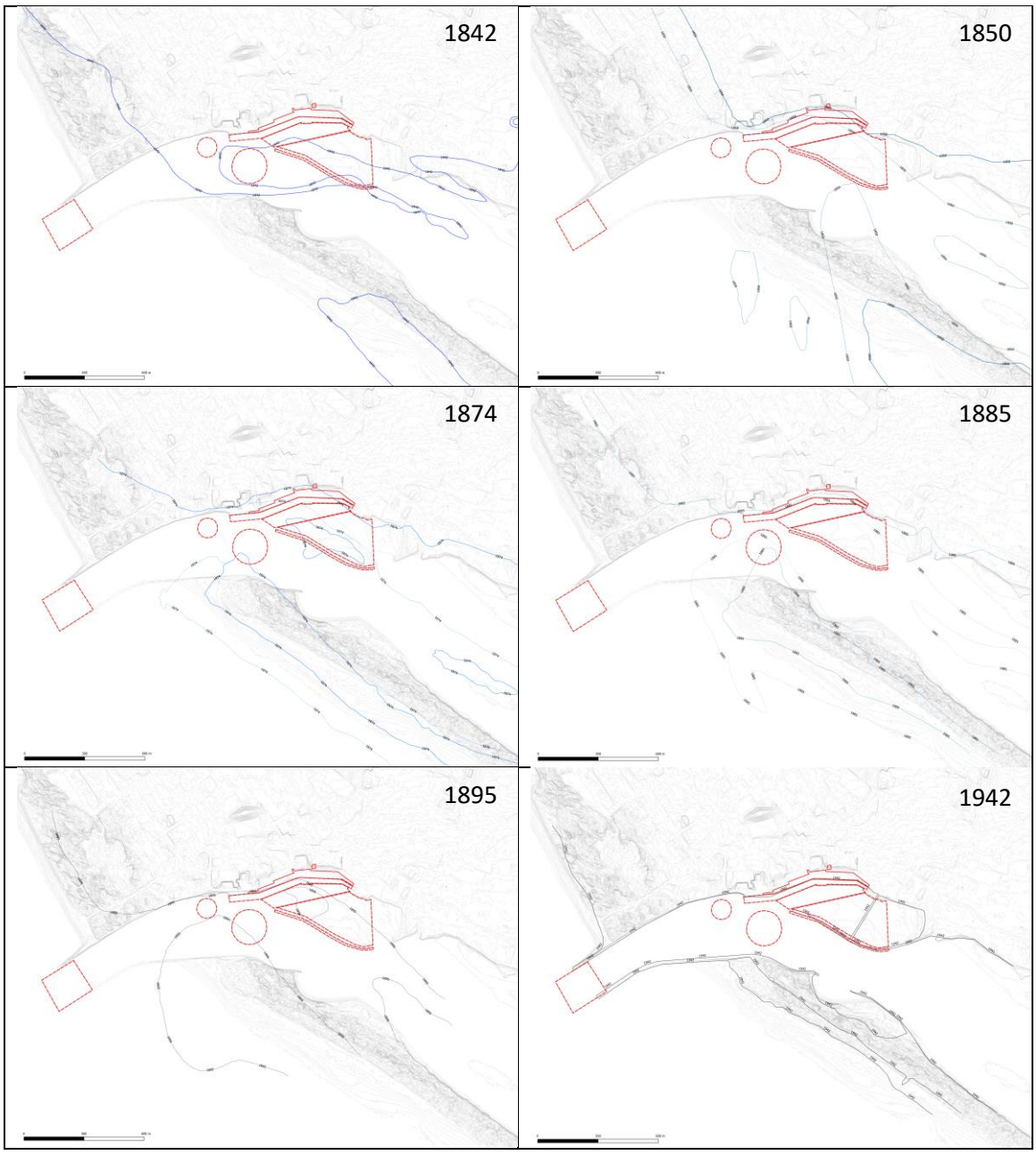


Figure 44: Changes in the Whanganui River Heads over time as recorded on old survey plans

The area directly in front of the wharves enclosed within the turning basin was also dredged in the twentieth century and this significantly reduces the likelihood of encountering shipwreck material or other nineteenth century seabed deposits in much of the area currently proposed for dredging (Figures 45 and 46).

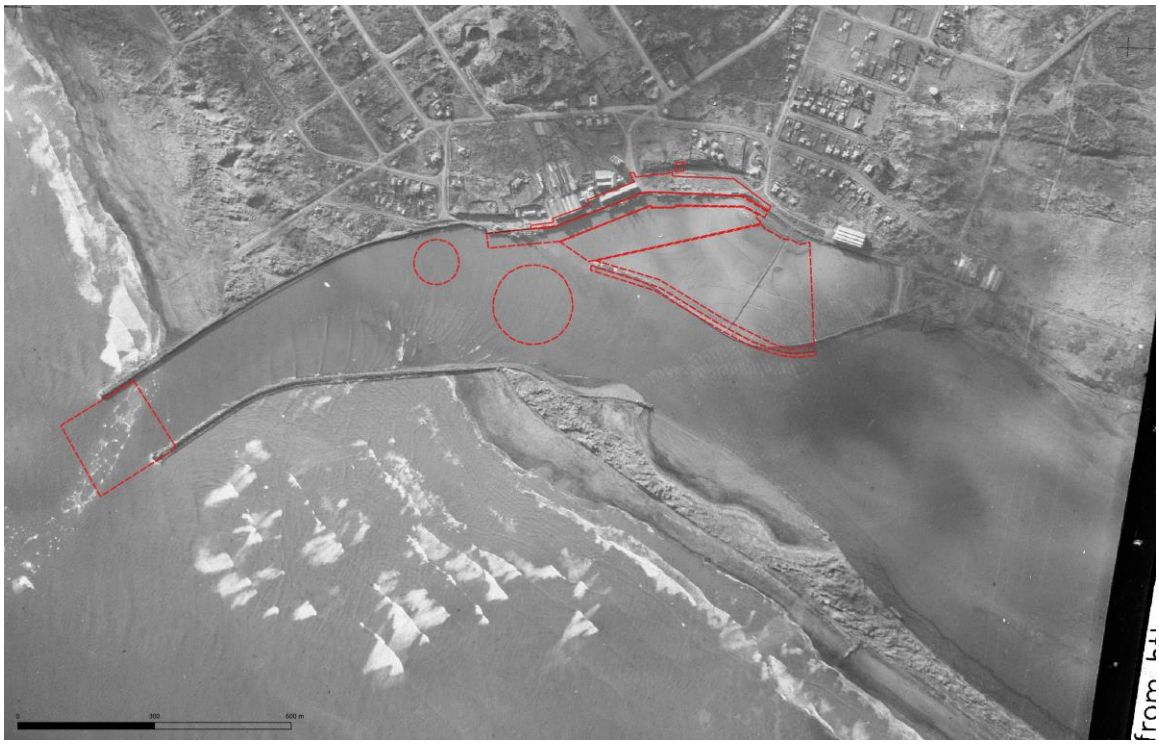


Figure 45: Detail of 1942 aerial sn215 382 3. Proposed dredge area encompasses much of the former turning basin

