

Figure 23. Plan of Southberg's Battery site.

is in front of the mortar boxes. Several sections of cast-iron stamp rods are also present.

Amongst the scatter of ironwork downstream of the battery site there are two Whitelaw turbine rotors. The one closest to the site is still mounted on its shaft. It is 43 in (1092 mm) in diameter, with two outlets (Fig. 25). The Whitelaw turbine described by Wright (see above) in 1867 was 30 inches in diameter, with three outlets. Despite the discrepancies, it is possible that this turbine was used at the site. There are also some sections of one or more mortar boxes in the stream bed; probably also from the battery site.

There is no visible evidence of the tramway to the mine, but as it was described as being constructed entirely of timber, it is likely to have rotted away.

What survives on site, therefore, appears to be the major parts of half of the 16-stamp battery that operated between 1866 and 1889. Although it was sold for removal, the remoteness of the site probably prevented much of the equipment being taken away. Half of the battery (eight stamps) was possibly

moved to construct the Leviathon and Crystal batteries in Sawyers Creek near Skippers, each of which had four stamps (P. Mason, pers. comm. 1996). It is not known whether the Phoenix Company made use of the battery after they purchased the ground.

Figure 24. Southberg's Battery, 1996, showing the two remaining mortar boxes on the site.
Photo: P. Petchey.



Figure 25. Whitelaw turbine rotor and shaft in Murdochs Creek, downstream from Southberg's Battery. The turbine assembly was mounted vertically, and high-pressure water was supplied to the base of the rotor (through the round hole). The water was expelled from the curved jets, spinning the assembly, similar to modern garden water sprinklers.
Photo: P. Petchey.



8. The dynamo site and power equipment

The first mention in the published records of the Phoenix Company's plan to install an electric generating plant in response to a lack of water for their water turbine during dry weather was made in late 1884 (*Lake Wakatip Mail*, 5 Dec 1884: 2). By November 1885, most of the machinery appears to have been erected at the site, and a trial of the plant was made on 3 Feb 1886.

The initial specifications of the equipment were published in the Mines Inspector's report in 1886 (AJHJR 1886 C4: 19-20):

- Two Pelton hurdy-gurdy water-wheels, utilising the 6.5 sluice heads of water at 186 ft., with two $\frac{7}{16}$ -in. jets playing on each wheel¹⁵. Penstocks 22 in. dia. at top, tapering to 'much less diameter at the bottom'.
- Two Brush Dynamos, each calculated to be capable of transmitting 36 h.p.
- Two miles of No. 8 B.W.G. copper wire to the battery house.
- Brush Victorian electric motor at the battery house to drive two stamps.

This equipment was confidently expected to be able to run a mill of 30 stamps at 80 drops per minute, and the existing 20-stamp mill was extended by an extra 10 stamps in expectation of the additional power. Figure 26 shows the dynamo house and penstocks while in operation.

A more complete description of the installation was published the following year, together with an illustration of the dynamos (AJHR 1887 C5: 46-47) (see Fig. 3):

'The dynamos used to generate the electricity are two of the brush pattern, of the largest size yet manufactured. Each machine has four large electro-magnets, forming two horse-shoe magnets. Between these magnets the armature-ring revolves, at a speed of 750 revolutions per minute. The armature-ring is 26in.

¹⁵ This figure is variously quoted: 1886—two $\frac{7}{16}$ -in jets; 1887—one 2.5-in jet; 1888—one 2.25-in jet. This may reflect inaccuracies in the reports or may suggest experimentation with jet sizes to obtain the best performance.

in diameter, and is bound with twelve coils of fine copper wire wound at equal distances round the ring, having a large number of convolutions in each coil. The wire is carefully covered, to insulate one convolution from the other. These twelve coils on the armature-ring are joined in pairs, and the end of each positive coil is connected with a negative one, and the whole connected with the commutator which is fixed on one end of the shaft of the dynamo—the same as that used for lighting purposes. As soon as the armature begins to revolve, currents of electricity are generated in the armature-coils; these currents pass to the commutator, next to the brushes, afterwards passing through the electro or field magnets. The current thence goes to one of the terminals of the machine, where it passes out to the circuit and to a Victorian motor at the battery-house, returning thence to the remaining terminal of the generator, and back again to the armature-coils.’

It was found that the dynamos were not capable of driving the full 30-stamp battery, as had been expected, so the water turbine was still used when full capacity was required. One problem encountered with the equipment was the decline in output of the dynamos when the two were linked; each on its own could generate a current of ‘ten amperes’, but linked they could only produce 15. In addition, it was found that one machine was slightly more powerful than its counterpart when driven at the same speed, requiring the use of separate intermediate shafts to allow for slightly different operating speeds. As the inspector of the time commented: ‘very little is yet really known about electricity’ (AJHR 1887 C5: 47).

