Biodiversity Huts, Fiordland

Historic Heritage Assessment

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Cover photograph: Aerial view of Mckenzie Burn Hut. DOC

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TABLE OF CONTENTS

1.0 Introduction

1.1 BACKGROUND

Nationally, the Department of Conservation (DOC) manages a large number of huts on conservation land. Within the Southland Conservancy these huts have been built by a range of organisations and have a variety of histories. Most of the Conservancy's eligible huts have now been evaluated for their heritage value, primarily as part of the visitor huts assessment report. However, there are groups of huts in the Murchison Mountains and on Secretary Island that were built mainly to assist the conservation of the existing biodiversity and these have not yet been assessed.

DOC has a responsibility under legislation and government policy to care for heritage that it manages. As a consequence it is DOC's policy to assess any building or structure that is more than 30 years old before any modification or removal to determine if there are heritage values that should be preserved.

Some 30 biodiversity huts have been included in this study. These are characterised by the fact that relatively few people other than staff, outside specialists and contract hunters have ever stayed in the huts.

1.2 PURPOSE

This evaluation has been undertaken to assist the Te Anau Area Office with the future management of biodiversity huts that are 30 years and older. The report describes and assesses the historical, physical and cultural values of these huts, and makes recommendations on their relative significance.

1.3 METHODOLOGY

Most of the biodiversity huts in the Murchison Mountains and on Secretary Island – 29 in all – have been included in this study. Some brand new huts on Secretary Island have been excluded. Information from AMIS (Asset Management Information System) about these buildings was collated and combined with research from primary and secondary sources. The latter were primarily files generated by the Fiordland National Park Board (Lands and Survey), Wildlife Service (mostly from the period when it was known as the Wildlife Branch and part of the Department of Internal Affairs), and the New Zealand Forest Service.

Consultation was undertaken with the Te Anau area office's staff, as well as ex-staff members from DOC and its parent departments. As is evident from the inventory sheets for each hut (see Appendix I), getting historical information on each hut was very difficult. Twelve huts in the Murchison Mountains were visited to gain an understanding of the types of huts employed. Visiting every hut on the list was impossible. The huts visited were chosen for the variety of ages and building styles, terrain and altitude they were situated in.

After all the relevant information was gathered, the heritage significance of the huts was evaluated, to the greatest extent possible. The huts were categorised into levels of significance or grades (from 1 to 3, with those ranking 1 being regarded as the most significant and thereby warranting long-term protection). Management guidelines for each grade of hut are provided. Guidance for individual huts is outlined in the inventory sheets in Appendix I.

1.4 ASSESSING SIGNIFICANCE

A combination of two approaches is required for an assessment such as this. DOC uses the assessment criteria in the Historic Places Act 1993 and these have been employed here to assess each hut individually. In addition a thematic approach has been employed because the HPA assessment criteria do not allow for the comparison of relative values across a large number of heritage items.

1.4.1 Thematic Approach

The thematic approach to heritage identification and assessment is already used by DOC, and "allows for the comparative evaluation of historic resources to establish priorities for management" (Egerton 2001:1). As described above a comprehensive inventory of the relevant historic assets was first compiled, huts were then grouped into key historic themes, as follows:

1. Wild Animal Control, Commercial and Recreational Hunting
   Wildlife Service, formerly Wildlife Branch (DIA)
   Fiordland National Park Board (Lands and Survey)
   New Zealand Forest Service
   Department of Conservation
2. Biodiversity Management (takahe)
   Wildlife Service, formerly Wildlife Branch (DIA)
   Department of Conservation

The themes were based on those outlined in the Southland Conservancy Historic Resource Management Plan (SHRMP) but were refined for the particular characteristics of this study. Most themes from SHRMP were omitted because they are not represented by buildings included in this study or have already been dealt with in the 2007 visitor huts assessment report.

While each theme was researched alongside the research into individual huts, the lack of specific information on individual huts made it very

difficult to evaluate them against the thematic structure. As a result, the huts have largely been assessed against established criteria to determine their relative value (see 1.4.2 below).

