Akaroa Main Wharf Replacement, Akaroa

Archaeological Assessment

Prepared for Christchurch City Council

Cover Photo: 1904 photograph showing grass seed stored on Akaroa Wharf. Source: Christchurch City Council

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Disclaimer and Limitations

This report is an archaeological assessment report. It is prepared for the purpose of presenting the results of an archaeological assessment undertaken by South Island Archaeology (SIA) for Christchurch City Council in relation to the proposed Akaroa Wharf replacement in Akaroa. This report should be viewed in light of the subject, purpose and assumptions only and cannot be relied on for anything apart from the purpose described in this report. The professional advice and opinions contained in this report do not constitute legal advice. This report does not make statements of mana whenua, nor does it attempt to quantify any cultural values across the project footprint.

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1. Introduction

1.1. Purpose of this Report

Christchurch City Council (CCC) commissioned South Island Archaeology (SIA) Ltd to prepare an archaeological assessment of effects for proposed Akaroa Main Wharf Replacement on the harbour edge at Akaroa on Banks Peninsula. Proposed works involve demolition of the existing wharf followed construction of a replacement structure. Associated services extending along the wharf approach (from the wharf to the edge of beach road) are also proposed. The project also includes the provision for groundworks at Akaroa Recreation Ground for a laydown area (Figures 1-4).

The existing wharf is a 155m timber structure which serves commercial and recreational users in the area and holds important cultural, historical, and social values for the Akaroa community. Originally constructed in 1887, the wharf is of significant recreational, heritage and commercial importance to Akaroa and is a recorded archaeological site: N36/277. The wharf has reached the end of its design life, and it is no longer economically viable to maintain the existing structure. CCC is seeking to rebuild a new wharf in the existing wharf's location.

This report presents an archaeological assessment of the wharf, its proposed demolition and replacement, associated services, and an assessment of groundworks at Akaroa Recreation Ground. It identifies the presence and values of archaeological sites in the Project footprints and discusses impacts on these sites from the proposed project activities. This report is also intended as a supporting document for an Archaeological Authority application to Heritage New Zealand Pouhere Taonga (HNZPT). It was prepared by TJ O'Connell (SIA).

1.2. Project Location

The town of Akaroa is located on the eastern shore of Akaroa/Whakaroa Harbour, on the southern side of Horomaka/Te Pātaka-a-Rākaihautū/Banks Peninsula. Akaroa Main Wharf extends westward from the foreshore in the southern part of the Akaroa Township. It runs perpendicular to Britomart Reserve and Beach Road – Akaroa's waterfront esplanade – and is situated between Church Street and Bruce Terrace (Figure 3).

The area around the wharf is a mixture of recreational spaces (most notably the Britomart Reserve to the south of the wharf), small-scale commercial buildings, and accommodation, all catering primarily to the growing tourist trade. The wharf itself is the focal point of this seaside tourist area. The wharf approach leads up to Beach Road and is characterised by asphalt ground surface.

Most of the Wharf and its approach is owned by the CCC. Being situated over the foreshore and seabed, the wharf is not associated with any land title.

The Akaroa Recreation Ground is located along the Akaroa waterfront at the more northern end of the town with main access off Rue Jolie, Rue Lavaud and Rue Brittan (Figure 2 & 4). Locally, the area is known as Jubilee Park. On the west side of the recreation ground is the Akaroa Boat Ramp. A small temporary loading ramp will be constructed on the southern side of the ramp to facilitate construction.

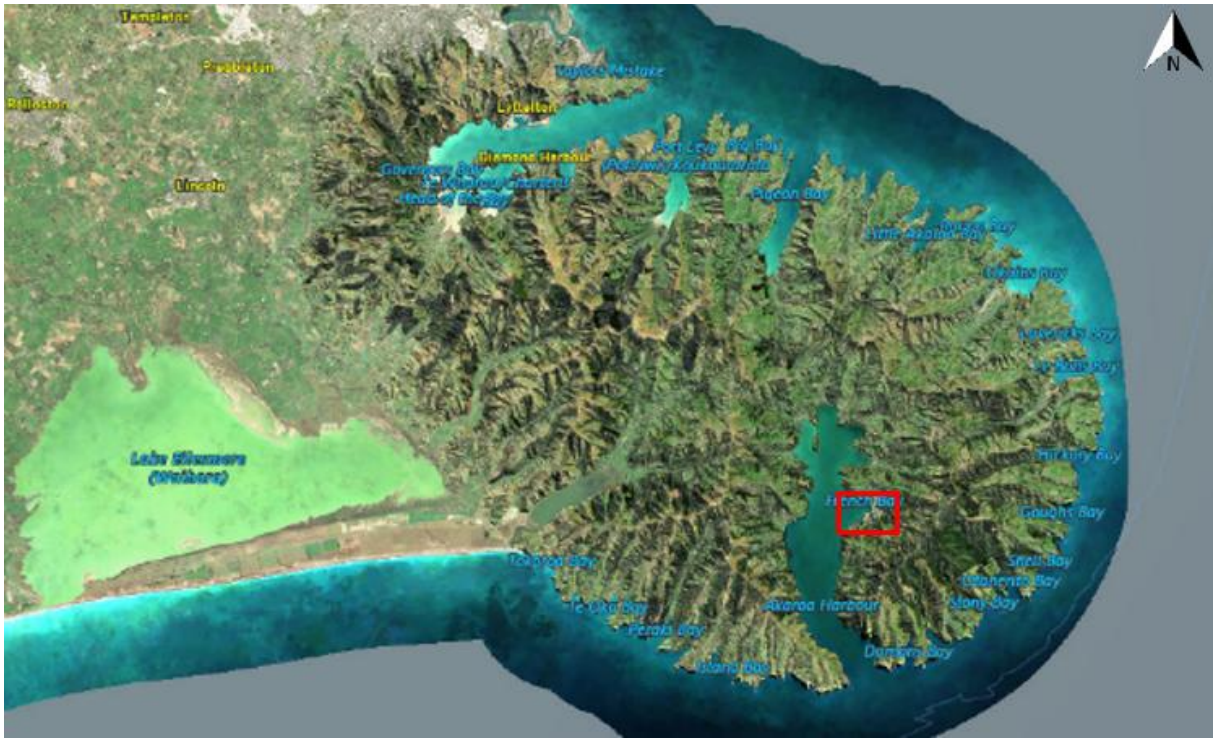


Figure 1. Location of Akaroa (red polygon) in the context of Banks Peninsula. Source: Canterbury Maps 2024.

Figure 2. Location of the project footprint (Akaroa Main Wharf in red polygon, Akaroa recreation Ground in blue polygon) in the context of wider Akaroa. Source: Canterbury Maps 2024.

Figure 3. Akaroa Main Wharf in the local setting. Indicative location of proposed new services along wharf approach shown by blue dashed line. Also indicated is Laydown Area 2 (Pink shading). Source: Canterbury Maps 2024.

Figure 4. Provided plan showing extent of Laydown Area 1 in Akaroa Recreation Ground. The Akaroa Boat Ramp is also indicated. Source: Enviser 2025.

1.3.Terminology & Summary Description of Wharf

Architectural terms used in this archaeological assessment (see Table 1 and Figures 6-7) are primarily informed by terminology used in a Conservation Plan previously prepared for the Wharf (Origin 2021). The wharf comprises of a number of elements including:

A. A solid landward approach comprised of a concrete abutment containing earth and gravel fill.
B. A timber jetty supported by piles.
C. Modern floating pontoons.
D. The buildings situated on the wharf (Figure 5).

The timber structure is comprised primarily of hardwood timber elements, with softwood timber and steel used for repair work undertaken in the last few years. The wharf consists of 40 bents, each bent is c. 7.2m wide and has 3 piles. Capping beams span across the piles with between 7 and 12 stringers spanning between the bents. The width of the wharf has substantially widened in its centre in the 20th century to accommodate large 20th century sheds. Two pontoon structures, one on either side of the wharf, are also recent additions to the timber wharf structure.

Table 1. Technical terms provided by Origin (2021) relating to timber structural components of the Akaroa Main Wharf (see Figures 6-7).

Timber Structural Component	Explanation
Pile	A heavy stake or post driven vertically into the bed of a river, soft ground, etc., to support the foundations of a superstructure.
Bent	A transverse frame, or trestle, comprising a series of piles with a capping beam on top and bracing to provide rigidity.
Fender Pile	An outer pile on a wharf that guides approaching vessels and provides a buffer to lessen the shock of contact between a vessel and the main body of the wharf.
Pile Cap	A beam running along the heads of a row of piles.
Stringer	A longitudinal timber running at 90° to the pile caps that supports the decking.
Decking	The upper platform or surface of the wharf comprising a series of timber boards laid flat or on edge.
Mooring bollard	A post to which a vessel's mooring ropes (warps or docklines) are attached.
Mooring cleat	A horn- or T-shaped piece of hardware on the deck of a wharf for a vessel to tie up to.

Figure 5. Aerial View of Akaroa Wharf. Source: Christchurch City Council 2024.

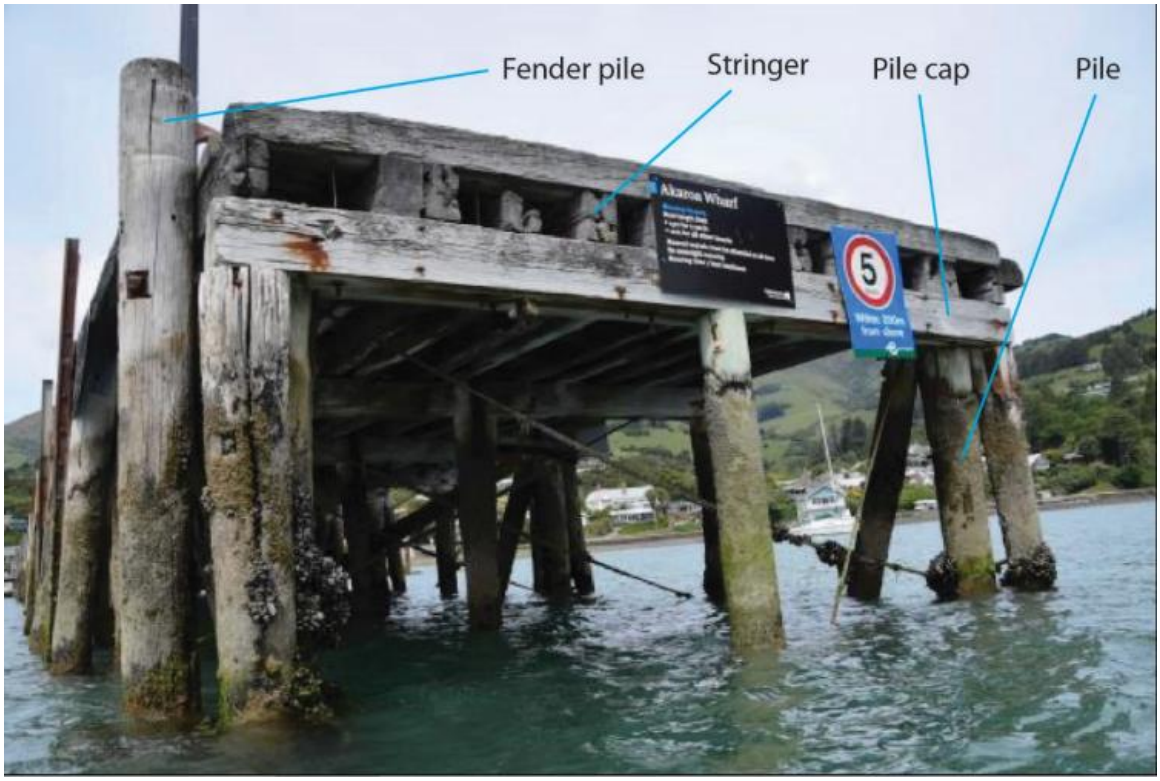


Figure 6. The end of Akaroa Main Wharf with the principal parts of the structure identified. The whole assembly of the five piles with the pile cap running across them comprises a single 'bent'. Source: Origin 2021.

Figure 7. Another example of a 'bent' – the entire frame comprising, this time, three piles with a capping beam on top and bracing to provide rigidity. Source: Origin 2021.

1.4. Project Background

Akaroa Main Wharf is the main wharf in Akaroa Town on Banks peninsula. It is owned by CCC and while originally constructed for coastal shipping it is used today by locals, visitors and business operators for a combination of commercial fishing, tourism and recreational activities.

An Opus condition report (2015) for the wharf identified several piles and stringers that required repair and noted that the useful remaining life of the wharf was 10 years, provided remedial works were carried out on an ongoing basis.

The structure was inspected by Calibre in 2018 and 2021, and it was found to be in a moderate to poor condition with numerous elements nearing the end of their life. Many of the original structural elements have been made redundant by the addition of new piles, steel bracing and steel and concrete beams. Repairs completed in the last 10-15 years include the addition of galvanised steel beams where the original timber beams had deteriorated and stainless-steel bracing replacing the original timber bracing where it had failed (Calibre Consulting Ltd. 2018, 2019, 2021).

The 2019 Calibre report raised considerable concern over the condition of the wharf and identified that it was reaching the end of its useful life and that it is no longer economical to keep repairing and maintaining it. The 2021 Calibre report noted that a large proportion of galvanised and stainless-steel tension bracing that were installed around 10 years prior were in poor condition and that much of the steel bracing was replaced in early 2020. It was also noted that the new bracing could be expected to last another 5-10 years before needing replacement again. The report further noted that repairs had recently been completed to several piles, stringers and capping beam connections, intended to keep the structure in use for five years.

The Cailber reports (2018, 2019, 2021) highlighted that during the Canterbury Earthquake Sequence (2010-2011) the wharfs 30m concrete abutment reportedly suffered damage from liquefaction with

visible severe cracking in the walls. The abutment could suffer further damage due to liquefaction should a significant seismic event occur in the future.

The 2021 Calibre report which outlined potential upgrade options for the wharf (2021) assesed the condition of the exsiting wharf as moderate to poor. The baseline option considered for wharf upgrade was restoring the existing wharf in its current location with no changes to its structural form. This option involved full replacement of the existing structure with like-for-like hardwood timber. However, this option was not favoured as:

- Rebuilding the wharf using like-for-like hardwood timber would require materials to be imported which raised a procurement risk associated with global supply chain disruption.
- It limited the opportunity to increase the amenity of the new wharf.
- It did not address sea level rise. The Calibre report noted that sea level rise due to climate change is predicted to inundate the current wharf deck height and much of the surrounding area.

The retention of the existing historic concrete abutment was also considered as an option for the rebuild of the wharf either in the same location or adjacent to the existing wharf. However, several issues with this retention were identified including:

- The condition of the abutment is moderate to poor. There is cracking throughout the abutment walls and the condition of the inner structure is unknown.
- The abutment was damaged in the Canterbury earthquake sequence. For the structure to be retained, CCC would need to accept the risk of damage from moderate earthquakes in the future.
- The proposed wharf deck is 500mm higher than the existing abutment, a sloping section would need to be created over the abutment or at the start of the main wharf. Modification of the abutment would be needed in the medium term.
- The condition of the existing abutment is such that strengthening / modifying the structure would present programme and cost risk.
- Based on the above, piling works required for the new wharf structure would have an uncertain impact on the abutment structure and it is uncertain whether the structure would remain intact during the construction works.

1.5. Project Proposal

CCC now propose removal of the existing wharf and its fulls replacement with a new structure. The elements of the existing wharf sturcture to be removed include:

- Solid landward approach comprised of a concrete abutment. It is expected that all of abutment wiill be removed though parts of the abutment or its fill may remain.
- Timber jetty of timber piles, capping beams, stringers and decking and associated components;
- Modern floating pontoons.

The Akaroa Wharf will be rebuilt generally in the existing wharf's location. A construction envelope within which the new wharf will be located covers the existing alignment of the wharf, and option to move the wharf to the north by 1.5m – 2.5m. The new wharf deck and supporting piles will all be constructed within this envelope. Ancillary features, like ladders, fender piles and other fittings, may extend beyond the envelope. The new wharf will be approximately 185 m long and 8 m wide for most of its length. In the zone where the current buildings exist (Black Cat and Blue Pearl), the new wharf will not extend under these buildings, they will remain on their existing piles and will connect to the new

wharf via a gangway or ramp. The new wharf will follow a similar form to the existing wharf but with some changes (see Table 2 & Figures 8-11).

Associated services for water and power along the wharf approach (extending from the wharf to the edge of Beach Road) are also proposed. While in some instances, existing sub-surface service trenches may be able to be utilised, it is considered likely that new sub-surface service trenches will also be required here. It can be expected that associated new service trenches will range between c. 0.80 m wide and up to c. 1 m deep.

Table 2. Changes in the form of the new Akaroa Main Wharf structure.

Marine side elements	Land side elements
The wharf height will be raised to 3.06 m LVD-37 or 12.10 m CDD which is between 500-600 millimetres higher than the existing deck to allow for sea-level rise and storm surges.	Two construction phase laydown areas (Laydown Areas 1 & 2). These are described in more detail below. Construction phase alterations to parking spaces and traffic movements.
The proposed wharf may be offset from its existing alignment by 1.5-2.5 m to the north.	Trenching to connect services.
New floating pontoons will be arranged on the northern and southern faces of the main wharf. The pontoons will be accessed from the main wharf by gangways.	Earthworks to remove the abutment and construct the new seawall, abutment and prepare for surface finishes.
The southern floating pontoon will include infrastructure for diesel refuelling.	Sealing and concrete works to provide a finished surface.
A new crane will be installed on the western end of the wharf to assist commercial vessels with loading/unloading.	
Removal of most or all the original 1887 abutment and associated reclamation back to the existing shoreline to accommodate the increase in deck height and lateral shift of the wharf. This will result in changes to the wharf's integration with the land. A small area of reclamation, enclosed by a concrete 'L-wall' seawall, is proposed on the northern side of where the new wharf will meet the shoreline.	
Wharf materials will include reinforced concrete decking, steel-encased concrete piles, timber fender piles and timber deck elements along with various wharf fittings (bollards, lighting etc).	

1.6. Construction Methodology

The proposed construction works includes marine and landside activities. The first phase of works will involve the establishment of contractor laydown facilities followed by demolition of the existing wharf and construction of the new wharf (Figure 3-4).

Laydown Area 1 (Figure 4): This will be at the Akaroa Recreation Ground and will be the main load out facility for the project. To facilitate construction, a small loading ramp will be constructed on the southern side of the Akaroa Boat Ramp. This will require a temporary reclamation, disturbance of the seabed, placement of geotextile, granular fill and rip rap protection. Dredging at the boat ramp to provide barge access will also be required. The laydown area itself will require topsoil stripping within the Akaroa Recreation Ground.

Laydown Area 2 & Service Trenches (Figure 3): This will be at the landward side of the Akaroa Main Wharf. Establishment or utilisation of Laydown Area 2 will not involve groundworks, however trenching for services along the wharf approach (extending from the wharf to the edge of Beach Road) is likely required. While in some instances, existing sub-surface service trenches may be able to be utilised, it is considered likely that new sub-surface service trenches will also be required. It can be expected that associated new service trenches will range between c. 0.80 m wide and up to c. 1 m deep. Laydown Area 2 includes the former Weighbridge House/Wharfingers Office and small park next to it. A 1.8m fence around the area will be erected to protect the public and existing trees. Any service trenches excavated in this area will be confined to the existing asphalt surface approach to the wharf and will avoid extant items including the former Weighbridge House/Wharfingers Office.

Demolition & Construction: Demolition of the existing wharf and new wharf construction will involve a series of different construction activities undertaken in stages (Table 3). It is noted that much of the piling and demolition works will occur concurrently as the piling methodology will rely on the existing wharf structure for support of the piling gates. Once new piles are installed it is expected that the existing wharf elements in the location will be demolished. As such, most of the wharf elements will be demolished in stages with demolition materials being shuttled by to Laydown 1 for unloading.

Table 3. Construction Activities.

Existing Wharf demolition	New Wharf construction methodology
Remove and relocate the two existing floating pontoons and associated structures.	Construct seawall and abutment (excavation, concrete works etc). A small area of reclamation, enclosed by concrete 'L-wall' seawall, is proposed on the northern side of where the new wharf will meet the shoreline.
Demolish and remove the timber wharf, which will require landside storage of demolition materials. The demolition will involve the use of land and water-based equipment. The public will be excluded from water and landside construction areas. Existing piles will be removed or cut back to seabed level.	Installation of 44-55 steel-cased concrete piles (710 mm diameter) for the main wharf, which will be driven socketed into the underlying basalt. Assuming a combination of vibro, drop hammer and bored installation methods.
Excavate and remove the concrete abutment. This will involve excavation back to the line of the adjacent seawalls though there is potential that some of the landside abutment will remain in place.	The main wharf piles are anticipated to be installed by barge, or from cranes staged off the wharf (both methods may be used).
	Install precast concrete capping beams and precast deck units
	Install formwork and pour the topping slab (concrete deck).
	Install fender piles (number to be finalised, but these will be driven into the seabed).
	Install deck furniture, and services.
	Install floating pontoons (north and south) including the piled platforms, gangways and associated services .
	Undertake any surface treatment on the landside.

The following notes provide additional information on the construction methodology and assumptions:

- Material and soil from the abutment will be assessed by a Contaminated Land Specialist and disposed of at an authorised land-based facility.
- Large construction elements, such as piles, will be transported to the site by barge.
- All material placement on the seabed will remain within the designated footprint.
- Demolition and construction will primarily be undertaken using marine-based plant or staged from completed wharf sections.
- Demolition debris will be transferred to a laydown/staging area before final disposal.
- A limited number of temporary contractor buildings will be located adjacent to the existing wharf abutment, near Beach Road.
- Construction piling will be minor in scale, with up to 18 additional piles no larger in diameter than those of the main wharf.

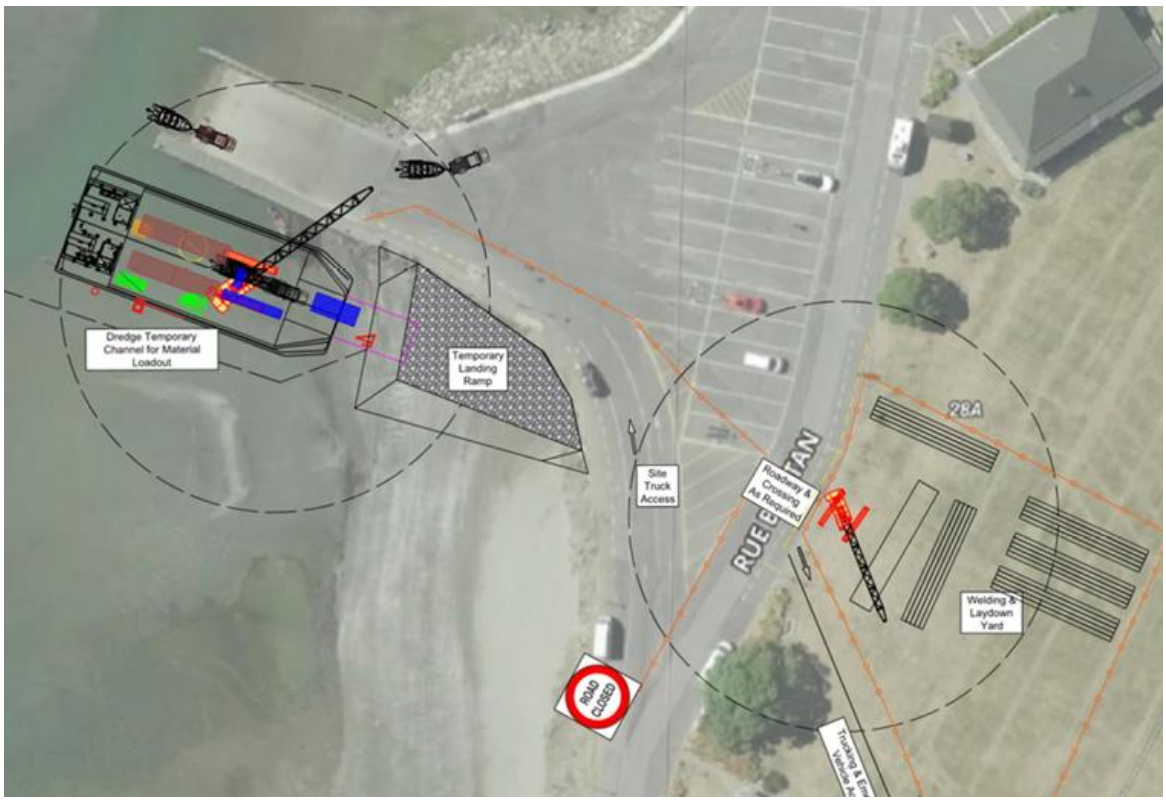


Figure 8. Temporary landing ramp at the Akaroa Boat Ram on west side of Akaroa recreation Ground. Source: Enviser 2025.

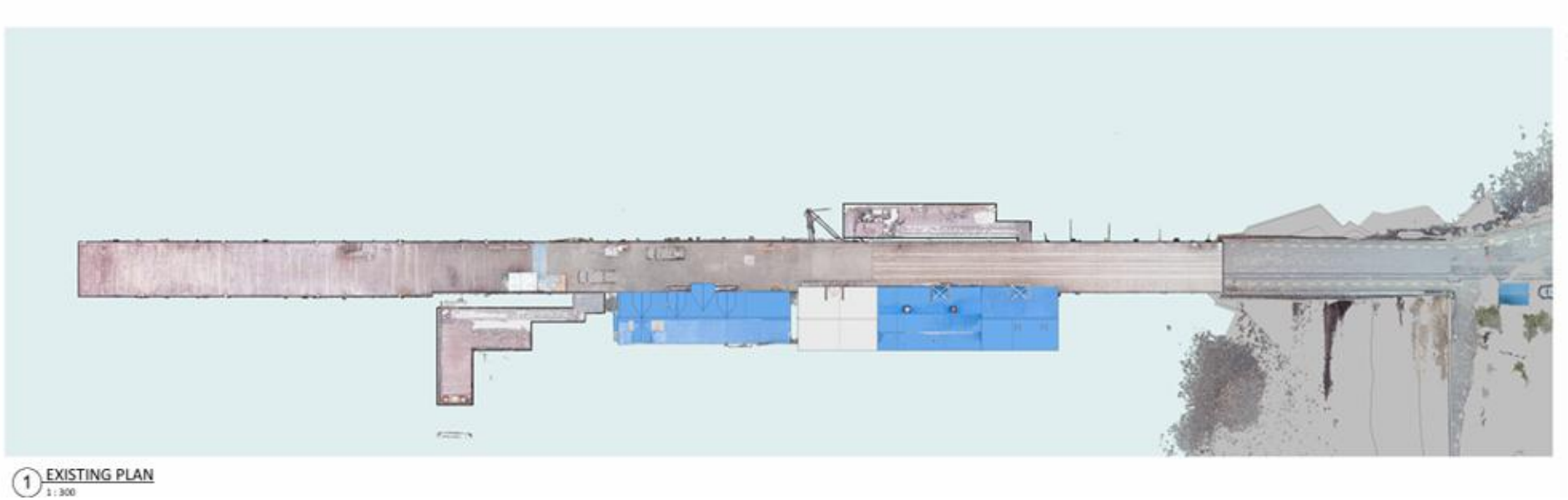
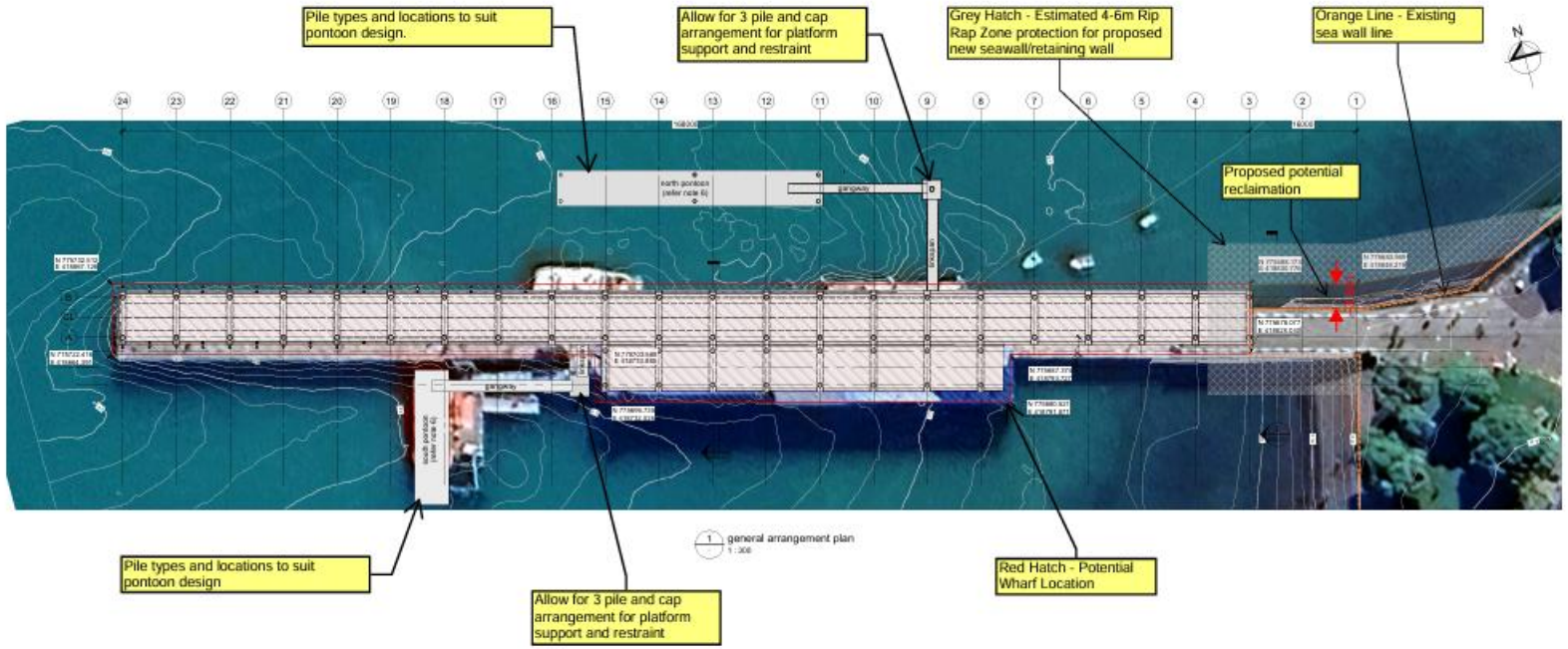


Figure 9. Provided plans showing the existing Akaroa Main Wharf and proposed demolition plan. Source: Isthmus 2024.



Notes:

- All coordinates are approximate only as they are based on Calibre Lidar Survey and initial CCC topo data provided by CCC in 2020. All design documentation subject to final confirmation with cadastral survey of existing wharf.
- The coordinate system used is Mount Piesent 2000
- All Wharf coordinates are based on the edge of the proposed wharf and exclude fenders, ladders and other components
- All existing seawall and proposed reclamation coordinates are based on the outer edge of the top of the sea wall.
- Total bent numbers may vary from 24 to 18. Total number of wharf piles may also vary from 64 to 44 (exc pontoon and platform piles)
- Pontoon, platform and gangway layout taken from Enviser Pontoon Concept Layout option F Rev 0. Design by others.

Christchurch City Council | Holmes | AKAROA WHARF RENEWAL | general arrangement plan | 145457.31 SSK-01

Figure 10. Provided plans showing proposed new Akaroa Main Wharf. Source: CCC 2025.