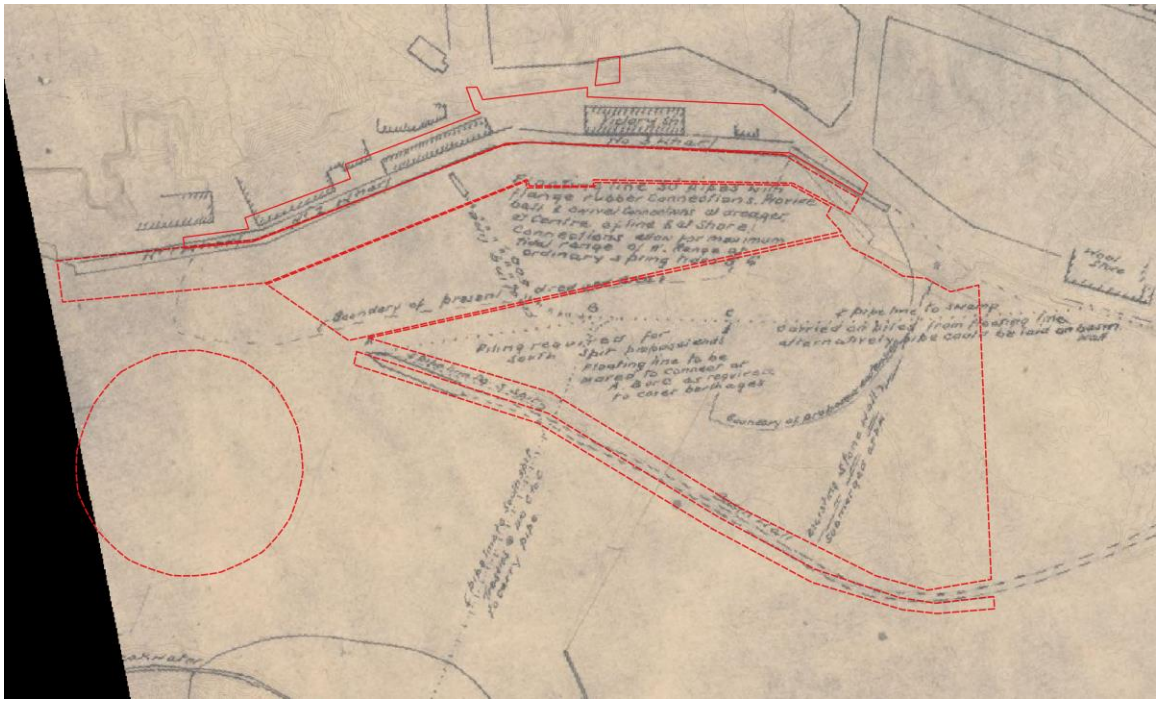


Figure 46: 1958 plan shows boundary of previously dredged area in front of wharves

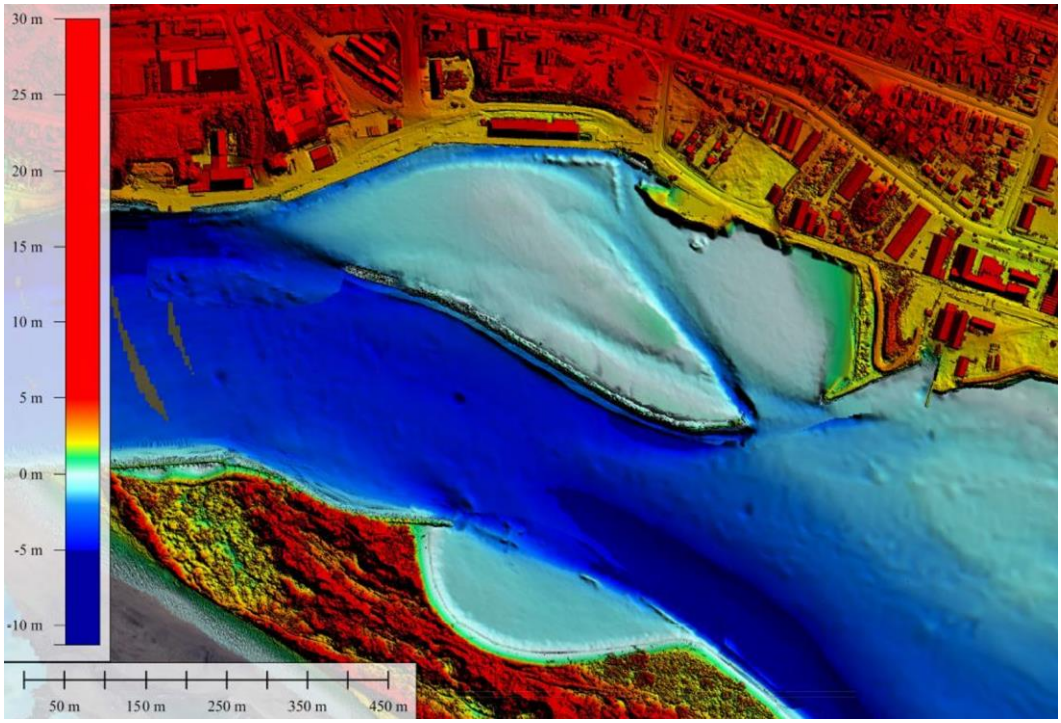


Figure 47: Whanganui Port bathymetry (supplied Whanganui District Council)

Figure 48: Low tide within the proposed dredge area, looking southeast from No.3 wharf with basin wall in background

The most likely places where pre-1900 archaeological deposits or structures will be encountered is directly alongside and underneath the western end of the No.2 wharf. The original fabric of No.2 wharf meets the criteria for archaeological protection, and areas beneath wharves tend to accumulate artefacts over time and will be less affected by twentieth century dredging activity. These areas also tend to accumulate pieces of wharves cut from the wharf structures during repair, of that have fallen off due to decay (for examples of this refer Dodd 2012; 2021).

Although less likely it remains a possibility that material from the fourteen pre-1900 reported shipwrecks at or near the Whanganui Heads may be excavated by the dredge.

RECORDED ARCHAEOLOGICAL SITES – PRELIMINARY DESCRIPTIONS

The following descriptions relate to recorded and unrecorded archaeological sites and features within the project area.

Where available dates of construction or deposition have been provided to differentiate protected pre-1900 archaeological sites from unprotected post-1900 archaeological sites. Additional historical detail is available in the individual Archsite records, and the previous archaeological assessment for the red shed (Dodd 2020).

R22/603 Te Anau (1879-1924); (Enterprise 1866-1924) E1770252 N5576325

This site record is for the vessels ss *Te Anau* (Official No. 75225) and hulk of the topsail schooner *Enterprise* (Official No.52393) which were scuttled in 1924 to form part of the training wall for the port at Castlecliff.

The ss *Te Anau* (Official No. 75225) was built by Wm Denny & Bros, Dumbarton, Scotland in 1879 (Leven Yard, No.226). It was commissioned by the Union Steamship Company, launched on 03/11/1879, and first registered 03/03/1880 (4/1880, Dunedin). Dimensions: 270.0 ft Length, 34.2 ft beam, 22.5 ft depth, tonnage: 1652 grt, 1028 nrt. It was fitted with a C2 cyl 200 hp engine driving a single screw. *Te Anau* was sister ship to the *Rotomahana*. *Te Anau* was put into the trans-Tasman passenger and cargo service for 10 years, and then transferred to the Wellington-Lyttelton service. In 1916 she was relegated to cargo only, and in 1924 sold to Todd & Borlase, Dunedin. The vessel was partially dismantled at Port Chalmers and towed to Whanganui by the *Kaitoke*. On 23/08/1924 Te Anau was scuttled to form part of the training wall for the port at Castlecliff, reportedly positioned on top of the coal hulk *Endeavour* (Sole 2008:134-135; Goater 2009:60), although other sources say on top of schooner *Enterprise* (Attwell 2006:60).

The topsail schooner *Enterprise* (Official No.52393) was built by Rock Davis at Brisbane Water, NSW, Australia in 1866. It was first registered 39/1866, Sydney and subsequently 5/1871 Wellington and 3/1884 Dunedin. Dimensions: 84.7 ft Length, 20.7 ft beam, 7.4 ft depth, tonnage: 84.24 tons. *Enterprise* operated for many years in the New Zealand coastal trade, before being purchased by the Blackball Coal Company in May 1916, then converted into a 150-ton hulk and towed to Whanganui by the *Ngakuta*. In 1924 she was scuttled to form part of the training wall for the port at Castlecliff, and her register was closed 08/06/1926.

R22/605 Castlecliff wharf; Heads wharf; No.2 wharf (1884) E1770250 N5576460

The first wharf to be constructed at Castlecliff was built in 1884 for the Heads Railway Company who leased adjoining land from the Harbour Board endowment. The first goods shed was erected behind the wharf in 1890, and appears to have been replaced by the 1917 red shed.