1.4.2 Assessment Criteria

The New Zealand Historic Places Trust (NZHPT) has a statutory role under the Historic Places Act, 1993 to assess historic significance. This makes it the New Zealand authority in this matter and the Department of Conservation has adopted the NZHPT assessment system. The current NZHPT assessment criteria, as per the HPA, are: Historical, cultural, aesthetic, archaeological, architectural, scientific, social, spiritual, technological and traditional significance or value.

For the purposes of this report, these criteria have been amalgamated into three general headings. These are as follows:

Historic

Physical

Cultural/social

1.5 COMMISSION DETAILS

This report was prepared by Michael Kelly for the Department of Conservation, Southland Conservancy. Site visits took place in November 2008 and a draft report was prepared over the following months.

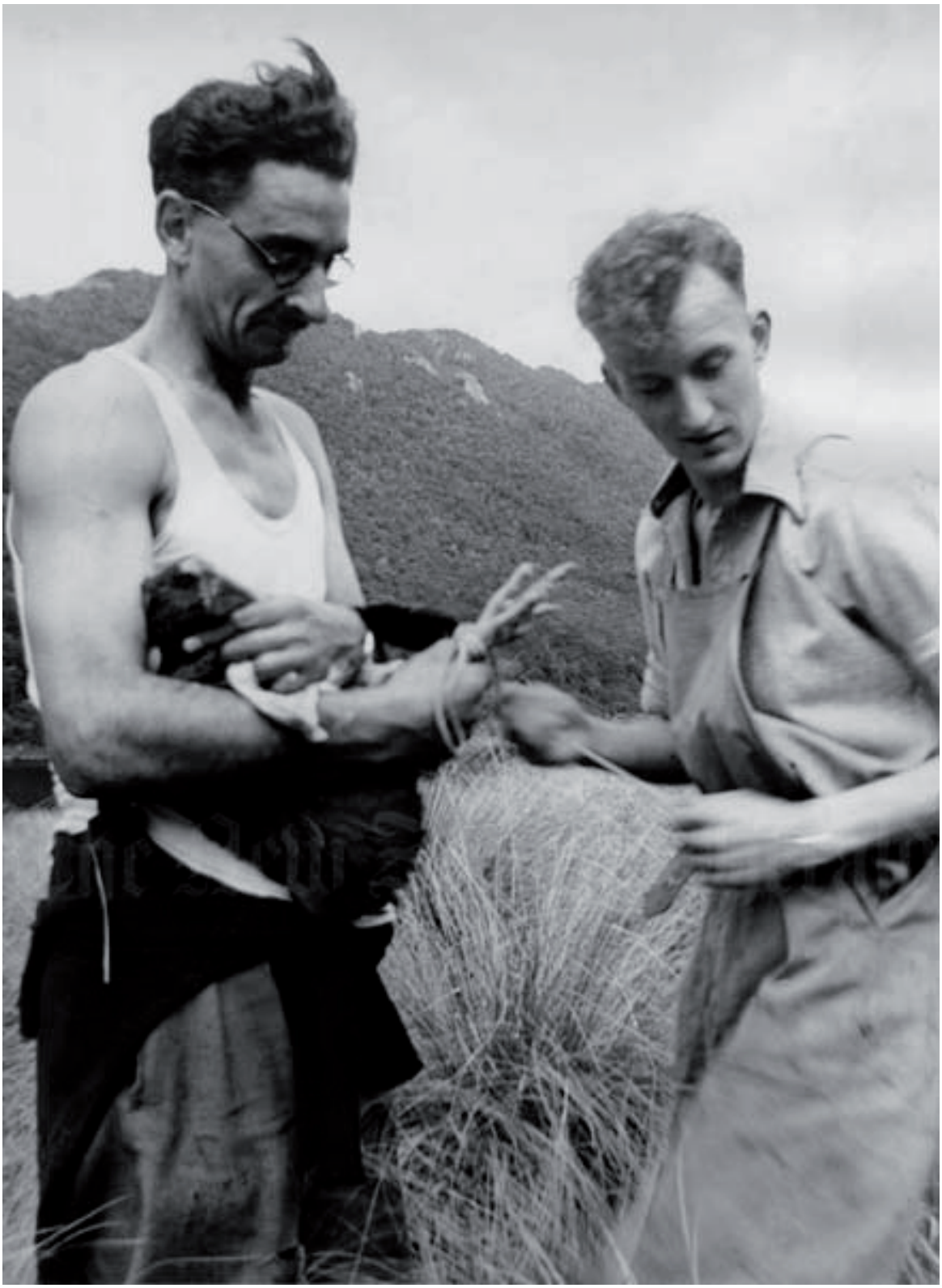
1.6 ACKNOWLEDGEMENTS

The contribution of staff Phil Tisch, acting Biodiversity Programme Manager, Grant Tremain, Ranger, Visitor Assets and Dave Crouchley, Ranger, Biodiversity, is gratefully acknowledged.

Research of Archives New Zealand files in Wellington was undertaken by Sarah Byrne.

John von Tunzelman spent many hours answering enquiries and his generosity in sharing his fund of knowledge is much appreciated.

Rachael Egerton smoothed the path for the project's progress by undertaking a lot of the research, gathering information together, organising files and using her understanding of the history of DOC and its parent departments to great effect.



Geoffrey Orbell carrying a takahe, with his assistant Rex Watson, probably 1948. (NZ Herald)

2.0 Historical Background

2.1 MURCHISON MOUNTAINS

2.1.1 Takahe and the Wildlife Service

New Zealand's flightless birds lived a predator-free existence for millions of years before the arrival of the first humans 800 or more years ago. Along with New Zealand's other flightless birds, the takahe *(Porphyrio [Notornis] hochstetteri)*, the largest of the rail family, was present throughout much of the South Island and the bottom of the North Island. The causes of their eventual retreat to a few mountain ranges in the lower South Island are not entirely understood but takahe may have been in decline before Maori arrived. They are highly specialised feeders and struggle to compete with more aggressive and adaptable animals. However, their numbers were certainly reduced by Maori hunting, predation by introduced pests and a subsequent loss of habitat.