A breakdown in January 1887 prompted the replacement of the original cast-iron armatures with laminated iron units (AJHR 1887 C6: 37) which, along with other small modifications that were no doubt carried out, improved the performance somewhat. By 1888, the dynamos were reported as generating 40 amperes together, and were capable of powering the 30 stamps at the battery as well as the air compressor and stonebreaker (AJHR 1888 C5: 42).

A proposal in 1893 to completely overhaul the electrical system, with two new dynamos to be installed at the junction of the Left and Right Branches of Skippers Creek and four new electric motors at the battery (AJHR 1893 C3: 87) came to little. Instead, in 1896 a new race was constructed from further up the Right Branch of Skippers Creek to supply water directly for power at the battery (AJHR 1896 C3: 108). A Pelton wheel (5 ft diameter) was installed, the existing electric power then being used to power the two air compressors, and only acting as an auxiliary for the battery.



Figure 26. The dynamo house in operation.
Photo: Lakes District Museum, Arrowtown.

The dynamos probably last worked in about 1901. That the entire electrical system was tired by the late 1890s is known, as R.E. Fletcher (who originally installed the units) was requested to examine the plant in 1898 and recommend on improvements (R.E. Fletcher letter to N.C. Morcom, 17 Nov 1898). He stated that the generators were in reasonable condition, only needing new commutator segments, but that the motor required complete rewinding. Overall, the whole system was judged to be very out of date. New motors were probably purchased in 1899 or 1900 (a 30-h.p. motor being installed at the winding house). The 1903 inventory of equipment at the mine includes one old motor valued at only £60, and two new motors valued at £664 (Inventory of machinery etc., January 1903. Hocken Archives ms 1270, 3-3-8; Appendix 2).

When the Mt. Aurum Quartz Mining Company purchased the ground and plant in late 1903, they powered the battery with a Pelton wheel, and no mention is made of the electrical plant. Several small dynamos were included in the equipment at the mine (see inventory, Appendix 2); presumably, any lighting requirements would have been supplied by these.

The building housing the dynamos was dismantled c. 1917 by Paterson, the runholder of Mt Aurum Station, and the iron was used to build the nearby Dynamo Hut (Site Record Form S123/128). All the copper windings and white metal bearings were also stripped from the dynamos, possibly at the same time or during the depression. The 1986 archaeological excavation of the building suggested that the dynamos were mounted on a sturdy timber floor that was removed at the same time the building was dismantled, with the equipment scattered about the site (Ritchie 1985b: 7).

8.1 ARCHAEOLOGICAL EVIDENCE AT THE DYNAMO SITE

The dynamo site has already been the subject of some intensive archaeological investigation. It was recorded as Site S123/128 in 1979, was the subject of an archaeological excavation in 1985 (Ritchie 1985a: 208–217; 1985b), and was partially restored in 1986 in time for its centenary. Before this work was carried out, the generating equipment was lying in an overgrown jumble on the site of the old power house, at the foot of the rock face down which the penstocks for the Pelton wheels ran. The excavation determined the basic outline of the demolished structure (Fig. 27), and recovered numerous items from the dismantled equipment as well as tools and nails from the demolished building.

The partial restoration carried out in 1986 involved mounting the remaining equipment on a replica timber structure on site (Figs 4 and 28). Other visible evidence on site includes the water race leading from the Left Branch of Skippers Creek to the top of the penstock line, mountings for the penstocks on the rock race, and the tailrace leading away from the power house site.

The late Peter Chandler has discussed in some detail the operation of these dynamos and the modifications carried out to them during their working life (Chandler & Hall 1986). Evidence of both their early and late modes of operation survive, as an early cast-iron armature is mounted on one machine, while a later laminated armature is lying beside the other. Chandler was of the opinion that the shafts were also changed, and that at least one of those on site today is a later one,

evidenced by its markings '55 Lamps, 800 Revs', which was the output after modification (Fig. 29).

Also on the site is a small dynamo of a later pattern. It has no maker's marks, and it is not known how and when it was used at the site.

The power line ran from the dynamo almost straight over Southberg Spur to the Phoenix Battery House. Its course on the battery side of the Spur can be identified from contemporary photographs. Brian Ahern (now deceased) located a number of the power line pylon sites on the hillside in the late 1990s (B. Ahern, DOC, pers. comm.).