The original structure (as shown in the 1884 photograph) was constructed with three piles per bent. The reclamation and wharf were extended in 1917 which allowed for the construction of the red shed. The wharf comprises bents of five round timber piles tied together with paired beams, wales and diagonal cross-braces. Concrete decking with embedded rails has been laid on top of laterally running stringers. The concrete is likely a replacement of an original timber deck.

The 2009 condition assessment noted that this wharf had considerable maintenance in the past (Kensington Swan 2009:8). These repairs were still evident during the present visit and included the addition of piles (evident where the piles are doubled up), splicing of new wood into the piles, replacement of beams and wales. One of the bollards on this wharf exhibited an impressed serial number '329' stamped into the top. No other impressed or incised marks were observed on the insitu wharf timbers.

The author was also asked to inspect an area of open excavation for urgent repairs to the sewer line which passed beneath the former red shed location. The old sewer line was still evident in the base of the excavations and probably dates post 1917 on account of passing through 1917 reclamation fill. No archaeological indicators were observed in the trench, but the interface between the 1917 fill and natural ground was evident. The fill contained bricks and other building rubble.

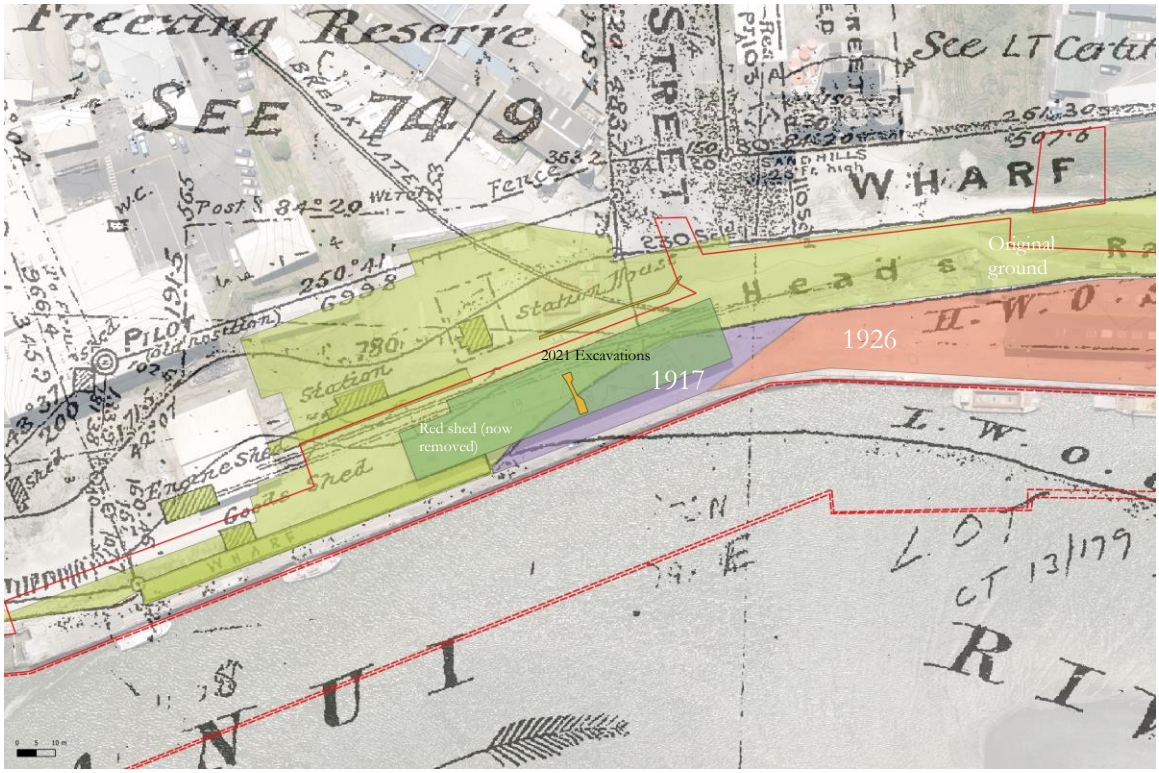


Figure 49: Locations of open trenches inspected on 15.07.2021 in relation to periods of fill and former building sites shown on 1890 survey plan

R22/606 Mueli wharf; No.3 wharf (1926) E1770428 N5576489

The Meuli wharf and reclamation was built in 1926. It was named for long time Harbour Board member Nicholas Meuli (1856-1926), the contractor who built the wharf was a Mr Moye. The Victory

shed which occupies part of that reclamation was built in 1945. It derives its name from the public celebrations surrounding VJ day, news of which arrived in New Zealand on 15 August 1945.[10]

The wharf comprises bents of five round timber piles tied together with paired beams, wales and diagonal cross-braces. Concrete decking with embedded rails has been laid on top of laterally running stringers. The concrete is likely a replacement of an original timber deck. The second pile in each bent is connected to an anchor pile set back in the reclamation via tie rods. There are two timber retaining walls, each braced with horizonal railway iron. The first wall forms the back of the wharf running behind the inner-most row of piles and the second extending to slightly above the waterline on the outside of the second row of piles. The 2009 condition assessment included a cross section showing the cross section of a typical bent (Figure 51).

The original wharf piles and structural timbers exhibited incised and impressed marks from construction and timber procurement. These included incised marks in roman numerals accompanied by an up or down arrow (↑↓) at the top of individual piles, which are likely to indicate the depth to which the pile was able to be driven if this was different to the depth prescribed in the contract. Other marks included NSW government marks authenticating the species of timber and confirming government duties had been paid, and ownership marks from carriers and cutters.

The NSW timber inspectors and cutter/ownership marks were most commonly observed on the anchor struts used to secure the second pile back to the deadman piles. It seems likely this was due to the ends of other structural timbers being either too degraded (beams, cross-braces, wales) or obscured within the structure (stringers, joists). Where the timber was identified it was all IronBark.

The wharf has two lines of timber sheeting one forming the back wall and a second along the outside of the second pile in each bent.

Figure 50: 'Regulations Forestry Act, 1909' Government Gazette of the State of New South Wales 5.1.1910, p.48

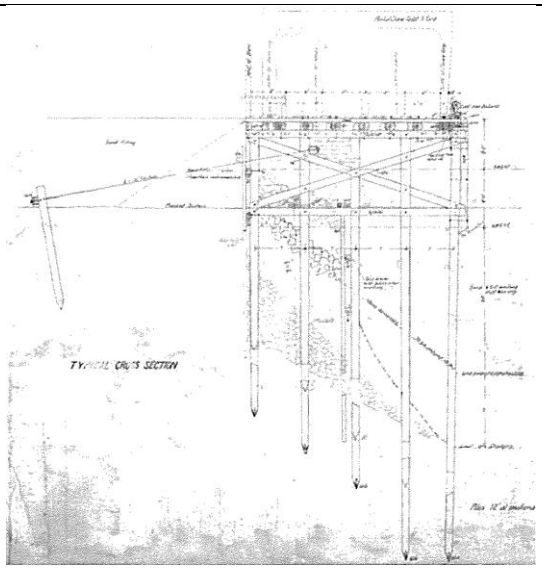


Figure 51: Cross section of wharf No.3 dated 1923, reproduced from Kensington Swan 2009

[10] https://nzhistory.govt.nz/war/vj-day

R22/607 No.1 wharf E1770030 N5576405

This extension to the Heads wharf at Castlecliff was constructed in 1908, and subsequently became known as No.1 wharf. Its progress was noted in the newspapers: "*At Castlecliff, all the piers on the 100 ft wharf extension had been driven, leaving six in the approach to complete the filing. The balance of the hardwood required to complete the wharf had not come to hand, though ordered nine months ago. Bluegum sheeting had been ordered and was expected about the middle of March.*" (*Wanganui Herald* 07.03.1908, p.2).

No under wharf inspection was undertaken for this structure during the site visit for this report. But the 2009 condition assessment noted that reconstruction work had been undertaken in recent times, including the addition of a new row of front piles, timber deck beams and a new concrete edge beam (Kensington Swan 2009:9). In 2017 the eastern portion of this wharf was removed and the reclamation shored up with sheet piling. Most of the piles from this partial demolition were removed, but a few remain insitu (Figure 49).