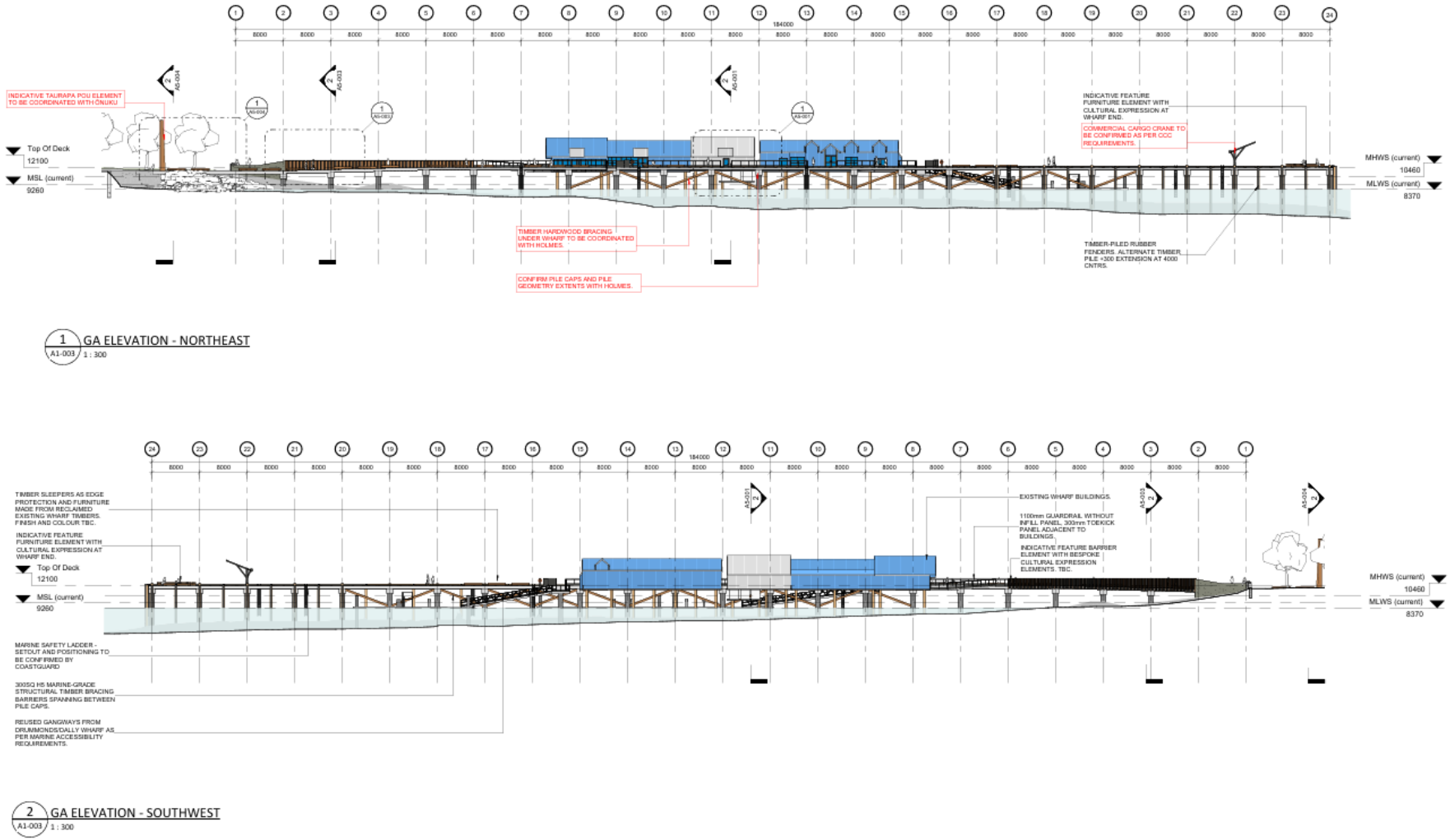


Figure 11. Provided plans showing SW Elevation of proposed new Akaroa Main Wharf. Source: Isthmus 2024.

1.7.Constraints and Limitations

This report does not include an assessment of Māori cultural values. Statements are made as to the location and nature of archaeological sites and their archaeological values. While there are some references to aspects of the cultural significance of the project footprints, it is outside of the expertise of the author to comment on tāngata whenua values. As such, there are no definitive statements on the cultural significance of the project area nor are the views of tāngata whenua represented in this report. An assessment of cultural significance will not necessarily correlate with an assessment of the archaeological significance of the area as it will refer to a different value set.

2. Statutory Framework

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:

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

a. Was associated with human activity that occurred before 1900 or is the site of the wreck of any vessel where the wreck occurred before 1900; and
b. Provides or may provide, through investigation by archaeological methods, evidence relating to the history of New Zealand; and
c. Includes a site for which a declaration is made under section 43(1)

Any person who intends carrying out work that may modify or destroy an archaeological site, 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 archaeological sites, regardless of whether:

- The site is recorded in the NZ Archaeological Association Site Recording Scheme or included in the Heritage New Zealand List,
- 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 the New Zealand Heritage List/ Rarangi Korero of Historic Places, Historic Areas, Wahi Tupuna, Wahi Tapu and Wahi Tapu Areas. The List can include archaeological sites. Its purpose is to inform members of the public about such places.

The heritage places under consideration in this report and the timeframe/age of these places is restricted to archaeological sites as defined in the HNZPTA.

3. Methodology

This assessment report is based on research from known information sources on archaeological values and a field survey of the project area.

Research was carried out using a range of information sources including the NZAA Digital Site Recording Scheme (ArchSite), historic survey plans, historic newspaper articles, aerial images, web-based resources and published and unpublished reports/articles.

Information in this report also relies on previous research that is included in a Conservation Plan previously prepared for the Wharf (Origin Consultants 2021). That conservation plan includes a comprehensive history and description of the wharf structure with much of that history represented in this report.

SIA archaeologists TJ O'Connell and Sheelagh Conran also visited the Akaroa Main Wharf on 11th November 2021. A site walkover was undertaken that reviewed both the concrete abutment and the top of the wharf deck. A comprehensive inspection of the underside of the deck including piles was not undertaken although the underside of the wharf was previously inspected as part of the previously prepared condition assessment (Calibre 2018) and Conservation Plan (Origin Consultants 2019). As such, site visit observations made by SIA archaeologists are supplemented in this report by observations made by Calibre and Origin.

The assessment of archaeological values was based on a consideration of the impacts of the proposed works on both potential and known archaeological sites in the area. These sites were characterised using the archaeological values of condition, rarity, contextual value, information potential, amenity value and cultural associations, as per Heritage New Zealand Guidelines.

4. Physical Environment or Setting

The area around Akaroa Main Wharf is a mixture of recreational spaces (most notably the Britomart Reserve to the south of the wharf), small-scale commercial buildings, and accommodation, all catering primarily to the tourist trade. The wharf itself is the focal point of the seaside tourist area. Some of the waterfront, including the wharf, is part of the Akaroa Main Wharf Area, a cluster of four significant heritage items scheduled in the Christchurch District Plan. This area is itself encompassed by the broader Akaroa Heritage Area. The Akaroa Recreation Ground is a large sporting complex consisting of outdoor grounds and an indoor facility situated to the northern end of the township. It is located along the Akaroa waterfront with main access off Rue Jolie, Rue Lavaud and Rue Brittan. Locally, the area is known as Jubilee Park.

5. Historical Background

5.1.Horomaka/Te Pātaka-a-Rākaihautū/Banks Peninsula[1]

Traditional kōrero tell of the origins of the Horomaka/Te Pātaka-a-Rākaihautū/Banks Peninsula landscape. One story relates to the adventures of Tūterakiwhānoa, the ancient explorer who created Banks Peninsula from the scrapings of an undersea reef.

[1] Reproduced from Christchurch City Libraries Tī Kōuka Whenua (https://my.christchurchcitylibraries.com/ti-kouka-whenua/horomaka/).

Another attributes the formation of the peninsula to Māui:

> *"who rested there with his whānau when an evil giant appeared. Maui cast him into the sea and heaped mountains upon him. Throughout the winter the giant remained still but in summer he stirred causing the land to split forming Akaroa harbour. Maui continued to pile further mountains onto the giant until he was finally subdued becoming Horomaka, or Banks Peninsula".*

5.2.Akaroa Harbour[2]

> *Akaroa is the large harbour on the southern coast of Horomaka/Te Pātaka-a-Rākaihautū (Banks Peninsula). Whakaroa is another spelling of Akaroa. Whanga, or Whaka in the Kāi Tahu dialect means harbour, and roa is the Māori word for long. Akaroa was occupied by iwi such as Hāwea, Waitaha, Rapuwai, and Kāti Māmoe prior to the southern Kāi Tūhaitara migration to Canterbury. Te Ake was one of several Ngāi Tahu tūpuna (ancestors) who claimed land during this migration. By placing his tokotoko at the head of the harbour Te Ake claimed ownership of the harbour. Akaroa continues to be a renowned mahinga kai (food-gathering area) for the local Kāi Tahu hapū based at the small kāika of Ōnuku. Foods gathered from the harbour's rocky shoreline, bays, and sandy beaches include makā (dogfish), pākirikiri (blue cod), hoka (red cod), hāpuka (groper), hokarari (ling), kōura (crayfish), pāua (abalone), kūtai (mussel), pipi, tuaki (cockle), oyster, kina, papaka (crab), and kōura (crayfish).*

Numerous sites of Māori occupation are located around the shores of Akaroa Harbour, including major pa sites such as Ōnawe (located on a peninsula on the northern shore of Akaroa Harbour).

5.3.Māori history[3]

The first Māori settlers are thought to have arrived on Banks Peninsula around 1300 AD (Challis, 1995: 9). The volcanic cone provided shelter while the natural environment provided food and materials. Fish, shellfish, and marine mammals could be harvested from the harbour, the forest provided native birds and materials for weaving and construction, and eels could be taken from the many streams which also provided fresh water. South Island Māori are known to have seasonally migrated from permanent settlements in the winter to distributed resource gathering camps during the warmer months (for an example see Anderson and Smith, 1996). Akaroa harbour is likely no exception, and it is probable that the population grew and shrank with the changing of the seasons. The Māori name for French Bay is believed to have been Paka Ariki (Andersen, 1927: 148).

The arrival of European settlers and technology in New Zealand had a massive disrupting influence on Banks Peninsula Māori (Witter, 2007: 4). The musket wars, in particular the Kai Huanga feud within Ngāi Tahu, and the Te Rauparaha raids took a heavy toll on the Banks Peninsula population. At the same time interaction with European traders and whalers had introduced disease and had eroded the traditional economy (Wilson and Beaumont, 2009: 10-11). These events appear to have significantly reduced and destabilised the Akaroa population to the point they had largely abandoned their occupation of the Akaroa harbour foreshore by 1840 in favour of the settlement at Ōnuku (Wilson and Beaumont, 2009: 9).

An 1849 sketch by Walter Mantell which shows the approximate site of the Akaroa Main Wharf during the early period of pakeha settlement depicts a waka being dawn onto the beach at the bottom right

[2] Reproduced from Kā Huru Manu The Kāi Tahu Cultural Atlas: Akaroa Harbour.
[3] In part reproduced from Hennessey, M 2022 10 Rue Lavaud, Akaroa: Archaeological Site Damage Report.

of the image (Figure 12). Furthermore, the abutment to Akaroa Main Wharf also interfaces with Britomart Reserve, an area which for Ngāi Tahu holds special significance. This was the place where approximately 500 Ngāi Tahu gathered in 1848 to discuss the sale of land which would later be known as Kemp's Deed. This event also marked the beginning of land alienation and a multi-generational battle to have the principles of Kemp's Deed honoured (Origin 2021).

Figure 12. An 1849 sketch by Walter Mantell – looking from one of the settlement's early jetties – showing the approximate site of the Akaroa Main Wharf during the early period of pakeha settlement at Akaroa. Note the waka being dawn onto the beach at the bottom right of the image. Source: Alexander Turnbull Library Reference: B-063-041.

5.4. Evidence of Māori Archaeological Sites

Ogilvie (2007: 20) speculates that the area of the modern Akaroa township was a location inhabited by Māori prior to European arrivals. The extent of the occupation was described by Vangioni, who claimed that "it was once the home of hundreds of Māori who had their whares and whatas (storehouses) all along the seashore" (Vangioni, 1967: 3).

Physical evidence relating to this Māori occupation of Akaroa was recorded in 2019 during groundworks for a water mains upgrade project (Underground Overground 2021). Two shell middens were recorded on Rue Jolie (Recorded Archaeological Site: N36/196, Archaeological Authority: 2018/073) this location being c. 110 m south of the Akaroa Recreation Ground and c. 760 m to the northeast of Akaroa Main Wharf. Archaeological midden was also recorded in another part of Rue Jolie (Recorded Archaeological Site N36/254, Archaeological Authority: 2018/073) c.45 m to the south of Akaroa Recreation Ground. More recently in October 2021 archaeologists from Underground Overground ltd identified a midden/cultural layer dated to the 16th/17th century on the corner of Beach Rd and Bruce Terrace (Recorded Archaeological Site N36/280, Archaeological Authority: 2021/675), on the east side of the road and c. 50 m south of the Akaroa Main Wharf (Underground Overground 2024). While this suggests for the potential that additional Māori archaeological remains are present in the local, it is considered that there has been a substantial amount of ground disturbance within the project footprint during construction of the wharf between 1887 and 1888 and that this disturbance would have likely severely impacted or removed such archaeological remains within the project footprint (if they had been once

present). Nevertheless, the potential that such remains are still present cannot be completely discounted.

5.5. European Settler Arrival - Akaroa Township[4]

Akaroa township is located 84 km southeast of Christchurch and is Canterbury's oldest town – established in 1840 by French settlers (Wilson 2015). In 1838, French whaler Jean François Langlois saw the money-making potential of Banks Peninsula, following a dubious land purchase from Māori he persuaded the French King Louis-Philippe to help him with his scheme of establishing a French colony at Akaroa. The Nanto-Bordelaise Company was established in France in 1839 to carry out the project. However, this French interest had been pre-empted by the British government's signing of the Treaty of Waitangi on 6 February 1840 and which had claimed sovereignty over the South Island on 21st May 1840. However, when Captain Charles François Lavaud on the Comte de Paris arrived in August 1840 to establish French rule and carrying 59 emigrants, the Union Jack was already flying over Akaroa (Copland 2016).

The French colonists arrived at a place now known as the French landing site on Beach Road (at the southern end of the town). Over the first few years, the French settlement prospered briefly through trade with whaling ships and was mixing well with British and Māori residents. Houses were established, along with shops hotels and other businesses. The French Navy built roads, bridges and wharves over this time. The decline in whaling had taken place by the mid-1840s and the French Navy left in 1846. Most settlers stayed and became naturalised. Victorian infrastructure development in Akaroa and led to a well-established township in the latter half of the 19th century (Copland, T. [online]).

5.6. Akaroa's Wharves and Foreshore

The French had built Akaroa's first jetty at the northern end of French Bay in the 1840s. The first public jetty at the southern end of the town was constructed in 1859 which was largely paid for by the Provincial Government (Wilson & Beaumont 2009: 59). The wharf was located at the end of Church Street (Figure 13). Regular shipping services linking Akaroa to Lyttelton began in the late 1850s and began using this wharf (*ibid*). This original wharf at the southern end of Akaroa was superseded in 1886-87 by a new wharf further south (the current Akaroa Main Wharf), the original wharf survived in a dilapidated state until the 1930s when it was finally removed (*ibid*).

For a time in the late 19th century and early 20th century, Akaroa had two wharves side by side at its southern end and Beach Road had an almost continuous line of business premises (ibid: 59-61). This commercial development along Beach Road in the latter half of the 19th century was associated with the wharf infrastructure which provided the township with transport, interaction and trade shipping with the outside world and its role as the harbour's port.

According to Wilson & Beaumont (2009: 62):

> *Most of the sea frontage of the town remained open beach until the first significant stretch of seawall on Beach Road, from the Rue Jolie corner round to the main wharf was built in 1901-1904. The wall was soon extended right round the main curve of Beach Road to the start of the northern end of the town, where Beach Road merges into Rue Lavaud.*

[4] In part reproduced from Origin 2021 Akaroa Main Wharf, Akaroa: Conservation Plan.

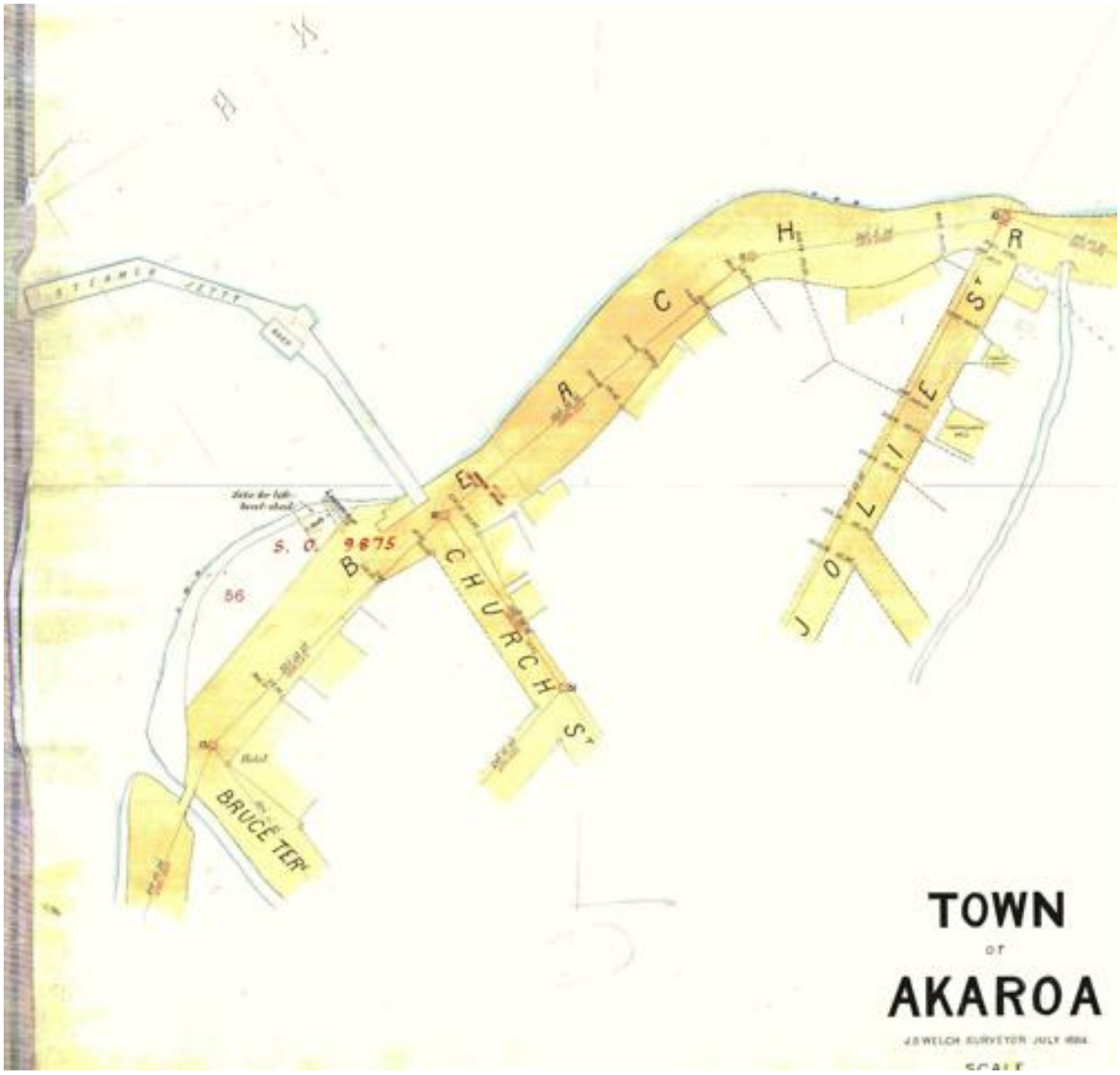


Figure 13. Detail of SO 813 from 1883 showing the 1850s jetty extending out from Church Street. Source: Grip 2024.

5.7.Daly's Wharf

Daly's Wharf located c. 611 m northward of Akaroa Main Wharf does not form part of the current archaeological assessment. However, aspects of its recorded history are included here for context. Previously prepared histories (see Daisley 2013) indicated that Daly's Wharf serviced the north end of Akaroa (replacing an older 'French jetty', which is thought be a little further north, see Figure 13). Daly's Wharf was constructed by Charles Haylock between 1859-1860 and was known as Daly's Wharf from about 1872 when James Daly took over Haylock's store and jetty.

By 1900 the wharf was in a state of disrepair. After initially debating the question as to whether a new wharf was necessary the Council decided to refurbish the wharf, especially since it was still used by local fishermen. The new wharf cost £800 and was an important step in the progression of Akaroa. The new wharf was designed by a local engineer, W.D. Wilkins, and built by a contractor, Robert Prowie. It was finally finished in 1913 and opened in 1914 by the Hon. Robert Heaton Rhodes. In 2001 the wharf was found to need extensive restoration. This work involved installing new piles and bracing, replacing

some of the timber decking and repairs to the northern stairs and a new landing for the southern stairs. The work was completed in 2002.

Epsie (2001) previously completed a conservation plan for Daly's Wharf. Epsie noted that the general shape of the 19th century wharf can be discerned from 19th century images of it. It consists of about 10 or eleven evenly spaced-out piles supporting a boardwalk to a more concentrated group of piles at the end. Epsie's report (2001) also included a description of the standing wharf from 2001 whose condition he describes as poor. Regarding the age of the extant wharf fabric Espie concludes:

"Although old, it is debateable that any of the present metal or timber fabric is original. Neither is there now any physical evidence of stages in the history of the present wharf".

Daisley (2013) states that the wharf was rebuilt in 1911 to replace an earlier one which had deteriorated which suggests that the standing Daly's Wharf structure is post-1900 in date. He further notes that the wharf was extensively restored in 2002 with the work including installing new piles and bracing, replacing some of the timber decking and repairs to the stairs. This renewed Daly's Wharf is still present today.

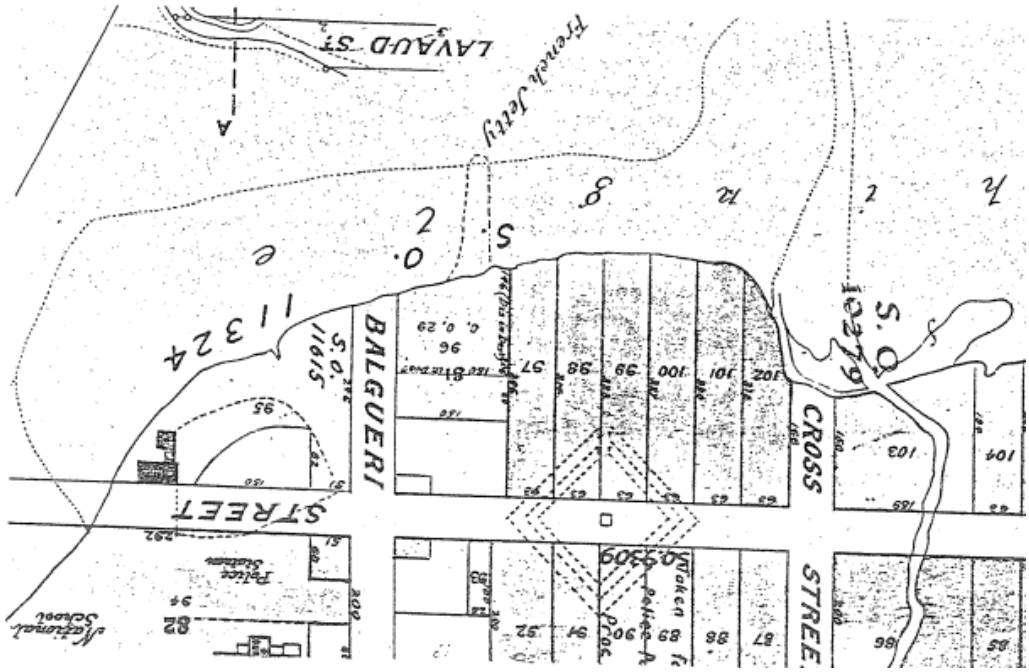


Figure 14. Part of 1856 map showing the French Jetty in dotted outline that is included in Espie, J (2001) Conservation Plan for Daly's Wharf.

5.8. Akaroa Main Wharf

Origin (2021) report that careful consideration went into the positioning and design of the new Akaroa Main Wharf prior to its construction. The Wharves Committee, reporting to the Akaroa Borough Council in early February 1887, outlined three proposals: "To carry it out from the present end into deeper water; to carry it out in a straight line from the first bend where the shed was; or to start from the reserve." They recommended that "we consider that the best site for the new jetty will be upon the line of soundings shown upon the drawing in blue figures (opposite reserve No. 86)" (what is now the Britomart). The committee's reasons were that

"as the reserve projects beyond the adjacent portions of the coast line, it offers the greatest facility for making deep water may be obtained in a little over five chains, starting from the reserve point, which is

now reached in the present jetty by seven chains and a quarter, and if a portion of the new jetty is built solid as suggested below, there will be less filling to do; or if it eventually decided to make the construction entirely of wood, shorter timbers will be required for piles. [Also] by building in a new place, the present jetty can be used during the construction of the new one, and the trade of the port in no way interfered with, thus overcoming a serious difficulty. [Finally,] that on the line indicated a straight jetty may be built, which is much more easily worked than one with an angle"[5]

Figure 15. Detail of a photograph from the 1850s jetty (c. 1880s?) showing the shoreline prior to the construction of the Akaroa Main Wharf. Source: Te Papa 2024.

Figure 16. Detail of an 1860s image showing the 1850s Provincial Government jetty. Source: Auckland Museum Reference: PH-ALB-86-p124-2.

[5] Akaroa Mail and Banks Peninsula Advertiser, 'Akaroa Borough Council' (Issue 1101, 4 February 1887).

Origin (2021) report that S. Derbidge, the inspector of works of the Lyttleton Harbor [sic] Board, and William Wilkins (see below), the engineer, considered "the jetty should be of solid earthwork, retained by concrete walls for about 200ft from high water mark, and the remaining portion of timber, to extend an additional 400ft, or 600ft in all, reaching about 13ft of water, the timber, except decking, hand rails, etc., to be ironbark; deck to be 4in stringy-bark or totara." Further advice was offered by William Tosswill, the mayor and chairman of the wharves committee, who suggested:

"That by making the wharf for another 100ft (by) 24ft wide they could enable vessels drawing 6ft 6in to 8ft 6in to be moored there. This would allow vessels like the Akaroa or Clyde to come in there, and with that width the drays could come right to the vessels over 200ft of solid and 100ft of stringy bark stringers. The crane would of course be erected there, and it would be a great convenience for the carts to come right up to the vessels and load under the crane"[6].

At a special meeting of the council five days later, the engineer approved of the mayor's suggestion that the wharf be specified to a 24ft width for the 300ft length and thought it would be good to carry out the wharf at that width for the whole structure. The meeting "moved to adopt the report and plan of the site prepared by Wilkins and Derbidge" and that the "Engineer be instructed to prepare plans and specifications in accordance with the report and plans."[7]

In July 1887, after approval from the Marine Department, tenders were invited for the "new jetty…600 feet in length, the first 150 feet from the shore end to be solid work, with concrete retaining walls and the outside 450 feet of ironbark timber"[8].Tenders were open until 24 August 1887, and shortly after that deadline the council had settled on the proposal of contractors Place and Wheeler, who offered to construct the wharf for £3,437 9s[9].

Work began in September in 1887, with stone-breaking for the concrete portion[10]. In early October Wilkins reported that the contractors had commenced the concrete retaining walls after he had put in the necessary levels, although work could only be completed between tides. The mixing of concrete on the site was supervised by George Piper, who appears to have been the site foreman[11].

Origin (2021) report that by 9th December 1887 the concrete retaining walls were apparently almost completed, with only a fortnight's further work expected. The "rubble retaining walls at the inshore end' were finished except for the coping and pointing". Wilkins told the council that the "concrete work is settling in a very satisfactory manner, and the walls keep the tide out even without the backing. The work of filling has been commenced and will probably be completed about Christmas.[12]" Some issues with the concrete structure also became apparent as works progressed. Wilkins reported to the council that "there was a scour" associated with a part of the wharf, but this appears to have been a minor problem and was resolved "by placing large stones in a certain position." More troublesome was some erosion of the wharf's interior fill: "Cr Staples further called attention to the fact of the sinking of the

[6] Akaroa Mail and Banks Peninsula Advertiser, 'Akaroa Borough Council' (Volume XIV, Issue 1101, 4 February 1887).
[7] Akaroa Mail and Banks Peninsula Advertiser, 'Akaroa Borough Council'.
[8] 9 Akaroa Mail and Banks Peninsula Advertiser, 'Advertisements' (Issue 1145, 8 July, 1887)
[9] Temuka Leader, 'Interprovincial News' (Issue 1626, 27 August, 1887).
[10] Akaroa Mail and Banks Peninsula Advertiser, 'Peninsula News' (Issue 1164, 13 September, 1887).
[11] Akaroa Mail and Banks Peninsula Advertiser, 'Akaroa Borough Council'
[12] Akaroa Mail and Banks Peninsula Advertiser, 'The Akaroa Mail' (Issue 1215, 9 March, 1888); Akaroa Mail and Banks Peninsula Advertiser, 'The Wharf' (Issue 1224, 10 April, 1888); Akaroa Mail and Banks Peninsula Advertiser, 'Akaroa Borough Council'.

earth over the weep holes in the concrete sustaining wall. The clay washed through these and did considerable damage by causing the upper surface to sink"[13].

In the New Year the construction of the wharf's timber component began, with timber supplies arriving intermittently from Australia from February till March 1888[14]. By April construction was proceeding well; the contractors had "already driven twenty rows of piles" and were "7ft over half the whole length of the wharf"[15]. Just a month later all "the piles for the whole of the bays of the new Jetty" were in place and the fender and shed piles were being "pushed on with"[16]. However, several delays had been overcome to reach this point, most notably issues with the timber supply, a major storm that damaged the half-built structure, and the wait to source longer piles (45 feet rather than the 37-foot piles used in the rest of the structure) to address soft ground at the 34th pile[17].

The shed and other wharf furniture began to be organised towards the end of the construction process. It appears that the shed on the 1850s jetty was taken for use on the new structure. In August 1888, the shed was "in process of removal" from the old jetty and Council discussed what alterations to make before it was re-erected. It was decided that the wharf tramline was not to be routed although the shed – as it was on the old jetty – in order to increase storage space and make the building easier to secure. A recommendation was also made to lower the shed floor from 2 feet 3 inches to only 18 inches above the jetty in order to facilitate the easier movement of goods. This separate floor was made to extend across the base of the shed and was apparently made of stringy bark boards. It was also agreed that the shed would be given a coat of 'hematite' paint. Several further features were removed from the old jetty for use on the new wharf: a lamp and pillar, as well as "seat and rails at the seaward end of the [old] Akaroa wharf, with the life-buoy support." For cargo management on the wharf a new crane was sought after inspecting options in Lyttelton, and a single (rather than double) tramline was decided upon because "it would leave 18 or 19 clear feet for the drays to go to the shed"[18]. There was also a proposal to construct a verandah over the door of the shed to "protect the door and trucks," but this was not agreed to in council[19]. A final small design alteration was the recommendation "that the parapet wall on the south side of the new jetty be returned along the shore end, a distance of twenty feet."[20]

Origin (2021) report that on 22 August 1888 the wharf was finally opened by the mayor on a fine late-winters day. Given the importance of maritime trade and communication to the port town, the wharf opening was a major event, and a public holiday was observed. The crowds that gathered for the ceremony cheered the contractors and engineer – it was matter of pride that "the wharf was designed by a Peninsula man and erected by two Peninsula contractors" – and a formal dinner and public ball was held later in the day[21].

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[13] Akaroa Mail and Banks Peninsula Advertiser, 'Akaroa Borough Council' (Issue 1211, 24 February, 1888).
[14] Akaroa Mail and Banks Peninsula Advertiser, 'The Akaroa Mail' (Issue 1215, 9 March, 1888); Akaroa Mail and Banks Peninsula Advertiser, 'The Wharf' (Issue 1224, 10 April 1888); Akaroa Mail and Banks Peninsula Advertiser, 'Akaroa Borough Council'.
[15] Akaroa Mail and Banks Peninsula Advertiser, 'The Wharf'.
[16] 7 Akaroa Mail and Banks Peninsula Advertiser, 'Akaroa Borough Council'.
[17] 8 Press, 'Akaroa Items' (Issue 7027, 2 April 1888); Akaroa Mail and Banks Peninsula Advertiser, 'Akaroa Borough Council' (Issue 1290, 17 February 1888); Akaroa Mail and Banks Peninsula Advertiser, 'Akaroa Borough Council'. The description of the finished wharf suggests that even longer 55-foot piles were ultimately required.
[18] Akaroa Mail and Banks Peninsula Advertiser, 'Akaroa Borough Council'.
[19] Akaroa Mail and Banks Peninsula Advertiser, 'Akaroa Borough Council'. (Issue 1261, 14 August 1888).
[20] 1 Akaroa Mail and Banks Peninsula Advertiser, 'Akaroa Borough Council'. (Issue 1261, 17 August 1888).
[21] Press, 'News of the Day' (Issue 7152, 23 August 1888).

5.9. Place & Wheeler

Included in the Conservation Report (Origin 2021) are short biographical notes on Place and Wheeler the contractors associated with construction of the wharf, this information is reproduced here. Place and Wheeler were contractors operating in Akaroa between c. 1886 and 1891. Their projects included Duvauchelle's Bay bridge (1886); Robinson's Bay bridge (1886); Gillespie's, Pound and Cross Bridges (1887)[22]. They also won the contract for the construction of the new Wainui Jetty in March 1890[23].

A.H. Wheeler came to New Zealand with his wife, landing at Port Chalmers in 1885. In 1887 he came to Akaroa to work on the main wharf and remained in the town for some three years. In 1890 he moved to Christchurch[24]. His obituary records that Wheeler was a native of Wiltshire, who left for Lyttelton soon after his marriage in 1883. He was a stonemason by trade, working first in the Motukaraka district before later working on the Akaroa Main Wharf in partnership with Thomas Place. Wheeler was also involved in the construction of the Otira-Stillwater section of the Midland railway – working on culvert construction – and the railway extension towards Cheviot from Christchurch. Eventually, he settled in the Rotomanu block and was among the first to introduce Jersey cattle to the district. In the 1920s he retired to Christchurch, residing at Shirley, before taking up farming at Styx where he was a renowned breeder of Lucerne[25].