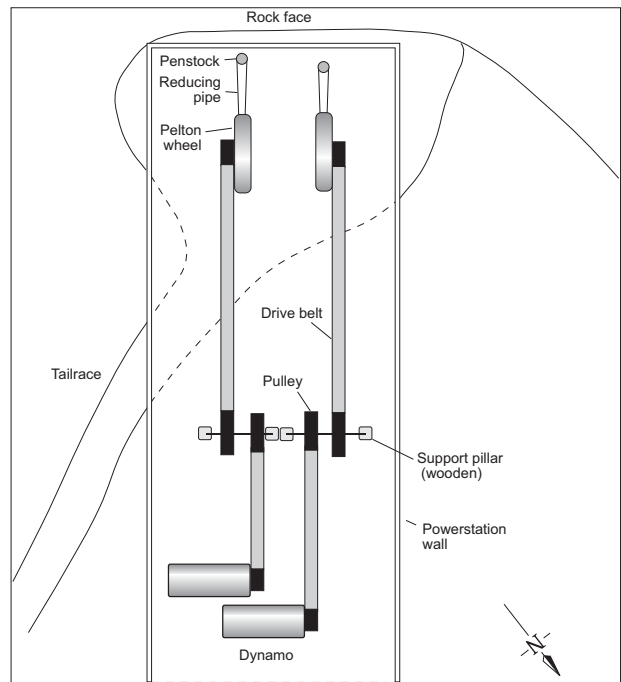


Figure 27. Phoenix dynamo, layout of machinery.
Figure after Ritchie 1985.

Downstream of the dynamo site, on the true right bank of the creek, is the site of the sawmill that once operated using the tailwater from the power house. This was recorded as Site S123/129 by N. Ritchie. Not a great deal is known about this



Figure 28. Phoenix dynamos, 1996. The penstocks for the Pelton wheels came down the rock face at the rear of the installation. Some iron supports are still visible in the schist. A similar view to that in Fig. 26.

Photo: P. Petchey.

Figure 29. Dynamo shaft, showing speed and output markings.

Photo: P. Petchey.



operation, apart from the fact that it was operated by a man named Morgan (Site Record Form, S123/129). Fletcher referred to it obliquely in 1898, as a possible site for the relocation of the dynamos (Fletcher, R.E., letter to N.C. Morcom 17 Nov 1898). Little evidence of the sawmill is visible now, apart from a flat terrace on the inside of a bend in the stream, with a low revetted wall.

8.2 BRUSH CORPORATION ELECTRIC MOTOR (AT NEW MAIN SHAFT SITE)

The Brush Corporation Victoria electric motor at the battery house was described at the same time as the dynamos in the quote provided earlier in section 8 above (AJHR 1887 C5: 47):

‘The Victorian motor that is fixed at the crushing-battery for driving the stamps is different in appearance from the other dynamos, but it is really essentially the same as far as generating electricity is concerned, when it is used for such. It has one armature, one commutator, one set of brushes, and, instead of having two horse-shoe magnets, as the other dynamo has, it has six, and has ninety coils of copper wire on the armature, instead of twelve coils, which is on the armature of the generating dynamos. The current from the generators, passing through the field-magnets of the motor, makes them powerfully magnetic, and also the coils on the armature, causing a great attraction between the two, resulting in the armature being pulled round, or towards the magnets, as each coil on the armature approaches the magnet as near as can be got. The action of the commutator reverses the direction of the current in that particular coil, causing the magnet and it to repel one another, which results that each coil on the armature, on approaching the magnet, receives a pull, and on leaving is pushed away from it. Such is the principle of the power that is obtained. The motor is driven at a speed of 350 revolutions per minute.’

Figure 5 shows the motor in use in the battery house.

As described above (section 6.4), the dismantled remains of an electric motor are present towards the southern end of the New Main Shaft winding house site at Bullendale (Fig. 30). The motor remains consist of a cast iron casing manufactured in two sections, together with numerous other smaller parts scattered about. The casing is embossed ‘Anglo American Brush Corpn. Ld. Electric Light’, and measures 34 in × 30.5 in (0.86 m × 0.77 m). All of the bearings and copper windings have been removed, and the armature was not visible but is likely to be on the site somewhere. The iron cores for the field coils are still bolted into the frame, suggesting that the windings were cut out. The motor was probably dismantled to recover the valuable metals for scrap¹⁶.

This motor appears to be the same model, and probably the same actual motor, as that which appears in a contemporary photograph of the original electric motor in the battery house (Fig. 5). The Mines Inspector reported that a new 30 h.p. electric motor was installed at the winding house in 1899 (AJHR 1900 C3: 26), but other evidence suggests that this is the original battery electric motor of 1885–86. In particular, the cast iron casing matches exactly the motor in Fig. 5, and details of the building visible in the same photograph match details in an external view of the battery house (note the window form in Fig. 18) and an 1887 cross-section of the battery (note the detail of the timber railing in Fig. 19).

¹⁶ These have also been removed from the dynamos.

Figure 30. Brush Corporation electric motor on winding house site, 1996.
Photo: P. Petchey.



These confirm that the 1886 battery house motor was identical in appearance to the dismantled motor found at the winding house site in 1996 (and still present in 2005). When and why it was moved to its present location from the battery is not known, although it was possibly when two new electric motors were purchased by Achilles Gold Mines Ltd in about 1898.

If this is the original 1885–86 motor (as seems almost certain), it is historically invaluable because of its pioneering role in the development of hydroelectric power in New Zealand, and its continuing association with its original site. It is also a very old motor in world terms, an issue that is discussed further below (section 11.3).