The recycled timber stockpile near the western entrance to the port probably relates to to these works and the timbers were able to be inspected for marks. NSW inspectors marks indicating Grey Gum (*Eucylptus punctata*), Tallow Wood (*Eucylptus microcorys*) and Iron Bark (*Eucylptus paniculata*) were noted, as well as an unidentified ЯR mark probably used by a cutter. These marks were most commonly seen on timbers which area likely to have been used as deck joists.

Exposed grain on some of the stockpiled timber piles were patched with copper.

R22/608 Castlecliff Railway Station E1770215 N5576595

The Wanganui Heads Railway Company was established in 1882, and in July 1884 Messrs O'Connor and Scaiby successfully tendered for the construction of the new line. The railway between Whanganui and Castlecliff was completed in April 1885. Lesie Reynold's 1895 plan of proposed harbour improvements shows this as the location of the railway station, and the lines and station buildings are still evident in aerial photos flown in 1942 (SN215 382 3). The railway was in a dilapidated state in 1952, and it was eventually purchased by the government to be written off in 1956. The post 1890 railway location is not impacted, but the 1884-1890 station infrastructure is close to the proposed area of works.

R22/611 Wanganui Meat Freezing Company works E1770180 N5576464

The Wanganui Meat Freezing Company was established in June 1890, a lease was negotiated with the Harbour Board for 13 acres of land behind the newly built wharf. The first shipment of meat was shipped aboard the ss *Duke of Sutherland* in August 1891 (*Wanganui Chronicle* 03.08.1891, p.2). By the turn of the century the freezing works employed some 200 men, and had also acquired the lighter *Thistle* to assist with loading operations at the port. Leslie Reynold's 1895 plan of proposed harbour improvements shows this as the location of the freezing works. The former footprints of some of these buildings are close to the proposed works area.

UNRECORDED SITES

Pungarehu est. E1769622 N5576473

The site of Pungarehu (Okupe) was reported by Smart and Bates as a fishing pā situated in the vicinity of what is now the Morgan and Treganna Street intersection. However survey plans show this as an accreting area, with the former (1882) shoreline marked a little west of the alignment of Aston Terrace (DP264, DP3054). It seems more likely that the location refered to in the Land Court records would have been the in the vicinity of the Watch House and Flagstaff shown on the 1895 harbour development plan by Leslie Reynolds inside the Government reserve.

Figure 52: Sheet piling repair to No.1 wharf, with No.2 wharf extending to the east, Te Anau hulk in background.

Figure 53: No.1 wharf - sheet piling repairs. Looking west towards heads (15.07.2021)

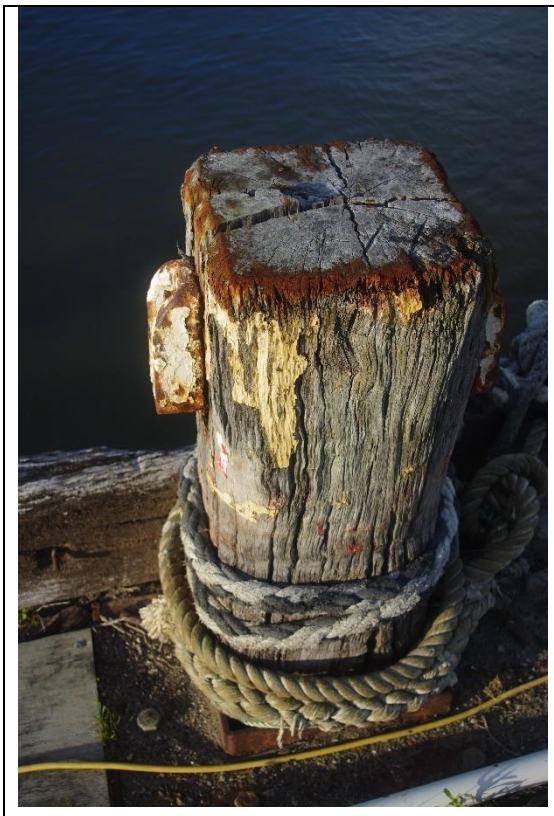


Figure 54: No.2 wharf, bollard with impressed number

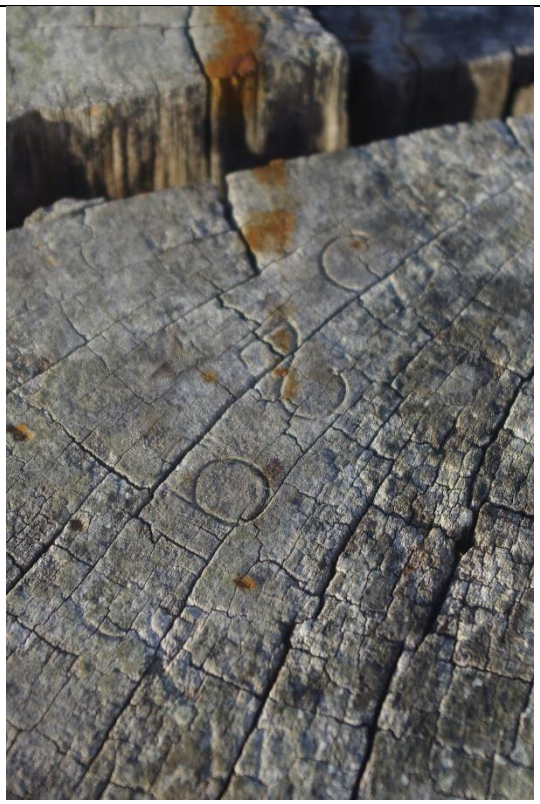


Figure 55: Detail of previous image (15.07.2021)

Figure 56: Stock pile. Copper patches over exposed grain or knots on wharf piles (15.07.2021)

Figure 57: Details of fastenings for copper patches (15.07.2021)

Figure 58: Stock pile, deck joist. NSW Government mark IB (Iron Bark), inspector 12 (15.07.2021)

Figure 59: Stock pile. NSW Government mark TW (Tallow Wood), inspector 15 (15.07.2021)

Figure 60: Stock pile, deck joist. NSW Government mark GG (Grey Gum), inspector identified by rim markings

Figure 61: Stock pile, deck joist. Cutters mark? (15.07.2021)

Figure 62: No.2 wharf, repairs using concrete pylons laid horizontally (15.07.2021)