No information was found relating to the biography of Thomas Place by Origin (2021). It is possible that after completing the Wainui Jetty in 1890, he shifted to Western Australia.

5.10. William Davy Wilkins

Included in the Conservation Report (Origin 2021) is a short biographical note on William Davy Wilkins the engineer associated with construction of the wharf, this information is reproduced here.

Born in 1842 in Farnfawr, Glamorganshire, Wales, as a child Wilkins moved with his parents to London, where his father worked at the British Museum. In 1867 he sailed for Jamaica, and on to New Zealand in 1868. He married Kate Elizabeth Cane in 1879, daughter of architect Thomas Cane. After a short period in Auckland and on the Thames goldfields, Wilkins joined his brother in Government survey work in Auckland and the Waikato. Moving to Canterbury, he laid out the north railway at Rangiora and the main south line at Studholme Junction. He then joined the Government survey staff on Banks Peninsula – working mostly in the Wainui district. After a period in private practice in partnership with a man named Fenton, he became the County Clerk and Engineer for the Akaroa County Council where he was responsible for many bridges and roads in the district. At the end of the 1880s, he left Akaroa and took up a position in Zeehan, Tasmania, where he supervised the construction of tramways. In November 1892 he returned to New Zealand, moving to Riverton, where he was appointed the Wallace County Engineer. However, he did not hold this position long before returning to Akaroa in 1897 to again serve as County Clerk and Engineer. Ill health forced him to resign this role in 1910. He was also acting engineer to the Akaroa Borough Council, supervising the waterworks and septic tank drainage schemes[26].

[22] Akaroa Mail and Banks Peninsula Advertiser, 'Akaroa County' (Issue 1038, 29 June, 1886); Akaroa Mail and Banks Peninsula Advertiser, 'Pigeon Bay Road Board' (Issue 1137, 10 June, 1887).
[23] Akaroa Mail and Banks Peninsula Advertiser, 'Akaroa County Council' (Issue 1422, 4 March, 1890).
[24] Akaroa Mail and Banks Peninsula Advertiser, 'No Title' (Issue 5945, 20 November 1934).
[25] Press, 'Obituary' (Issue 22514, 23 September 1938).
[26] Western Star, 'No Title' (Issue 1715, 16 November 1892); Western Star, 'Presentation' (Issue 2152, 30 October, 1897); Akaroa Mail and Banks Peninsula Advertiser, 'Obituary' (Issue 3800, 19 November, 1918).

5.11. Construction Details of the 'New Wharf'

The Origin report (2021) includes a comprehensive consideration of construction details of the 'new wharf' including original drawings and early written descriptions supplemented by late 19th and early 20th century photography. That consideration is reproduced directly here.

The original plans of the wharf are limited to four pages, originally held by the Marine Department and now stored in Wellington at Archives New Zealand. Historic accounts of the structure and photographs provide additional insight into construction details of the wharf. A locational plan included in the original drawings shows the original wharf/jetty structure and the proposed new Akaroa Main Wharf (Figure 17).

The first page of the construction plans shows the results of sounding undertaken along the shoreline (Figure 18). Soundings were taken at the wharf line, 1 chain (20 metres) north and south of the wharf, 3 chains (60 metres) north and south, and 5 chains (100 metres) north and south. This was presumably done to ensure there was sufficient draft for large ships to navigate to and from the wharf at low tide.

The second page of the construction plans shows the wharf in plan, elevation, and section (Figure 19). The eastern portion is detailed as a solid fill with concrete walls. The portion of the wharf over water is hatched as timber, with steps on the northern and southern sides to allow access to moored boats. The location for the goods shed is shown on the southern side, and it appears that the shed from the existing jetty (Fisherman's Wharf) was to be relocated on the new wharf. The substructure of the wharf was in the form of stringers or 'floor beams', which provided a place to the fix the wharf decking. Section and elevation details show how the piles and bracing were to be installed with iron fixings.

Figure 17. Location of the original jetty/wharf and where the current wharf was built. Source: Wellington Archives New Zealand.

George Ranald Macdonald, 'William Davy Wilkins', Canterbury Museum: Macdonald Dictionary Records, 1952-1964 [accessed 31 October 2018].

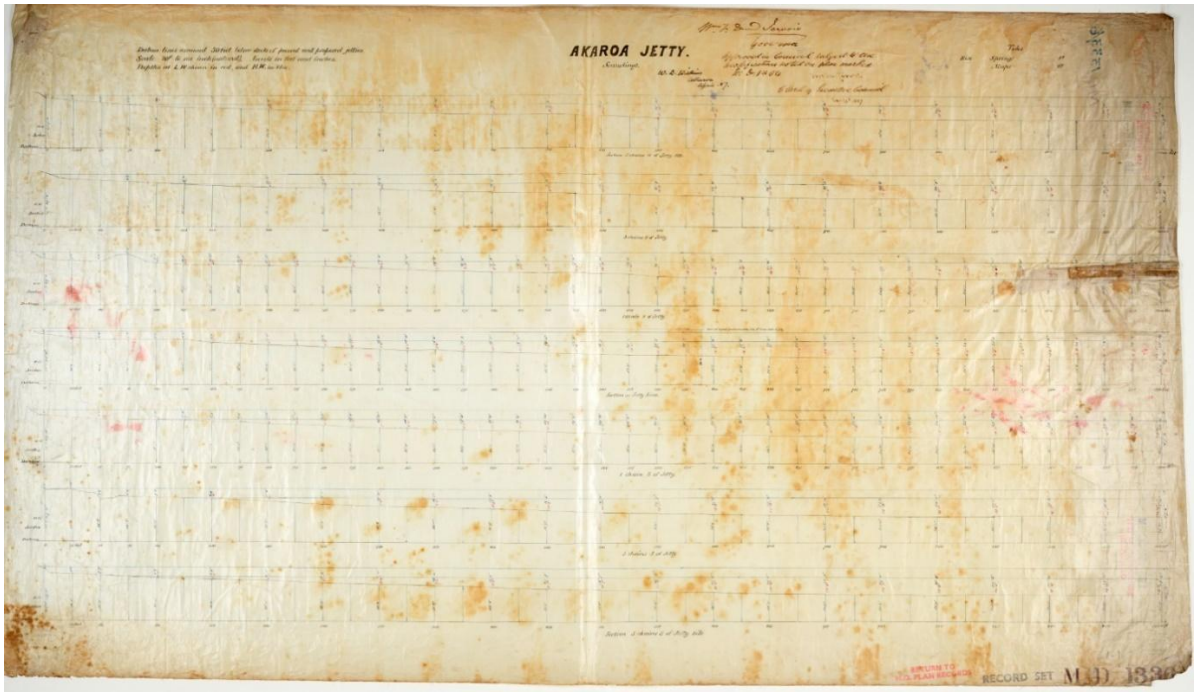

Figure 18. This page of the construction plans shows the results of sounding undertaken along the shoreline. Source: Wellington Archives New Zealand.

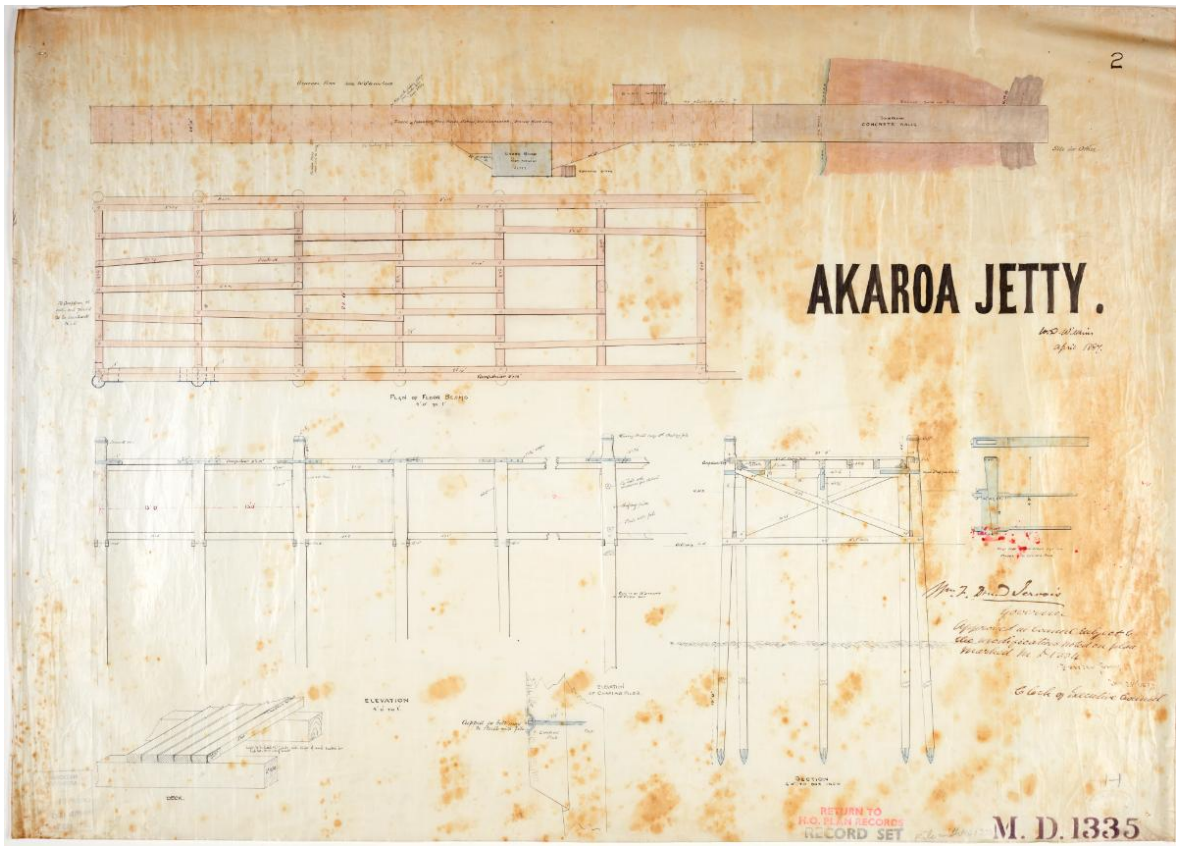

Figure 19. Plan, section, and elevation of timber portion of Akaroa Wharf. Source: Wellington Archives New Zealand.

A thorough description of the wharf in the *Akaroa Mail* at the time of opening is particularly useful and will be frequently referenced. In general, the wharf was noted as being a "composite structure of concrete work and timber, 605ft long, 24ft wide at the steamer berths, and 22ft wide on the

gangway."[27] The steamer berths are understood to be the westernmost portions of the timber structure, beyond the wharf shed (Figure 20). The Origin report (2021) notes that the original design of the wharf can also be seen in the historic photographs of the wharf including:

- From the shore, a section of solid structure projects, which has concrete sides and a protective concrete wall on the south side (returning a short distance along the foreshore).
- This solid structure then becomes a timber one comprising 'bents' of piles (running north/south) with a timber deck and white-painted timber railings along the south edge. This part of the structure remained the same width for 13 bents from the abutment after which it widened on an angle for 2 further bents. The white railings continued from the abutment up to the 15th bent, where the shed was located. On the north side of the wharf a square platform projected from the 15th bent and ran back towards the shore with two flights of steps as far as the 11thbent. This was the main access down to water level; the only other being a small, narrower flight of steps on the south side adjacent to the shore-facing gable of the shed. The crane was on the north side of the wharf opposite the shed at about the 16th bent from the abutment.
- The wharf shed ran from the 15th to the 18th bent (3 bays) and then a small building at its rear (west) ran for a further 2 bays up to the 20th bent, where the wharf width narrowed again.
- Beyond these buildings, the timber wharf structure continued but fender piles were installed on both the north and south sides, as protection, where vessels were designed to dock. Every third bent, the fender pile extended above the deck to create a mooring post (bollard) for these vessels. A further section of railings extended a short distance beyond the buildings on the south side of the wharf up until about the 26th bent.
- There were no steps or other features in this last part of the wharf until the very end, where was another section of white railings running the width of the structure and a navigation light (Origin 2021).

Figure 20. View of the wharf on regatta day in 1907, showing the parapet and smooth concrete wall on the south side of the solid portion. Source: Te Papa.

[27] Akaroa Mail and Banks Peninsula Advertiser, 'The Opening of the Wharf'.

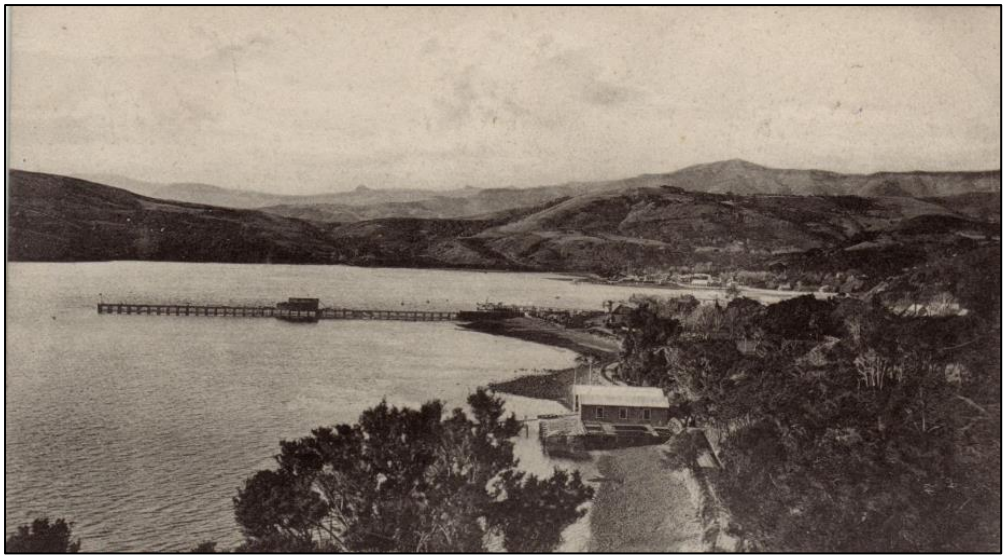

Figure 21. Akaroa Main Wharf and environs in 1905, looking north. Source: Kete Christchurch.

Figure 22. View looking west showing Akaroa Main wharf (to the left) and the remains of the old jetty in 1909. Source: Kete Christchurch.

Figure 23. Regatta day in 1895, with two ships pulled up to the steamer berths. Source: Alexander Turnbull Library.

5.11.1. Solid Landward Portion/Abutment

Details about this abutment are provided on the third page of the plans for the wharf (Figure 24). It shows a concrete structure divided into two bays. The walls are of solid concrete with solid fill in between. It was capped with concrete which formed the roof, and then the road placed on top to provide a level surface from the shore edge onto the wharf itself.

A more detailed description of the abutment is found in a contemporary article from the *Akaroa Mail*: "The solid portion, which extends 98ft from the shore, consists of a hearting of rubble and clay, retaining by concrete walls of great strength, resting upon foundations five feet six inches wide on the south or weather side, and four feet six inches on the inner side; the weather side is also protected by a parapet wall, which serves to give a finish to this part of the work."[28] The south side of the solid portion also had a smooth concrete finish (Figure 24) while the north side was rougher, with the large aggregate used in the wall giving the appearance of stonework (Figure 20). The concrete parapet on the south side appears to have been given a roughcast finish with smooth concrete trim (Figure 20).

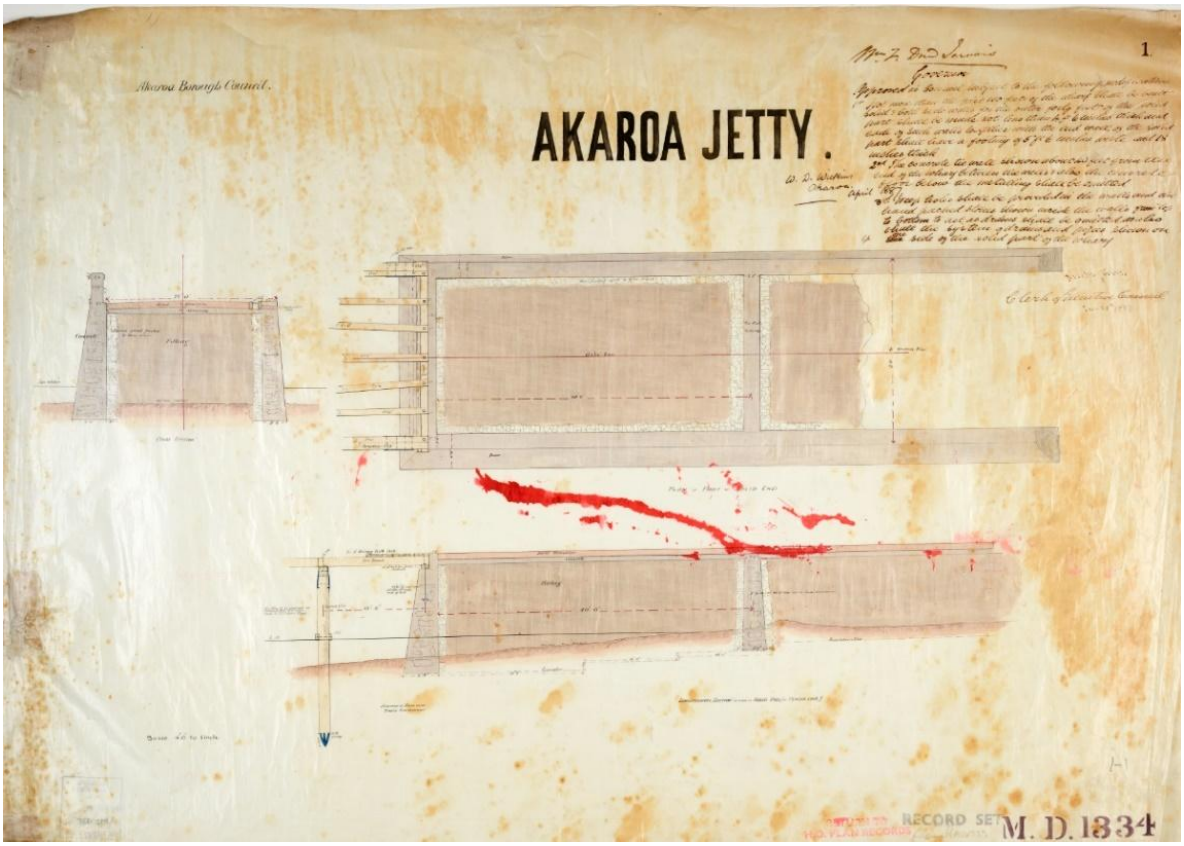

Figure 24. Plan, section, and elevation of concrete portion of Akaroa Wharf. Source: Wellington Archives New Zealand.

5.11.2. Timber Piles and Other Supporting Structure

From the Akaroa Mail:

> *The timber structure consists of thirty-nine 13ft bays, the outer eleven of which comprise five piles each, and the remaining twenty-eight bays three piles each, all of Australian iron-bark, specially imported for the work and landed from the Rose M. in February last. The longest piles are fifty-three feet in length and weigh about*

[28] Akaroa Mail and Banks Peninsula Advertiser, 'The Opening of the Wharf'.

2 ½ tons each…The caps, braces, wales and floor beams are all of squared iron-bark, of which timber there are some 70,000ft in the structure, irrespective of the piles.[29]

'Ironbark' is still used as the common name in Australia for *Eucalyptus sideroxylon,* and this is likely the timber used in the construction of the wharf's supporting timber structure. Newspaper reports suggest that most piles were 37 feet long, though 45 foot piles were sought for the 34th bay to counter soft ground at that point.[30] It is unclear if these 53 foot piles described above were ultimately used to construct this particular element, or relate to another area of soft ground elsewhere beneath the wharf.

An image from 1910 (Figure 25) shows that diagonal cross bracing ran across the wharf between adjacent piles on each side, but there was no bracing running along the wharf. A small beam ran alongside the piles on the outside of the wharf just above the waterline, but this appears too small to be structural and likely served to keep boats out from under the wharf and assist with mooring. Another image from 1907 (Figure 26) shows the additional structure erected to create a platform for the wharf shed.

Figure 25. A brightened image of the north side of the wharf in 1910 showing the supporting structure and boat steps. Source: Kete Christchurch.

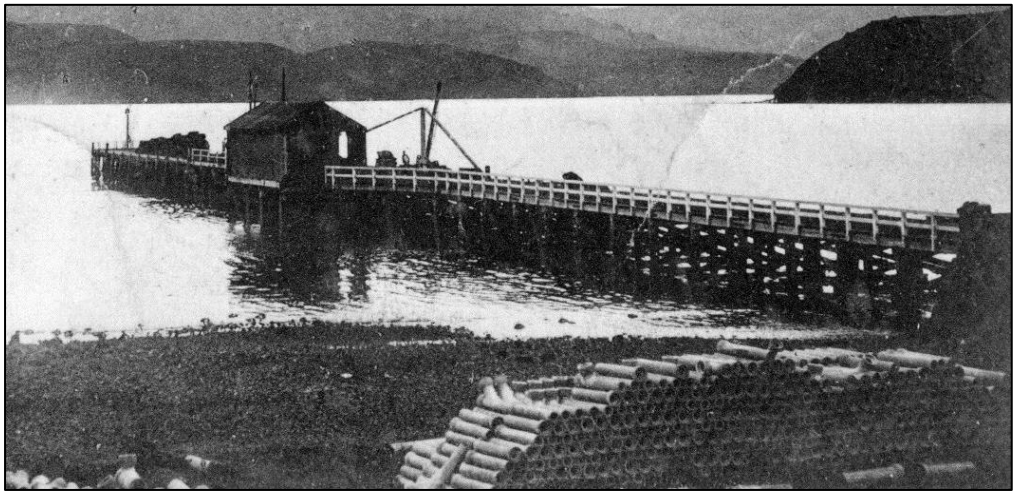

Figure 26. View of the south side of the wharf in 1907 showing the extended platform for the wharf shed and protective railing running alongside the deck. Source: Kete Christchurch.

[29] Akaroa Mail and Banks Peninsula Advertiser, 'The Opening of the Wharf'.
[30] Akaroa Mail and Banks Peninsula Advertiser, 'Akaroa Borough Council'.

5.11.3. Decking

From the Akaroa Mail: "The decking is of Tasmanian stringy bark, of which timber there are about 49,000ft." Tasmanian stringy bark may refer to *Eucalyptus obliqua,* a species especially associated with Tasmania, but stringy bark is also a colloquial term for a range of different *eucalyptus* species. The decking visible in Figure 27 & 28 is likely largely composed of the original stringy bark boards.

Figure 27. Detail of 1904 photograph showing the wharf decking. Source: Kete Christchurch.

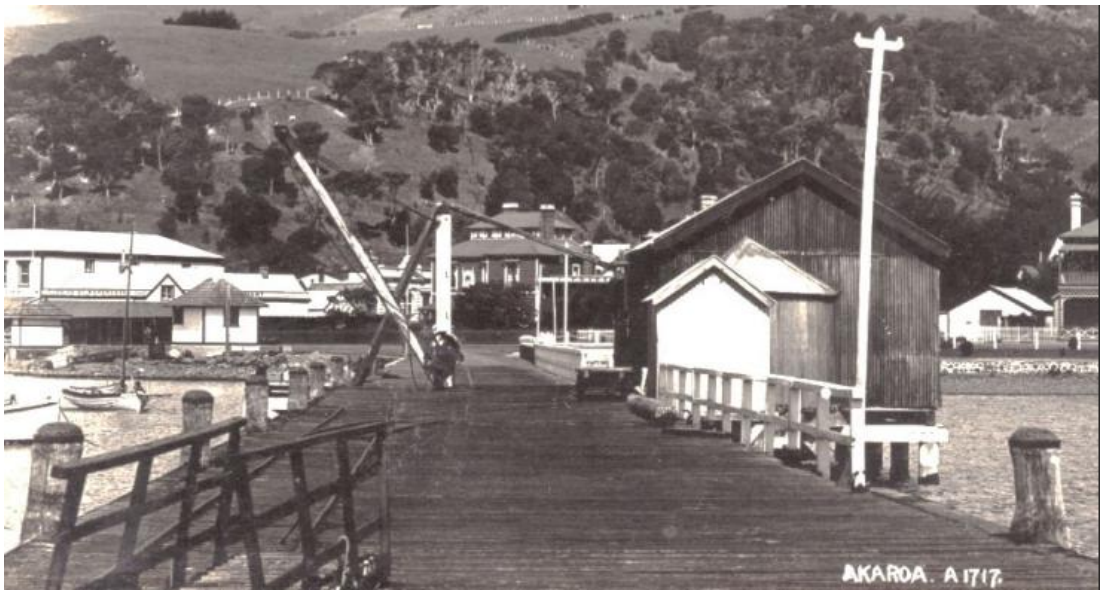

Figure 28. Brightened detail of a 1911 photograph showing the wharf decking. Source: Kete Christchurch.

5.11.4. Wharf Shed

Based on historic newspaper reports and the original plans, it appears that the rectangular, gable-roofed wharf shed was relocated from the older 1850s jetty.[31] While this suggests it dates from before 1887, its exact age is unclear as it may not have been erected at the same time as the previous jetty. A note in the *Star* about repairs and improvements to 'storage accommodation' on the jetty at Akaroa suggests that it dates at least from 1875.[32] Its position facing northwards on the Akaroa Main Wharf appears calculated to combat the swells and poor weather that come from the south in the Harbour.

Images of the structure in the early 20th century show that it was both roofed and clad in corrugated iron and newspaper reports noting that it was a coat of 'haematite' suggests that it was likely painted a dark red colour (Figure 29).[33] Access to the building appears to have been through one of three large sliding doors: two on the north side of the building, and one on the east (Figure 30). On the old jetty, the shed was positioned to allow tram lines to run right through it, so the eastern door is likely a relic of this previous arrangement. This building would have been lit largely through its doors, but there were also two small windows on the south wall. The original interior and structural details of the shed are unknown, although newspaper reports suggest that it likely had a slightly elevated floor – lifted 18 inches from the wharf surface – made of stringy bark boards.[34]

A small outbuilding was also attached to the west end of the wharf shed and was possibly used as an engine room. It appears in one of the earliest images of the Akaroa Main Wharf (Figure 20), but it is unclear if it was also removed from the older 1850s jetty. Part of this outbuilding is painted a different, lighter-hued, colour than the main shed.

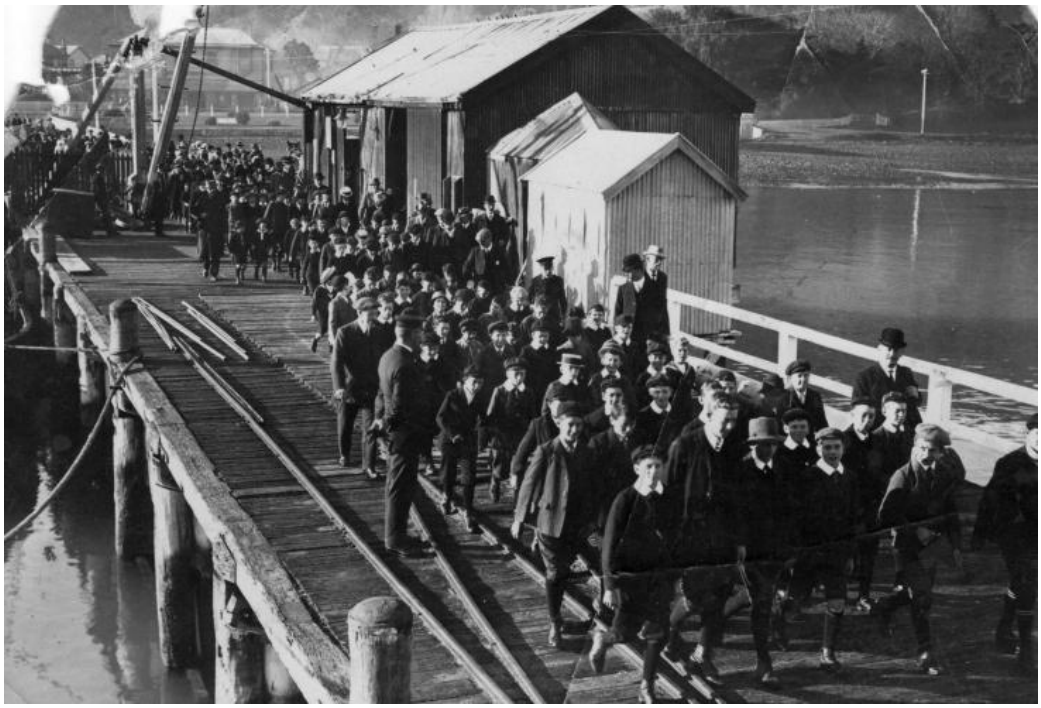

Figure 29. Schoolchildren on the wharf in 1910, with the shed in the background. Source: Kete Christchurch.

[31] Akaroa Mail and Banks Peninsula Advertiser, 'Akaroa Borough Council'.
[32] Star.
[33] Akaroa Mail and Banks Peninsula Advertiser, 'Akaroa Borough Council'. 'Haematite' presumably references a paint made from iron oxide pigment and some form of oil binder (likely linseed oil, but possibly fish liver oil in a maritime community like Akaroa). This would most likely have been dark red in colour.
[34] Akaroa Mail and Banks Peninsula Advertiser, 'Akaroa Borough Council'.

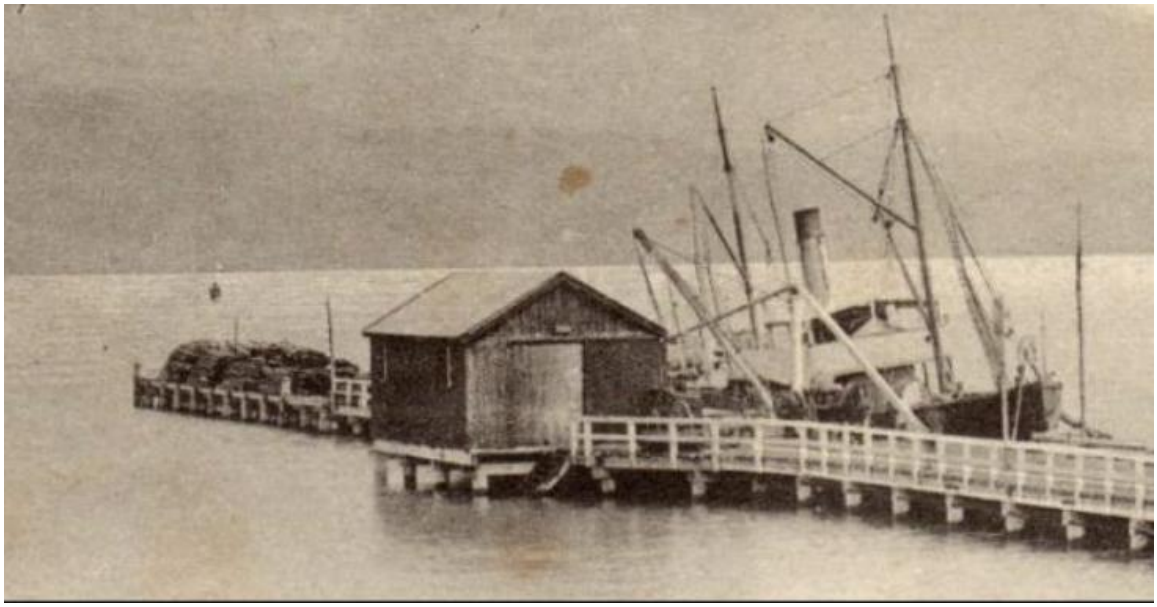

Figure 30. Detail from 1910 photograph showing the east side and door of the wharf shed. Two windows are visible on the south wall.

5.11.5. Ironwork

From the Akaroa Mail: "The iron of one description and another weigh over 25,000lbs, and was imported from Home, tracings of the Engineer's detail drawings having been forwarded to England through Messrs Nashelski of Christchurch."

Iron fixings and fittings appear to have been used throughout the wharf. Some examples can be seen in Figures 31-32. An especially notable piece of ironwork is the tramway that ran from the wharf shed to the western end, alongside the steamer berths.

Set in the concrete surface of the wharf outside roughly the original location of the wharf shed is a small cast iron cover plate which bears the name "Glenfield Kennedy Ld FP, Kilmarnock". Cover plates such as this typically provide access to a tap or valve and the 'FP' label could refer to a 'fire plug' or hydrant. Formerly two separate, but closely allied firms, the Glenfield Company and Kennedy's Patent Water Meter Company in Kilmarnock, Scotland, worked side by side up till the year 1897, when they were amalgamated. This cover plate is therefore not original to the wharf but may be a very late 19th century or early 20th addition. It is presumed that it was once set in to the timber deck and was raised into the concrete deck when the concrete was laid. It is also possible, of course, that it is simply a recycled fitting brought to the wharf when the concrete was laid as a later modification in the 1980s (see below). However, it is equally likely that that a fire hydrant was required in this location on the wharf and, therefore, it would seem not unreasonable to conclude that it is related to the earlier shed on the wharf.

