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# ARCHAEOLOGICAL EXCAVATION OF A QUARANTINE STATION HUT SITE ON QUAIL ISLAND, LYTTELTON HARBOUR

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A number of archaeological sites have been recorded on Quail Island, Lyttelton Harbour, Canterbury, of both Maori and European origin. The European sites reflect the major uses to which the island has been put since 1851, mostly rock quarrying, pastoral farming and the quarantine of both livestock and humans (Trotter and McCulloch 1999, 2000). Today the whole of Quail Island is a Reserve administered by the Department of Conservation.

In 1906 a patient with leprosy was transferred from Christchurch to a quarantine station on the island, and shortly thereafter a “Leper’s house” was built to accommodate him—this building is indicated on a 1907 map of the island (reproduced in Jackson 1990: 57). Subsequent photographs show that this building was more of a hut than a “house”. By 1909 at least two more such huts had been constructed (*Canterbury Times*, 20 January, 1909).

By September 1924 there were nine leprosy patients at the station, each having his own hut, according to a *Lyttelton Times* article. Although referring to the buildings as “huts” the article also described them as being of “semi-bungalow style” having a “kitchenette and bedsitting room” and noted that “Some of the huts, built in recent years, and on more modern lines, provide ample ventilation. Glass doors and bigger windows enable the sunshine to enter the huts ...” (*Lyttelton Times*, 2 September, 1924). Undated photographs taken about this time show that no two huts appear to be of exactly the same design and that at least some of the earlier huts had been modified by the addition of a small window on the northern side (see Figure 1, also Jackson 1990: 48, 49).

A news item in *The Press*, Christchurch, on 18 August 1925 indicated that all the leprosy patients were being transferred from Quail Island to Mokogai, Fiji.



Figure 1. 1920s photograph of huts used by leprosy patients on Quail Island. The hut in the top centre of the photograph was the one excavated in 2002. Photograph held by the Department of Conservation.

On 28 November 1931 *The Press* referred to the dismantling of buildings of the “old leper station”, and on 10 December the same year it noted that the “quarters occupied by the lepers” had been “pulled down and burnt a few weeks ago”. In recent years the sites of three huts on the hillside were still easily discernable as terraces. This area has been recorded as archaeological site M36/130. A GPS grid reference for this cottage site is E 2484970 N 5730656 with an estimated accuracy of within 10 metres. This is consistent with a map grid reference for it.

Early in 2002 we were invited by Ian Hill, Historic Heritage Technical Support Officer of the Department of Conservation, Christchurch, to carry out an archaeological investigation of one of the hillside hut sites—the one shown in the middle top of Figure 1. This was because the Catholic Cathedral College of Christchurch planned to erect a replica hut, constructed by pupils, on the site later that year, an undertaking that was likely to destroy any archaeological evidence in the ground. It needs to be noted that the ‘replica’ hut was not based on the findings of the excavation, but on a photograph of the first one built at the Quarantine Station. After some discussion, planning, and a preliminary visit, the hut site was excavated during 4–6 September, 2002. The availability of personnel limited the excavation to three days.

## Excavation

The hut site comprised an artificial terrace, approximately 9 by 4 metres, cut into the north-east facing hillside, with material from this cutting deposited on the downhill side and stabilized further down slope by a drystone wall of local rock (Figure 2). The terrace contained a deposit of organic material and soil of varying depth, mostly originating from further up the hillside. To facilitate excavation and recording, a grid of eight two-metre squares was laid over the area most likely to have contained the hut, the approximate size of which could be judged by the shape of the terrace and from scaling off early photographs. This grid was two squares wide, four long, oriented along the longitudinal axis of the terrace at  $329^\circ$  (grid north), with the southern end of the grid aligned with the southern side of the remains of a brick platform, which proved to be the base of a chimney (see below). For convenience, references to walls etc. are given here in terms of grid north rather than true north.

Projecting through the turf on the terrace, prior to any disturbance, a quantity of bricks could be seen, which were interpreted, and later confirmed, as a fallen chimney. At the southern end a number of the bricks were still in the positions



Figure 2. Drystone wall on the down-slope side of the hut terrace, looking west.

they had originally been placed at the bottom of the chimney—these comprised a platform 1.4 by 1.1 metres in size, and three courses of bricks high. The positions of the loose bricks, mostly aligned on edge, roughly at right angles to the longitudinal axis of the terrace, indicated that the chimney had fallen as a single structure, rather than having being dismantled piecemeal.

Excavation basically comprised removing the turf and loose bricks, noting what lay beneath them, and then excavating the soil from around significant features to provide further information on the features themselves and the layout of the hut. Most small artifacts were recovered for further study (currently held by the Department of Conservation) but *in situ* constructional elements were left in position.