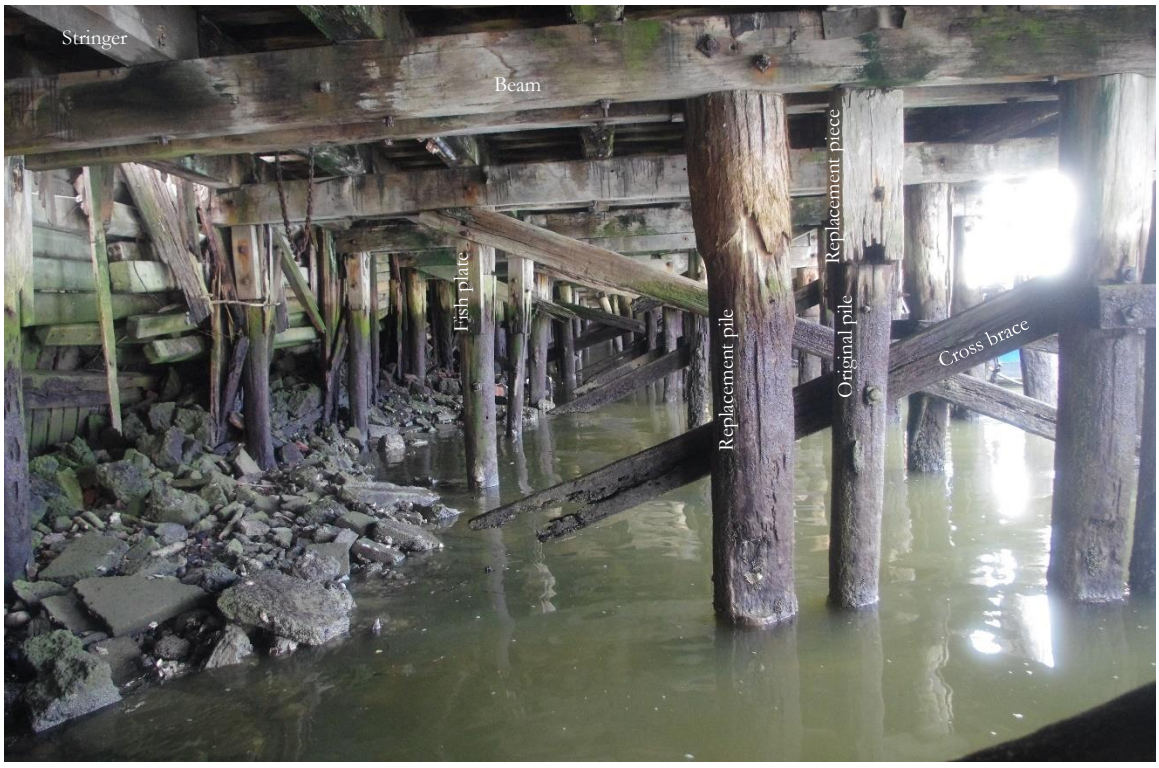


Figure 63: No.2 wharf typical arrangement of bent and repair work (15.07.2021).

Figure 64: Red shed prior to removal, looking northeast along southern side (30.07.2020)

Figure 65: Red shed prior to removal, looking east along northern side (30.07.2020)

Figure 66: Red shed foundations, Victory shed in background right of frame (15.07.2021)

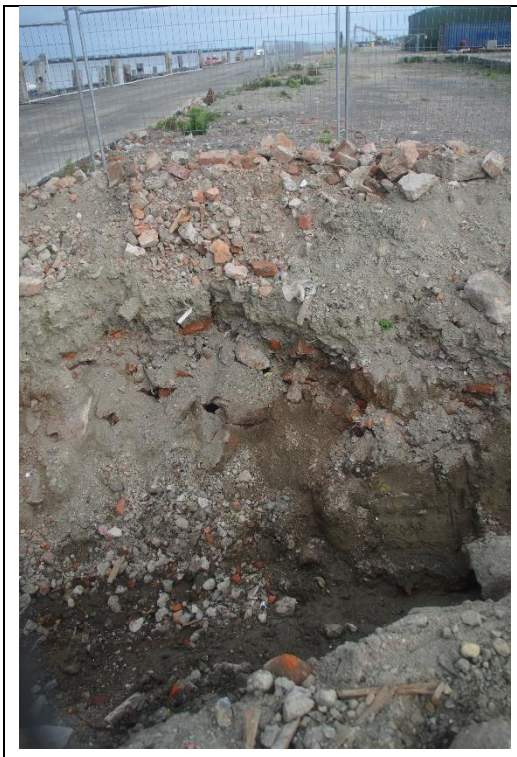


Figure 67: Interface between fill and natural soil below red shed foundations (15.07.2021)

Figure 68: Original metal pipe and sheet wall

Figure 69: No.3 wharf (15.07.2021)

Figure 70: No.3 wharf (15.07.2021)

Figure 71: No.3 wharf incised roman numerals to indicate depth of driven piles (15.07.2021)

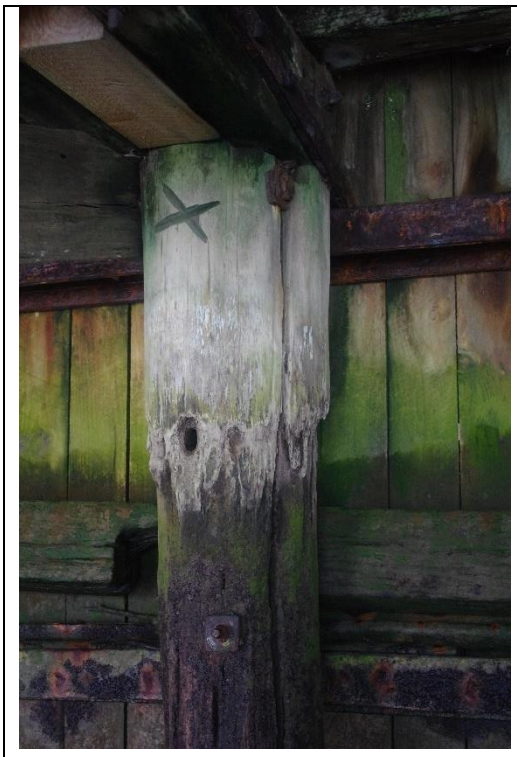


Figure 72: No.3 wharf, incised mark X

Figure 73: No.3 wharf, incised mark M

Figure 74: No.3 wharf incised roman numerals to indicate depth of driven piles (15.07.2021)

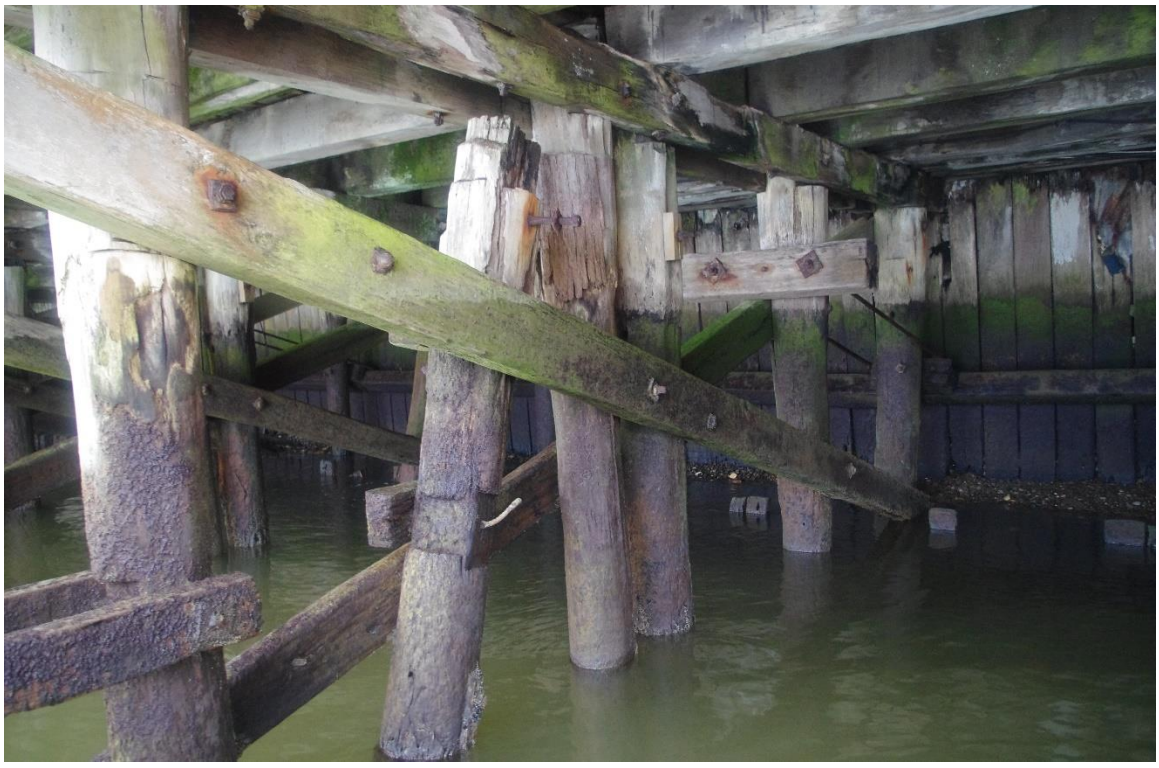


Figure 75 No.3 wharf typical arrangement of bent (15.07.2021)