Figure 31. Detail of an undated early 20th century image showing the iron slice straps on the side of the wharf. Source: Canterbury University Archives.

Figure 32. Detail of a photograph from 1908 showing an iron band around the top of a bollard and the wharf tram tracks running out to the end of the steamer berths. Source: Kete Christchurch.

5.11.6. Steps, Railings, & other Wharf Furniture

Alongside the use of other timber in the decking and supporting structure, the Akaroa Mail also noted the presence of "some 12,000ft of heart of totara, used in boat steps; fences and minor works."

The boat steps were located on the north side of the wharf and can be seen in Figure 25 and Figure 33.

Railings ran alongside the south side of the wharf from the parapet of the solid portion till the shed, then past the shed for around another 10m, or so, before ending to make allowance for docked ships (Figure 26). There was also a further railing and navigation light (see below) with life-buoy at the far end of the wharf which was likely recycled from the old 1850s jetty (Figure 33)[35].

Newspaper reports also record other recycled items from the old wharf included a seat (although this has not been able to be made out in photographs) and a lamp and pillar (visible in photographs at the seaward end of the Akaroa Main Wharf)[36]. This latter item was potentially some form of navigation light, as one is known to have been installed at the end of the old jetty[37].

A major feature of the wharf was the goods crane, which was positioned roughly between the north-east corner of the shed and the boat steps (Figure 34). It appears to have been able to load small ships directly, or alternately move goods from the shed onto drays or wagons to be carted to larger ships moored further west on the wharf. The origins of the crane are unclear, but newspaper reports suggest it was sourced from a company in Lyttelton[38].

It is noticeable in the historic photographs of the wharf that there are no signs of ladders and mooring paraphernalia, such as cleats and rings. Architecturally, it had 'clean lines' until at least the 1950s.

Figure 33. View west down the wharf in 1914. The boat steps can be seen projecting from the north side of the structure and the railings, lamp, and life buoy are just visible at the western end. Source: Kete Christchurch.

[35] Akaroa Mail and Banks Peninsula Advertiser, 'Akaroa Borough Council'
[36] Akaroa Mail and Banks Peninsula Advertiser, 'Akaroa Borough Council'.
[37] Akaroa Mail and Banks Peninsula Advertiser, 'No Title' (Issue 123, 21 September 1877).
[38] Akaroa Mail and Banks Peninsula Advertiser, 'Akaroa Borough Council'.

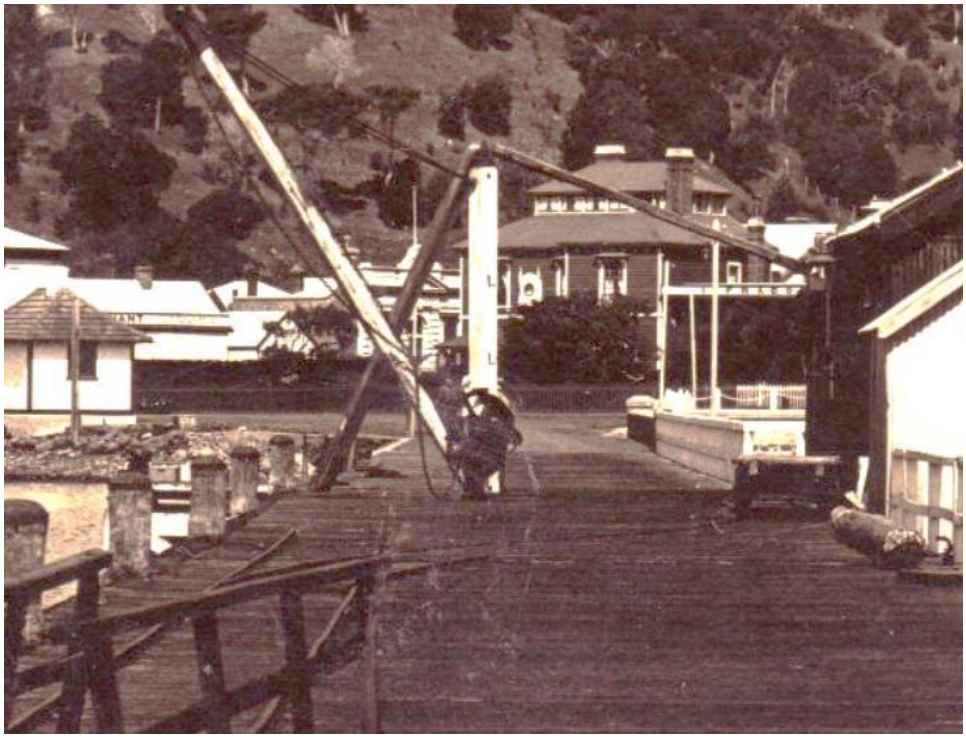

Figure 34. Brightened detail of a 1911 image showing the wharf crane. Source: Kete Christchurch.

5.12. 20th Century Wharf Developments

Origin (2021) describe that by the early 1920s, and through to the 1930s, there were regular complaints that the wharf needed repair; a major item was replacement of the decking. However, a review of 20th century photographs of the wharf by Origin (2021) suggests for very little modification of the wharf until the 1950's although they report that large-scale extensions/alterations to it began after that date.

The white-painted railings were still present on the first part of the wharf from the abutment in the earlier half of the 20th century but were removed sometime after that and replaced with the galvanised steel barrier that exists today. Likewise, there were still steps in the original location between the 11th and 15th bents from the abutment on the north side of the wharf until at least 1973.

The original crane seems to still have been in place in 1961 (Figure 35) and may have been moved to the west end of the wharf by 1971 (Figure 36). After this it was removed and the present crane installed in its current location.

The original shed remained in place until at least the mid-1970s and structural repairs were carried out to the piles in that same decade. Around this time ladders and mooring rings were also added. In the 1990s, the decking at the western end of the wharf was replaced by Opus and further repairs and strengthening were undertaken beneath deck level. In or around 2007, a large shed was added on the east side of the existing sheds, extending these buildings substantially towards the shore.

Figure 35. Detail of a 1961 photograph showing the north side of Akaroa Main Wharf in 1961. Source: Kete Christchurch.

Figure 36. Detail of a 1971 photograph showing the south side of Akaroa Main Wharf. Source: Archives New Zealand.

5.13. Britomart Reserve

The ground on the immediate landward side of the Akaroa Main Wharf (the wharf approach where service trenching will take place) is formed by Britomart Reserve which was originally called Reserve 86 in the 19th century. Reserve 86 was officially surveyed in 1856 and vested in the Akaroa Borough Council in 1887 (Akaroa Civic Trust, 2019). In 1856, a building on the reserve, owned by James Bruce of the Bruce's Hotel (located immediately opposite) was approved for the free warehousing and securing of goods under bond. This building was recorded on early survey maps as a long narrow building opposite the hotel.

First mention of the land being a reserve in local newspapers was in an article in the Akaroa Mail and Banks Peninsula Advertiser in 1877 discussing the encroachment of the sea which left the reserve exposed to the full force of the southerly weather[39]. Later in the same year Mr J. Beecher asked that the Barlow Circus be granted use of the reserve in September of 1877. The reserve was also sublet by the Akaroa Regatta Committee in November of 1877, who sold sites on the reserve for the erection of booths for the event[40]. By 1888, when the new wharf was built a life-boat shed was erected on the reserve. In 1900 it was proposed that the shed be removed[41], it appears no further action was taken as by 1902 it was proposed that the shed, located on what was referred to as the "Council's reserve", be made into a workshop for the men engaged at the waterworks[42]. At the turn of the century many areas

[39] Akaroa Mail and Banks Peninsula Advertiser 13/4/1877: 2.
[40] Akaroa Mail and Banks Peninsula Advertiser 30/11/1877: 2.
[41] Akaroa Mail and Banks Peninsula Advertiser 26/1/1900: 2.
[42] Akaroa Mail and Banks Peninsula Advertiser 7/4/1902: 2.

in Canterbury were part of beautifying campaigns, and in 1908 the Akaroa Beautifying Association decided to improve the reserve. Lawn and trees were planted, a post and chain fence erected.

5.14. Akaroa Recreation Ground

The ground on which the Recreation Ground sits was formed because of a significant alteration to Akaroa's shoreline which dates from the same years that the Akaroa Main Wharf was built. In 1886-88, a shallow section of foreshore at the northern end of the town was reclaimed and the Recreation Ground was established on this reclaimed land (Davis-Miller 2009).

As noted earlier, Akaroa's original French colonists arrived at a place now known as the French landing site on Beach Road (at the southern end of the town). Over the first few years, the French settlement prospered briefly through trade with whaling ships and was mixing well with British and Māori residents. Houses were established, along with shops hotels and other businesses. The French Navy built roads, bridges and wharves over this time. The decline in whaling had taken place by the mid-1840s and the French Navy left in 1846. Most settlers stayed and became naturalised.

Black Map 291, published in 1852 appears to be a survey of the original French settlement. A layover of the extents of Akaroa Recreation Ground and Laydown Area 1 indicates that parts of Laydown Area 1 intersect with the 1852 coastal edge (the original shoreline, see Figure 37). While there is currently no recorded evidence of Māori occupation within the Akaroa Recreation Ground, local Māori would likely have been very familiar with this area due to it being very close to the foreshore, and the freshwater Grehan Stream which bounds the north edge of Akaroa Recreation Ground. This part of the harbour was likely a wetland or estuarine like environment. Such environments are typically abundant sources of shellfish, other marine life, and birds. It is probable that pre- European Māori utilised this shallow part of the harbour as a food source and for occupation in at least some capacity. This statement is supported the presence of the two shell middens that were recorded on Rue Jolie (Recorded Archaeological Site: N36/196, Archaeological Authority: 2018/073) c. 110 m south of the Akaroa Recreation Ground. Furthermore, archaeological midden was also recorded in another part of Rue Jolie (Recorded Archaeological Site N36/254, Archaeological Authority: 2018/073) c.45 m to the south of Akaroa Recreation Ground.

Black Map 290 published 1856 (Archives New Zealand, 1856, see Figure 38) appears to be the first survey plan that established land parcels in this area. Marked on this later map is a rectangular item, presumed to be a building present on a spur on the then coastal edge and within the extent of Laydown Area 1. No further detail regarding this building was found during research for this assessment, and it is not present on later survey plans. Prior research by Hennessey (2022) noted that it is not known if the original French survey plans for Akaroa still exist. He notes that Black Map 291 appears to be a survey of the original French settlement although it does not include ownership details (Figure 37). He also highlights that later land grants issued by the British Crown represent the earliest available land records for the township and as such the history of land ownership for the period 1840-c.1855 is largely not known. It can therefore be speculated that the building or structure Black Map 290 (and within the extent of Laydown Area 1) is associated with the early French settlement of Akaroa.

An historic photograph taken in 1869 shows the location present-day Akaroa Recreation Ground before land reclamation activities (Figure 39). It shows the shoreline that makes up the southern end of the Akaroa Recreation Ground but does not indicate for any buildings or other items within the extent of the current Recreation Ground. An 1883 survey plan also shows the area just before land reclamation activities (Figure 40). A later 1897 photograph shows the Akaroa Recreation Ground on the reclaimed land (Figure 41). The coastal side of the reclaimed land is characterised by a sea wall or boundary of some type. Some survey plans indicate an extension of Rue Jolie through the reclaimed land, but it would seem this never eventuated. A 1909 survey plan (Figure 42) shows a 'Rubble Wall' forming the

west edge of the grounds. This would appear to be the sea wall or boundary that is visible in the 1897 photograph. This item is not present on later survey plans (Figure 44) or in a 1941 aerial image (Figure 45) which shows the extent of the Akaroa Recreation Ground. Of note, the Akaroa Boat Ramp is not present in the 1941 aerial image indicating it was constructed later.

Davis-Miller (2009) notes that a grandstand was built in the Akaroa Recreation Ground 1909 on the seaward edge of the reclaimed land and remained on that site until a new pavilion was erected to serve the "Rec Ground". The grandstand is not visible in a 1910 photograph that shows part of the Recreation Ground along Rue Lavaud (Figure 43). Apart from a boundary fence, no buildings or structures are visible within the Recreation Ground in that photograph and the grandstand is likely out of sight.

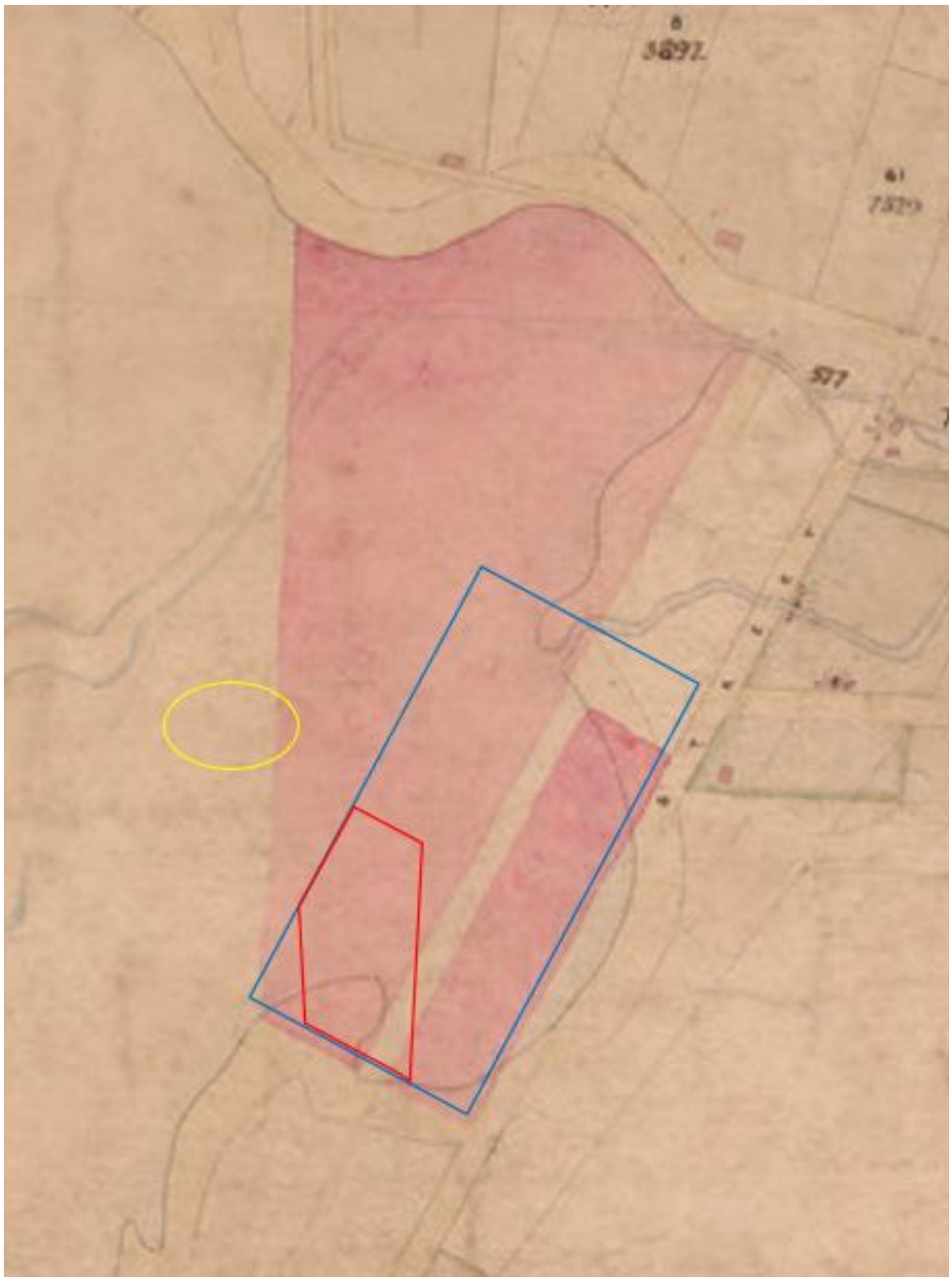

Figure 37. Detail of Black Map 291 (Archives New Zealand, 1852). The approximate modern location of Akaroa Recreation ground marked by the blue rectangle and Laydown Area 1 in red polygon. The location of the present-day Akaroa Boat Ramp is indicated by yellow ellipse. The layover indicates that parts of Laydown Area 1 intersect with the 1852 coastal edge (the original shoreline).

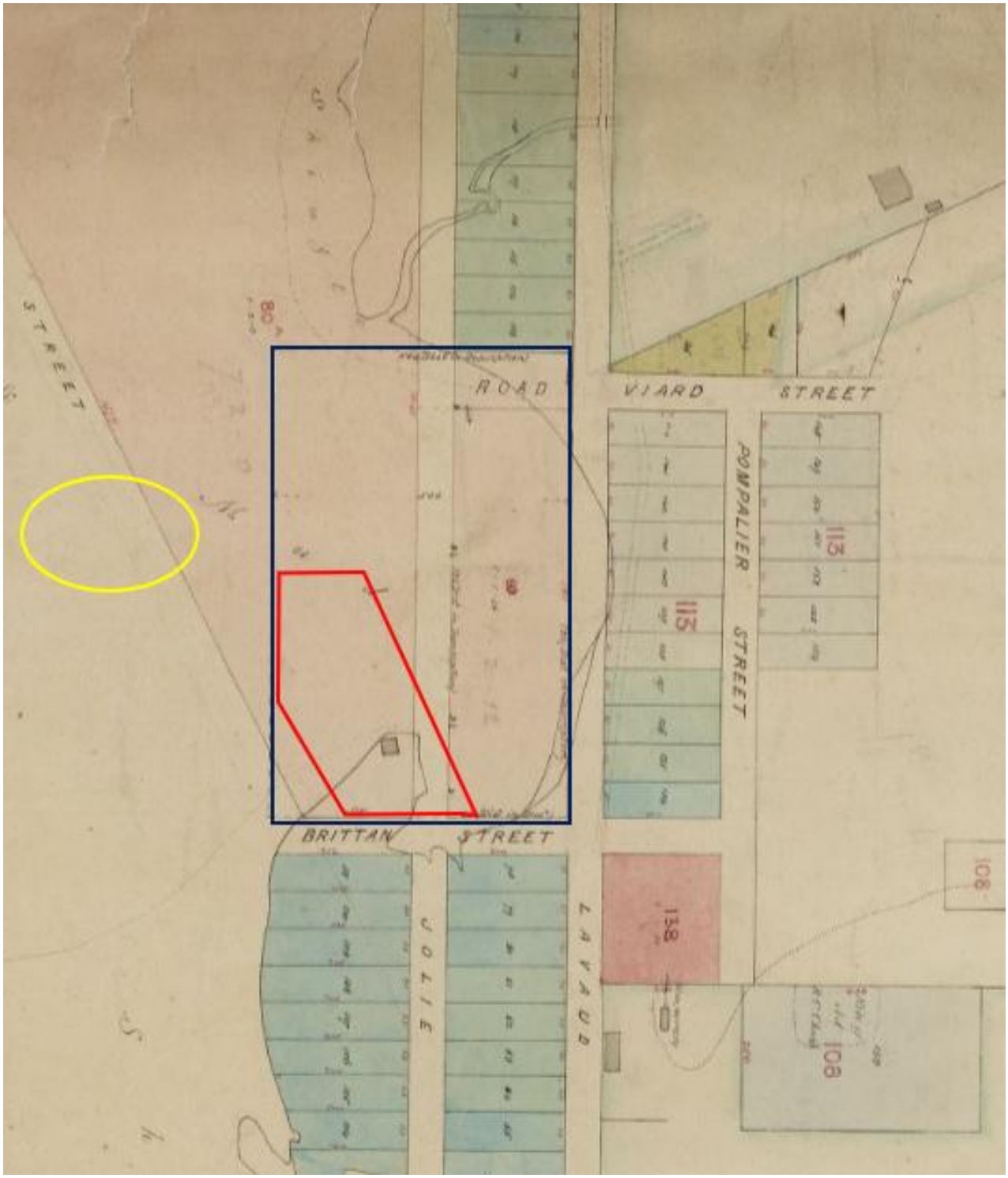

Figure 38. Detail of Black Map 290 published 1856 (Archives New Zealand, 1856). The approximate modern location of Akaroa Recreation ground marked by the blue rectangle and Laydown Area 1 in red polygon. The location of the present-day Akaroa Boat Ramp is indicated by yellow ellipse. The layover indicates that parts of Laydown Area 1 intersect with the 1856 coastal edge. Furthermore, there appears to be a building present on the coastal edge within the extent of the Laydown Area 1.

Figure 39. Akaroa 1869, looking southwest. Location of present-day Akaroa Recreation Ground is indicated with the red arrow. Note the location of the shoreline which is significantly closer than it is today. D. L. Mundy, 1869. Printed by F. Bradley & Co. Collection of Akaroa Museum. Item INV:933.

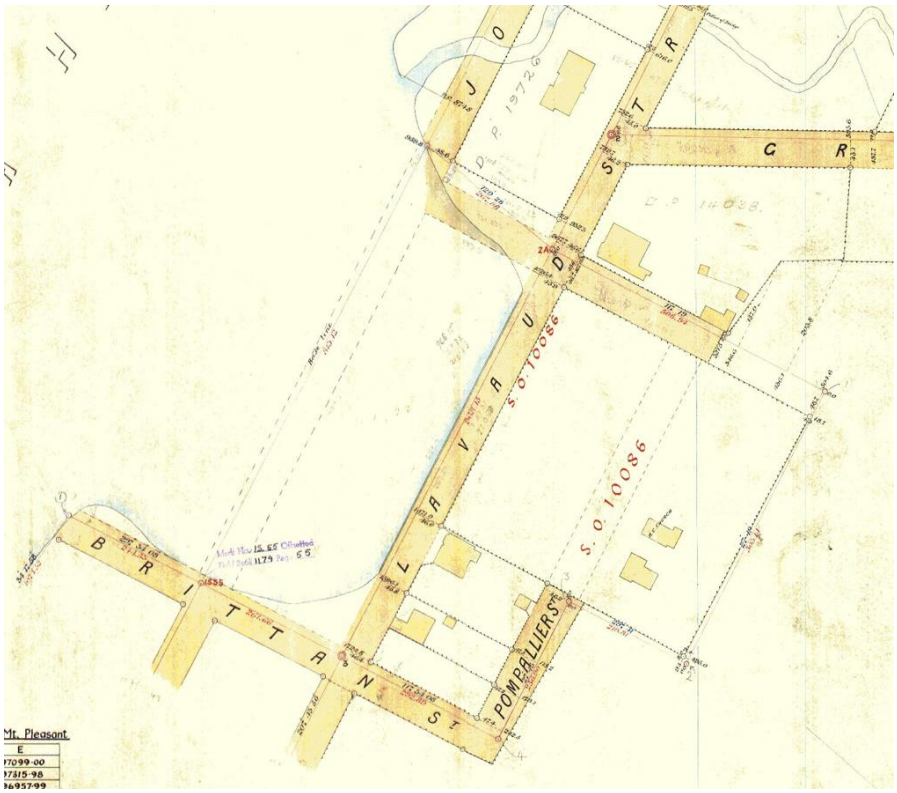

Figure 40. 1883 Survey Plan (SO 810) which shows the shoreline on north side of Rue Brittan before land reclamation activities occurred. Source: Grip 2024.

Figure 41. Detail of photograph of Akaroa taken 1897 in a southwest direction looking down Rue Lavaud. The Akaroa Recreation ground is visible at the top right of the image. The coastal side of the reclaimed land is characterised by a sea wall or boundary of some type. Source: Akaroa Museum item: 2002.29.1.

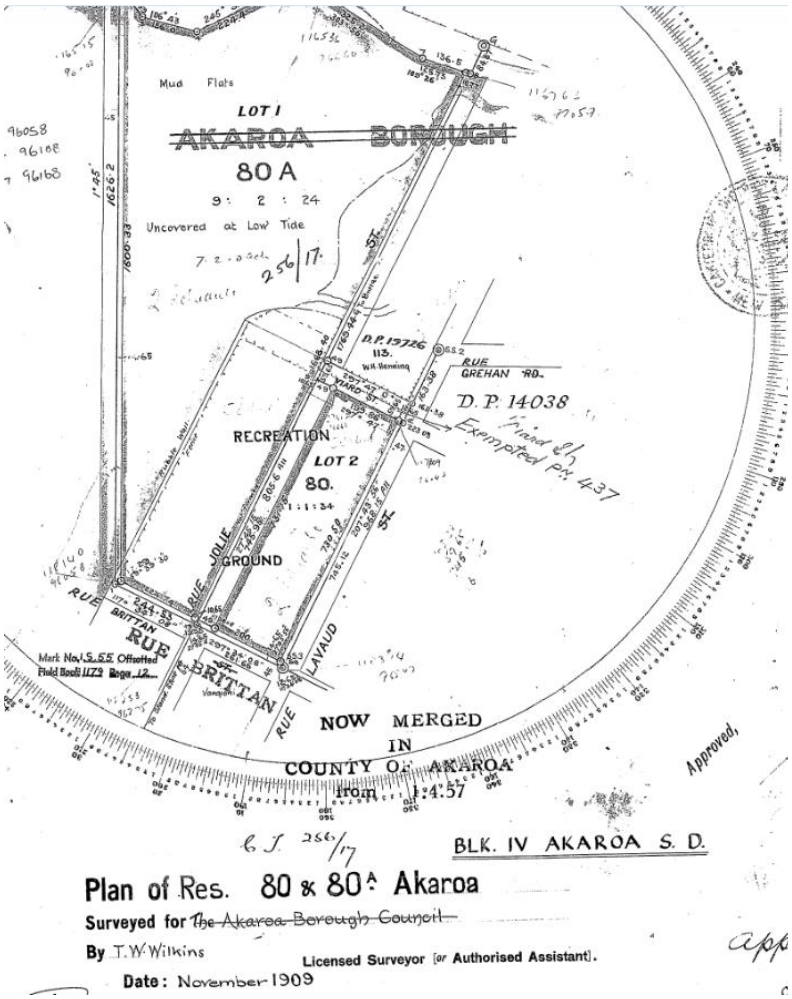

Figure 42. November 1909 survey plan (DP 2868) which shows a section of Rue Jolie running through the Akaroa Recreation Ground, however, the street never did run through here. The image shows a 'Rubble Wall' forming the west edge of the grounds. Source: Grip 2024.

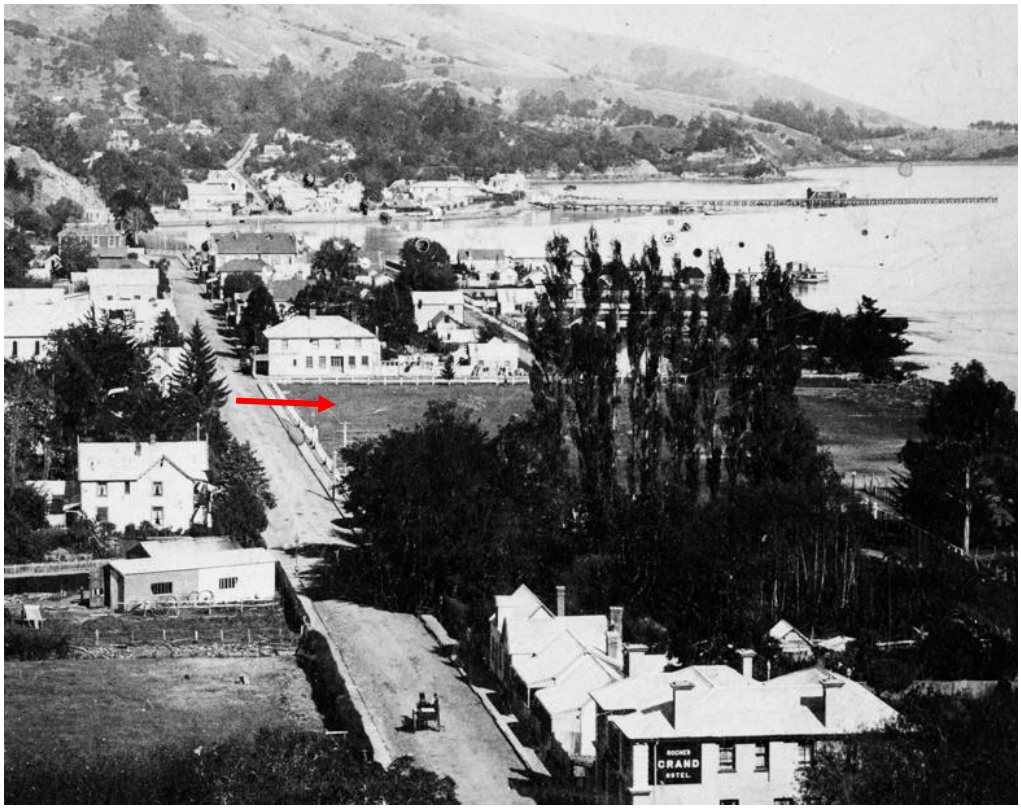

Figure 43. Part of 1910 photograph looking down Rue Lavaud with the Akaroa Recreation Ground indicated by red arrow. Apart from a boundary fence, no buildings or structures are visible within the Recreation Ground. Source: National Library of New Zealand, PAColl-9021.

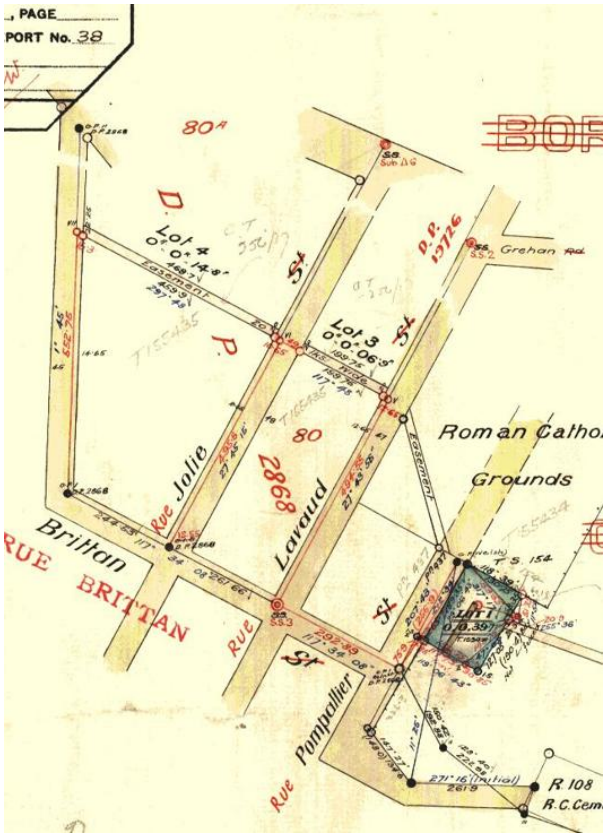

Figure 44. 1921 survey plan (DP 6864) which shows a section of Rue Jolie running through the Akaroa Recreation Ground (the road never did eventuate through here). The image does not show the 'Rubble Wall' that was present in the earlier 1909 survey plan. Source: Grip 2024.

Figure 45. 1941 aerial image showing the Akaroa Recreation Ground: the Akaroa Boat Ramp has not been constructed yet, Source: Retrolens 2024.

6. Previous Heritage, Archaeological & Other Work

There are various archaeological, heritage and other reports relating to Akaroa Town and locations close to the project footprint. Reports listed here are limited to relevant reports that relate to the Akaroa Main Wharf, it's very immediate environs and Akaroa Recreation Ground.

6.1.Origin (2021)

As previously noted, a Conservation Plan for the Akaroa Main Wharf commissioned by CCC was prepared by Origin Consultants Ltd (2021). The conservation report assessed the historical, architectural, and structural significance of Akaroa Wharf, offering a detailed account of its construction, alterations, and condition over time. It focused on understanding the wharf's heritage significance, documenting physical changes etc. The conservation plan included a comprehensive history of the wharf, and the current Archaeological Assessment draws heavily from that report.

The Origin report noted that the concrete abutment at the junction of the wharf with the land (and the Britomart Reserve) is an important part of the wharf's overall structure. The original jetty component of the wharf was largely timber-based, originally constructed using Ironbark timber. Key components include timber pile caps, stringers, and decking, with cross-bracing and horizontal wale beams also featured prominently.

The wharf has undergone substantial modifications, especially from the 1970s onward. This includes the addition of floating pontoons, sheds, and modern fendering systems. Many of the original timber elements have been replaced or augmented with steel repairs, including steel jackets, braces, and PFC

horizontal ties. Additionally, concrete beams were added to provide further support, particularly for the floating pontoons and new structures.