9. The Reefs/Bullendale settlement

The settlement at Bullendale (originally ‘The Reefs’) had little formal identity, and grew up and evolved as demand dictated, although it was served by a Post Office for a number of years (New Zealand Gazette 1892, 1902). The first semi-permanent huts were probably erected in 1863 or 1864, as the Scandinavian Reef began to be worked by a number of mining companies. The settlement probably quickly became dominated by workers from the main companies: the Scandinavian Company, the Otago Company and the British-American Company. When a concentration of houses around the site of the Phoenix battery began to form is not known, but it was possibly about the time the new battery was built in 1866–67. The settlement slowly grew, particularly in the late 1880s as the fortunes of the Phoenix Mine improved, but the closure of the mine in 1901 caused the rapid abandonment of Bullendale as it stood, the Post Office closing in 1902 (New Zealand Gazette 1902). The Mount Aurum Company of 1904–05 employed 12 men (AJHR 1906 C6: 60), and they presumably lived in some of the old houses. The removal of much of the corrugated iron from the buildings during and after World War I caused the rapid decay and collapse of many of the

structures. Little information on the layout of the town by way of maps or diagrams could be located, so what is known is taken from contemporary photographs and direct observation of the archaeological remains discussed below.

Specific buildings that are known to have existed include:

- Phoenix Hotel. Built after 1878 on the spot where Southberg's house had been swept away by flood in 1878 (Miller 1949: 126). Burnt down in October 1896, rebuilt by early 1897 (De La Mare 1993: 35-6)
- Billiard room. Built by James Johnston (Chandler & Hall 1986: 23).
- Bullen Hall. Erected by George Bullen at a cost of £150. Library and meeting house, complete with piano and electric lighting. Doubled as a schoolhouse from June 1891 until May 1902 (Chandler & Hall 1986: 23; De La Mare 1993: 27, 38).
- Combined grocer, baker, butcher, draper, hardware shop. Opened 1885 by Harry A. Evans. Owned by H. Graham in 1888, Cotter brothers from 1894 until closure in 1902 (De La Mare 1993: 34).
- Slaughter house. Beside the creek below the settlement (De La Mare 1993: 34).
- Manager's house. Burnt down 1897. Probably rebuilt. Dismantled by Duncan McNichol for materials for Ballarat Hut (De La Mare 1993: 41).
- Blacksmith. Shown on 1900 mine plan.

While the location of some of these buildings is known, others can not be pinpointed from historic sources. Numerous buildings are visible on contemporary photographs of Bullendale (Figs 6 and 12), and the sites of these can often be found on the ground. However, association of a specific site with a specific function or occupier was not always possible.

9.1 ARCHAEOLOGICAL EVIDENCE OF THE BULLENDALE SETTLEMENT

Only two huts remain intact at Bullendale, and one of these was restored by the Department of Conservation after it collapsed during a storm in 1998 (*Otago Daily Times*, 29 May 1998: 3). Most other house and hut sites are marked by terraces cut into the hillsides, scatters of corrugated iron and artefacts, occasional stone chimneys, and cultural plantings of poplar, hawthorn and mint (much of the latter two now growing wild). The settlement appears to have had several concentrations: on the sunny slip face opposite the Phoenix battery; a group on the true right bank of Skippers Creek, between 200 m and 450 m downstream of the battery; a group around Bakery Flat; and a group scattered between bakery Flat and the Phoenix battery. This last group probably included the mine and assay offices and Bullen Hall. Several buildings were located on Caspers Flat, beside Skippers Creek upstream of the battery. A total of 46 building sites were recorded during the 1996 survey, excluding the battery sites, winding house site and power house site.

Evidence of fossicking and bottle hunting was rife in the area in 1996, and was also noted by Ritchie in 1979. Numerous areas of recently dug-over earth, excavations into banks, and scatters of discarded artefactual material were seen. The hut sites near Bakery Flat and the assay office (identified by the presence of crucibles) were particularly thoroughly dug-over. A brief inspection in 2005 suggested that fossicking is continuing at the site.

A number of the building sites were recorded by Ritchie in 1979, including the hotel (S123/135), a standing hut (S123/136) and 17 further hut sites (S123/138, 144). These were not all sought individually during the 1996 survey, as although some were easily relocated (such as the hotel site), the large numbers of building sites scattered about the area made individual relocation based on a 100-yard grid reference difficult.

Figure 31 and Figs 32, 33 and 34 show the results of the 1996 survey, giving the locations of the identified huts and hut sites (numbered—see section 9.1.4) and the network of tracks between them. There are certainly more building sites and tracks than are shown here, many being obscured by the beech forest on the south-facing slopes and the hawthorn on some north-facing slopes. The hillside opposite the Phoenix Battery is unstable, and much evidence of occupation on this sunny face has slipped away.