Ten foundation piles of local volcanic rock were located, shown hatched on the accompanying diagram (Figure 3). These were of varying size, and appeared to have been natural stones (i.e., not quarried) though most had been lightly trimmed. None had been deeply embedded into the ground.

The original positions of two more piles on the eastern side were indicated by post hole stains projecting into the underlying subsoil. These were both about five centimetres square and are interpreted as having contained wooden uprights, as the downwards slope of the ground along the eastern side of the terrace would have required taller foundations than could be provided by stones. The pile size was undoubtedly greater than 50 mm square, but the hole size was probably reduced by soil movements when the wood was removed or rotted away. A central gap in the top course of bricks on the northern side of the fireplace base (Figure 3) was probably designed to take the end of a sub-floor timber.

While the positions and relative heights of the piles might have been expected to provide some idea of the under-floor framework, this was not the case—clearly a number of piles were missing and the heights were all within 50 mm of each other. The most probable layout for the main rectangular area would have been three sleepers or stringers—one along each side (possibly doubling as bottom plates) and one in the centre, with floor joists laid on top, the internal ends of those at the southern end lying on the stones set into the fireplace base. If this were the case, the piles on either side of the fireplace would have had to be blocked up the thickness of the stringers—it would have been simpler to have made those piles higher. The alternative, with floor joists laid directly on the piles, would have meant excessively wide joist spacing unless there were considerably more piles.

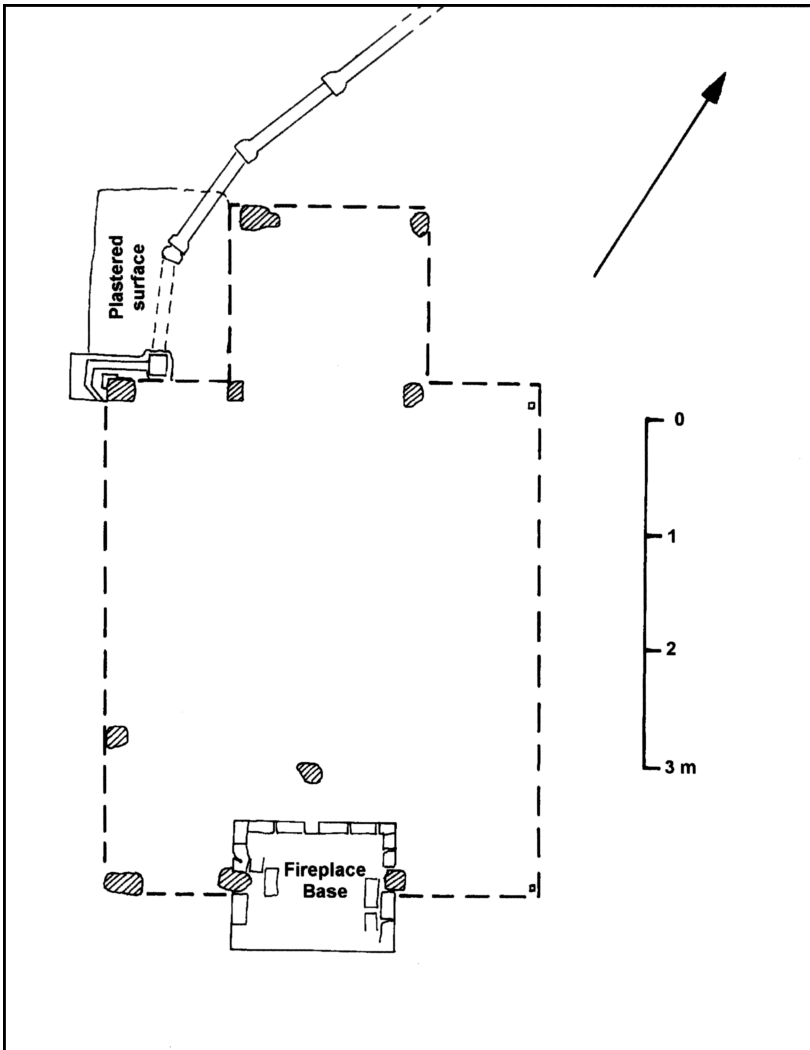


Figure 3. Plan of the excavated hut site showing pile positions, fireplace base, plastered washing area and drain pipes. The dashed line indicates the probable outline of the walls.