Despite the extensive alterations, Origin noted that certain heritage features retain high significance. This includes the marble date plaque, wrought iron strap connections to pile caps, and timber elements that survive in parts of the structure. The Fender piles, particularly those made from Ironbark timber, are remnants of the original structure, although many are showing signs of decay and have been reinforced or replaced

Regarding the wharfs condition Origin (2021) noted that generally it is in fair to poor condition in certain areas. Timber decay has occurred particularly near the waterline. Many of the timber stringers and decking boards have been subjected to extensive wear, with evidence of corrosion in metal components such as the iron bolts and wrought iron straps used in early connections. Some areas have been subjected to modern repairs involving steel strapping and additional timber stringers. These repairs have helped extend the life of the wharf but have also altered the original fabric.

6.1.1. Comparison With Other Structures

The Origin report (2021) included a consideration of Akaroa Wharf in comparison to other similar structures in New Zealand. Origin noted that the Akaroa Main Wharf, like many historic wharves in the 19th & 20th century New Zealand, was designed primarily for functionality. The design focused on durability and stability to withstand weather and tides, with few decorative elements. Key structural components—piles, beams, decking, bollards—served practical purposes, with the overall size and layout shaped by specific use requirements. Many of the engineers involved in these wharf projects, such as William Wilkins for Akaroa, were not wharf specialists but civil engineers experienced in railway, road, and bridge construction. Some larger projects were overseen by harbour engineers, like John McGregor for the Oamaru Wharf.

Origin further noted that 19th century Wharf designs in New Zealand varied widely, influenced by the professional and personal preferences of both the engineers and the clients. This diversity in design is reflected in different wharves across New Zealand. Origin notes that a review of heritage wharf structures recorded by the HNZ List and other heritage surveys [43] gives little indication of identifiable wharf 'types' or any sort of design tradition which the Akaroa Wharf might fit into. They consider the examples of Days Bay Wharf (in Eastbourne, Wellington, HNZPT List No. 3574), Macandrew Wharf, and Kinloch Jetty (on Lake Wakatipu). Days Bay Wharf – built 1895 – is an entirely timber structure composed of a narrow gangway extending to a significantly wider portion at the seaward end. Macandrew Wharf is a long, narrow, concrete structure serving as a breakwater as well as a wharf. Kinloch Jetty – built c. 1873-4 – was originally a broad timber platform extending only a short distance from the shore. Aside from the overall form and material, there appears to be further differences in each wharf's design details. In this context, Akaroa Wharf can be thought of as relatively unique structure; the only roughly similar wharf identified by this assessment was the 1887 Motueka Wharf (HNZPT List No. 2985) which was also a composite solid/timber structure, although the walls of the solid portion were made from stacked granite rather than concrete, and the nature of the timber portion is unknown.

[43] Origin Consultants, *Queenstown Lakes District Historic Wharves and Jetties Report* (Unpublished Report to the Queenstown Lakes District Council, 2017); Cochran and others.

Timber used for wharves was often imported, with Australian hardwoods preferred for their durability, as local timber resources were increasingly depleted. For example, Australian hardwood was used in Akaroa's piles. As wharves were exposed to harsh maritime conditions, they frequently underwent repairs, often resulting in a "patchwork" of old and new materials. Overall, wharves like Akaroa reflect a practical approach to design, shaped by both technological trends and the demands of local contexts (Origin 2021).

6.1.2. Heritage Significance

Origin (2021) rated the heritage significance of the wharf is high, primarily due to its historical role in the local maritime economy and its association with Akaroa's development. The conservation plan concluded that Akaroa Main Wharf is one of the most significant heritage structures in the town and that its cultural heritage significance to the town and wider district is highly significant. The report advised that the wharf has suffered incremental damage to its heritage significance since the 1970s and has suffered historically from a lack of ongoing maintenance. Origin assessed the heritage significance of the wharf as:

- High Historical and Social Value
- High Cultural and Spiritual Value
- Moderate Architectural and Aesthetic Value
- Moderate Technological and Craftsmanship Value
- High Contextual Value
- Moderate Archaeological and Scientific Significance Value

6.2. Akaroa Services Renewal (Underground Overground Archaeology 2020) (Figures 46 – 48)

CCC previously undertook earthworks for a new water mains and associated laterals on Beach Road (which is the road on the landward side of Akaroa Main Wharf). Associated archaeological monitoring was undertaken under archaeological authority 2015/1347 (Figure 46). Two archaeological sites were uncovered at/close to the Akaroa Main Wharf.

Artefacts in backfill (N36/229)

Earthworks for the trench on Beach Road included excavation on the south extent of the concrete approach that forms part of Akaroa Wharf (where service trenching will take place as part of wharf replacement). Earthworks involved a main trench, excavated to a maximum depth of 600 mm, and a lateral excavated to a maximum depth of 1350 mm. The stratigraphy exposed here included 19th century artefacts within fill layers and a deposit of backfill soil with artefact inclusions. The report on the monitoring noted that the stratigraphy exposed in the wharf appeared to be consistent with multiple phases of formation and later maintenance. Multiple historic fill layers were present with artefacts dating to the 19th and 20th centuries. Artefacts dated to the 19th century were found in a localised deposit, indicating that a distinct infilling event in this section of the roadway occurred. It was concluded that as this section of the road was part of the Akaroa Wharf, it was likely that it had a different history of formation and maintenance than the rest of Beach Road due as it was likely more closely tied to the development of the wharf over time.

Historic road layers (N36/233)

Beach Road had a long period of modifications, repairs, widening and relevelling from 1859 to 1884. The stratigraphy exposed layers included fill and roading layers that predate Akaroa Wharf. Most of these fill layers comprised crushed shell and artefacts mixed clay and stone/rock.

Figure 46. The location of the earthworks monitored under authority 2015/1347.

Figure 47. View looking east showing the trench excavated through the solid portion of the Akaroa Main Wharf in 2015 (K. Bennett)

Figure 48. The stratigraphy exposed in a section of the northern baulk, exposing asphalt, mixed clay, stone and volcanic rock, and light brown clay (K. Bennett).

6.3.Akaroa Sea Wall (Harsveldt 2020)

WSP previously prepared an Archaeological Assessment for proposed repair works on sections of the Akaroa Seawall on Beach Road, Akaroa between the Akaroa Main Wharf and the intersection of Beach Road and Rue Jolie (Harsveldt 2020). The report concluded that sections of seawall showed evidence of potential pre-1900 construction along with 20th century repairs. Harsveldt cited Wilson & Beaumont (2009: 62) who stated that:

"Most of the sea frontage of the town remained open beach until the first significant stretch of seawall on Beach Road, from the Rue Jolie corner round to the main wharf was built in 1901-1904.".

However, Harsveldt argued this did not rule out the possibility that smaller sections of seawall were constructed prior to 1900. As such, his Assessment recommended that CCC obtain an Archaeological Authority to carry out the works. Heritage New Zealand issued an Archaeological Authority (2021/252) to CCC to cover works associated with strengthening and repair of the Akaroa Seawall on 26th November 2020 and associated works commenced in late September 2021.the results of archaeological works associated with Archaeological Authority 2021/252 is summarised in Section 6.6 of this report below.

6.4.Wastewater Renewal Services (Underground Overground 2021)

As described earlier, physical evidence relating to Māori occupation of Akaroa was recorded in 2019 during trenching for a water mains upgrade project (Underground Overground 2021). Two shell middens were recorded during trenching on Rue Jolie (Recorded Archaeological Site: N36/196, Archaeological Authority: 2018/073) this location being c. 110 m south of the Akaroa Recreation Ground and c. 760 m to the northeast of Akaroa Main Wharf. Archaeological midden was also recorded in another part of Rue Jolie (Recorded Archaeological Site N36/254, Archaeological Authority: 2018/073) c.45 m to the south of Akaroa Recreation Ground.

6.5.Akaroa Wharf Condition Report (Calibre 2021)

Calibre produced a condition report for the Akaroa wharf in 2021, based on two inspections via boat, one each at high and low tides and a dive survey. The surveys were completed in June 2021. They identified significant deterioration of the wharf structure, which was worse at the seaward end of the structure. Most timber members showed signs of deterioration, piles were infested with suspected teredo worm, and capping beams and stringers were substantially decayed at the head of the wharf.

The condition report included important descriptive detail of the wharf, particularly the timber deck and pile elements which is included below along with structural drawings showing the layout of the piles, capping beams & stringers and deck (see Figures 49-54):

"The total area of council owned wharf deck is approximately 1125m². The wharf also has two floating pontoons, constructed approximately 15 years ago, that have a combined area of approximately 150m2.

The deck of the wharf was originally formed by 8" x 4" (200 x 100mm) stringy bark planks. These have been replaced by 50x100mm softwood timbers planks on edge between bents 0-12 and bents 23-40. Running boards above the deck between bents 0 -12 have been installed to allow vehicle access. The deck between bents 12 and 23 is 100-200mm thick reinforced concrete.

The pile caps are typically 14" x 12" (350x270) hardwood, likely to be ironbark as they appear consistent with the original construction drawings. The stringer beams are 14" x 8" (355 x 200), many of the stringers have been replaced or made redundant by the addition of galvanised steel stringers alongside.

The piles comprise of a mixture of original ironbark piles and newer piles of various grades and species. More recently, FRP, concrete and steel jackets have been installed to rehabilitate the deteriorating piles.

The lateral load resisting system in the wharf is a combination of raking piles and bracing. Raking / chafing piles are located every fourth bent at the outer end of the wharf, this is consistent with the original construction drawings.

The majority of the original hardwood bracing has been replaced by steel tension only bracing. The little timber bracing that remains is at the inner end of the wharf and in poor condition.

Two pontoon structures, one on either side of the main wharf were constructed approximately 15 years ago. The pontoons are floating steel structures anchored in place by steel piles driven into the seabed. The pontoon on the south side of the wharf is approximately 68m2 and the pontoon on the north side of the wharf is approximately 81 m2".

The condition report included descriptive detail of the wharf's abutment structure:

"The abutment structure is a concrete structure approximately 33m long extending from the shoreline to meet the wharf. On the southern side of the abutment a large crack extends from the base up to the top of the wall, being a result of the severe liquefaction that occurred during the Canterbury Earthquakes. The structure has had several post-tensioned rods installed through the abutment to prevent further damage. The heads of these were in good condition. Inspection of the abutment showed large cracks at regular intervals and fine materials have been washed away leaving the aggregate exposed".

A summary of the additional Calibre report findings relevant to the archaeological values of the wharf is presented below:

- The majority of timber members show signs of deterioration, with capping beams and stringers having substantial decay at the head of the wharf.
- The majority of load bearing piles were found to be in moderate to poor condition
- Approximately 30 piles have had jacket repairs in the past, using a mixture of concrete and steel jackets, and in some cases a new softwood pile has been spliced to the base of a hardwood piles.
- Capping beams are mostly in moderate condition with early signs of decay.
- Stringers are generally in moderate to poor condition with early stages of decay and the condition deteriorating towards the seaward side.
- A large portion of the hardwood bracing has decayed and been replaced.
- The dive survey identified that the majority of damage was worm damage at the bottom of the piles.
- Much of the deterioration to the wharf has occurred in the tidal zone.
- Most of the walers have been lost, and lower portions of most braces are decayed.

The 2021 condition report produced by Calibre recommended that the wharf is to be replaced in the next 5 years.

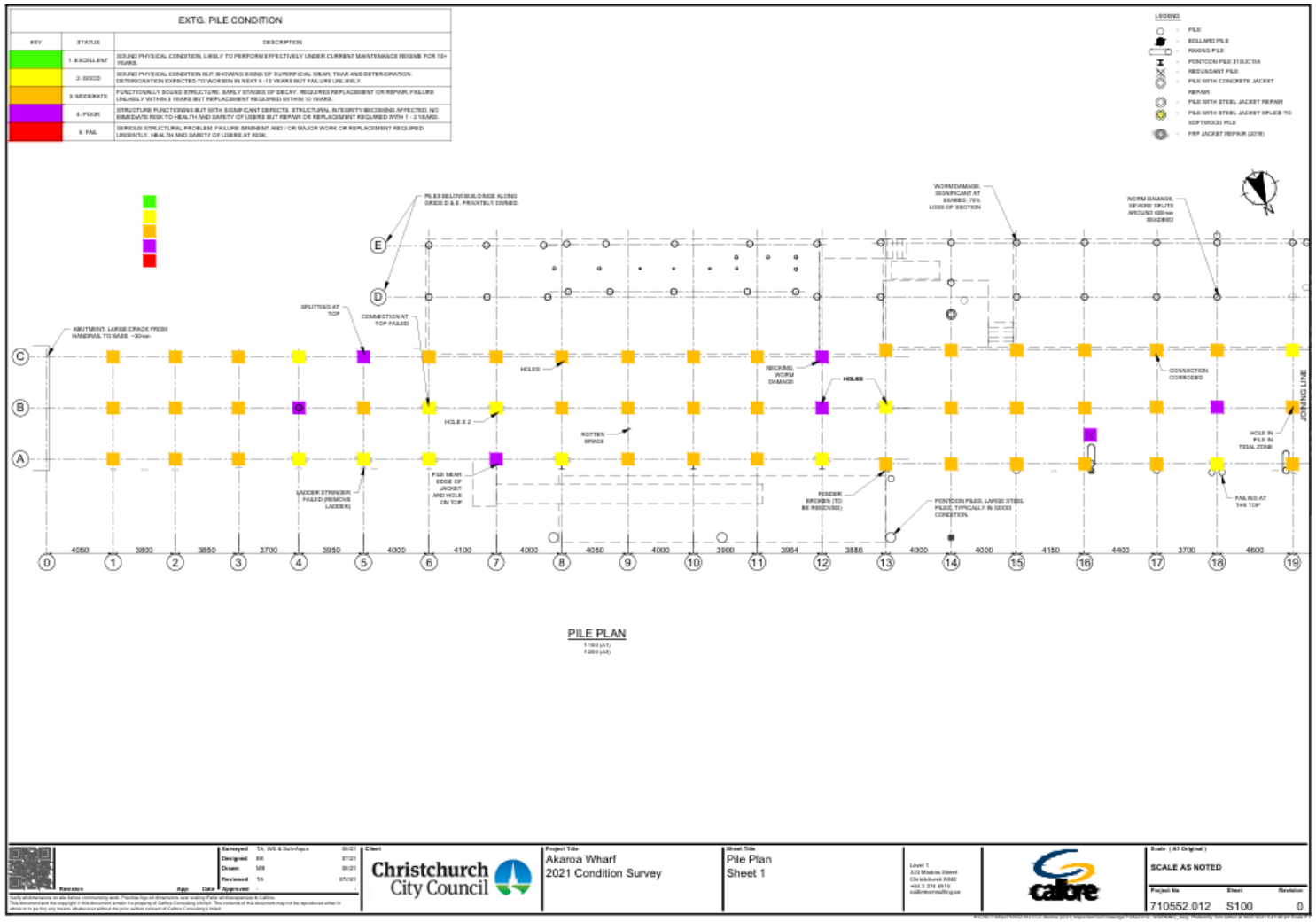

Figure 49. Akaroa Main Wharf pile plan (1 of 2) produced by Calibre (2021).

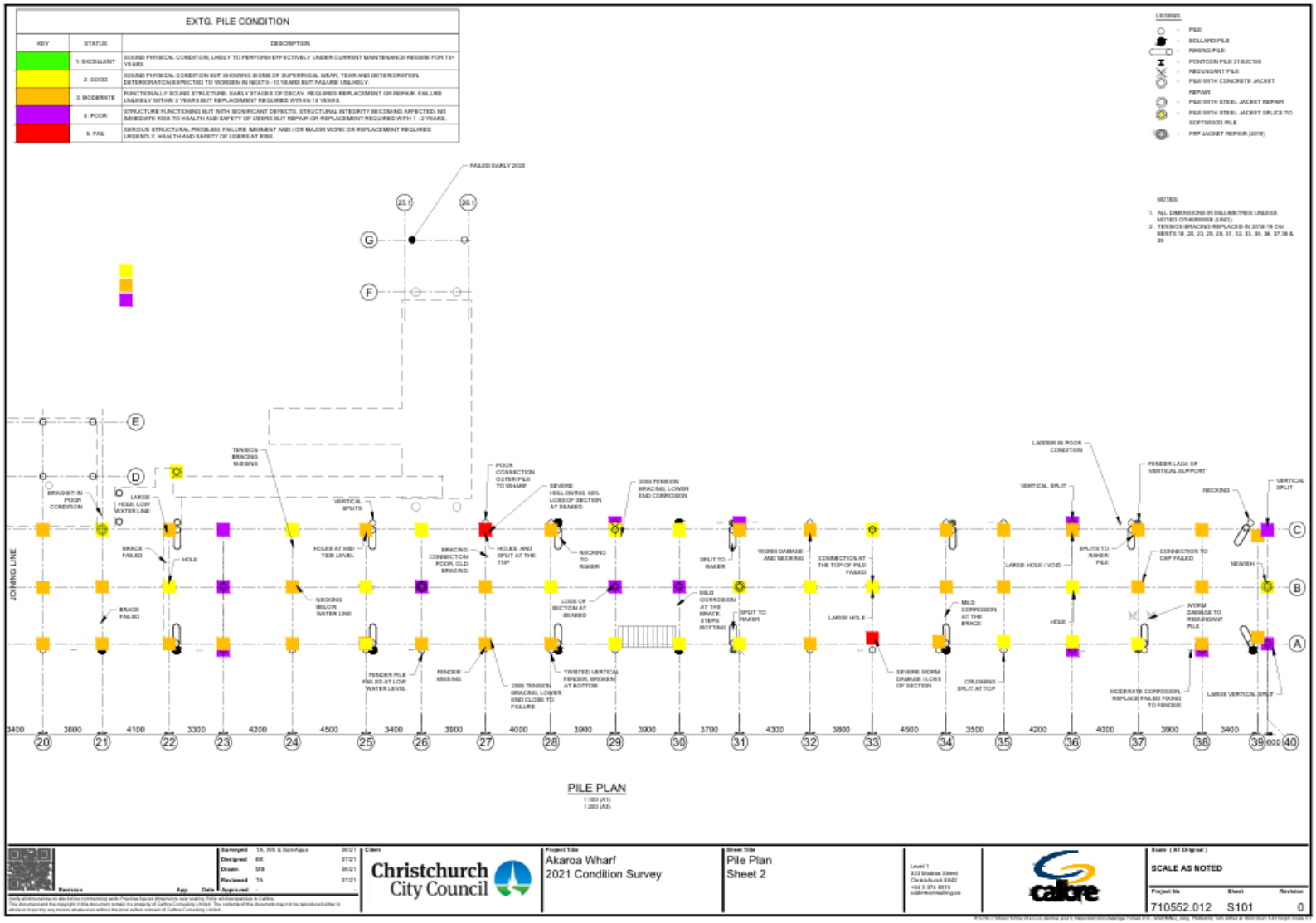

Figure 50. Akaroa Main Wharf pile plan (2 of 2) produced by Calibre (2021).

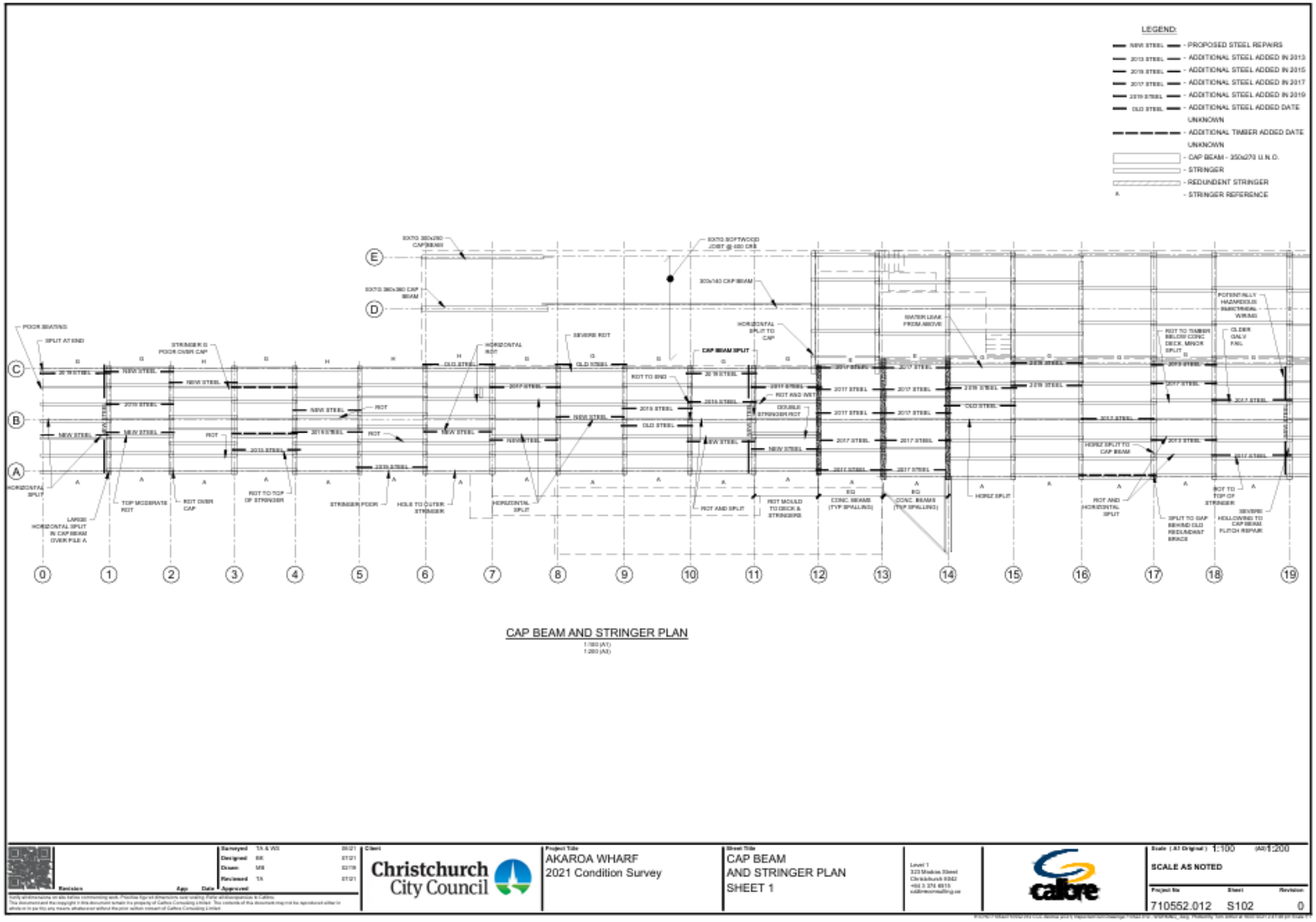

Figure 51. Akaroa Main Wharf cap beam and stringer plan (1 of 2) produced by Calibre (2021).

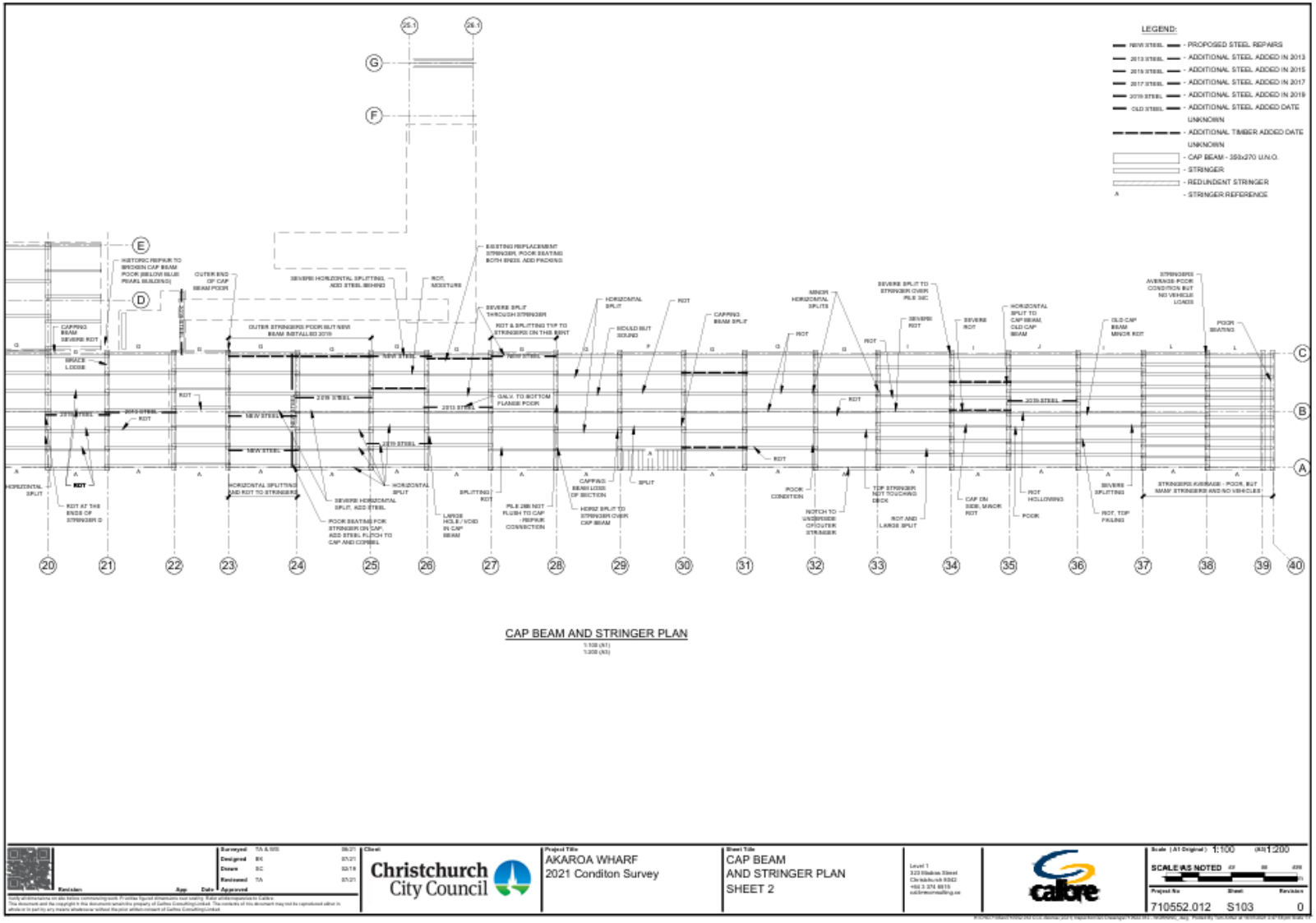

Figure 52. Akaroa Main Wharf cap beam and stringer plan (2 of 2) produced by Calibre (2021).

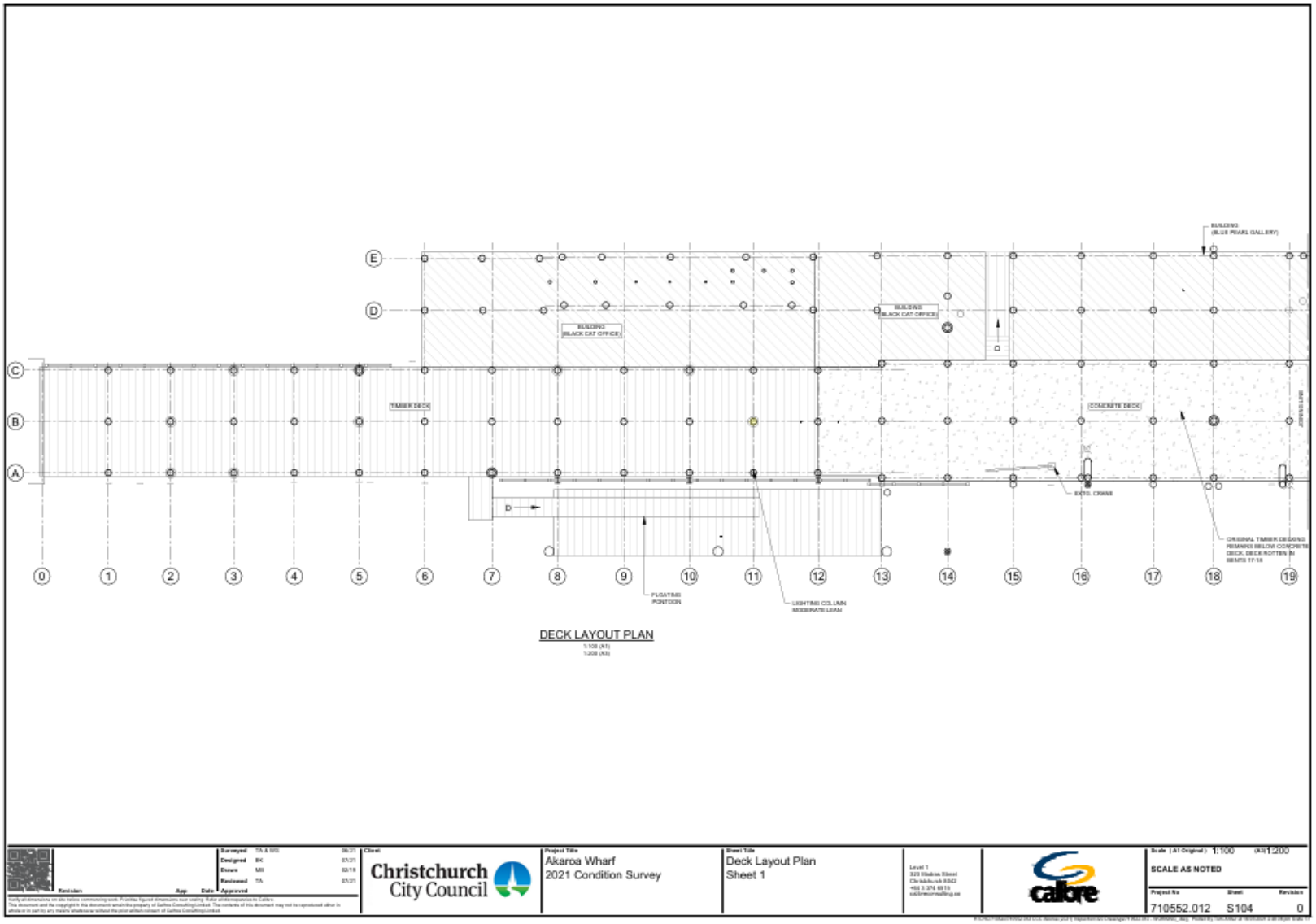

Figure 53. Akaroa Main Wharf deck layout plan (1 of 2) produced by Calibre (2021).

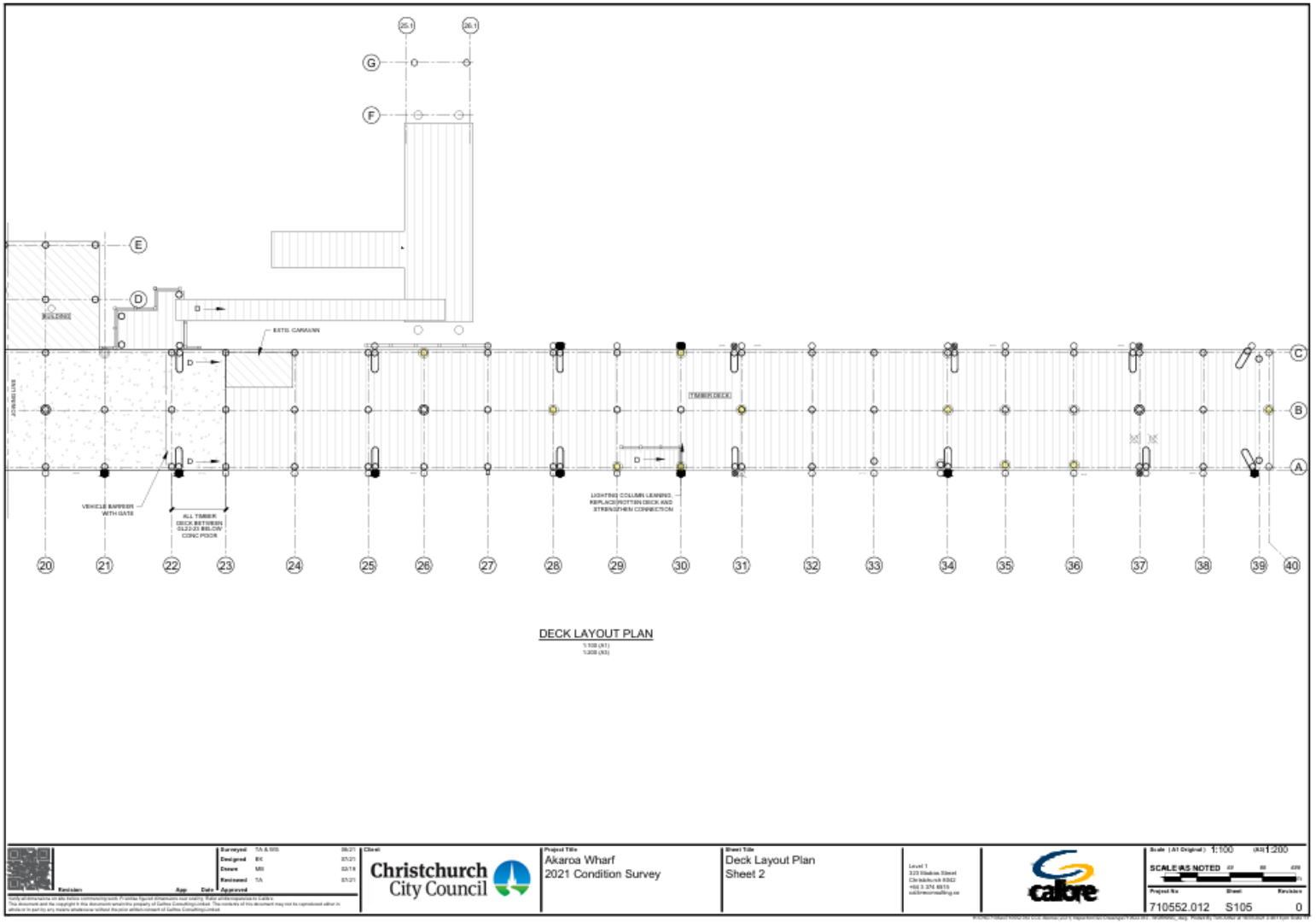

Figure 54. Akaroa Main Wharf deck layout plan (2 of 2) produced by Calibre (2021).