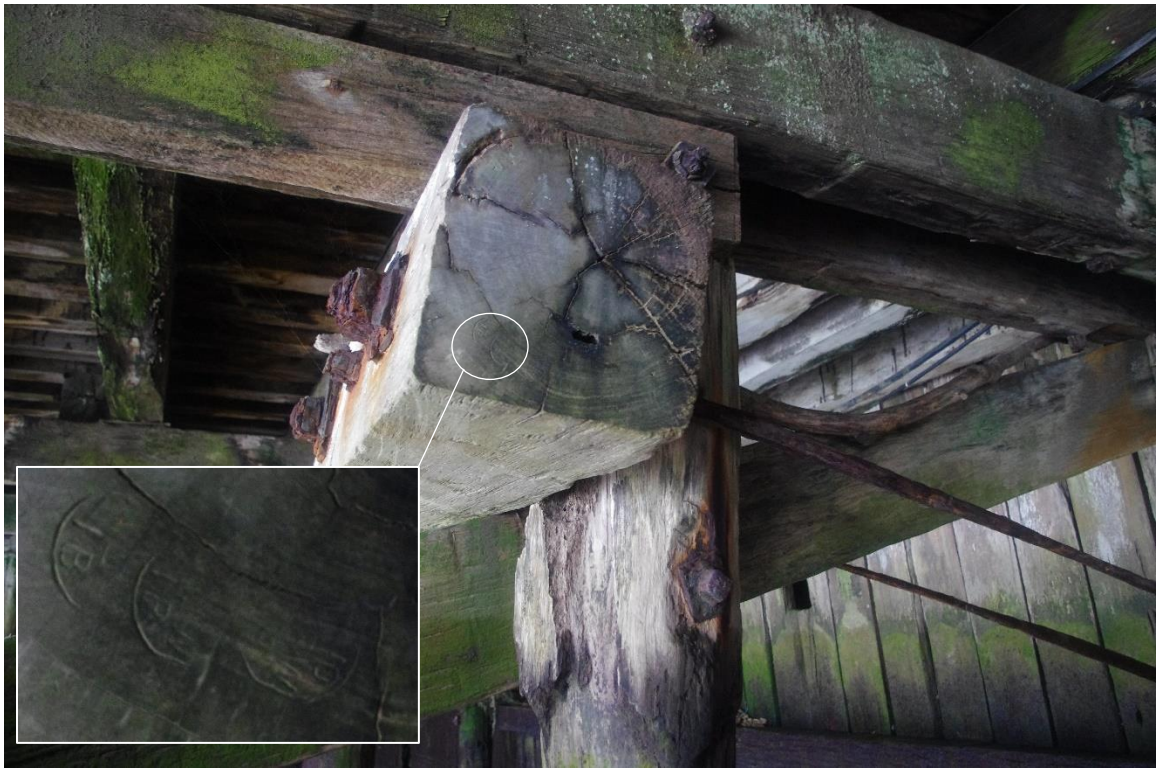


Figure 76: No.3 wharf, NSW timber inspectors mark on anchor strut (15.07.2021)

Figure 77: No.3 wharf, typical arrangement of anchor strut and tie rods. Original below with modern repair above

Figure 78: No.3 wharf arrangement of fenders (15.07.2021)

Figure 79: No.3 wharf, cutters mark HK on anchor strut (15.07.2021)

Figure 80: No.3 wharf, cutters mark T WHITE on anchor strut (15.07.2021)

Figure 81: No.3 wharf, NSW inspectors mark (Ironbark, inspector 8) and cutters mark WHITE (15.07.2021)

Figure 82: No.3 wharf, cutters mark WHITE (15.07.2021)

Figure 83: H , P, TW?

Figure 84: Cutters mark VA, P, W, RR *(possibly indicates Royalty Received) (15.07.2021)*

Figure 85: No.3 wharf, NSW inspectors mark (Ironbark, inspector 3)

Figure 86: No.3 wharf, pile depth indicators (15.07.2021)

Figure 87: No.3 wharf, pile depth indicators (15.07.2021)

Figure 88: No.3 wharf, eastern end, scoured out fill from behind sheet wall (15.07.2021)

Figure 89: No.3 wharf, eastern end (15.07.2021)

Figure 90: No.3 wharf and scouring beneath Victory shed backfilled with rounded boulders (15.07.2021)

Figure 91: No.3 wharf and scouring beneath Victory shed (15.07.2021)

Figure 92: No.3 wharf concrete decking and embedded rails, eastern end (15.07.2021)

Figure 93: Victory shed with awning and railway siding along northern wall, looking southeast (15.07.2021)

Figure 94: Victory shed with awning and siding along northern wall, looking west (15.07.2021)

Figure 95: Victory shed, looking east (15.07.2021)

Figure 96: Victory shed, looking west (15.07.2021)

Figure 97: ss Te Anau starboard side (15.07.2021)

Figure 98: ss Te Anau bow (15.07.2021)

Figure 99: ss Te Anau hulk, bow off port side (15.07.2021)

Figure 100: ss Te Anau hulk, insitu decking near bow (15.07.2021)

Figure 101: ss Te Anau hulk, insitu decking near bow (15.07.2021)

Figure 102: ss Te Anau hulk, insitu decking toward stern (15.07.2021)

ARCHAEOLOGICAL SIGNIFICANCE

The following statements of significance have been prepared separately for each of the potentially affected sites, and tentatively for unrecorded sites that have potential to be in close proximity to the project area. Archaeological significance has been assessed according to accepted guidelines (Gumbley 1995, Walton 1999; NZHPT 2006, NZHPT 2013).

Site	Value	Assessment
Pungarehu	Condition	Unknown. Shell middens have been reported in the wider Castlecliff area, but it is unclear to what extent the site has been affected by suburban and industrial development. It is probable that isolated deposits will have survived.
	Rarity/ Uniqueness	Midden are relatively common site types, but for pre-contact Māori archaeological remains to have survived within the developed areas is less common. There were a number of fishing and defensive pā in the vicinity of Whanganui prior to the establishment of the town.
	Contextual Value	Pungarehu can be viewed in the context of other documented pre-contact Māori settlements along the Whanganui River, and in particular the fishing and defensive pā which were present prior to and contemporary with colonial settlement in the nineteenth century.
	Information Potential	Med. This is largely dependent on survival and condition. However, there have been no archaeological investigations of midden in the Castlecliff area to date. Investigation of archaeological remains is therefore likely to add significantly to the existing knowledge.
	Amenity Value	Low. Not a prominently visible site.
	Legal status	Protected
	Cultural Associations	Māori

Site	Value	Assessment
Castlecliff railway (1885)	Condition	Unknown. Above ground structural elements were removed in c.1890, subsurface deposits may have survive, but are likely to have been affected by the freezing works development and subsequent reclamation activities and by twentieth century works associated with lines maintenance and port activities.
	Rarity/ Uniqueness	Nineteenth century railway infrastructure sites are not uncommon, but many have been affected by subsequent development pressures. It is therefore a rapidly diminishing class of archaeological site.
	Contextual Value	The development of the port at Castlecliff, the heads railway, and the freezing work are all contextually linked. The creation of the deep water port facilitated local interests to engage in international trade at a time when shipping was dramatically increasing in size and tonnage and advances in the frozen meat export allowed direct access to the London market.
	Information Potential	Med. Can contribute information not readily accessible from archival sources about the day-to-day operations of the Heads Railway and those employed in its service.
	Amenity Value	Not a prominently visible site but could form an interesting topic for on site interpretative signage in the upcoming development.
	Legal status	Protected
	Cultural Associations	Colonial European

Site	Value	Assessment
Heads wharf (1884)	Condition	The seawall beneath the former wharf (red) shed is slumping and scouring of the fill is leaving cavities which further destablise the reclamation. While the ground surface is likely to have been changed over time archaeological deposits buried within the reclamation are likely to be in fair condition. The red shed has been removed to ground level.
	Rarity/ Uniqueness	Nineteenth century wharves and reclamations are not uncommon nationally, but as working structures wharves are often rebuilt and altered over time. As more land is reclaimed nineteenth century reclamations are often buried behind later additions
	Contextual Value	The development of the port at Castlecliff, the heads railway, and the freezing work are all contextually linked. The creation of the deep water port facilitated local interests to engage in international trade at a time when shipping was dramatically increasing in size and tonnage and advances in the frozen meat export allowed direct access to the London market.
	Information Potential	Med. Can be compared with original plans and photographs to determine alterations over time. Reclamations under construction were often considered convenient location for the disposal of rubbish and debris so nineteenth century artefacts are likely to be encountered.
	Amenity Value	The wharf is a prominently visual maritime feature that would lend itself well towards historic interpretative signage.
	Legal status	Protected
	Cultural Associations	Colonial European

