# Lyttelton Port of Christchurch (LPC) reconstruction: AN ARCHAEOLOGICAL ASSESSMENT

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**Historical summary[[1]](#footnote-1)**

Formed from the remnants of an extinct volcano, Lyttelton harbour has been the site of human activity for over 800 years (Rice 2004:14).

Prior to European settlement the harbour was known as Whakaraupō, or harbour of raupō (Burgess 2009:7). The first occupants of the area were Waitaha, followed by Ngāti Mamoe in the 16th century (Anderson 1998:22-23). For Ngāti Mamoe the area surrounding Lyttelton, which they named Ohinehou, was a mahinga kai. The pioki, or gummy shark, was hunted there on a seasonal basis (R. Couch, pers. comm. 2011). Ngāti Mamoe was eventually displaced in the 18th century by Ngāi Tahu, who established a settlement at Rapaki (Anderson 1998:38).Rapaki later became a native reserve and is today the site of a marae. Ōhinehou (now Lyttelton) is noted as the place where an early 18th century Ngāi Tahu war party fought and defeated the resident mana whenua Ngāti Mamoe (Jolly 2013: 34).

Māori travelled backwards and forwards across the Port Hills, between the settlements around Whakaraupō and the settlements and resources on the inland side of the hills. Both the Port Hills and Banks Peninsula provided access to forest-related resources, including a rich birdlife (Challis 1995). By the time the first Europeans arrived in the area the settlement at Ohinehou appears to have been abandoned. Visiting French whalers described settlements at Whakaraupō as “a cluster of huts and some whata on which were stores of dried fish, sacks of kumara and cakes of roasted fern root” (Anderson 1998: 151). No Māori were recorded as living in this part of Whakaraupō between 1840 and 1861 (Anderson 1998: 151).

By the 1820s the Ngāi Tahu population of Banks Peninsula was on the decline due to the Kai Huanga feud. The population suffered a further decrease in the1830s following the massacres of the Ngāti Toa war chief Te Rauparaha (Rice 2004:14). Lists of Māori settlement sites of the early 19th century have been compiled from traditional and historical sources (Orchiston 1974: Table 2.5; Anderson 1988: Figs. 14 and 15). By this stage there had been a migration of populations to the Horomaka harbours frequented by trading vessels and whaling ships, particularly to Akaroa, Koukourarata (Port Levy), and Whakaraupo (Lyttelton Harbour; Anderson 1988: 34-35, 76).

Despite this, European vessels still visited the Banks Peninsula region in order to trade with the local inhabitants. It was a flax trader, Captain William Wiseman, working on behalf of Australian merchants Cooper and Levy, who gave Lyttelton its first European name: Port Cooper. Although British, French and American whaling vessels visited the harbour, Akaroa remained the main port of call for the Banks Peninsula region (Rice 2004: 14-17).

During this early period of Māori-European interaction, local Māori had a market area – and several whare – at the east end of Norwich Quay (now recorded as archaeological site M36/229). This was subsequently moved to the west end of the original foreshore, around the corner of Norwich Quay and Dublin Street, including Sutton Reserve and the area around the Moorhouse tunnel mouth. Both these areas were also the site of fishing villages before European arrival in the area (Burgess 2009: App. 4).

Following the establishment of a farm by the Deans family on the Canterbury plains, Port Cooper was used as a landing site for surveyors who were looking to establish a colony on the plains. The plan for a British colony at Whakaraupō was prepared in 1847 by Edward Gibbon Wakefield and John Robert Dudley. In 1848 they formed the Canterbury Association with the support of the Anglican Church. Originally the main settlement in Canterbury was to be called Lyttelton, after the association’s chairman, George William Lyttelton, 5th Baron Lyttelton. However the association decided to name its first settlement, that which was established at Port Cooper, after Lyttelton instead (Rice 2004:17).

In 1848 Captain Joseph Thomas was sent by the association to survey the region and plan the new settlement. Initially Thomas suggested the establishment of a settlement at Teddington, but he later realised that the process of reclamation would prove to be too expensive (Rice 2004:17). With the main settlement being relocated to the plains, Thomas moved the site of the main port to what was then known as Erskine Bay in Port Cooper (Rice 2004:18).