6.6.Archaeological Authority 2021/252 (Manwaring, N., 2023).

Repair and protection work of parts of the Akaroa Seawalls were undertaken between November 2021 and April 2022, under archaeological authority 2021/252. This wider project involved the infilling of cracks with cement and mortar, the removal of damaged sections of wall on the foreshore, shallow trenching in the foreshore, and the installation of a rock revetment by CCC. These repairs occurred in two discrete areas of the Akaroa Seawalls between the Akaroa Wharf and the northern intersection of Rue Jolie which includes Drummond's Wharf.

It was proposed in the earlier archaeological assessment that the development of Akaroa seawall was in part constructed as a section along Beach Road sometime before 1900 (Harsveldt 2020). The road and footpath of Beach Road were prone to slips and potholes, which was recorded in newspapers in 1881 and 1882 (Akaroa Mail and Banks Peninsula Advertiser, 5/8/1881: 2, 8/8/1882: 2, 19/8/1881: 2). The construction of the seawall was designed to be part of Akaroa's foreshore access facilitating a support structure for the road and wharves to alleviate the road movement in the form of slips and potholes (Harsveldt 2020). Based on this information it was hypothesised that seawall construction was from the 1880s. To counter this claim, according to Wilson & Beaumont, much of the seawall was constructed between 1901-1904 (Wilson, J. and Beaumont, L., 2009: 62).

Subsequent photographic research by South Island Archaeology showed no evidence of a seawall within the repair and protection project area before 1900 (Manwaring, N., 2023). This included the part of the seawall where the Akaroa Main Wharf is located. It was concluded that the photographic evidence confidently concludes that the seawall in the area around the Main Akaroa Wharf dates to the early 20th century.

Void repairs were undertaken in a number of locations during the Akaroa Seawalls project. One of these voids (Void 1) was located at the entrance of to the 1888 Akaroa Main Wharf (Figure 55). Excavations revealed a modern service line running immediately below the modern asphalt road, over multiple fill layers comprising of rubble and clay. The upper 600mm was described as mottled brown clay fill with shell and cobble inclusions, overlying a layer of brown clay (Figure 56-57). An outcrop of poured concrete was present to the base of the excavation on the edge of the trench closest to the seawall (northern side), representing a modern repair.

Void repair 1 was excavated through multiple fill layers interpreted as being associated with the construction of the Akaroa Main Wharf in 1888. These layers were broadly characterised as dark brown silty clay fill with varying levels of cobble inclusions, with shell in the upper layer. It was noted that these layers differed from stratigraphic profile recorded elsewhere on the wharf (see Underground Overground Archaeology 2020 and ArchSite Record N36/229). This was interpreted as being the result of modern repair/maintenance works and service installations on the wharf. No artefactual material was recovered from within the archaeological fill layers in void repair 1.

Figure 55. Location of void excavations undertaken during the Akaroa Sewall repair project. Void 1 is indicated by red arrow. (Manwaring, N., 2023).

The layers were consistent with those recorded during archaeological monitoring under archaeological authority 2015/1347 (Overground Archaeology 2020, ArchSite Record N36/229). These excavations recorded more discrete layers of stratigraphy, in comparison to the layers observed in void repair 1 which appeared to be mixed into two larger layers. Both stratigraphic profiles can be compared to the plans for the Akaroa Wharf (termed Akaroa Jetty) held by Archives New Zealand (see Section 5.11.1. above). These plans record a single layer of "solid fill" in the solid abutment portion of the wharf. It is considered likely that the more complex stratigraphy recorded during the recent archaeological work demonstrates that this fill was in fact multi-layered. Additionally, it is likely that modern repairs and maintenance have resulted in the modification and additions to the stratigraphic profile across the wharf. This would account for the difference in the stratigraphy recorded by UOA during the archaeological work.

In addition to the recording of the modified archaeological deposits associated with the 1888 construction of the Akaroa Wharf, a timber post believed to be associated with the original 1859 Akaroa Jetty (N36/276) was recorded during works under Archaeological Authority 2021/252 (Manwaring, N., 2023).

Figure 56. Excavations at void repair 1 (Manwaring, N., 2023).

Figure 57. Stratigraphy at Void 1. (Manwaring, N., 2023).

6.7. 19th Century Composite Wharves

A review of additional historic and archaeological literature was undertaken to check for comparative archaeological structures to the Akaroa Main Wharf. This included a review of other wharves and structures in both Akaroa and Lyttelton harbours and some structures further afield. Sources used included in Robertsons (2003) recent study of the smaller settlements in Lyttelton Harbour (which includes a history of the harbours wharves and jetties), ArchSite Information, and available archaeological reports. It is noted this was a cursory review and it was not exhaustive.

Both Akaroa and Lyttelton Harbours 19th century wharves are mainly timber structures. One example though, the 19th century Governors Bay Wharf appeared to also be a composite solid/timber structure, although the walls of the solid portion appear to have been made from rock rather than concrete (Figure 58). This structure is also much smaller than Akaroa's Main Wharf. Available histories indicate that Governors Bay Wharf was built in 1874 and was extended significantly in 1913 (Robertson 2023). An 1890's photograph shows the timber jetty extending from a rock landward based stem with coastal rock protection next to the jetty. This jetty was enlarged and ultimately replaced in the 20th century.

Figure 58. c. 1890's photograph showing the Governors Bay wharf before it is lengthening in 1915. Visible in the image is portions of rock stack wall protection next rock stem section of the wharf. Source: Robertsons (2003).

Lyttelton itself was officially designated a port on 30 August 1849 with its first jetty, known as Thomas's or 'the Government Jetty,' being constructed in 1849. A second wharf, 'Peacock's Wharf' was constructed in 1857. With the establishment of the Lyttelton Harbour Board in 1877, facilities continued to be built and improved, including Jetties 4, 5 and 6, constructed between 1875-1881 (Lyttleton Museum n.d.). Between June 2023 and November 2023 Jetties 4 (M36/326), 5 (M36/343) & 6 (M36/317) were demolished due to their deteriorating condition, and the health and safety and environmental risks it posed. These jetties were three of the seven main jetties to be constructed at the Lyttelton Port in the late 19th century. The demolition works were completed under archaeological authority 2015/600 that was granted to LPC for ongoing infrastructure repairs following the 2010/2011 Canterbury earthquakes. The final report detailing the documentation of these jetties prior to their demolition is not yet available. Available ArchSite information and historic photographs indicate that Lyttleton's 19th century wharves and jetties were all timber structures extending from the foreshore and as such the composite wharf type was not employed here in the 19th century.

Further afield, the Old Kaikoura Wharf (O31/112, Figure 59) in Kaikoura is a 19th century wharf that included a composite design. The original Kaikōura jetty (the 'Old Wharf') was constructed in 1863 at Fyffe Quay, near Avoca Point, to service the coastal shipping trade. A replacement wharf on the same site, built by Foster & Co, was completed by March 1881. This wharf, which is mainly extant, consists of a sub rectangular construction of solid rock and miscellaneous fill, bounded on three sides by concrete retaining walls with a wooden pier projecting from the wharf structure. The wooden component has a sub rectangular shape in plan with overall measurements of c. 12 m (NW/SE) by c. 10 m. It consists of a series of timber piles (of various condition but most appear to be weather damaged) which supports horizontal timber bearers beams which in turn support timber joist beams. The joists are topped by timber decking and modern guard rails. Timber decking is absent on the westerly side of the timber jetty where it is proposed to remove elements. As such, the jetty was a previously enlarged structure, but the deck had since been reduced in size (O'Connell 2023).

Figure 59. View of westerly side timber jetty that projects from the end of the Old Kaikoura Wharf. Visible in the image are timber piles supporting timber bearers with timber joists running over them. The timber joists are topped by timber deck with deck planking and guardrails. Image taken looking eastward. Source: SIA 2023.

Motueka Wharf (N27/195, Figure 60), cited earlier by Origin (2021), is a composite solid/timber structure was constructed in 1887-88 replacing an earlier wharf. It is composed of a stone causeway

with wooden t-extension on piles at the end. The stone causeway is a granite masonry enclosure packed with earth and other fill probably including estuarine deposits. Wharf buildings were originally situated on the wooden extension (Young 2011).

Figure 60. The remains of Motueka Wharf. Source: HNZPT.

6.8. NZAA Site Records

6.8.1. Akaroa Main Wharf

As noted, the Akaroa Main Wharf is a recorded archaeological site (N36/277) with its abutment components having partly been investigated during archaeological monitoring in 2015 and again in 2021. These investigations provided some insight into the construction of this element of the wharf (see previous section). In addition, there are 12 recorded archaeological sites within c. 115 m of the Akaroa Main Wharf (see Table 4 & Figure 61). One of these sites in part included historic fill with 19th century affects finds (N36/229) that was considered to form part of Akaroa Wharf.

Table 4. Summary detail of recorded archaeological sites close to Akaroa Main Wharf (see Figure 61 for locations).

NZAA ArchSite #	Feature	Location	Description
N36/249	19th century block house	Britomart Reserve, 82 Beach Road, Akaroa	Location of a blockhouse, one of three constructed in Akaroa in 1845. The blockhouse was removed from the reserve, but it is possible that foundations of the building remain in-situ below the ground surface.
N36/250	19th century land parcel with building	Britomart Reserve, 82 Beach Road, Akaroa	Reserve 86 was officially surveyed in 1856 and vested in the Akaroa Borough Council in 1887. In 1856, a building on the reserve, owned by James Bruce of the Bruce's Hotel (located immediately opposite) was approved for the free warehousing and securing of goods under bond. This building was recorded on early survey maps as a long narrow building opposite the hotel.

NZAA ArchSite #	Feature	Location	Description
N36/229	19th century artefact finds	Akaroa Town Wharf Roadway	Three features were found during trench earthworks on Beach Road (which included excavation on Akaroa Wharf approach). The stratigraphy exposed included 19th century artefacts within fill layers, a shell fill layer, and a deposit of backfill soil with artefacts inclusions. The artefacts were not collected.
N36/233	19th century road surface layers	Beach Road reserve	Evidence of historic road surface layers. Beach Road had a long period of modification, repairs, widening and relevelling from 1859 to 1884. The pier or town wharf was constructed in 1887-1888.
N36/198	19th century rubbish pit/dump	Beach Road	19th century rubbish deposit containing whole shell and clay tobacco pipe fragments. CCC carried out earthworks to upgrade the water mains in Church Street, Beach Road and Rue Lavaud, Akaroa.
N36/261	Akaroa Seawalls	Akaroa Seawalls	Site record form for the Akaroa Seawalls created as part of archaeological assessment for these works (Harsveldt 2020a). Later confirmed to be an early 20th century sea wall.
N36/276	Akaroa Old Wharf	Akaroa Old Wharf	A single wooden post, 250mm in diameter at the base and 120mm at the top, sitting just below the ground surface. Associated with the 19th century Akaroa Old Wharf which was the original 1859 jetty/wharf which preceded the construction of the Akaroa Main Wharf.
N36/280	Midden/Oven	Beach Road reserve	Shell midden containing shell, bone, charcoal, metal, glass, cobbles, fish, bird, cut mammal bone, charcoal from native plant species.
N36/199	Artefact scatter	Beach Road	Historic fill material containing scattered nineteenth century artefacts.
N36/234	Historic Road Surface	Bruce Terrace road reserve	Historic road surfaces, comprised of stacked manually broken basalt rounded cobbles, basaltic hard fill.
N36/282	Historic Road Surface	Aubrey Street Road reserve	Historic roading layers: stacked manually broken basalt river cobbles in dark brown silty clay, reddish-brown broken basalt boulders in rusty brown sand.
N36/152	Historic Road Surface	Rue Jolie	Historic road surface consisting of water-rounded basalt pebbles and gravels with some shell fragments.

Figure 61. Map of recorded archaeological sites (green rectangles) near Akaroa Main Wharf (indicated by red arrow). the red arrow indicates the location of N36/276 which is described in ArchSite as Akaroa Old Wharf. This is not the Akaroa Main Wharf but rather the original 1859 jetty/wharf which preceded the construction of the Akaroa Main Wharf. Source: NZAA ArchSite 2024.

6.8.2. Akaroa Recreation Ground

There are no recorded archaeological sites within Akaroa Recreation Ground. However, there are several recorded archaeological sites within c. 150 m of the recreation ground (see Table 6 & Figure 62). The vast majority of these are colonial era archaeological sites including 19th century roading layers. There are also two archaeological midden sites (N36/254 and N36/196) that were exposed during previous in-road trenching activities, these sites being c. 45 m and c. 110 m respectively to the south of Akaroa Recreation Ground.

Table 5. Summary details of recorded archaeological sites close to Akaroa Recreation Ground (see Figure 62 for locations).

NZAA ArchSite #	Feature	Location	Description
N36/197	19th century culvert	Near intersection of Rue Brittan and Rue Jolie	Small timber culvert found during work for new water mains. Feature remains in situ: "the culvert extended across most of the roadway towards Jubilee Park".
N36/267	19th century road surface	Rue Jolie roadway.	Several historical roading layers were recorded on Rue Jolie during works for the installation of broadband.
N36/237	19th century road layers & artefacts	Rue Brittan and Rue Lavaud intersection	Historical roading layers found during trenching. One road layer containing 19th century artefacts.
N36/254	Shell midden	Outside 46 Rue Jolie	Midden comprised dense shell, consistent with the material described and recorded under N36/196. No bone or cultural artefacts.
N36/217	19th century cottage	18-24 Rue Lavaud	Henning's cottage, now commonly known as "the Poplars", is still extant.
N36/244	Historic road layers.	Rue Pompallier road reserve	19th century road layers and artefact scatter found during trenching.
N36/201	St Patrick's Church	25 Rue Lavaud	St Patrick's Catholic Church, Akaroa, built in 1864.
N36/255	Historic fill with artefacts	Outside 54 Rue Jolie	Historic fill with artefacts (bricks, bone and ceramics) found during trenching.
N36/196	Two midden deposits	Rue Jolie	Buried midden deposits (shell and charcoal) of Māori origin.
N36/228	Brick and stone bridge constructed in 1879.	Rue Lavaud Road reserve over Balguerie Stream	One of two bridges located 385 metres apart on Rue Lavaud and listed as #1714 on the New Zealand Heritage List/Rarangi Korero (Heritage New Zealand 2018).
N36/218	Site of 19th century store and house	14-16 Rue Lavaud	Site of 19th century store and house
N36/271	19th century cottage site	12 Rue Lavaud	Cottage was demolished in the 1930's.
N36/243	19th century road layers with artefacts.	Rue Grehan Road	Historic road layers containing 19th century artefacts.

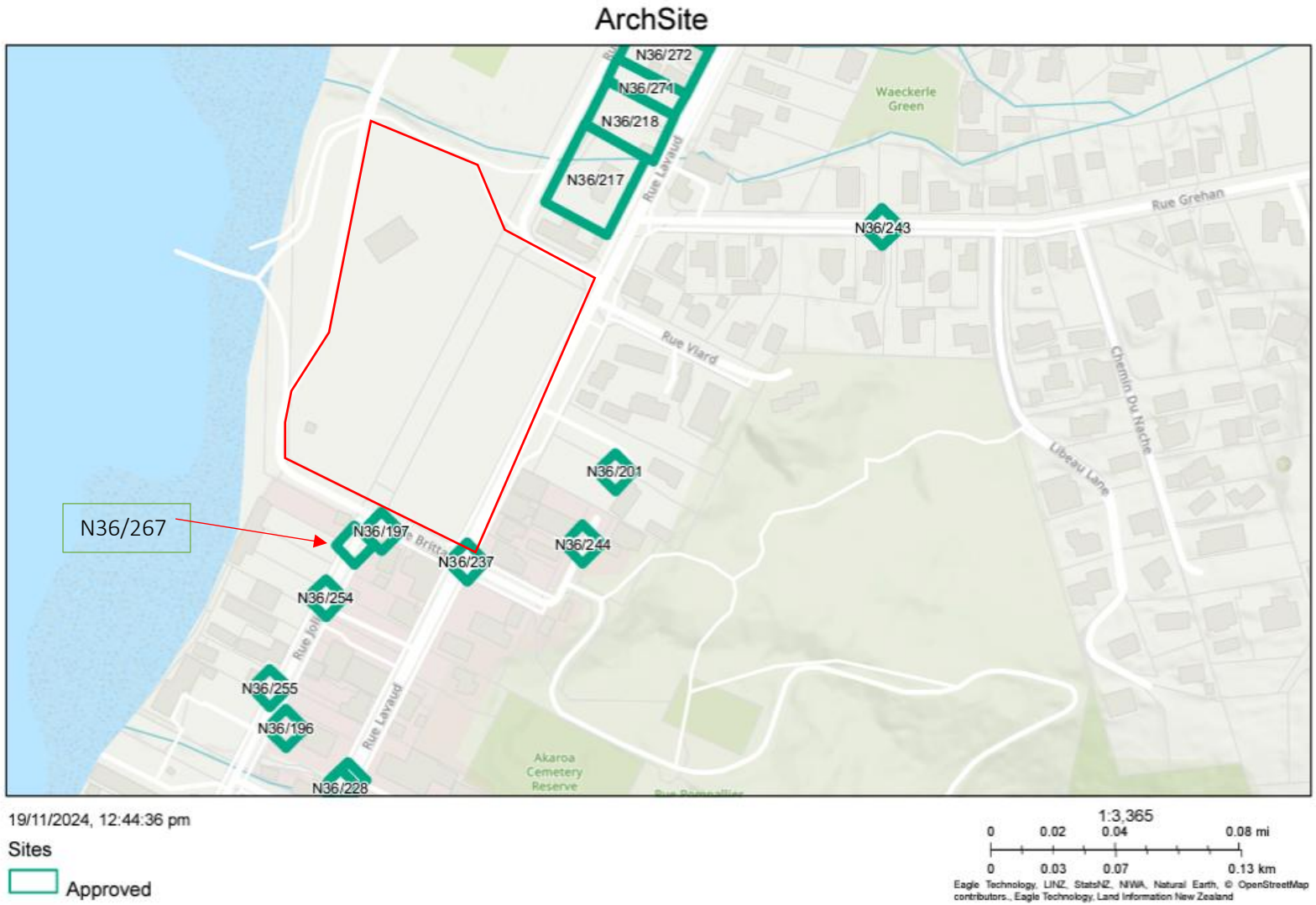

Figure 62. Map of recorded archaeological sites (green polygons) near Akaroa Recreation Ground (indicated by red polygon). Source: NZAA ArchSite 2024.

6.9. Christchurch District Plan and Heritage New Zealand Pouhere Taonga – The Heritage List / Rārangi Kōrero

Both Akaroa Wharf and Akaroa Recreation Ground are included in a Nga tūranga tupuna overlay in the in the Christchurch District Plan. Nga tūranga tupuna are identified in the District Plan as areas of settlement or occupation in the past. These are broader areas or landscapes of Ngāi Tahu cultural significance. Both Akaroa Wharf and Akaroa Recreation Ground are included in the silent file overlay in the in the Christchurch District Plan. This layer relates to a list included in the Mahaanui Iwi Management Plan Silent Files.

The Akaroa Main Wharf structure (Heritage Item Number 1137, Heritage Setting Number 526, Heritage Aerial Map Number 480) is a Group 2 – Significant items in the Christchurch City Council (CCC) Schedule of Significant Historic Heritage but is not included in the Heritage List / Rārangi Kōrero.

The Wharf Area including its approach is scheduled in the current District Plan for Christchurch City Council under Appendix 9.3.7.2 Schedule of Significant Historic Heritage. It is shown on the heritage planning map designated H37 under the District Plan.

The Origin Conservation Plan (2021) notes that the Akaroa Main Wharf is considered part of the Akaroa Historic Area, which was listed in 1999 (No. 7443), and part of the Akaroa Waterfront which was listed as a historic area in 1996 (No. 7330) in the Heritage List / Rārangi Kōrero. However, the Main Akaroa Wharf is not explicitly identified in either listing document.

The Akaroa Recreation Ground is not scheduled in CCC's Schedule of Historic Heritage and is not included in in the Heritage List / Rārangi Kōrero although there are listings in the surrounding landscape.

7. Site Visit

A site visit to Akaroa Main Wharf was undertaken by SIA Archaeologists TJ O'Connell & Sheelagh Conran on 11th November 2021 with more recent visits having been undertaken by TJ O'Connell in various dates in 2024. A site visit was undertaken to Akaroa Recreation Ground by TJ O'Connell on 30th May 2024.

As previously noted, a Conservation Plan for the Akaroa Main Wharf commissioned by CCC was prepared by Origin Consultants Ltd (2021). Included in that report was a photographic survey of the wharf structure including its underside. Parts of the wharf description here, particularly information relating to the underside of the wharf, is taken from the Origin report. The Origin photographic survey is reproduced in Appendix A of this report.

7.1. Akaroa Main Wharf

The site visit confirmed that the wharf comprised of the following elements:

A. A solid landward approach comprised of a concrete abutment containing earth and gravel fill.
B. A timber jetty supported by piles.
C. Modern floating pontoons.
D. The buildings situated on the wharf (Figure 63).

The wharf approach is characterised by asphalt surface. The area around the wharf is a mixture of recreational spaces (most notably the Britomart Reserve to the south of the wharf), small-scale commercial buildings, and accommodation, all catering primarily to the growing tourist trade. The wharf itself is the focal point of this seaside tourist area.

Figure 63. Aerial View of Akaroa Wharf (Source: Christchurch City Council 2021)

7.2.Concrete Abutment (Figures 64-72)

The landward approach of the Akaroa Main Wharf is characterized by a large concrete abutment that extends from the foreshore. It is composed of a slightly angled (wider at base) concrete abutment topped by concrete parapet wall on its southern side. The main concrete abutment measures c.32 m x 9.6 m wide (depth could not be ascertained due to tide). The extent of the concrete parapet wall on the south side of the concrete abutment is defined by two large piers, one of these contains a recess within which is a marble date plaque with the name of the Mayor, W. B. Tosswill. The incised letters and small drill holes indicate that the plaque would have had lead lettering, and this has either fallen out or been removed. Associated with the parapet wall is a protective concrete wall which runs a short distance along the foreshore atop the sea wall. The base of the parapet and protective concrete walls is defined by a protruding concrete kerb, and they are topped by chamfered pier caps. The outer north wall of the abutment features drainage holes (weep holes), circular pattress plates to the end of the tie rods and many cracks in the masonry.

The concrete abutment including concrete and stone aggregate walling with weep holes matches the design and form of the concrete abutment specification included in the original plans of the wharf (Figure 24). Furthermore, comparison of the concrete abutment today with the historic photographs indicates that it has not been altered or modified too much (see Figure 20). As such, the concrete abutment portion of the Akaroa Main Wharf including the stone plaque can be regarded as a broadly intact pre-1900 component.

Figure 64. View of concrete abutment portion of Akaroa Main Wharf taken from the landward approach to the wharf. Visible in the image is the concrete parapet wall that tops the concrete abutment of the north side of the structure (to left in image). The grassed area on left of image is part of Britomart Reserve. The image was taken looking west. Source: SIA 2021.

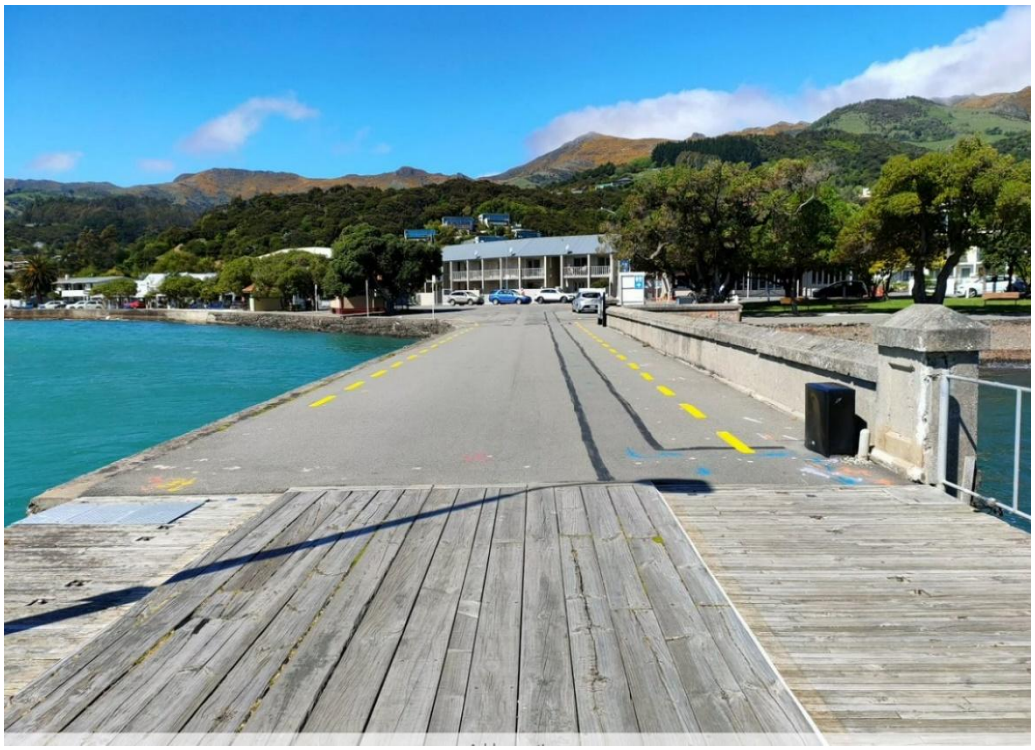

Figure 65. View of concrete abutment portion of Akaroa Main Wharf taken from the timber portion of the wharf. The wharf approach is on the landward side of the wharf. Visible in the image is the concrete parapet wall that tops the concrete abutment of the north side of the structure (to right in image). The image was taken looking east. Source: SIA 2021.

Figure 66. View of south elevation of the concrete abutment of the Akaroa Main Wharf. Visible in the image is the main concrete portion topped by concrete parapet wall. Image also shows an associated protective concrete wall running a short distance along the foreshore atop the sea wall. The image is taken looking northwest. Source: SIA 2021.

Figure 67. View of south elevation of the concrete abutment of the Akaroa Main Wharf. Visible in the image is the main concrete portion with pattress plates towards its lower portion. The main concrete portion is topped by concrete parapet wall. At the base of the parapet wall is a protruding and extended concrete kerb and the wall is topped by chamfered pier caps. The image is taken looking north. Source: SIA 2021.

Figure 68. View of protective concrete wall running a short distance along the foreshore. It appears to be constructed atop a buried portion of the Akaroa Sea Wall. The image is taken looking east. Source: SIA 2021.

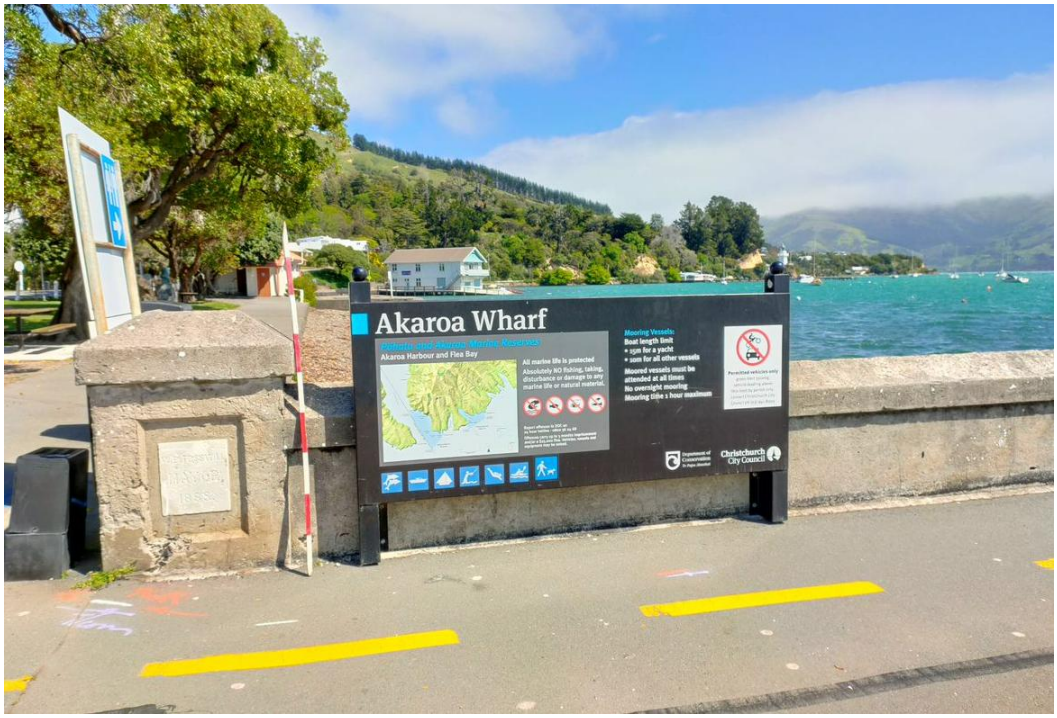

Figure 69. View of interior side of parapet wall on southern side of concrete abutment of the Akaroa Main Wharf. The marble date plaque with the name of the Mayor, W. B. Tosswill is on left side of image. The incised letters and small drill holes indicate that the plaque should have lead lettering, and this has either fallen out or been removed. Image was taken looking south. Source: SIA 2021.

Figure 70. View of marble date plaque with the name of the Mayor, W. B. Tosswill. The incised letters and small drill holes indicate that the plaque should have lead lettering, and this has either fallen out or been removed. The image was taken looking south. Source: SIA 2021.

Figure 71. View of cracked portion of concrete parapet wall. Cracked portion of chamfered pier caps suggests it is composed of red brick with concrete render overlay. Image was taken looking south. Source: SIA 2021.

Figure 72. View of junction of Akaroa Sea Wall and north facing elevation of Akaroa Main Wharf (concrete abutment). The image is taken looking southwest. Source: SIA 2021.

7.3. Timber Wharf Component (Figures 73 – 74)

As noted earlier, a broad characterisation of the timber substructure alignment is presented here using terminology consistent with that provided by Origin (2021). The timber structure is comprised primarily of hardwood timber elements, with softwood timber and steel used for repair work undertaken in the last few years. The wharf consists of 40 bents, each bent is c. 7.2m wide and has 3 piles. This is consistent with the original form of the timber wharf of 40 bents/39 bays, being 11 bays with five piles each and 28 with 3 piles each. Capping beams span across the piles with between 7 and 12 stringers spanning between the bents. The width of the wharf has substantially widened in its centre in the 20th century to accommodate large 20th century sheds. Two pontoon structures, one on either side of the wharf, are also recent additions to the timber wharf structure.

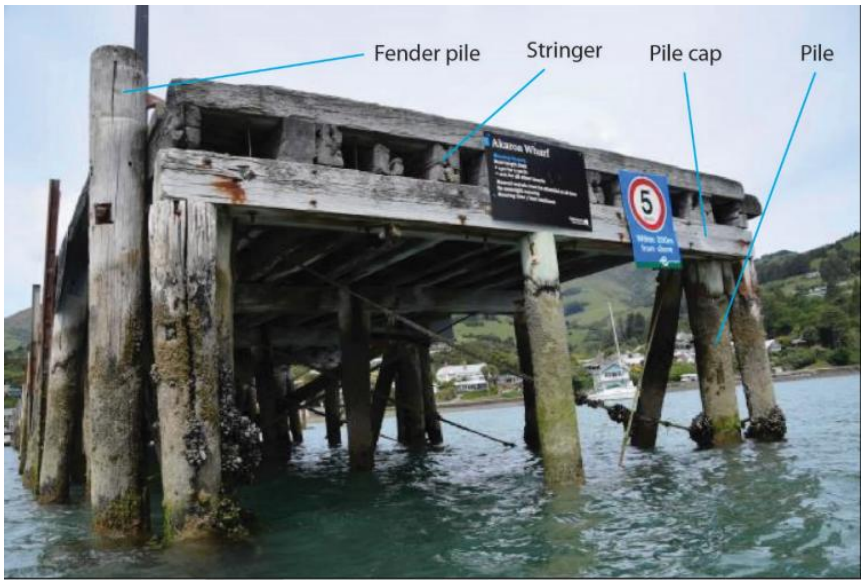

Figure 73. The end of the wharf with the principal parts of the structure identified in Origin report (2021). The whole assembly of the five piles with the pile cap running across them comprises a single 'bent.'