Site	Value	Assessment
Wanganui Meat Freezing Company (1890)	Condition	Many of the waterfront buildings have been removed, but inground foundations remain in some places. The former offices have been used by the Harbour Board since 1923.
	Rarity/ Uniqueness	Nineteenth century meat works sites not uncommon nationally, and many were established following the successful export of frozen meat to Britain in the 1880s.
	Contextual Value	The development of the port at Castlecliff, the heads railway, and the freezing work are all contextually linked. The creation of the deep-water port facilitated local interests to engage in international trade at a time when shipping was dramatically increasing in size and tonnage and advances in the frozen meat export allowed direct access to the London market.
	Information Potential	Med. Can probably provide information about the development and layout of individual buildings associated with the meat works in the late nineteenth and early twentieth centuries. Faunal remains if encountered may provide insights into changing butchery and meat processing practices through time.
	Amenity Value	One of the buildings is currently used for offices and could lend itself towards historic interpretative signage outlining the changes in waterfront buildings through time.
	Legal status	Protected
	Cultural Associations	Colonial European; Dominion

Site	Value	Assessment
Te Anau (1924)	Condition	Scuttled hulk, forms part of basin wall. In fairly advanced state of dilapidation due to rust. Some of the decking towards the stern has been removed by scavengers.
	Rarity/ Uniqueness	There are remains of several dozen hulks recorded nationwide. Nineteenth century meat works sites not uncommon nationally, and many were established following the successful export of frozen meat to Britain in the 1880s.
	Contextual Value	The Union Steamship company was established in 1875 and based in Dunedin. By 1890 it became one of the largest in the southern hemisphere. Over the course of its 125 years of operation it had a fleet list of over 300 vessels with financial interests in several dozen more. Many of their vessels were disposed of by incorporating them into coastal works (eg Aramoana mole). The basin wall was part of Castlecliff harbour improvements in the 1920s.
	Information Potential	Med. Lines and deck plans for the vessel may be able to be procured from archival sources related to the USS Co. The vessel was constructed in 1879 so would be a source of information about nineteenth century shipbuilding. If physical remains of the enterprise are encountered these would provide information not likely to be otherwise available.
	Amenity Value	Good, the hulk is visually prominent and an interesting heritage feature that could be pointed out in historic interpretative signage based on the land.
	Legal status	Not protected because of post-1900 date of deposition.
	Cultural Associations	Colonial European; Dominion

Site	Value	Assessment
Victory shed (1945)	Condition	Reported as unsound due to undermining of the reclamation fill beneath the structure.
	Rarity/ Uniqueness	Wharf goods sheds in New Zealand are a rapidly diminishing heritage feature. Where structures similar to the red shed were once common-place in many ports, they are now more often relegated to waterside areas, that have been retired from, or are peripheral to, active port use due to the advent of containerisation and the pressures on modern ports for space and facilities.
	Contextual Value	The Victory shed was built in 1945 and named for the WWII VJ day celebrations. The shed formed part of the expansion of harbour facilities in the mid twentieth century.
	Information Potential	Low. Like the red shed this building may have diagnostic marks on structural features, but the archival records and plans are likely to be more complete by comparison due to the later date of construction.
	Amenity Value	Unless it can be repaired and stabilised the shed has limited amenity value .
	Legal status	Not protected because of post-1900 date of deposition.
	Cultural Associations	Twentieth century NZ

The effects on archaeological values from the proposed works have been grouped by the activities and areas assessed (Figures 103 and 104).

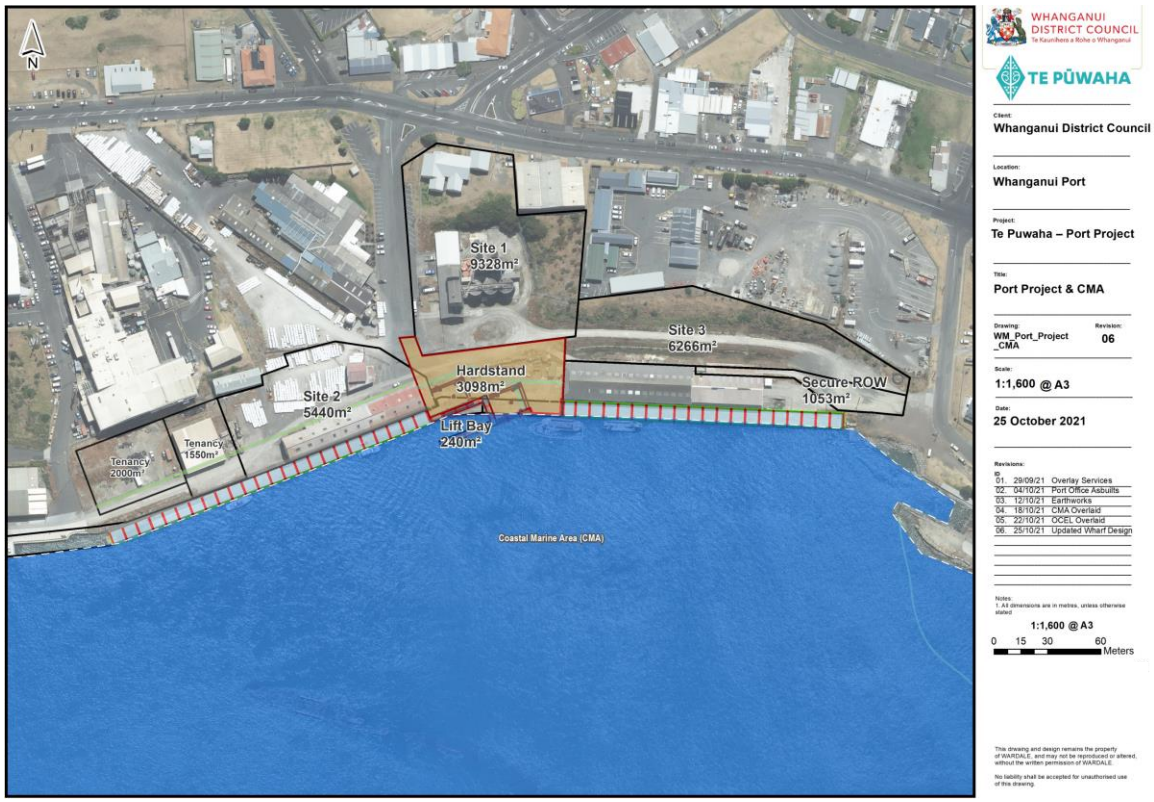


Figure 103: Site areas subject to assessment of archaeological effects

Site 1 (9328m2)
This site was occupied by the Golden Bay cement Co., and the Waterfront Commission post 1940s. 1942 aerials (SN215 382 3) shows site 1 was undeveloped at the time and to the east are leaseholds of Shell and Caltex. Nineteenth century plans do not indicate earlier structures, and in 1886 much of site 1 was set aside as Tod Street and Wharf Street road reserve. It is possible that earthworks may expose deposits associated with earlier Māori use.

Site 2 (5440m2)
This site was the location of the Station House, and Station Building as shown on survey plan SO13044 (dated 1890). The railway lines extended through this section to goods and engine sheds on the other side and the railway line to the end of the northern mole also extends through the northeastern corner of this site. This area also includes 1880s reclamation fill and photographs taken during the construction of the Heads wharf in 1884 show a number of timber structures for which archaeological evidence may still survive.

Site 3 (6266m2)
This site was occupied by the railway lines and by the Wharf Street road reserve. The alignment of the 1880s railway lines through this area was substantially changed in the 1920s to provide access to

the Meuli wharf and the future site of the Victory shed. It is currently unclear to what extent evidence of the former alignment still survives archaeologically.