By September 1849, Thomas (with the help of Charles Torlesse) had surveyed the proposed site for the Lyttelton settlement. The street plan was drafted by Edward Jollie (Rice 2004:18). The settlement was officially gazetted as a port of entry on 30 August 1849. The following year saw the arrival of the First Four Ships that brought the Canterbury Association’s first settlers to Canterbury. By the end of the year the settlement had grown to include a jetty, a customs house, a hotel, barracks and 25 houses (Rice 2004:19).

There were, however, concerns that the harbour was unsuitable for a port. Engineers suggested that the neighbouring Gollans Bay would be a more appropriate location as it would allow larger vessels to dock and unload. Regardless, efforts were taken to ensure that Lyttelton could accommodate the growing number of vessels. One such progressive individual was the merchant, John Thomas Peacock, who in 1857 oversaw the construction of a second jetty on Norwich Quay (Scotter 1968:62). The construction of the second jetty led to an increase in shipping which resulted in the rise of exports (Scotter 1968:63).

By 1859 a sea wall on either side of the Government wharf (Rice 2004:26). However, criticism of the port continued, especially since many vessels were forced to berth further out in the harbour and be unloaded through the use of lightermen (Scotter 1968:67). Some cargo vessels even took weeks to unload (Rice 2004:25).

Against the backdrop of these developments, plans were also being made to connect the port to Christchurch via railway. The concept of a railway linking the port town of Lyttelton with Christchurch had been the hope of many early English settlers in Lyttelton, who had left their homeland at a time when the railway industry was rapidly expanding (Scotter 1968:63). However it was not until an English engineer, G.R. Stephenson, had completed a report in 1859 that the idea was given official consideration. Work began on the tunnel in 1860 but was hindered by hard rock and the lack of available men due to the lure of the gold rush taking place on the West Coast. The tunnel was finally opened in 1867 (Rice 2004: 33).

The railway contributed significantly to the development of Lyttelton and the tunnel became known as the ‘throat of the province’ (Rice 2004: 29). Debris from the excavation was used to form reclaimed land in Erskine Bay (Rice 2004:35).

During construction there were proposals for the railway to continue as far as Gollans Bay, which was still considered to be the more appropriate location for a port. However Stephenson argued in favour of Lyttelton and suggested that land should be reclaimed (Scotter 1968:68). Edward Dobson, a member of the railway commission established by the council, suggested that the tunnel should be straightened in order for the railway line to continue as far as a jetty, which would extend out into the harbour (Scotter 1968:68).

This was accepted by the contractors, who felt that a straight tunnel was safer. The plans were also accepted by the Provincial Government when Dobson presented them in 1862 (Scotter 1968:68). However, the plans were opposed by some members of the council and this disagreement led to the establishment of the Lyttelton Wharf Commission in November of that year. The commission’s priority was to determine the most appropriate location for a wharf that would accommodate larger vessels. However, because the commission was largely composed of individuals who were merchants and vessel masters, the organisation favoured plans that emphasised the needs of shipping rather than rail (Scotter 1968:69).

Instead of Dobson’s plan of an extended wharf, the commission suggested that a breakwater, extending from Officers Point, with a wharf, should be formed. The submissions were put before an English commission, which dismissed them all save for that of the local commission. The English commission suggested that as well as a breakwater from Officers Point, a second breakwater extending from Naval Point should be constructed (Scotter 1968:71).

In July 1859 further work was undertaken on the Government wharf that saw it extended through the screw-pile method. An embankment with a wooden seawall was also constructed between the jetty and the reclamation at the mouth of the tunnel. A short jetty was also built at the western end of this seawall (the lighter jetty). The seawall and the short jetty were contracted to E.G. Wright, an engineer, while the screw pile jetty was overseen by Alexander Cairns. Progress was slow, however, due to the peculiarities of the Lyttelton mud and in October 1866 the government took over the work on the screw-pile jetty (Scotter 1968:74). Work was also undertaken on building the breakwater from Officers Point through the use of prison labour (Scotter 1968:75). The need for breakwaters was confirmed when a tsunami hit the port in August 1868 (Rice 2004:38).