Figure 74. Another example of a 'bent' – the entire frame comprising, this time, three piles with a capping beam on top and bracing to provide rigidity (Origin 2019).

7.3.1. Timber Piles (Figures 75– 77)

Each bent is made up of three timber piles and fender piles of moderate condition. Signs of deterioration are evident, such as necking and hollowing around the older connections, which is typical for aging piles. The piles seem to be a mix of original ironbark piles and more recent additions of varying grades and species. To address the deterioration, modern concrete and steel jackets have been applied to rehabilitate some piles. Fender piles are positioned at every fourth bent at the wharf's outer end, aligning with the original construction plans. Calibre (2021) previously noted that the pile caps are typically 14" x 12" (350x270) hardwood, likely to be ironbark and as such they appear consistent with the original construction drawings. The stringer beams are 14" x 8" (355 x 200), many of the stringers have been replaced or made redundant by the addition of galvanised steel stringers alongside.

Figure 75. The first bent and the stringer/deck connection to the abutment. This part of the structure contains many original elements, including the pile cap, central pile with wrought iron strap connection to the cap, bracing timbers and horizontal wale between the piles, and timber stringers between the pile cap and modern decking boards (Origin 2021).

Figure 76. Three pile 'bents' under the eastern end of the wharf close to the abutment. Note the diagonal, timber braces, horizontal timber ties beneath the braces, and later steel rod braces. The original construction can be clearly seen here with timber pile caps (beams) running along the heads of the three piles in each bent and the timber stringers and decking on top. There are no fender piles to this part of the wharf. Ladders are a late 2oth century addition (Origin 2021).

Figure 77. An example of repairs and alterations to a bent – original timber bracing cut off either side of the central pile; diagonal steel braces installed; and a steel jacket added to the right-hand pile (Origin 2021)

7.3.2. Bracing

Only a small amount of hardwood timber bracing, which may be original or date back to the 19th century, seems to remain. This is located at the inner end of the wharf (see Figure 73). This bracing appears to be in poor condition. Most of the original hardwood bracing appears to have been replaced by steel tension only bracing, presumably in the 20th century (see Figure 77).

7.3.3. Stringer and Pile Cap Beams

Stringers or 'floor beams' provided a place to the fix the wharf decking. Section and elevation details in the original wharf drawings show how the piles and bracing were to be installed with iron fixings. A review of images taken by Origin (2021) of the underside of the timber wharf structure indicates that many of the stringers have been replaced or made redundant by the addition of galvanised steel stringers. When original stringers are present (see Figures 73, 75, 78), they appear to generally be in moderate to poor condition with early stages of decay and the condition deteriorating towards the seaward side. The pile capping beams across all bents appear to be hardwoods (likely to be ironbark) and appear to be consistent with the original construction drawings. They are mostly in moderate condition with early signs of decay (Figures 75-76).

Figure 78. Additional stringers inserted to strengthen the deck at the western end of the wharf. There is considerable erosion and decay in many of the stringers here (Origin 2021).

7.3.4. Decking

The deck appears to be a mixture of 20th century timber and concrete. The sources consulted indicate that the decking was a major item of replacement in the 20th century. However, there is a possibility that original decking survives in places where concrete surface was installed over it. The decking is framed by timber deck kerbs varying from poor to moderate condition (Figure 79). Some of these kerbs may be original and survived deck replacement in the 20th century.

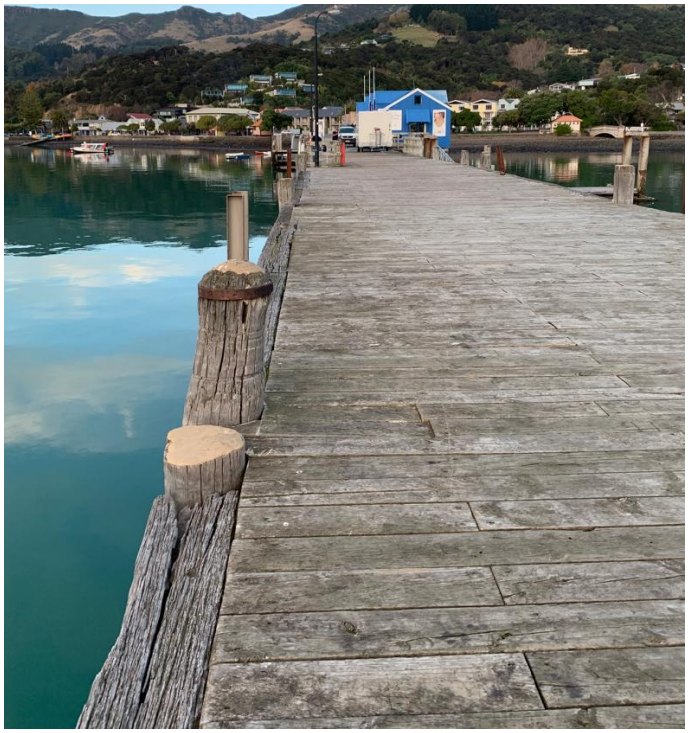

Figure 79. Timber deck kerb on outer edge of the deck planks. Source: South Island Archaeology 2024.

7.3.5. 19th Century Mooring Bollard

The original drawings and a 1907 photograph of the Akaroa Main wharf showed that every third pile of the wharf also served as a mooring post or 'bollard' that was finished with a metal, likely wrought iron, band (Figure 26). These mooring bollards had a slight hour-glass shape so that they had a wider diameter at the top; this was done to reduce the likelihood of mooring warps ('dock lines'), from working loose from the bollard. One possible 19th century mooring bollard survives on the east side of the wharf's timber deck (Figure 79-80).

Figure 80. Mooring pile with iron band. Source: South Island Archaeology 2024.

7.3.6. Metal Work & Joinery

The sources indicate that the original wharf ironwork for fixings and fittings was imported from England. Some pre-1900 elements are evident in some potential surviving wrought iron strap connections that tie the pile caps to the piles, although they are showing signs of corrosion and decay (Figure 81). There is also evidence that original iron bolts and iron bands are present throughout the structure (Figure 82-83). In addition to this there is evidence for the use of joinery techniques on some of the original timbers including presence of mortise and tenon joints (Figure 84).

Figure 81. Close-up of the pile head showing the original wrought iron strap connection with the pile cap beam – now corroding/delaminating and separated from the pile head (Origin 2021).

Figure 82. Original wrought iron strap connections between the central piles and their pile cap. The joints also have a mortise and tenon (Origin 2021).

Figure 83. Decay in decking boards beneath the existing deck finish. Corrosion to original iron bolts and nuts (Origin 2021).

Figure 84. Original wrought iron strap connections between the central piles and their pile cap. The joints also have a mortise and tenon (Origin 2021).

7.3.7. Other Items

Other items, the majority of which are 20th century in date were observed attached to the wharf during the site visit (Figures 85-87). They include:

- 20th century Mooring bollards.
- 20th century Mooring cleats.
- Lighting columns.
- 20th century benches.
- 20th century ladders.
- 20th century galvanized steel boxes.
- 20th century signage.
- 20th century timber handrails.
- 20th century crane.
- Modern steel fenders.
- Diesel pump station.
- Painted steel crane.

Figure 85. View of the southern floating pontoon is visible on the right side of the wharf (Origin 2021).

Figure 86. Alterations on the north side of the wharf with steel added to support the gantry to the floating pontoon and concrete cast to the base of the pile supporting the steel framing (Origin 2021).

Figure 87. View of 20th century benches and light fitting at seaward end of wharf. Image was taken looking northwest (Origin 2021).

7.4.Akaroa Recreation Reserve (Figure 88)

The Akaroa Recreation Ground is a large sporting complex consisting of outdoor grounds and an indoor facility situated to the northern end of the township. It is located along the Akaroa waterfront with main access off Rue Jolie, Rue Lavaud and Rue Brittan. Locally, the area is known as Jubilee Park. The part of the recreation ground that encapsulates Laydown Area 1 is an open field with trees lining the southern boundary/extent of the greenfield.

Figure 88. View of southern end of Akaroa Recreation ground where Laydown Area 1 is proposed. Source: SIA 2024.

8. Research Results

8.1.Potential for Māori Archaeological Evidence

The research undertaken for this archaeological assessment indicates that the area that forms the current township of Akaroa has been occupied and utilised by Māori for several centuries (Ogilvie, 2007: 20).

Physical evidence relating to this Māori occupation of Akaroa includes two shell middens recorded on Rue Jolie (under a single Recorded Archaeological Site: N36/196) this location being c. 110 m south of the Akaroa Recreation Ground and c. 760 m to the northeast of Akaroa Main Wharf. Archaeological midden was also recorded in another part of Rue Jolie (Recorded Archaeological Site N36/254) c.45 m to the south of Akaroa Recreation Ground. More recently in October 2021 archaeologists identified a midden/cultural layer dated to the 16th/17th century on the corner of Beach Rd and Bruce Terrace (Recorded Archaeological Site N36/280), on the east side of the road and c. 50 m south of the Akaroa Main Wharf. While this suggests the potential that additional Māori archaeological remains are present in the local, it is considered that there has been a substantial amount of ground disturbance within the Main Akaroa Wharf associated with construction of the wharf between 1887 and 1888 and that this disturbance would have likely severely impacted or removed such archaeological remains within the project footprint (if they had been once present). Nevertheless, the potential that such remains are still present cannot be completely discounted. There is a higher likelihood that buried Māori archaeological remains are present along the edge of the land reclamation area at Akaroa Recreation Ground where Laydown Area 2 is located.

8.2.Akaroa Main Wharf

Construction on the Akaroa Main Wharf began in 1887 and was completed in 1888. As with many wharfs of this period, it was designed to accommodate commercial and transport activities, including passenger and freight services. It replaced the earlier Fisherman's Wharf, which was deemed insufficient to meet the growing needs of the town. The Akaroa Main Wharf has undergone several modifications to meet the demands of the 20th and 21st centuries, although it retains much of its original fabric, and it is a mixture of original and later 20th century elements in place. Akaroa Main Wharf is a recorded archaeological site (N36/277).

An Opus condition report indicated problems with the wharf's condition, with an estimated remaining life of 10 years, assuming ongoing maintenance. Inspections in 2018 and 2021 found the structure in moderate to poor condition, with many original elements replaced by new piles, steel bracing, and concrete beams. Recent repairs included galvanised steel beams and stainless-steel bracing. The 2019 report raised concerns over the wharf's viability, and the 2021 report noted deteriorating steel bracing, which was replaced in 2020, with an expected 5-10 year lifespan. The wharf's 30m concrete abutment showed cracking and vulnerability to future seismic events. In considering upgrade options, restoring the existing wharf was not favoured due to procurement risks, limited amenity improvement, and concerns over sea level rise. Retaining the historic abutment was also deemed problematic due to its condition, susceptibility to earthquake damage, and potential cost and program risks related to strengthening or modifying it.

The wharf consists of several key components: a solid landward approach formed by a concrete abutment, a timber jetty supported by piles, modern floating pontoons, and associated buildings. The concrete abutment is largely original and includes concrete and stone aggregate walling with weep holes and internal fill, topped by a concrete parapet wall on its southern side. Although the abutment shows signs of cracking, it remains in relatively unaltered condition. Prior archaeological investigations of this component of the wharf, including monitoring in 2015 and 2021, have provided insights into the construction of the solid landward portion of the wharf and its approach. It contains fill that includes a mix of volcanic rock, clay, crushed shell, and hard fill. Excavations also uncovered historic refuse such as bone, glass, ceramic, and clay pipe fragments. The fill, particularly the crushed shell and volcanic rocks, are likely remnants of the original construction, with later layers of fill likely dating to the 20th century.

The original timber jetty, which forms the seaward portion of the wharf was constructed primarily from Australian hardwood and native timber. Significantly, the combined research did not indicate for modifications or replacement of timber until the mid-20th century on. Since then, many of the original timber components, including decking, sheds, and furniture, were either removed or replaced. Timber decay, particularly near the waterline, is evident, with ironbark piles and bracing having been replaced by steel tension-only bracing in many areas. Some areas of the wharf, particularly the seaward end, are in poor condition, with piles infested by suspected teredo worms and general decay in capping beams and stringers. Many of the original ironbark fender piles have also been replaced or reinforced.

While the structural history of the wharf is marked by later 20th century repair and modification, much archaeological fabric remains. These include wrought iron strap connections to the pile caps, timber elements in parts of the structure, and the marble date plaque marking the wharf's 1888 completion. The original timber piles, although in poor condition, are an important part of the original design and contribute to the wharf's archaeological significance. Although repairs have extended the life of the structure, they have also altered the original fabric, particularly in areas where steel reinforcements have replaced timber components.

The combined evidence suggests that while the 1888 Akaroa Main Wharf has been subject to extensive modification and development particularly since the mid-20th century onwards, the wharf has remained largely in its original form. Original elements include the solid landward approach formed by a concrete abutment and the timber jetty supported by piles.

8.3. Akaroa Recreation Ground

The assessment research has shown that the ground on which the Akaroa Recreation Ground sits was formed because of a significant alteration to Akaroa's shoreline which dates from 1886-88 when a shallow section of foreshore at the northern end of the town was reclaimed. There is a higher likelihood that buried Māori archaeological remains are present along the edge of the land reclamation area where Laydown Area 1 is located rather than within the footprint of the Akaroa Main Wharf. 1856 mapping shows the presence of a rectangular item, presumed to be a building, present on a spur on the then coastal edge and within the extent of Laydown Area 1. No further detail regarding this building was found during research for this assessment, and it is not present on later survey plans or photographs. A 1909 survey plan shows a 'Rubble Wall' forming the west edge of the grounds (the rubble wall location intersects with the extent of Laydown Area 1). Photographic evidence suggests this wall was present in the 19th century, though this item is not present on later survey plans and was not observed during the site visit. Basal components of the wall may still survive below the ground surface.

While there are no recorded archaeological sites within Akaroa Recreation Ground, there are several recorded within c. 150 m. The most significant of these include two archaeological midden sites (N36/254 and N36/196) that were exposed during previous in-road trenching activities, these sites being c. 45 m and c. 110 m respectively to the south of Akaroa Recreation Ground. They also include a small timber culvert (N36/197) found near the intersection of Rue Brittan and Rue Jolie on the south side of the Akaroa Recreation Ground. Available information indicates that "the culvert extended across most of the roadway towards Jubilee Park". As such, it is likely that this culvert extends into the edge of the reclaimed ground within Laydown Area 1.

It is considered there is a general risk for the presence of buried archaeological remains associated with both Māori and early 19th century colonial settlement activities to be present within Laydown Area 1 and there is a risk that any groundworks here will uncover sub-surface archaeological remains. Furthermore, the original fill used to reclaim during reclamation efforts, constitutes archaeological material, given that reclamation efforts occurred before 1900.

9. Archaeological Values

Archaeological values relate to the potential of a place to provide evidence and information on the history of New Zealand. This is framed within the existing body of archaeological knowledge and current research. Statements on archaeological values of the project area are made below regarding the Heritage New Zealand Pouhere Taonga guidelines for writing archaeological assessments. This section presents the archaeological values that relate to both confirmed and potential archaeological sites present within the project footprint. The following criteria are accounted for to assess archaeological values from within the project footprint:

- Condition – is the site in good condition?
- Rarity or uniqueness – is the site notable in any other way in comparison to other sites of its kind?

- Contextual value – context or group value arises when the site is part of a group of sites, which taken together as a whole, contributes to the wider values of the group or archaeological, historic or cultural landscape.
- Information potential – what current research questions or areas of interest could be addressed with information from the site?
- Amenity value (e.g., educational, visual, landscape) – does the site(s) have potential for public interpretation, access and education?
- Cultural associations – does the site(s) have any special cultural associations for any particular communities or groups, e.g., Māori, European, or Chinese.

Table 6. Potential unrecorded Māori Archaeological Remains at Akaroa Rec Ground & Akaroa Main Wharf.

Site	Value	Assessment
Potential unrecorded Māori Archaeological Remains	Condition	Condition of such remains, if present, is unclear. If present, such sub-surface remains likely include subsurface intact or disturbed midden deposits. As such, it would be anticipated that such remains would have a Moderate Condition Value
	Rarity/ Uniqueness	If unrecorded Māori archaeological remains are uncovered, they are likely to be middens. Midden sites are recorded in the wider landscape and as such are not rare. Potential midden sites would have Low to Moderate Rarity Value.
	Contextual Value	Any Māori archaeological remains that are uncovered will have contextual value with the other midden sites in the local setting. Low to Moderate contextual value.
	Information Potential	Any information that could be recovered from potential midden site will likely provide information about Māori utilization of the local environment including food gathering, consumption and disposal. Low to Moderate information potential value.
	Amenity Value	Low amenity value.
	Cultural Associations	Will have cultural associations for local iwi.

The overall Archaeological Values for potential unrecorded Māori Archaeological Remains at the Akaroa Recreation Ground & Akaroa Main Wharf is deemed to be Low to Moderate.

Table 7. Archaeological Values of Akaroa Main Wharf (M35/277) and that part of N36/229 that makes up wharf approach.

Site	Value	Assessment
Akaroa Main Wharf (M35/77) & Historic Fill (wharf part of N36/229)	Condition	The Akaroa Main wharf has overall **Moderate** Condition Value (as an archaeological site). The concrete abutment portion has high condition value. It is largely original and includes original concrete and stone aggregate walling with weep holes and internal fill. The abutment is topped by concrete parapet wall on its southern side with piers ones of which contains a plaque. On the southern side of the abutment a large crack extends from the base up to the top of the wall, being a result of the severe liquefaction that occurred during the Canterbury Earthquakes. The structure has had several post-tensioned rods installed through the abutment to prevent further damage. Inspection of the abutment showed large cracks at regular intervals and fine materials have been washed away leaving the aggregate exposed. Despite this damage, the concrete abutment remains in overall relatively good condition. The timber component of the wharf which includes the timber jetty supported by piles is in moderate condition. Many original elements including decking, sheds and furniture have either been removed, replaced, or covered in concrete in the 20th century.
	Rarity/ Uniqueness	The Akaroa Main wharf has overall **Moderate to High** Rarity Value. 19th century wharves are not particularly rare. However, problems with degradation of the timber on other 19thcentury wharf structures in New Zealand has resulted in a high rate of repair, modification or replacement. The Akaroa Main Wharf has some additional rarity value given its composite solid/timber form. Some other 19th century composite solid/timber wharf structures are documented both locally and further afield. This includes the Governors Bay Wharf (replaced) and Kaikoura Old Wharf. Another South Island example of an extant 19th century composite form includes the 1887 Motueka

Site	Value	Assessment
		Wharf (HNZPT List No. 2985). All these examples pre-date the Akaroa Main Wharf. The Kaikoura example, built in 1881, is still mainly extant, and consists of a sub rectangular construction of solid rock and miscellaneous fill, bounded on three sides by concrete retaining walls with a wooden pier projecting from the wharf structure, this latter component having been reduced in size. The Akaroa Main Wharf does have some rarity value in the local setting given its size and form. While 19th century Akaroa had a few jetties and wharves along its shoreline, these have either been demolished or replaced in the 20th century.
	Contextual Value	The Akaroa Main Wharf has **Moderate** to **High** contextual value. The wharf forms part of Akaroa's historic foreshore and shoreline area though other 19th century wharf structures in the township were either removed or replaced in the 20th century. One shoreline archaeological feature nearby includes a recently discovered timber post (N36/276) associated with the first public jetty built in 1859 at the end of Church Street. This original wharf was superseded in 1886-87 by the current Akaroa Main Wharf. The wharf has high contextual value to the historic township of Akaroa which still retains a relatively intact heritage landscape associated with the transport, administration and commercial history of the town.
	Information Potential	The potential for information to be recovered by archaeological means that relate structure and its use through time is **Moderate**. With regards the concrete abutment such information relates to early engineering design, craftsmanship and form and make-up of the interior fill. With regards the timber jetty component, despite degradation of timbers and 20th century modifications, there is potential for information to be recovered by archaeological means that relate to the original timber structure including its design,

Site	Value	Assessment
		construction, and use. This includes structural forms, woodworking, materials used, metal fittings and precise details regarding timbers used though timber species I.D. There is also information to be obtained relating to changing structural history over time (although available information suggests for limited modifications or changes until the 20th century).
	Amenity Value	The amenity value of the existing Wharf is **Moderate to High**. While visibility of extant 19th century timber remains is limited, the extant concrete abutment is still in place and currently the public have access to the abutment and wharf and the location has high visitor numbers. The form and shape of the wharf retains its overall 19th century design.
	Cultural Associations	The Akaroa Main Wharf has Colonial European cultural associations. The abutment to Akaroa Main Wharf interfaces with Britomart Reserve, an area which for Ngāi Tahu holds significance as the place where approximately 500 Ngāi Tahu gathered in 1848 to discuss the sale of land which would later be known as Kemps Deed. The Akaroa Main Wharf is located within a landscape of high significance to two hapū, Ngāi Tārewa and Ngāti Irakehu who are the tangata whenua of the takiwā which covers the Akaroa Harbour, surrounding coastal environment and hills as defined by the Ngāi Tahu Claims Settlement Act 1998. However, It is outside of the expertise of the author to comment on tangata whenua values.

The overall Archaeological Values of Akaroa Main Wharf (M35/77) is deemed to be **Moderate to High.**

Table 8. Potential unrecorded historic European archaeological remains at Akaroa Recreation Ground.

Site	Value	Assessment
Potential historic European archaeological remains at Akaroa Recreation Ground	Condition	It can be expected that intact 19th century fill material associated with land reclamation is present. There is potential for buried archaeological remains associated with 19th century settlement to be present including culvert remains, basal sea wall, and building or structural remains. Condition of such remains, if present, is unclear but potential for such remains to survive intact. As such, it would be anticipated that such remains would have a **Moderate to High** condition value
	Rarity/ Uniqueness	Any archaeological remains dating to the 1850's will have rarity value. Later 19th century archaeological remains in Akaroa are not particularly rare. **Moderate** rarity value.
	Contextual Value	Historic European archaeological remains will have contextual value with the other recorded 19th century archaeological sites in Akaroa. **Low to Moderate** contextual value.
	Information Potential	Information to be gained regarding early European occupation along the harbour edge, coastal management, and land reclamation activities. **Moderate** information potential value.
	Amenity Value	**Moderate** amenity value. Any surviving remains are below the ground surface. However, there is opportunity to present information to the public via installation of information panels in the recreation ground.
	Cultural Associations	Colonial European cultural associations

The overall Archaeological Values for potential historic European archaeological remains at Akaroa Recreation Ground is deemed to be **Moderate**.

10. Assessment of Effects

10.1. Description of Works

Please refer to Section 1.6 of this report for a description of proposed works.

10.2. Potential Effects of Proposed Works

10.2.1. Potential Unrecorded Māori Archaeological Remains

It is considered likely that ground disturbance associated with construction of the Akaroa Main Wharf between 1887 and 1888 would have severely impacted or removed any Māori archaeological remains within the Main Akaroa Wharf project footprint (if they had been once present). Nevertheless, the potential that such remains are still present cannot be completely discounted. If such remains survive, it can be expected that the impact of proposed demolition and construction activities will be negative and permanent resulting in the loss of associated surviving archaeological deposits within the extent of the new wharf footprint. Archaeological remains that may extend beyond the new wharf footprint and

its approach will not be impacted.

There is a higher likelihood that buried Māori archaeological remains (i.e. midden) is present along the edge of the land reclamation area at Akaroa Recreation Ground and where part of Laydown Area 1 is located. Area 1 will require groundworks for establishment of the laydown area. If deep groundworks occur along the edge of the historic land reclamation area it can be expected this will result in physical removal of archaeological deposits (if they are present) within the area of deep groundworks. Archaeological remains that may extend beyond Area 1 extents will not be impacted.

It is considered that potential effects from project works on archaeological values identified in Table 6 of this report will be moderate to high (if associated archaeological remains are present). There will be no risk of future damage of potential archaeological remains once the proposed works are completed.

10.2.2. Akaroa Main Wharf (M35/277)

This archaeological assessment has identified that much of the Akaroa Main Wharf, including concrete abutment and parts of the deck and pile sections, are pre-1900 in date. The impact of the proposed wharf demolition will be negative and permanent resulting in the loss of the entire extant structure. As such, all archaeological values associated with the wharf structure (Table 7) will be lost as a result of the proposed demolition.

10.2.3. Potential Unrecorded European archaeological remains at Akaroa Recreation Ground

This archaeological assessment has identified the potential for European archaeological remains to survive in a sub-surface fashion at Akaroa Recreation Ground, particularly 19th century reclamation fill and sea wall. There is also a higher likelihood that buried archaeological structural remains are present along the edge of the land reclamation area than elsewhere in Area 1. If deep groundworks occur along the edge of the historic land reclamation area it can be expected this will result in physical removal of archaeological features and deposits within the area of deep groundworks. Groundworks will only impact a portion of 19th century reclamation fill material and potential basal sea wall remains as the reclamation area extends beyond Area 1.

It is considered that potential effects on archaeological values identified in Table 8 of this report will be moderate. There will be no risk of future damage of potential archaeological remains once the proposed works are completed.

10.3. Mitigation & Managing Effects

All pre-1900 archaeological sites are protected under the provisions of the Heritage New Zealand Pouhere Taonga Act 2014. It is illegal to destroy or damage an archaeological site without an authority to do so from HNZPT. The legislation is in place to ensure that the archaeological record is not destroyed. Where it is not possible to avoid adverse effects on archaeological values, an archaeological authority issued under the provisions of the HNZPT Act provides a means of controlling those adverse effects and creating an information record of a site in accordance with archaeological best practice. As such, an archaeological authority is required to be sought from the HNZPT to cover proposed project plans. This is a legal requirement.

It is recommended that an Archaeological Management Plan (AMP) is prepared for the project once more information is available regarding proposed methodology for demolition and rebuild of the Akaroa Main Wharf and proposed groundworks at Akaroa Recreation Ground. The AMP will provide

operational guidelines and procedures to manage archaeological mitigation work.

10.3.1. Mitigating Effects on Unrecorded Māori Archaeological Remains

A programme of archaeological monitoring of construction activities at Akaroa Wharf and topsoil removal/groundworks within Laydown Area 1 should be implemented at the construction phase to determine the presence of Māori archaeological material. Mitigation of such archaeological sites and features should be by investigation, recording, sampling, and analysis in line with current standard best archaeological practice. Management of the potential for uncovering archaeological material should be detailed in the AMP formed in consultation with HNZPT and affected mana whenua.

10.3.2. Mitigating Effects on Recorded Archaeology: Akaroa Main Wharf (M35/277)

As noted earlier, all archaeological values associated with the wharf structure (Table 7) will be lost as a result of the proposed demolition. When it is not possible to avoid adverse effects on archaeological values an archaeological authority issued under the provisions of the HNZPT Act provides a means of controlling adverse effects and creating an information record of a site in accordance with archaeological best practice.

It is proposed that the potential loss of archaeological information is mitigated by archaeological recording of the Akaroa Main Wharf, prior to, during, and after its demolition. While it's acknowledged that the recovery such information only mitigates for the loss of archaeological information, rather than the loss of the site itself, such an information record will provide a valuable data set relating to the wharfs design, construction, and use through time. This information will be included in a Final Archaeological Report that will be produced in line with issued Archaeological Authority conditions. Deconstruction should also happen in such a manner as to ensure the salvage and retention of select original building material.

It is recommended that the external aspects of the concrete abutment components undergo recording in line with Level 1 of Heritage New Zealand Pouhere Taonga's levels of building recording. Removal of the internal fill to be undertaken under archaeological supervision. It is recommended that the first two bents of the timber jetty structure undergo recording in line with Level 1 of Heritage New Zealand Pouhere Taonga's levels of building recording. It is also recommended that representative portions (to be specified in the AMP) of the remaining parts of timber jetty and associated piles undergo recording in line with Level 3 of Heritage New Zealand Pouhere Taonga's levels of building recording.

It is recommended that trenching for services at wharf approach in Laydown Area 2 undergo archaeological monitoring to determine the presence of archaeological material. Mitigation of such archaeological sites and features should be by investigation, recording, sampling, and analysis in line with current standard best archaeological practice.

Management of the archaeological recording, monitoring, and salvaging of archaeological material should be detailed in the AMP formed in consultation with HNZPT.

Information on the history of Akaroa Main Wharf and any archaeology outcomes should be made available to the public, including on the CCC website. The recovery of any significant information through archaeological investigation would be a positive effect of the Project and would also provide opportunities for public information through interpretation panels and displays. Public Interpretation should be provided. Commonly used methods include interpretative panels with photographs and text documenting the history of the site and the significant associations. Fixed interpretation panels should

be incorporated and installed in the new wharf structure. Additional interpretation could be done through via Christchurch City Council webpages or displays in public buildings such Akaroa Museum. A selection of original building material should be offered to Akaroa Museum for use in future museum initiatives as museum sees fit.

10.3.3. Mitigating Effects on Unrecorded European archaeological remains at Akaroa Recreation Ground

A programme of archaeological monitoring of topsoil removal/groundworks within Laydown Area 1 should be implemented if groundworks proceed at Akaroa Recreation Ground. This is to determine the presence of European archaeological material. Mitigation of such archaeological sites and features should be by investigation, recording, sampling, and analysis in line with current standard best archaeological practice. Management of the potential for uncovering archaeological material should be detailed in the AMP formed in consultation with HNZPT and affected mana whenua.

10.4. Site Management

The AMP will provide operational guidelines and procedures to manage the archaeological mitigation work.

11. Recommendations

- Heritage New Zealand should be consulted around the conclusions and recommendations included in this report to ensure it is in line with their expectations.
- An Archaeological Authority must be sought for proposed demolition works as they will impact pre-1900 archaeological remains. There are significant timeframes associated with applying for and obtaining and Archaeological Authority. Project scheduling needs to allow for this.
- It is recommended that the external aspects of the concrete abutment components undergo recording in line with Level 1 of Heritage New Zealand Pouhere Taonga's levels of building recording. Removal of the internal fill to be undertaken under archaeological supervision.
- It is recommended that the first two bents of the timber jetty structure undergo recording in line with Level 1 of Heritage New Zealand Pouhere Taonga's levels of building recording.
- It is recommended that representative portions of the remaining parts of timber jetty and associated piles undergo recording in line with Level 3 of Heritage New Zealand Pouhere Taonga's levels of building recording.
- It is recommended that if groundworks take place at Akaroa Recreation Ground that these are archaeologically monitored.
- The AMP Document prepared to manage archaeological response must be followed.
- It is recommended that local iwi is consulted regarding the Archaeological Authority application and this assessment report.
- It is recommended that Information on the history of Akaroa Main Wharf and any archaeology outcomes should be made available to the public, including on the CCC website. Fixed interpretation panels should be incorporated and installed in the new wharf structure.
- It is recommended that a selection of original building material should be offered to Akaroa Museum for use in future museum initiatives as museum sees fit.

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- 5/8/1881: 2

- 8/8/1882: 2
- 19/8/1881: 2
- ‘The Opening of the Wharf’
- ‘Akaroa Borough Council’ (Issue 1101, 4 February 1887)
- ‘Akaroa Borough Council’ (Volume XIV, Issue 1101, 4 February 1887)
- ‘Advertisements’ (Issue 1145, 8 July 1887)
- ‘Peninsula News’ (Issue 1164, 13 September 1887)
- ‘The Wharf’ (Issue 1215, 9 March 1888)
- ‘The Wharf’ (Issue 1224, 10 April 1888)
- ‘Akaroa Borough Council’ (Issue 1211, 24 February 1888)
- ‘The Wharf’ (Issue 1224, 10 April 1888)
- ‘Akaroa Borough Council’ (Issue 1290, 17 February 1888)
- ‘Akaroa Borough Council’ (Issue 1261, 14 August 1888)
- ‘Akaroa Borough Council’ (Issue 1261, 17 August 1888)
- ‘Akaroa Borough Council’ (Issue 1038, 29 June 1886)
- ‘Pigeon Bay Road Board’ (Issue 1137, 10 June 1887)
- ‘Akaroa County Council’ (Issue 1422, 4 March 1890)
- ‘No Title’ (Issue 5945, 20 November 1934)
- ‘No Title’ (Issue 123, 21 September 1877)
- 13/4/1877: 2
- 30/11/1877: 2
- 26/1/1900: 2
- 7/4/1902: 2

Press

- ‘Akaroa Items’ (Issue 7027, 2 April 1888)
- ‘News of the Day’ (Issue 7152, 23 August 1888)
- ‘Obituary’ (Issue 22514, 23 September 1938)

Western Star

- ‘No Title’ (Issue 1715, 16 November 1892)
- ‘Presentation’ (Issue 2152, 30 October 1897)
- ‘Obituary’ (Issue 3800, 19 November 1918)

Appendix A – Photographic Record (Origin Consultants 2021)

This record starts at the junction of the abutment and the Britomart Reserve and roughly proceeds in an anti-clockwise direction around the wharf before going under the structure from the outer/west end back to the abutment. Virtually all of it is taken from sea level. Access was restricted in many places by the structure itself and by boat operations during the inspection, particularly around the floating pontoons. The purpose is to record the overall nature of the wharf below deck level in 2018 and to give an indication of the extent of alterations carried out in the past and the general condition of the wharf. From Photo 26 the images are mostly taken from under the wharf deck starting at the outer west end and running towards the abutment. Finally, there are some views on the wharf deck of the sheds and of cruise ship passengers arriving by small tenders.