By the time of the arrival of Europeans the birds were already rare. Eventually they were confined to the isolated Murchison and Stuart Mountains in Fiordland. Only four birds were captured by Europeans during the 19th century, the first in 1849 and the last in 1898. After this it was thought the birds had become extinct, although that was not a view shared by every scientist and observer. The bird, extinct or not, was declared a protected species.[1]

In November 1948, Dr Geoffrey Orbell (1908-2007) of Invercargill, then president of the New Zealand Deerstalkers' Association, led an expedition to the remote Murchison Mountains, west of Te Anau, to search for the takahe. Orbell, long convinced the takahe had survived, had been interested in the bird ever since he saw a photograph of one in the Otago Museum as a boy.[2] Orbell had been in Takahe Valley in April that year and had heard bird calls and seen tracks he did not recognise. Convinced that the birds were takahe, Orbell set out to prove it. He and his companions Rex Watson, Neil McCrostie and Joan Telfer found the evidence they were looking for on 20 November 1948. Orbell described the moment:

> Suddenly I saw in a clearing in the snow grass a bird with a bright red beak and a blue and green colouring. I threw myself flat and the others fell like ninepins. The faces of the others were a study. The snowgrass seemed noisy as I wormed my way through it. It is hard to crawl in snowgrass dragging 50 yards of

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1 File L&S 4/300/13 Historic and Scenic Reserves – Fiordland National Park – Notornis (Takahe) Area, Pt.1, 189-1939, Under-secretary Lands & Survey (L&S) to under-secretary Department of Internal Affairs (DIA), 20 December 1937

2 http://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=10458022 [viewed 24 March 2009]

> net. In sign language I brought Rex and Neil, who were in the wings, closer until the circle around the birds was complete. A moment later the net shook violently at one spot. "We've got them' I shouted as I ran up to secure the specimens of the notornis in each hand. Rather than disturb the nesting birds, we released them as quickly as possible and returned home, grateful to Providence for our twelve still photos and three reels of coloured movie.[3]

The discovery was international news and made Orbell famous. He continued to return to Takahe Valley and other parts of the Murchison Mountains for many years, building huts and enjoying special privileges accorded him by the government. He became a trenchant critic of what he regarded as excessive handling of the takahe for research purposes.