9.1.1 The standing huts

Two huts remain standing at Bullendale, both on the true right of Skippers Creek. One is on the sunny face opposite the Phoenix battery (Hut I), and the other is on a terrace 400 m to the southeast (Hut II).

9.1.2 Hut I

Hut 1 is shown in Fig. 35. This hut is constructed of corrugated iron over a light timber framework. It measures 16 ft × 10 ft 6 in (5 m × 3.2 m), with a single doorway in the centre of the front wall flanked by two symmetrical lightweight sash windows. A stacked schist fireplace is situated on the east side wall, with a section of riveted iron pipe being used as a chimney. The interior of the hut was originally divided in two, but only the framing of the division remained in 1996. The remains of newspaper and hessian lining were found on the interior walls, a page from an 1896 edition of the *Otago Witness* being just discernable.

At the time of the survey in 1996 this hut was beginning to collapse, with the front wall leaning out, the door missing, and most of the window panes broken. In 1996 the hut was strengthened by the Department of Conservation (*Otago Daily Times*, 15 Nov 1996), but high winds in January 1998 completely demolished it (*Otago Daily Times*, 4 Mar 1998: 14). The Department then rebuilt the hut (*Otago Daily Times*, 29 May 1998: 3), and when visited in 2002 it was in good condition, with a new front door and all glazing intact. Thus, although it can no longer be considered to be completely original, it still stands in its original form with much of its original fabric intact.

9.1.3 Hut II

Hut II is shown in Fig. 36. It was recorded in 1979 as S123/136, known as 'Duncan's hut', as it supposedly belonged to Robert Duncan, a Bullendale miner.

This hut is also built from corrugated iron over a light timber frame. It measures 18 ft × 10 ft (5.5 m × 3 m), and also has a stacked schist fireplace and an iron water pipe chimney. At the time of the 1996 survey it appeared to have had a number of repairs carried out, probably using corrugated iron scavenged from around the site.

The hut is divided into two rooms inside, with a table, bench and cupboard in the room with the fire, and bunks and a bed in the other room. The external door is in the corner of the front wall beside the fireplace. There are only three small windows. One wall is lined internally with newspapers dating to 1937.

This hut is in generally good condition, and is still used by visitors to Bullendale, and a log book was in use in 1996. It is difficult to say how the hut differs from its original form, as it has apparently been substantially rebuilt at least once. It lacks the symmetry displayed by Hut I, and appears generally more ramshackle, despite its continued use.

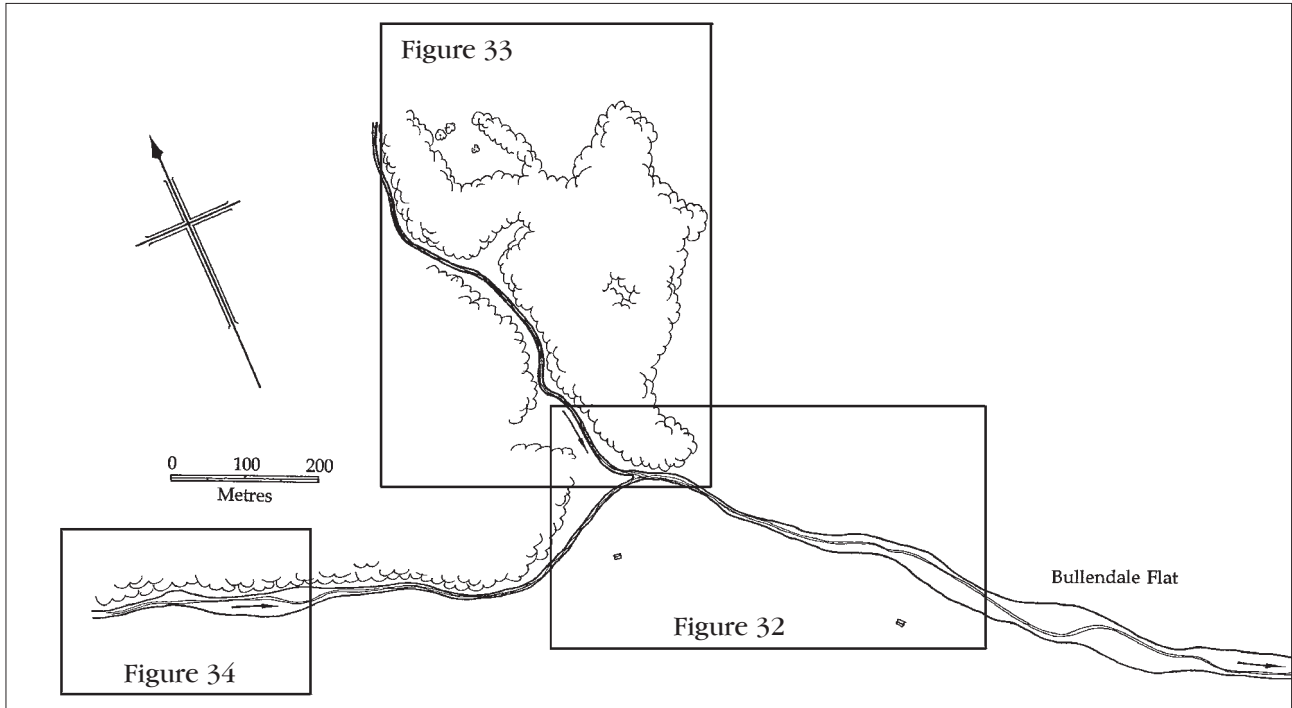


Figure 31. Bullendale settlement, showing location of detailed plans.