Photo 1 The marble date plaque with the name of the Mayor, W. B. Tosswill. The incised letters and small drill holes indicate that the plaque should have lead lettering and this has either fallen out or been removed.

Photo 2 The north face of the seawall at the junction of the abutment and Reserve.

Photo 3 The outer north wall of the abutment with drainage holes, circular pattress plates to the end of the tie rods and many cracks in the masonry.

Photo 4 Three pile 'bents' under the eastern end of the wharf close to the abutment. Note the diagonal, timber braces, horizontal timber ties beneath the braces, and later steel rod braces. The original construction can be clearly seen here with timber pile caps (beams) running along the heads of the three piles in each bent and the timber stringers and decking on top. There are no fender piles to this part of the wharf. Ladders are a late 2oth century addition.

Photo 5 Clear evidence of decay in a timber stringer at the eastern end of the wharf.

Photo 6 An example of repairs and alterations to a bent – original timber bracing cut off either side of the central pile; diagonal steel braces installed; and a steel jacket added to the right-hand pile.

Photo 7 Further alterations on the north side of the wharf with steel added to support the gantry to the floating pontoon and concrete cast to the base of the pile supporting the steel framing.

Photo 8 The north side of the wharf beyond the floating pontoon with modern ladders and replacement tanalised fender piles. The width of the wharf has substantially widened to accommodate the late 20th century sheds. Refer to Photo 9 below regarding the pile in the foreground on the left of the image.

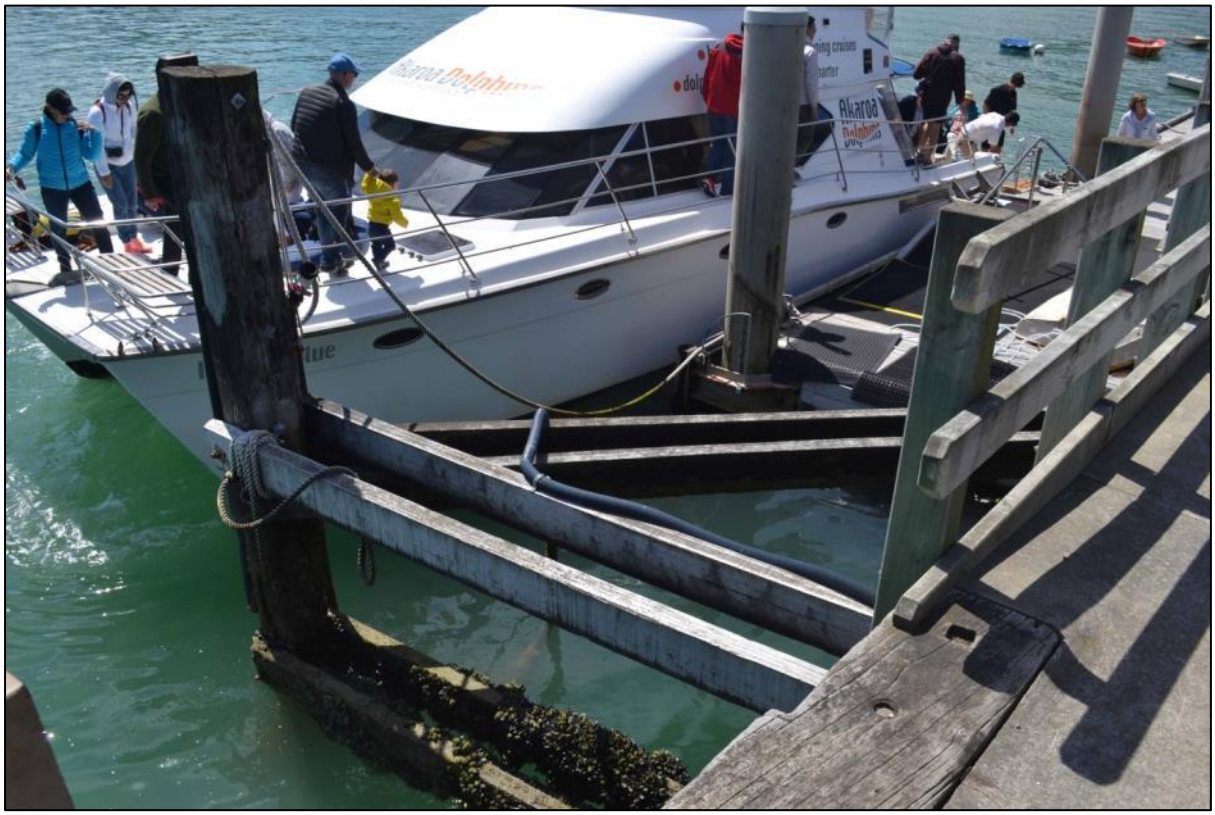

Photo 9 This older pile on the left appears to relate to the former projecting platform and main steps to water level that previously existed on the north side of the wharf.

Photo 10 The end of the shed and the BSP fuel station. On the far right is a tethered caravan selling fresh fish. The outer piles here have had modern fenders added.

Photo 11 The location of these steps does not relate to the original design of the wharf. They are thought to be a post-1973 alteration. The steps have a tanalised bare timber barrier and handrails (there are similar elsewhere on the wharf).

Photo 12 The outer/west end of the wharf clearly showing the original construction, although with some replacement tanalised piles. Along the top of the piles is the timber pile cap (beam). On top of that are the stringers and running parallel to the cap is the timber kerb with the timber decking behind it. On the far left and far right are fender piles and each corner has an inner bracing pile.

Photo 13 Here the original timber cross-braces to the bents have been replaced with modern steel bracing rods and a number of the piles have had repair 'jackets' encased around their lower sections.

Photo 14 The floating pontoon on the south side of the wharf.

Photo 15 The line of modern sheds on the south side of the wharf running from the 6th bent from the abutment to the 21st and enveloping and extending the original sheds' footprint which ran from the 15th to 20th.

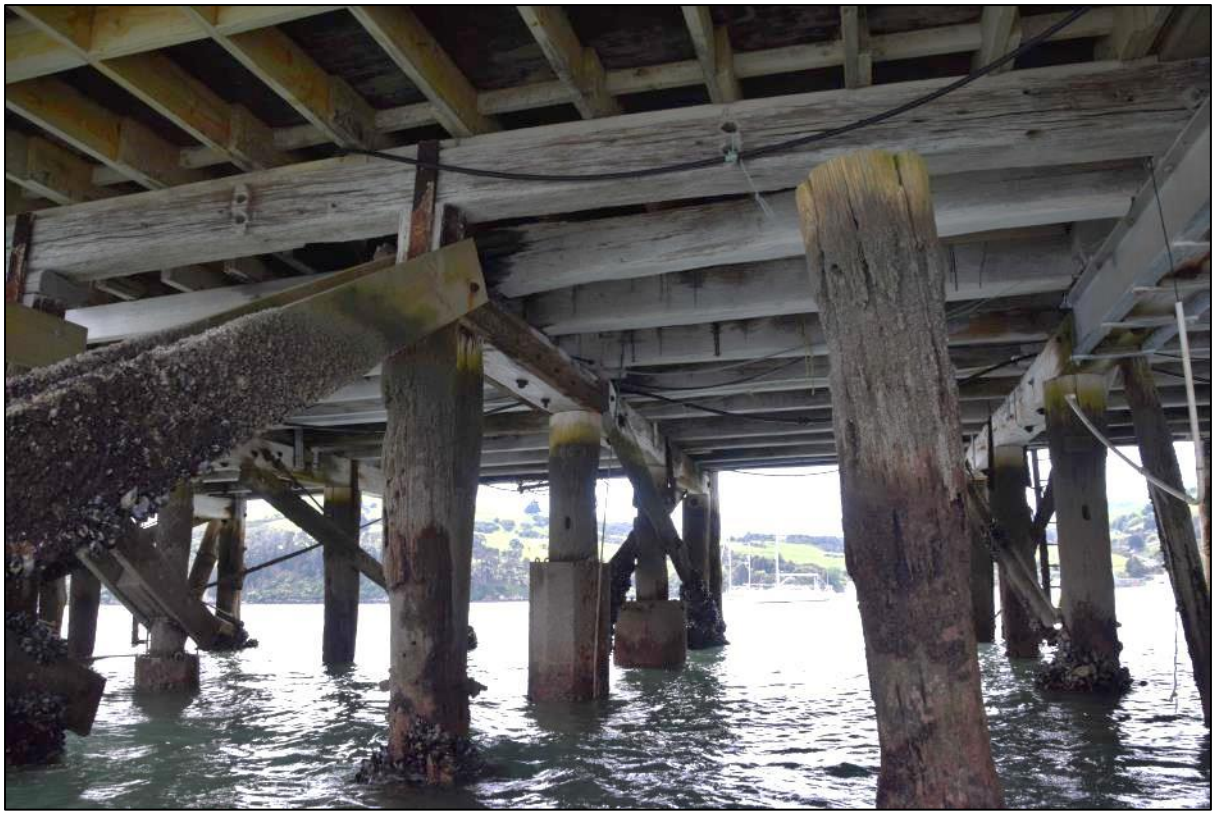

Photo 16 An image underneath the western end of the sheds showing the modern tanalised floor structure to one of the sheds (top) and steel strengthening added to the pile caps (centre and right foreground).

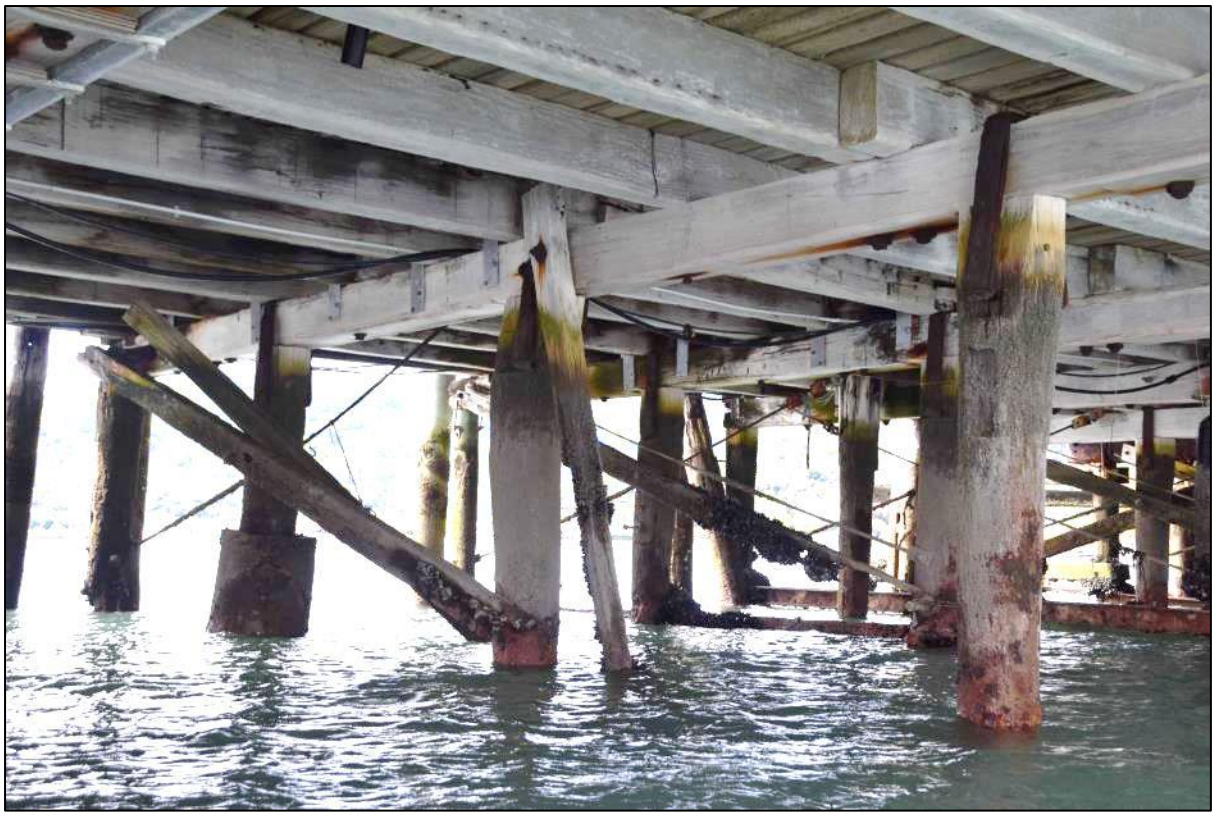

Photo 17 An image 2 bays closer to the shoreline than 16 showing the original widened structure under the original shed –with continuous pile cap spanning over the additional piles and wrought iron straps to the heads of the piles now delaminating and, in places, no longer connected to the piles. The bent in the foreground is missing bracing and one of the piles has a 'jacket' repair.

Photo 18 Close-up of the pile head on the right of Photo 17 showing the original wrought iron strap connection with the pile cap beam – now corroding/delaminating and separated from the pile head.

Photo 19 Timber decay and corrosion at the junction of two of the modern sheds (south side approx. 16th bent from the abutment).

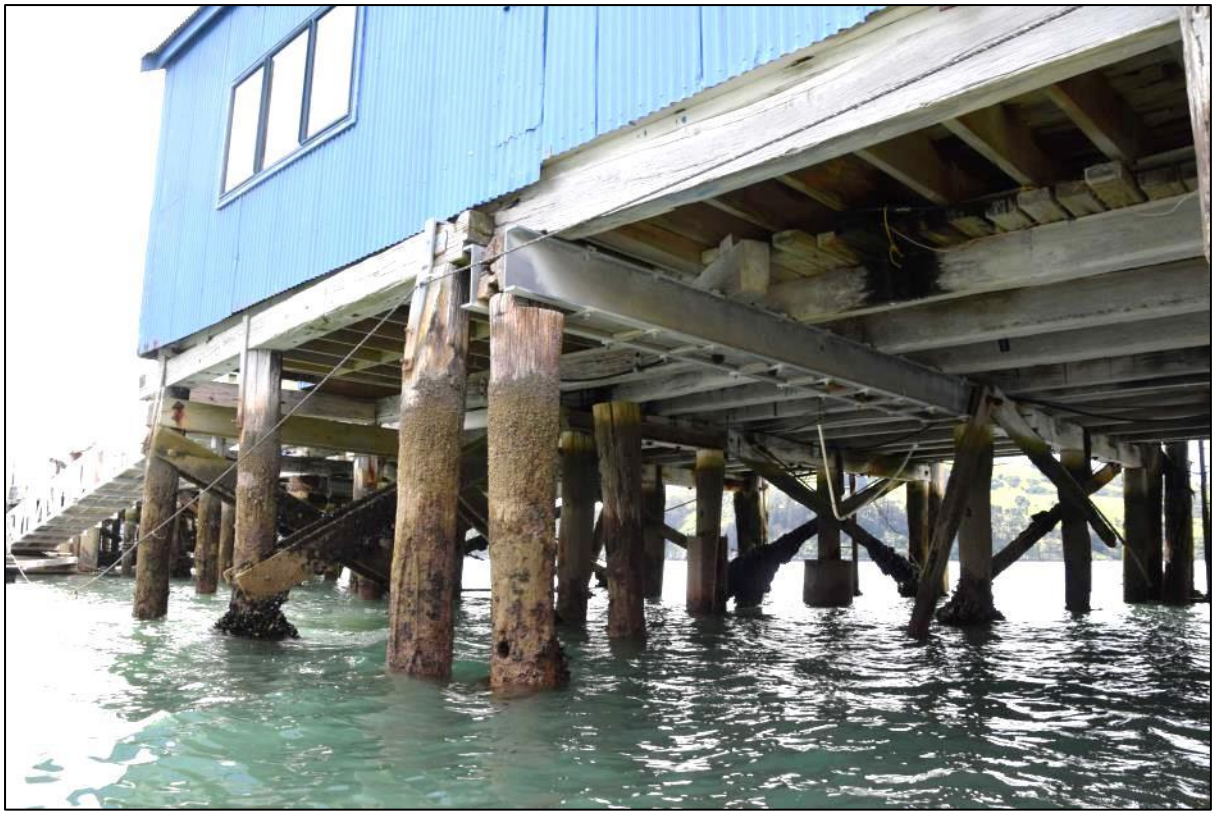

Photo 20 Steel beams either side of a pile cap. It is possible that the short section of diagonally-laid timber beam (cut face towards the camera) on top of the steel strengthening is where the original wharf structure narrowed at the end of the former wharf sheds.

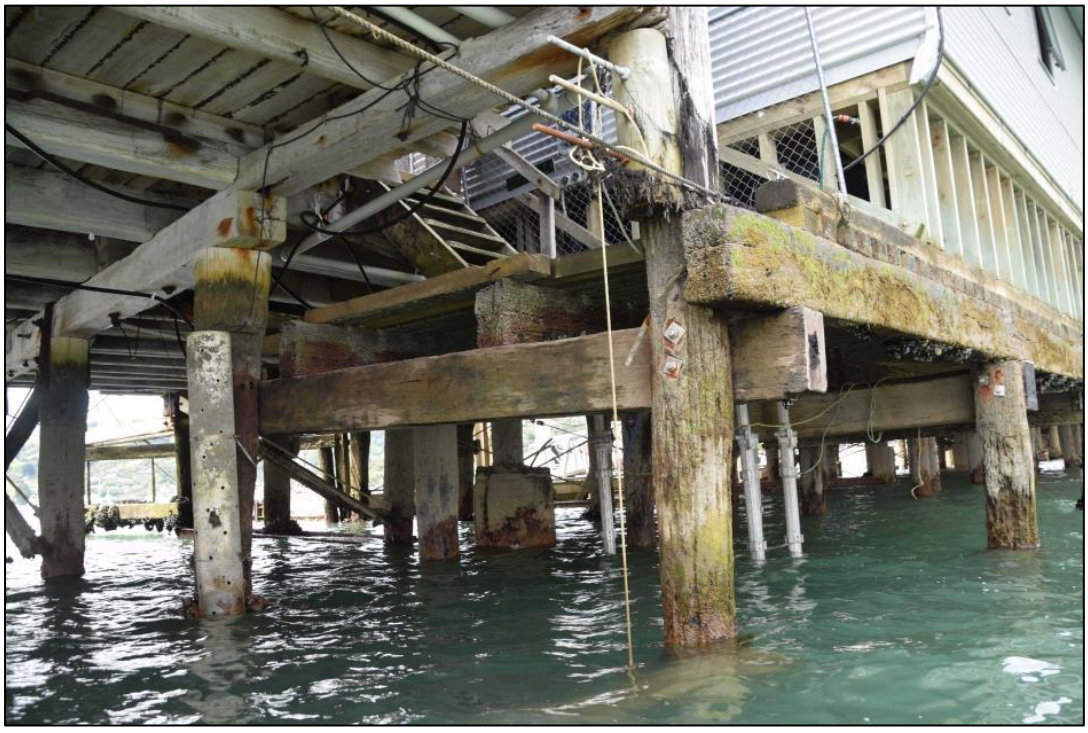

Photo 21 Between about bents 13 and 15 from the abutment, the south side of the wharf has been lowered in the past. None of the historic photographs show this lower and, hence, it seems to have been a 1970s or later alteration. In order to maintain the floor level, the corner of the modern shed (top right) has had to be built up on jack studs (with an area for services and plastic tanks below the floor). Note the steel props under the lowered deck.

Photo 22 showing the lowered deck area (Photo 21) accessed by timber steps between the two sheds. Note the steel props under the lowered deck.

Photo 23 The modern sheds have extended the original sheds' footprint on the south side of the wharf substantially towards the abutment.

Photo 24 The junction of the abutment, and its concrete wall, and the start of the timber wharf structure on the south side. Galvanised steel railings have replaced the painted timber railings since 1973.

Photo 25 The same bent as in Photo 6, but from the south side. Both outer piles have 'jacket' repairs and the bent is missing its original horizontal brace. The diagonal timber braces have been cut off and replaced by steel rods.

Photo 26 A' jacket' repair to a central pile under the western end of the wharf. The pile has continued to erode above the jacket.

Photo 27 Severe decay at the water line to a fender pile on the south side of the wharf towards the western end. The photograph shows rows of piles and adjacent fender piles, many of which are thought to be original and of Ironbark timber.

Photo 28 Additional stringers inserted to strengthen the deck at the western end of the wharf. There is considerable erosion and decay in many of the stringers here.

Photo 29 original wrought iron strap connections between the central piles and their pile cap. The joints also have a mortise and tenon.

Photo 30 An example of modern steel repairs – bolted straps between the piles and cap beam, a steel PFC horizontal tie and double steel bracing rods. There is also an earlier steel jacket repair to the central pile.

Photo 31 A large area of decay in one of the stringers close to the modern steps toward the western end of the wharf.

Photo 32 Decay in the decking boards and modern steel straps added.

Photo 33 Broken timber brace.

Photo 34 Steel stringer added.

Photo 35 Broken/corroded steel brace.

Photo 36 Decay in decking boards beneath the existing deck finish. Corrosion to original iron bolts and nuts.

Photo 37 Further decay in decking boards beneath the existing deck finish.

Photo 38Severe corrosion to a past steel repair.

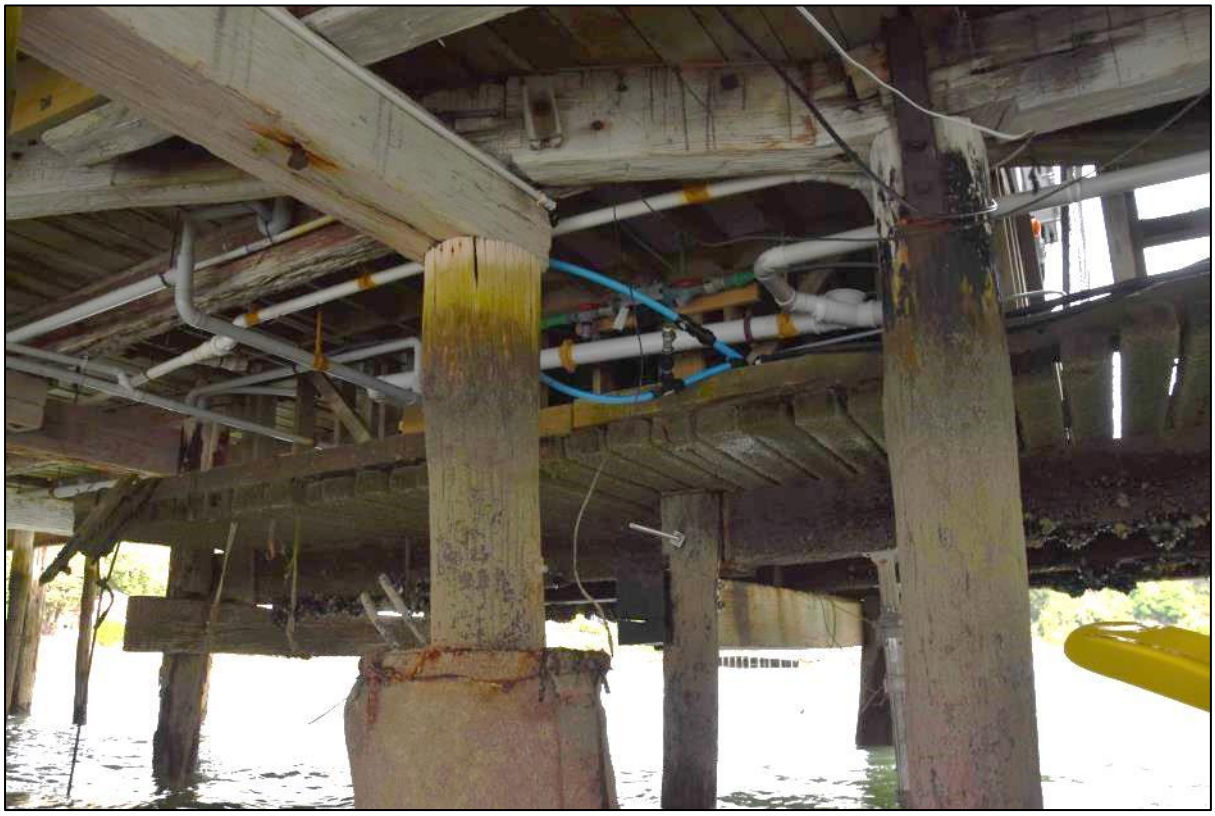

Photo 39 Tanks and modern piping on the lower deck area on the south side of the wharf (refer to Photos 21 & 22).

Photo 40 Substantial alterations/repairs with steel and concrete beams below the deck adjacent to the north floating pontoon.

Photo 41 A close-up of inserted concrete and steel beams (Photo 40) – some of the concrete beam are cracked. Poorly restrained and concealed modern conduits.

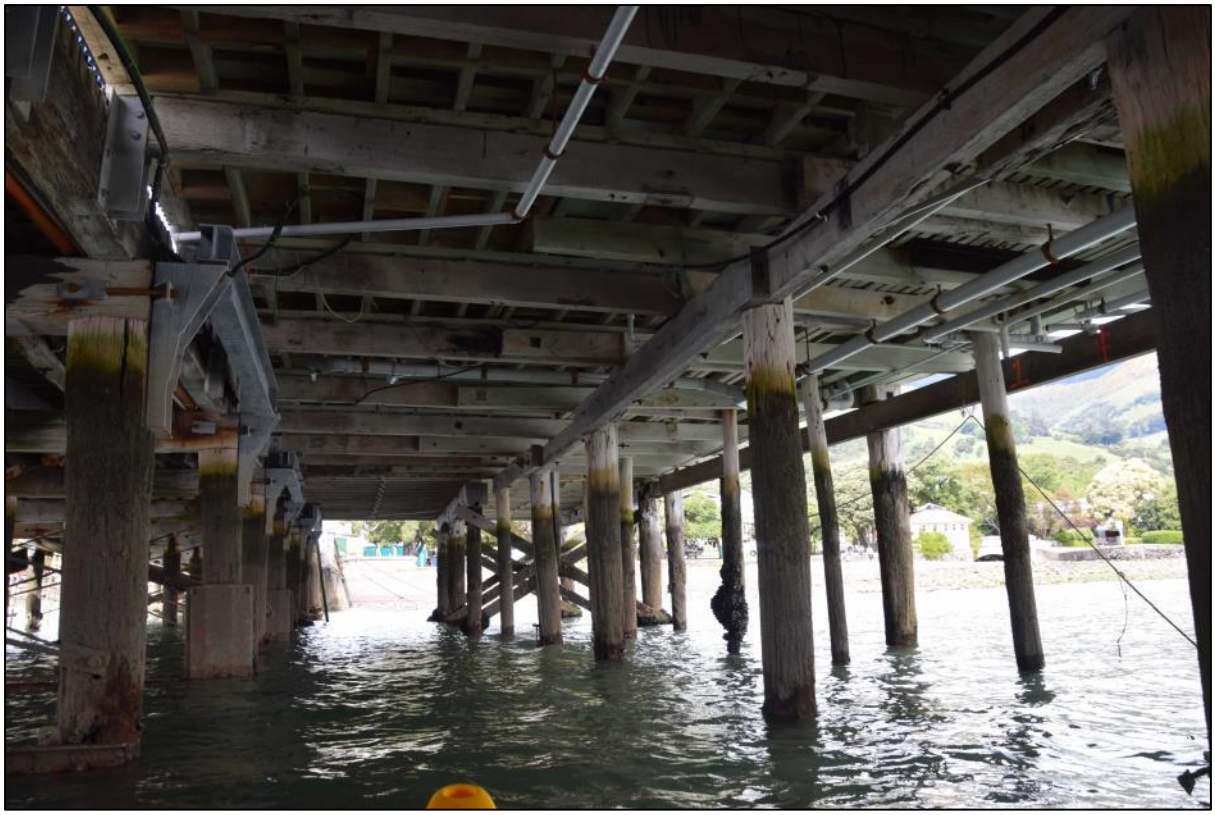

Photo 42Modern piles, pile caps and floor framing beneath the eastern end of the sheds.

Photo 43 As Photo 42 (looking east), but showing in more detail two different periods of modern floor framing (foreground and distance).

Photo 44 As Photo 43, but showing the more distant floor framing in greater detail.

Photo 45 The first bent and the stringer/deck connection to the abutment. This part of the structure contains many original elements, including the pile cap, central pile with wrought iron strap connection to the cap, bracing timbers and horizontal wale between the piles, and timber stringers between the pile cap and modern decking boards.

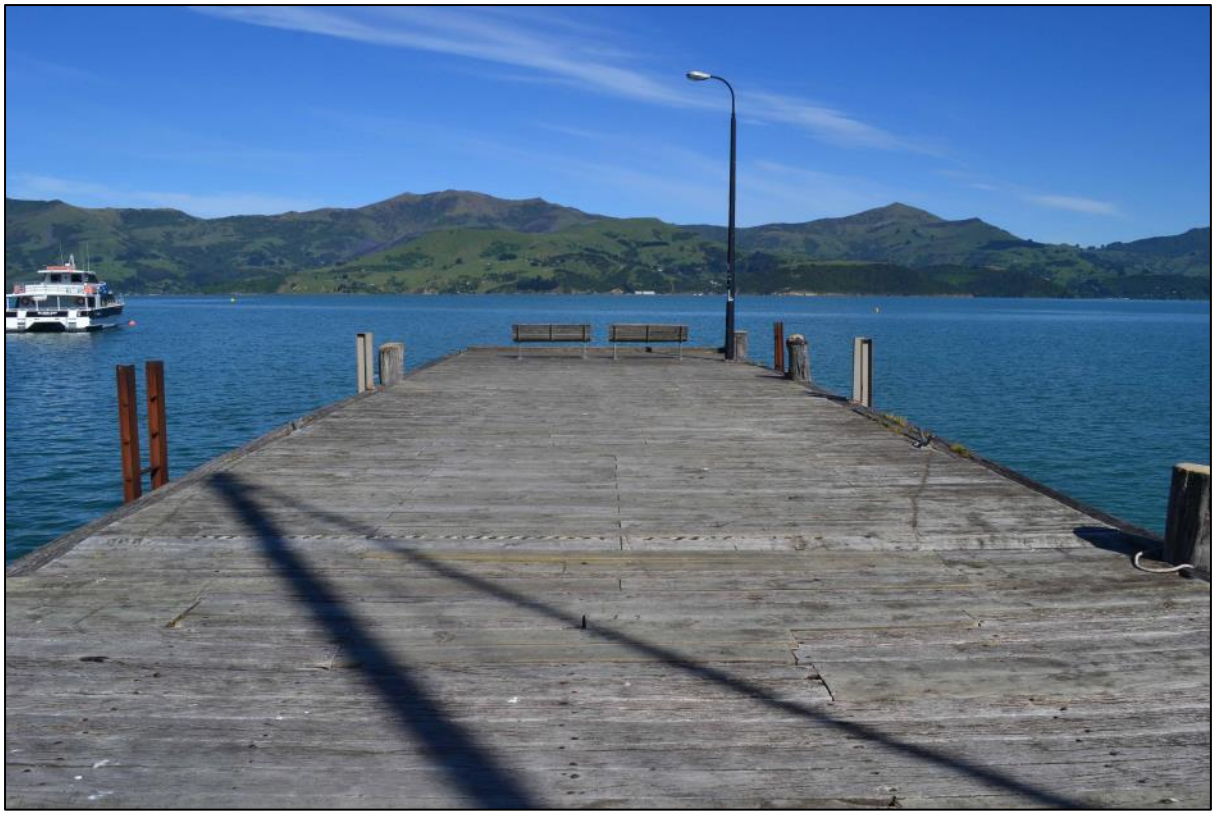

Photo 46 The outer end of the wharf looking west.

Photo 47 The recent eastern-most extension (extending towards the shore).

Photo 48 Modern sheds.

Photo 49 Modern sheds

Photo 50 West end of modern sheds.

Photo 51 South floating pontoon.

Photo 52 Access walkway to south floating pontoon.

Photo 53 North floating pontoon.

Photo 54 Setting up for a cruise ship day.

Photo 55 Arrival of the first cruise ship passengers.

Photo 56 Cruise ship passengers arriving on the north pontoon.

Photo 57 Cruise ship passengers arriving on the south pontoon.