An indication of the relationship between the outer walls of the hut and the piles was provided at the north-western corner of the main rectangular area where concrete had been poured around weather boards and corner boards, and along the western side of the northern extension. From these it is estimated that the outer dimensions of the building were a rectangle 3.72 metres wide and 4.4 metres long, with a 1.7 by 1.5 metre extension at the northern end (the dashed line in Figure 3). This reconstruction is consistent with the available photographs except that these show a verandah along the eastern side of the main rectangular area (Figure 1). The absence of any archaeological evidence of a verandah can easily be attributed to degradation and erosion.

The fireplace base would have projected nearly 50 centimetres outside the southern end of the hut, and an external chimney can be seen in the photographs. Whether the brickwork inside the hut formed the base of a hearth for an open fireplace or for a stove is not clear, although a piece of ornamented cast iron, found lying in the area of the northern extension, is probably of part of a stove. The top of the brick fireplace base was only the thickness of one course of bricks above adjacent piles and the gap on the northern side (which supports the possibility that floor joists were laid directly on the piles).

Immediately west of the hut's northern extension was a cement plastered surface (see Figure 4), 1.65 by 1.2 metres in size, on a loose brick foundation. The surface had, prior to slumping, sloped towards a square concrete drain hole centred near its southern end, and it is interpreted as a washing area – it may even have had a shower head above it. A shallow concrete drainage channel from outside the north-west corner of the main area of the hut also fed into the drain hole, presumably to take waste water from a sink or basin within the hut (the shortage of fresh water on Quail Island makes it unlikely that the channel was for rain water off the roof). The concrete had been poured around the corner boards of the hut, so had clearly been made after the rest of the hut was built. Part of the open channel was lined with a half-section of glazed earthenware drain pipe.

Drainage from this point was conducted down the hill slope through a series of buried glazed earthenware pipes. The pipes were of a nominal four inches (100 mm) in diameter by three feet (900 mm) long.

Other material relating to the structure of the hut was located during the course of the excavation. Lead-head nails and spouting brackets, both with traces of red paint, indicated a red-painted corrugated iron roof with spouting to collect



Figure 4. Plastered area at the north-west of hut site, looking north. Square drain hole in centre foreground.



Figure 5. View of excavation, looking south.



water, and there was some sheet lead, which had probably been used as flashing. Fragments of fibrolite asbestos board may have come from a ceiling lining of the verandah roof, though it was more usual for such roofs to be unlined. Pieces of malthoid may have come from a moisture-stop lining beneath the roof. The presence of at least one opening window was indicated by window glass, a sash weight, and a window latch. Two pipe fittings suggested that water was piped to the hut.

Numerous pieces of coal were found in the vicinity of the northern wall of the hut extension. In one historic photograph (not reproduced here) there is what appears to be a filled sack leaning against the extension wall, and it seems not unlikely that this contained coal.

Ten glass marbles, the sort obtainable from early aerated drink bottles, were found close together at one point, presumably having been either placed beneath the floor or having fallen there on the demolition of the hut. A few pieces of thin glass with no sign of putty along the edges were probably from one or more pictures. A tin-plate box that had held water-colour paints had probably been used by the hut's occupant. Other material included pieces of bones, bottles, jars, crockery, buttons and a piece of a metal bedstead.

The 1931 reference in the *Press* to the huts being “pulled down and burnt” (quoted earlier) did not make it clear whether they were burnt in place. From the excavation, however, it was clear that this one at least was not burnt on the site. There was little charcoal present, but more importantly, there was not the quantity of burnt nails that would be associated with such an activity (only a small number of ordinary nails were found, especially towards the northern end), and galvanized iron showed no sign of having been heated. And the comparative paucity of remains of building materials found must indicate that most were taken off the site.

### **Acknowledgements**

The excavation was carried out under the direction of Michael Trotter (Summer Wine Initiatives) by Ian Hill, Jo Hulsman, Sarah Mankelow, Chandra Littlewood, Alison Mason (all from the Department of Conservation); Michael Goussmett (Pacific Leprosy Foundation); Bruce Henley, Alf Holt (Catholic Cathedral College); Sam Snyder, Corina Wedlake, Daniel de Seymour (Catholic Cathedral College pupils); and Greer Hill (volunteer) – each of whom took part for between one and three days.

## References

Jackson, P., 1990. *Quail Island. A Link with the Past*. Department of Conservation, Christchurch.

Trotter, M., and B. McCulloch, 1999. Impact of a planting programme on historic and archaeological sites of Quail Island, Lyttelton Harbour. Conservation Advisory Series Notes: 264. Department of Conservation, Wellington.

Trotter, M., and B. McCulloch, 2000. Archaeological and Historical Sites of Quail Island and King Billy Island, Lyttelton Harbour. Internal Report for the Department of Conservation, Canterbury Conservancy, Christchurch.