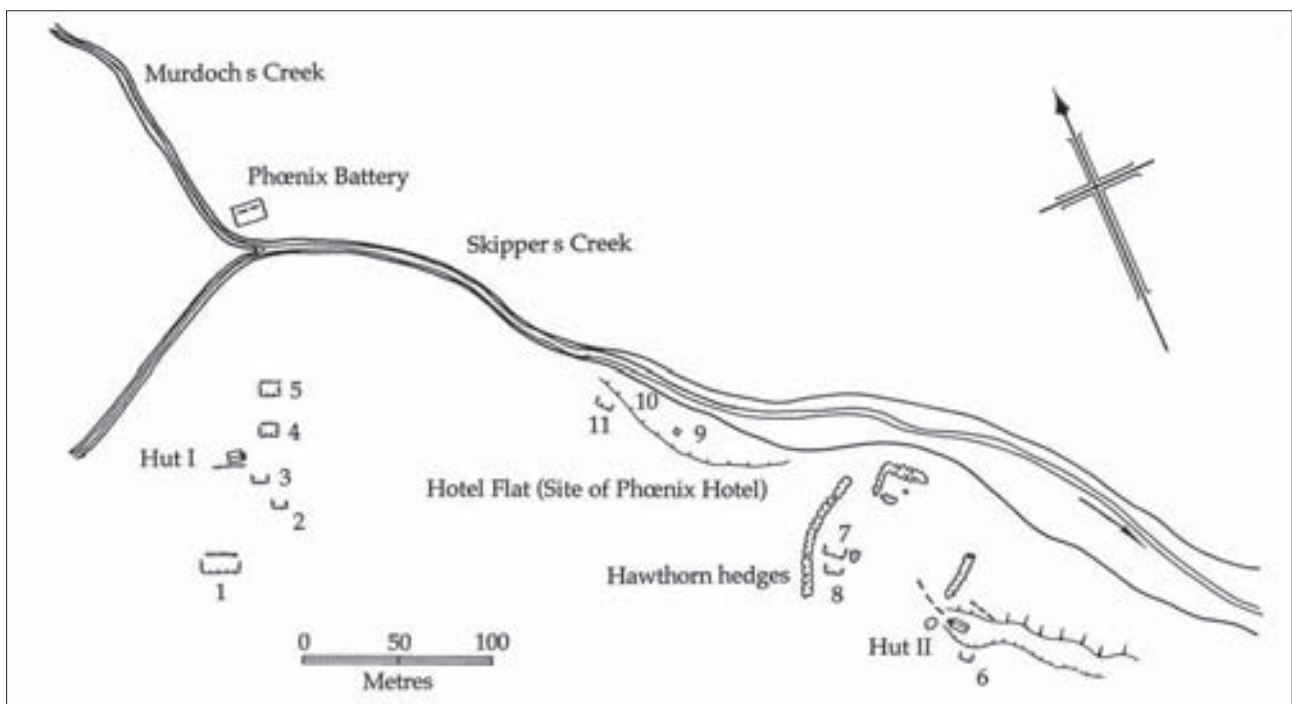


Figure 32. Plan of Hotel Flat and part of Bullendale settlement site.

Figure 33. Plan of part of Bullendale settlement site along Murdochs Creek.