With the completion of the railway tunnel in 1867 attention was once again focused on the need for adequate berthage (Scotter 1968:77). The 1870s saw an increase in grain production in Canterbury and therefore the port was forced to deal with a high volume of exports (Scotter 1968:80). John Marshman, the general manager of the Canterbury provincial railways, stressed the need for a third wharf in order to cope with the demands (Scotter 1968:81).

In 1872, in order to ensure that the plans for harbour development would meet government approval, Superintendent William Rolleston requested that the Minister of Public Works provide him with the services of John Carruthers, the engineer in chief for the New Zealand government, and his assistant, John Blackett. The report they produced outlined the need for the harbour to be dredged, that the Officers Point breakwater be extended, that another wharf capable of carrying railway lines, another breakwater be constructed and a jetty for lighterage be erected at the tunnel mouth (Scotter 1968:84).

In December 1873 the firm Hawkins, Stock and Company signed the contracts for the Officers Point mole and wharf and the Naval Point breakwater. Another company, Connor and McKay, oversaw the construction of the lighterage jetty. The contracts were eventually taken over by a newly formed firm, that of Hawkins and Martindale (Scotter 1968:84).

The breakwater wharf was formally opened in February 1874 and was named Gladstone pier after the first ship to dock there, *W.E. Gladstone*. The breakwaters were finally completed in 1876 (Scotter 1968:84). The dredge, *Erskine*, started its work deepening the harbour in August of that year, accompanied by the hopper barges, *Sumner* and *Heathcote* (Rice 2004:42). Apart from sporadic work in 1887 and 1890 the dredge and barges were made redundant in 1886 (Rice 2004:51). As a result of this dredging the need for lightering steadily began to decline (Scotter 1968:87). These developments led to an increase in shipping, both domestic and international (Rice 2004:42).

In 1876 the Provincial Government was disestablished and the Lyttelton Harbour Board took over the management of the port. The composition of the board represented the two groups that had vested interests in the growth of the port, businessmen and farmers (Rice 2004:43).

In 1878 the harbour board started on new projects, the first of which was the construction of a graving dock. The £92,000 contract for this was given to Ware and Jones and the firm was required to also cut away the Naval Point hill and reclaim the land (Scotter 1968:136). There were delays, however, due to the need for the cassion (floating gateway) to be delivered from Glasgow. When it finally opened on 3 January 1883 there was a large celebration, with trains bringing guests to a ceremony held in the export shed (Scotter 1968:137).

Although the graving dock allowed the Lyttelton Harbour Board to repair its own vessels, it was not used enough to recover the cost of its construction (Scotter 1968:138). The transition from sail to steam also meant that it was unable to accommodate new and larger vessels (Rice 2004:48).

Built in 1884 and situated next to the graving dock was a patent slip designed by C. Napier Bell and constructed by John Stinson (Scotter 1968:138). In 1885 Peacock’s wharf was replaced by the new No. 7 Ocean Steamer wharf, which was also designed by Bell (Scotter, 1968:139).

As well as harbour improvements, the 1880s also saw the installation of military defences. The threat of war in Europe in 1878 resulted in the New Zealand government obtaining four guns from Britain (Scotter 1968:145). These were placed on Gladstone pier in 1879 and in the following year the naval brigade was formed (Rice 2004:53). The Russian incursion into Afghanistan in 1885 led to further defensive measures, with the installation of a 64 pounder gun at Officers Point and the formation of N Battery of the New Zealand Naval Volunteers (Rice 2004:53).

The 1880s also saw the formation of a union for the Lyttelton waterside workers (Rice 2004:51). Working conditions in the port were rough, with long hours and constant danger. Despite this, the men who worked the port were not the underclass found in other city ports, but rather men who lived and socialised together with their fellow workers and overseers (Scotter 1968:151). Although the 1880s was a time of economic depression for New Zealand, Lyttelton was fortunate, as the Canterbury wheat boom and the export of frozen meat to Britain kept the worst effects of the depression at bay (Rice 2004:44).

When the 1890 Maritime Strike, which had its origins in Australia, reached New Zealand, the workers of Lyttelton joined in August. Although the strike only lasted until October, there were still instances of disorder (Rice 2004:51). The Lyttelton Harbour Board was pressured by bodies representing Canterbury farmers and was forced to intervene and ensure that the work continued (Scotter 1968: 152). As a result of the strike the Canterbury Employers’ Association prevented unionists from working at the Lyttelton docks (Rice 2004:52).