Hardstand (3098m2)
As with Site 3, the hardstand area was occupied by railway lines and the track layout was substantially changed in the 1920s. It is unclear to what extent evidence of the former alignment still survives archaeologically. The proposed hardstand area also contains areas of 1917 and 1926 reclamation fill.

Dredging
The effects on archaeological values will depend on 1) what is buried in seabed sediments within the dredge footprint (as outlined above), 2) what is present in the location where the excavated dredge spoil will be redeposited and 3) what is present in areas affected by scouring arising from any subsequent changes in flow.

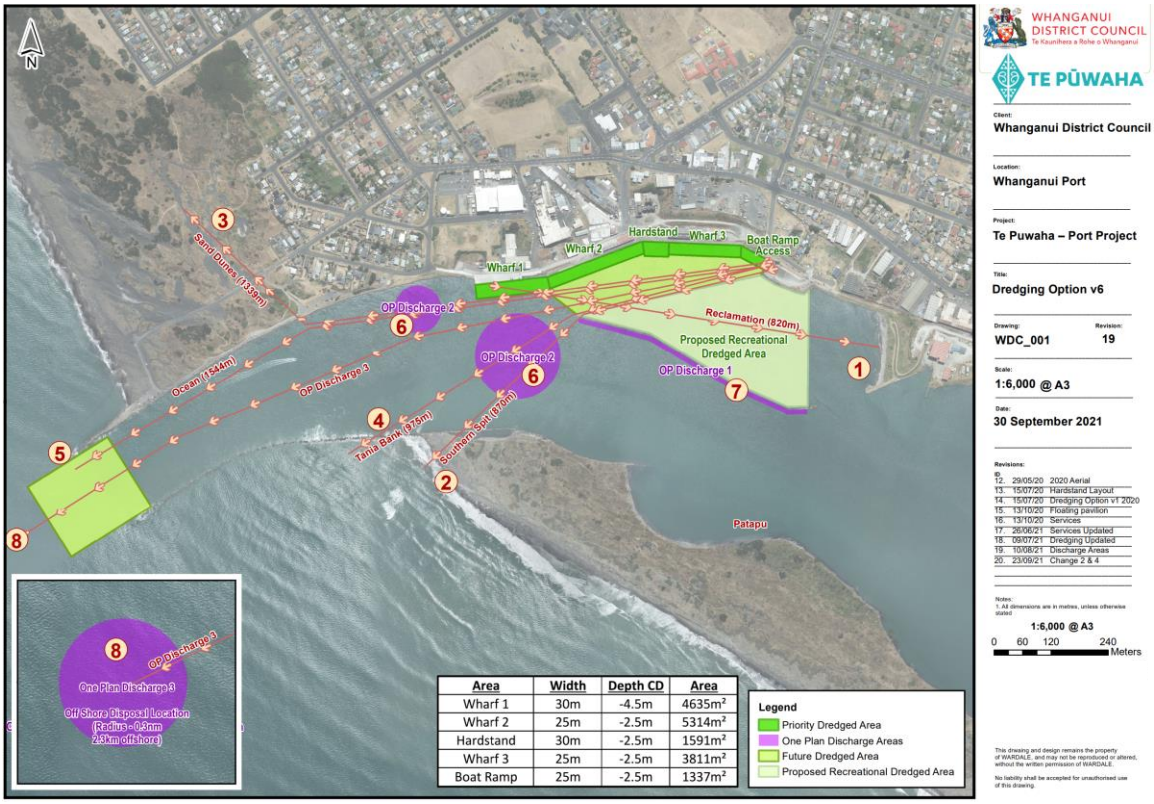


Figure 104: Dredge areas subject to assessment of archaeological effects

The following table refers to sites described in the previous assessment for the demolition of the Red shed (Dodd 2020). Features dated pre-1900 require an archaeological authority to be granted by Heritage New Zealand before they can be removed

R22/581	E1769870 N5576410	North mole		Stone training wall extending 930 metres from No.1 wharf	Not affected by the current proposal
R22/603	E1770252 N5576325	Te Anau Enterprise	1924	Scuttled ex-USSCo steamer forming part of basin wall	Affects are likely to be related to changes in sedimentation around the hull, maybe further clarified with modelling
R22/604	E1766902 N5576838	Pillbox	1942	Arrowhead design, structure probably removed from original location near Carson and Hood Street intersection	Not affected by the current proposal
R22/605	E1770250 N5576460	Castlecliff wharf; Heads wharf; No.2 wharf	1884	The first wharf at Castlecliff, built for the Heads Railway Company.	To be removed
-	E1770263 N5576481	Red shed	1917	Replaced an earlier good shed built in c.1890	Removed 2020
R22/606	E1770428 N5576489	Meuli wharf; No.3 wharf	1926	Eastern-most wharf	To be removed
-	E1770424 N5576506	Victory shed	1945		To be removed
R22/607	E1770030 N5576405	No.1 wharf	1908	Western-most wharf	Not affected by these works
R22/608	E1770215 N5576595	Castlecliff railway station	1884	The site of the station is shown to the west of Tod street	Post 1890 railway site not impacted, 1884-1890 buildings within the area of proposed works
-		Railway alignment	1884, 1926	Extends through the hardstand area as well as sites 2 and 3	The works area includes areas of original heads railway alignment, but the tracks which are currently visible were re-laid in the 1920s. Archaeological evidence of the original alignment may survive
R22/609	E1769985 N5576465	Watch house; flagstaff	1855		Not affected by the current proposal
R22/610	E1770110 N5576490	Pilots house	1855		Not affected by the current proposal
R22/611	E1770180 N5576464	Wanganui Meat Freezing Co	1890		Not affected by the current proposal
-	E1769960 N5576495	Heads redoubt			Not affected by the current proposal
-	E1769622 N5576473	Pungarehu			Reported position not affected, but outlying features maybe encountered along old shoreline

CONCLUSION

Castlecliff (Kai Hau o Kupe) was the general location of a pre-contact Māori settlement known as Pungarehu, and while not formally recorded as archaeological sites there have been shell midden deposits and artefacts found in the general area reflecting on going use over time. There is potential for archaeological features related to Pungarehu to be exposed in earthworks anywhere along the interface between the natural shoreline deposits, but not in the reclamation fill.

The construction areas sites 1 & 2 have potential to contain archaeological features associated with the 1884 railway buildings, original heads railway alignment, and the pre-1900 reclamation fill for the No.2 wharf. The two wharves being proposed for demolition have construction elements dating from 1884 (No.2 wharf), and 1926 (No.3 wharf). Of these only the earlier No.2 wharf is protected by the archaeological provisions of the *Heritage New Zealand Pouhere Taonga Act*, but the later structure incorporates diagnostic timber marks which are useful for advancing knowledge about wharf construction and timber procurement in the early twentieth century in New Zealand.

It has not been possible to undertake a visual inspection of the seabed in the proposed dredge area in front of the wharves due to weather and river conditions in the time available, so it is recommended that this is undertaken prior to commencing wharf deconstruction or dredging operations.

The effects of the removal of the wharves and modification of below ground archaeological deposits can be appropriately mitigated through archaeological monitoring of those works, analysis of any artefactual remains and reporting in this instance.

RECOMMENDATIONS

- This report is intended to address issues related to historic heritage effects for Horizons Regional Council resource consent applications and Heritage New Zealand archaeological authority applications, so it is recommended that a copy of this report is supplied to both organizations for comment in advance of lodging applications

- The application for an archaeological authority requires consultation with mana whenua iwi who should also be supplied a copy of this report as part of that consultation.

- That Heritage New Zealand should grant an archaeological authority with standard monitoring conditions pursuant to an archaeological management plan (to be prepared) which outlines when an archaeologist should be on site during works.

- That a diver survey be carried out along the wharf edges, and any potential targets identified during hydrographic survey prior to dredging to make a record of any visible heritage features

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Heads wharf being constructed in May 1884 (Harding & Denton Collection, Wanganui District Library, NZC2.1.271

Castlecliff railway station and platform in 1941 looking NW towards engine shed (reproduced from Cassells 1984)

Castlecliff railway station in December 1946 looking opposite direction (reproduced from Sole 2008)

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