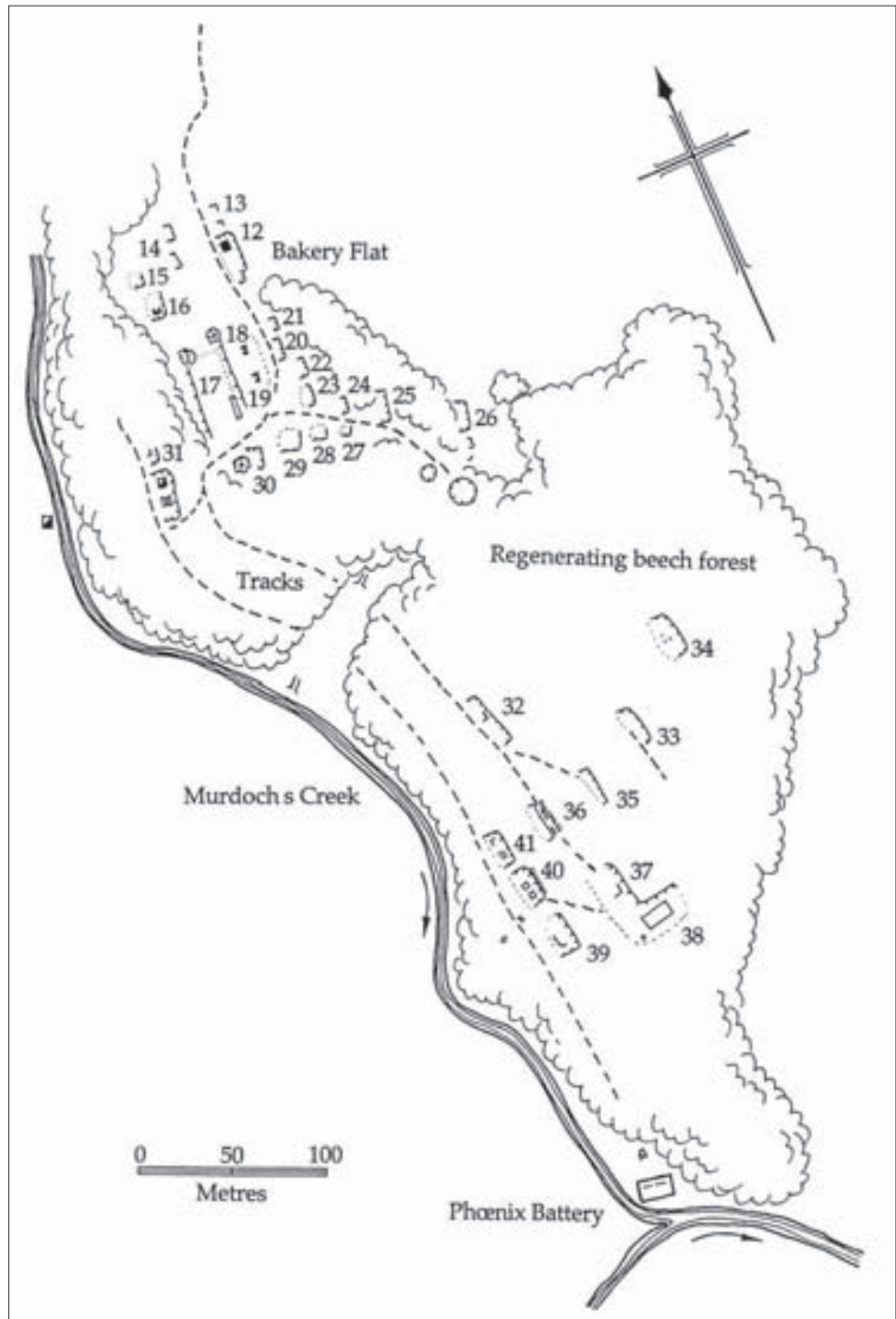
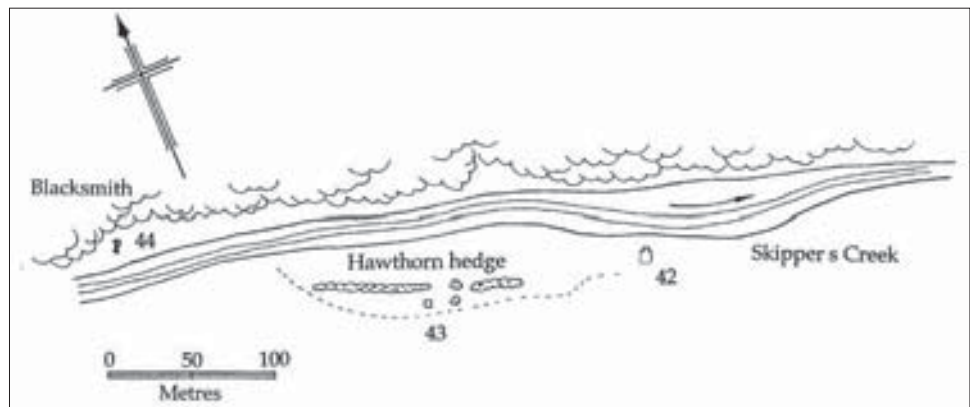


Figure 34. Plan of Caspers Flat at Bullendale.



9.1.4 Hut and building sites

Most of the other hut and building sites at Bullendale are marked by small terraces cut into the hillsides and/or scatters of artefactual material. The building sites recorded during the 1996 survey are described below, grouped geographically and numbered, starting at 1. The locations of the sites are shown on Figs 32, 33 and 34. **The standing huts described above (Huts I and II) are included and labelled as such, while all other sites are labelled numerically from 1.**

9.1.5 Slope opposite Phoenix Battery

This is the steep north-facing slope opposite the site of the Phoenix Battery (Fig. 32). Such north-facing locations were often preferred by Central Otago goldminers, as they provided the best sun exposure in what were generally very cold locations during the winter (Bristow 1994: 92; Petchey 1999a: 14; 1999b: 75).