The government of the day realised the significance of Orbell's find and quickly made a remarkable decision – the takahe habitat was made off limits to visitors. The Commissioner of Crown Lands stipulated that 'No permit [is] to be granted to any person in the enclosed area.'[4] Some 530 square kilometres was declared a 'Special Area' of restricted entry within what would later become the Fiordland National Park.

With unintentional timing, shortly before the rediscovery of the takahe, the Wildlife Branch of the Department of Internal Affairs had constituted a Native Bird Preservation Committee (later, from 1955, the Fauna Protection Advisory Council), which was intended to advise the Wildlife Branch on how it should manage its threatened species.[5] This committee gave advice on takahe policy and operations until the end of the Wildlife Service in 1987.

The year 1948 was also the first year that the Wildlife Branch hunted deer in the Murchison Mountains, as part of its national role in pest eradication. Red deer had been liberated at Manapouri (30 kilometres away) between 1901 and 1910 and began arriving in the western catchments in 1930. By the late 1940s, deer were well established in the north-western parts of the mountains and had begun colonising the eastern and southern catchments.[6] Although it was thought that introduced species such as deer, stoats etc. were likely to be competing with takahe, the real extent to which deer (red deer), in particular, were undermining takahe habitat was still not understood.

Deer numbers were, at any rate, fairly low throughout the Murchison Mountains. In that first year of hunting, 35 deer were shot in the Snag and Junction Burns. A party was sent in to the Esk and McKenzie Burns

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3 www.mtbruce.org.nz/takahe_more.htm [viewed 24 March 2009]

4 File L & S 4/300/13 Pt.1, Commissioner of Crown Lands to Controller of Wildlife, DIA, 23 November 1948

5 Galbreath R. 1993, *Working for Wildlife: A history of the New Zealand Wildlife Service*, Bridget Williams Books, Wellington p. 84

6 Ibid. p. 147

the following year and shot a handful more, although few were seen.[7] An early hunter and trapper in the Murchisons was Frank Woodrow, for whom the Woodrow Burn is named. Woodrow, a Canadian who came to New Zealand on a post-retirement journey, made a singular contribution to animal control in the Murchisons. He was an expert stoat trapper, a useful asset given the menace that stoats would become.

Although deer were to become a significant focus of efforts to save the takahe, this was some way off in 1948. The initial response to the takahe was to leave them largely undisturbed, which was partly the reason for making the area off limits. Research on the takahe began in 1949, when the first party visited Takahe Valley. Parties returned to the mountains on average three times a year thereafter to count birds, observe their behaviour and later, to band them. Once the entire area had been inspected it was estimated that 200-300 birds remained in small scattered groups. All the close attention paid to the birds irked more than just Orbell. Bill Axbey, later Conservator of Wildlife in Queenstown and a man who frequently visited the Murchison Mountains, thought that the scientists 'were a greater danger to the takahe than the deer or anyone else ever was...'. He thought the birds were frightened by the attention given that they were generally 'tame as chooks'.[8]

Bill Axeby standing next to an old bivvy in the Point Burn Valley, 1971. (R.H. Simpson, Fiordland National Park Slide Library, DOC)

7 Parkes J., Tustin K. and Stanley L., 'The History and Control of Red Deer in the Takahe Area, Murchison Mountains, Fiordland National Park', *New Zealand Journal of Ecology*, Vol.1, 1978 p. 148. A report by Te Anau ranger Mal Evans, written in 1967 (see footnote 9), states that hunting took place in McKenzie and Chester Burns.