The 1890s saw the end of the depression and an increase in the number of ships (Rice 2004:60). One of the new developments was the formation in 1895 of an interisland ferry service to Wellington. The *Penguin* was the first vessel to offer such transport and this was expanded upon in the following year by the Union Steamship Company (Rice 2004:62). The impact of the ferry service meant that by the early 1900s the No. 2 Wharf became known as the Ferry Wharf (Rice 2004:69).

The dawn of the 20th century was marked by Lyttelton being the port of operations for three expeditions to Antarctica, culminating in Robert Falcon Scott’s ill-fated 1910-1912 voyage (Rice 2004:66). Lyttelton was chosen most likely due to its close proximity to the Ross Sea area and because R.J. Scott, the professor of engineering at Canterbury University College, was Scott’s cousin (Scotter 1968:177).

The 1900s also saw a renewal of dredging as none had taken place since 1895 and as a result there had been a gradual accumulation of silt. The Lyttelton Harbour Board purchased the dredge *Manchester* to undertake this work in 1900 (Scotter 1968:159). However, the renewal of dredging led to disagreements among the harbour board as to where the spoil should be dumped (Scotter 1968: 162-163). In 1909 it was finally decided to start a process of reclamation behind the breakwater at Naval Point (Scotter 1968:163).

The Naval Point reclamation was eventually finished in 1925. After the land had settled railway lines and roads were laid across its surface. Oil companies such as Vacuum Oil and British Imperial Oil then used the land to construct their new storage facilities. Many of these oil tanks were constructed by the local engineering firm, Andersons’ engineering works (Rice 2004:92).

With the economic downturn following World War I, the depression of the 1930s and then the outbreak of the World War II in 1939, there were no further major construction projects at the port until the 1950s. In 1951 the Lyttelton Harbour Board Empowering Act was passed by Parliament, granting a loan for the improvement of the No. 7 jetty. In the following year the loan was raised so that further repairs could be made to the Ferry Wharf. A second tunnel was also built during this period (Scotter 1968:289).

A new reclamation project, situated between Windy Point and Gladstone pier, started in 1957. This was designed by James A. Cashin, the former senior assistant engineer at the port of Liverpool. By creating a new eastern reclamation, Cashin aimed to create more room for cargo handling, as well as a new site for transit sheds (Rice 2004: 119). The construction was a lengthy process, as tests had to be carried out by a British hydraulic research station based at Wallingford in Berkshire. Because the liquid mud of Lyttelton harbour had to be overcome by unique methods of engineering, the construction of the reclamation was visited by many overseas experts (Rice 2004: 120).

The new eastern reclamation, named Cashin Quay, was opened in 1964 (Rice 2004:122). This quay provided the ample space required for the newly implemented cargo containers and in 1973 the container wharf was opened (Rice 2004:134). At the time Lyttelton, along with Port Chalmers, was one of only two cargo container ports in the South Island (Rice 2004:135).

The Lyttelton Harbour Board continued to manage the port until October 1989 when the organisation was disestablished by the Port Companies Act 1988 and taken over by the Lyttelton Port Company (Rice 2004: 137-138). The 1980s also saw the removal of the oil storage tanks at Dampiers Bay following an explosion in 1985, and the replacement of the 1884 patent slip in 1987 (Rice 2004: 143).

The changes implemented by the Lyttelton Harbour Board saw the formation of various heritage groups who sought to preserve the maritime history of the port. One such group, the Norwich Quay Preservation Society, assisted in the removal of the historic signal box from its original site to a new location opposite the Lyttelton Historical Museum (Rice 2004:149). Despite this, the historic crane *Rapaki* and the *Te Whaka* dredge were unable to remain in situ. Since they belonged to the company they were put up for sale, and then relocated to Auckland and Dunedin (Rice 2004:147). The last of the port’s electric cranes were removed in 1994 and replaced by modern equivalents (Rice 2004: 147).

Despite the damage caused by the 2010-2011 Canterbury earthquakes, the port of Lyttelton continues to operate in its original role as an export and import zone between the South Island and the rest of the world.

1. This section is not a full outline of the history of the Lyttelton Port but a summary of the relevant information. [↑](#footnote-ref-1)