This area was sprayed in the mid-1980s to kill introduced weeds (B. Ahern, DOC, pers. comm. 1996), and at the time of the survey there had been little re-growth apart from grass. However, dead standing hawthorn and scrub made the slope relatively difficult to inspect in detail, and possibly hid some house sites and tracks. Contemporary photographs of the area show that there were more huts situated there than were identified in 1996.

Hut I Standing corrugated iron hut, discussed above.

- 1 Terrace cut into slope, c. 19 m × 10 m. Revetted retaining wall on down-slope side.
- 2 Terrace cut into slope, c. 6 m × 6 m.
- 3 Terrace cut into slope, c. 11 m × 4 m.
- 4 Terrace cut into slope, c. 6 m × 3 m. Revetting at front.
- 5 Terrace cut into slope, c. 8 m × 4 m. Revetting at front.

Figure 35. Hut I, Bullendale, prior to restoration in 1998.
Photo: P. Petchey.



9.1.6 Adjacent to Phoenix Hotel site

The Phoenix Hotel site (site 9 in Fig. 32) is situated on a flat above the true right bank of Skippers Creek, 250 m downstream from the Phoenix Battery site (Fig. 32). There is a concentration of sites on the hillside to the south of the hotel site (Hut II and sites 6–8), set amongst overgrown hawthorn hedge lines that delineate old gardens and enclosures. This hawthorn growth prevented some areas of ground from being searched for sites, and more may exist there.

Hut II Standing corrugated iron hut. Somewhat modified and still in use. Described above.

- 6 Terrace cut into hillside above Hut 2, c. 6 m × 4 m.
- 7 Terrace cut into slope, c. 15 m × 6 m. Hawthorn planted around back and sides, and site looks down over sloping grassed area that contains several overgrown hawthorn hedges.
- 8 Terrace cut into slope, c. 7 m × 4 m. Situated directly above hut site 7.
- 9 The site of the Phoenix Hotel (Figs 37 and 38). The hotel site is in the middle of a 100 m × 10 m flat on the true right bank of Skippers Creek. The site is marked by a an old iron bedstead, a scatter of broken bottles, a collapsed schist fireplace and the remains of a cast iron stove embossed 'Plantress No. 8'. This was originally the site of Southberg's house.
- 10 Building site at north end of hotel flat. A building was visible there in contemporary photographs.
- 11 Hut site above the north end of the hotel flat. A building was visible there in contemporary photographs, and small cast-iron stove parts were scattered down the bank below the site in 1996. It was not possible to inspect the site closely because of hawthorn growth.

The hotel site is easily accessible, as it is on the walking track that follows the stream bed into Bullendale. This site and those nearby have therefore certainly been thoroughly dug over by bottle hunters, and the hotel flat is also prone to flood damage.

Figure 36. Hut II, Bullendale.

This hut, situated just downstream and above Hotel Flat, is still in occasional use. It is in reasonable condition, but has been modified to some extent over the years.

Photo: P. Petchey.



9.1.7 Bakery Flat and vicinity

This area has the largest concentration of building sites identified during the present survey (Fig. 33). Evidence of bottle hunting was rife at the time of the survey, while a number of the old poplar trees on the flat had recently been felled without permission. The main feature of the flat (other than the remaining poplars) is the remains of a stone baker's oven (site 12).

Below and to the south of the flat an area of beech forest is slowly covering the occupation sites. This forest existed while Bullendale was occupied, as it appears in contemporary photographs. While fuel for heating during the winter was important at Bullendale, it is likely that this stand of beech was not cut down because it supplied shelter for many of the buildings.

- 12 The remains of the bakehouse. The schist remains of the oven on a large terrace (c. 27 m × 6 m). This area is regularly used as a campsite by visitors to the area (and was used during the 1996 survey).
- 13 Small terrace, c. 4 m × 4 m, to the north of the bakehouse. Includes the remains of a schist fireplace.
- 14 A small terrace cut into the slope. Two other small terraces were adjacent, and were possibly associated.
- 15 A small terrace cut into the slope down a steep bank below site 14, c. 6 m × 4 m.
- 16 A terrace to the south and above site 15, c. 10 m × 4 m. Schist chimney and fireplace in good condition.
- 17 The main flat area, with surviving poplars, c. 25 m × 13 m. An iron trough with tar in the bottom is at the south-east end. There was evidence of recent fossicking at the side of the flat, at the edge of the regenerating beech forest.
- 18 Immediately above site 17. A flat area c. 25 m × 13 m, with two schist fireplaces (sites 18 and 19).
- 19 As for site 18.
- 20 A small terrace cut into the slope above sites 18 and 19. A track between the bakehouse and battery sites leads across the front of this terrace.

Figure 37. Phoenix Hotel, looking up Skippers Creek.
Photo: Hocken Library.