8 www.stuff.co.nz/waikato-times/features/282006 [viewed 28 April 2009]

Hunting – presumably under the management of the Wildlife Service – had resumed in 1953 and that year 356 deer were shot.[9] A further 515 were taken the following year from all the catchments. In 1955, two men shot 193 deer.[10] Despite these kill numbers, official operations all but ended that year and would not begin again with any intensity until 1962. In the interim, government hunters under the direction of the Wildlife Branch made small forays into eastern catchments, augmented by deer stalkers on special access permits.[11]

Surveys of takahe numbers continued, with banding of birds beginning in 1955.[12] In 1957, Gordon Williams, Wildlife Service biologist, in a summary of the state of takahe declared that 'there is no direct evidence, whatsoever, that stoats or deer (or any other animals for that matter, for example, opossums, wekas [sic] and kiwis [sic]) are directly affecting takahe numbers.'[13] It was not known at this point that stoats predated takahe chicks, and the evidence for deer competition was still considered uncertain. Deer were known to eat the same tussock grasses as takahe (*Chionochlea pallens* and *C. flavescens* among them) but because numbers in Takahe Valley and Point Burn were still relatively low, their real impact was obscured.[14] However, as if to hedge his bets, Williams added that it would be desirable to ensure that deer numbers were not allowed to grow.

Wisely Hut nearing completion in 1961, with the leftover timbers and iron lying around the site. The hut's distinctive flared walls are easy to see without the later (1976) addition.
(Fiordland National Park Slide Library, DOC)

While the Wildlife Service continued to undertake some hunting it also remained responsible for the conservation of the takahe, as with all other indigenous fauna. Despite Gordon Williams' assertions, it quickly became apparent that takahe numbers were dropping at the same time that deer numbers were rising. The Wildlife Branch responded firstly by deciding to intervene in takahe breeding. It initiated a captive breeding (later rearing) programme, under the direction of Elwyn Welch, a North Island farmer and amateur ornithologist, who had some experience in the raising of pukeko. His work at his farm at Mt Bruce, controversially taking

9 Evans M.A. 'Activity within Murchison Mountains since rediscovery of takahe 1948', p. 4, File 3/641, Lands and Survey, RI 2301, DOC Southland Conservancy

10 Ibid.

11 Parkes, Tustin and Stanley p. 148

12 The Notornis or Takahe – Official Activities in the Special Area of Fiordland National Park', author and date unknown, RI 2999, Southland Conservancy, DOC

13 Williams G.R., 'The Takahe – A General Survey After Eight Years', File 13/1/1, Wildlife Branch, DIA, 1957

14 Studies undertaken by Dr Bill Lee (Botany Department, Otago University) have since shown that it takes about 25 years for tussock to recover from deer browse.

place well away from the bird's natural habitat, was carried on under great secrecy, until the Wildlife Branch was able to show off four birds successfully raised. This roused great public interest and 13,000 people visited Welch's property over three weeks in May 1960.[15] Despite this, success in captive breeding remained elusive for many years.

Wildlife Branch continued its research and monitoring through the 1960s. By 1965, 41 'official' research trips had been made into the Murchison Mountains.[16] Hunters also played their part in takahe research and monitoring by reporting sightings of birds. Like the hunters, researchers appreciated the eventual construction of the huts. Much of the early research had been based around burns nearest Lake Te Anau as well as Takahe Valley and Point Burn. The construction of Wisely Hut (1961, see 2.1.2) in a more remote area, with takahe populations nearby, enabled lengthy field trips from a secure and comfortable base. It was the forerunner of other huts dropped into valleys that were otherwise rarely visited.

Observations in the late 1960s and early 1970s revealed that, although deer numbers were in decline or at least stable, takahe numbers in Takahe Valley and Point Burn were declining rapidly. Subsequent research in the period 1972-75 revealed that the damage had already been done in the 1960s. Deer had removed so much of the takahe's favoured food that plants were struggling to recover, with a consequent impact on the takahe. By and large, takahe numbers remained fairly static in other parts of the Special Area, a situation that was enhanced by the degree of control over deer numbers that the Forest Service was able to achieve and maintain from the mid-1970s onwards.

The latter half of the 1970s saw research into artificial boosts of nitrogen to improve the coverage of grasses the takahe favoured, but bird numbers were continuing to decline. By 1981 just 120 takahe were estimated to be living in the Murchison Mountains and drastic intervention was required. In 1982 the Fauna Protection Advisory Council approved several measures to improve the takahe's chances for survival, including 'intensive management of the wild population, development of a captive-rearing facility at Burwood Bush [near Mossburn, Te Anau] and the establishment of a takahe population on a pasture grass environment at Maud Island'.[17]

The following year, in the Murchison Mountains, the Wildlife Service started moving fertile eggs from one nest to another to replace infertile eggs. Burwood Bush opened in 1985, the same year the first takahe was relocated to Maud Island.

The end of the Wildlife Service's role in takahe conservation came with the creation of the Department of Conservation (DOC) in 1987. It was formed by the amalgamation of the three principal contributors to the takahe's management – the Forest Service, Lands and Survey and Wildlife

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15 Galbreath p. 95

16 Reid B. 1966, 'Takahe Research', File 46/61, DIA, RI 2714, DOC Southland Conservancy

17 Mills J.A., Lavers R.B. and Crawley M.C. 1985, 'Management of Takahe and Takahe Habitat' Wildlife Service, DIA, p. 9 (RI 1601, DOC Southland Conservancy)

Service. However, by that stage the direction was already set for DOC's approach to takahe management.

2.1.2 Hut building and the Wild Animal Control programmes of New Zealand Forest Service

The Wildlife Branch came under withering criticism for its handling of wild animal control (WAC) in the years immediately prior to 1956. In 1954 discussions over the future of deer control were underway and eventually the nod was given to the Wildlife Branch's rival the Forest Service – well-resourced and with a new plan for deer control. It had an added incentive – its responsibility to manage protection forests, where deer were also a significant threat.

As noted above, the Forest Service did not take over animal control in the Murchison Mountains for a considerable period after it acquired its national role. The reasons for this are not known, but were undoubtedly related to its special status. However, the Forest Service was busy elsewhere. One of its key initiatives was the construction of a network of huts and bivouacs, together with tracks and bridges. The building of infrastructure was intended to allow hunters to spend more time in the field and effect more kills. The Wildlife Branch had built huts, but not in any systematic way. While the latter had overseen some standardisation in certain conservancies, e.g. West Coast, the Forest Service saw standardised designs and prefabrication as the means to attaining good coverage of huts nationally. By 1958 it had its plans in place. These centred around 2, 4 and 6 bunk, timber-framed structures. Regional variations were common, as the Forest Service was a decentralised bureaucracy, and standardised designs were

often amended or adapted for specific site needs.

Harsveldt and Egerton have identified that the main era of WAC hut building in the nearby Eyre and Takitimu mountains occurred during the mid to late 1960s, with the earliest WAC huts being constructed from 1962.[18] This was somewhat late by comparison with other regions, such as Westland and Nelson. However, once underway, the NZFS put a huge effort into hut building. As was common throughout New Zealand, huts were located so that hunters were within four to four and half hours walk from a hut.[19]

A map drawn up c.1967 showing the takahe 'territories' in the Murchisons. (Wildlife Service Slide Collection, DOC)

[18] Harsveldt P. and Egerton R. 2007, 'Historic Evaluation Project of Department of Conservation Huts', Southland Conservancy p. 31

[19] Ibid.

The first of the new wave of huts in the Murchison Mountains was built by the Fiordland National Park Board (FNPB) in 1961/62. (The Park had been created in 1952). The Forest Service began building huts in the Murchison Mountains soon after it took over hunting operations in 1962[20] and it is safe to assume that it took the same approach to siting huts as it did elsewhere, despite the fact that it was under the direction of the FNPB.

The decision by the FNPB to resume intensive hunting in the Murchison Mountains followed a report in 1960 that described forest slopes and valley floors that had undergone 'severe depletion of scrub and understorey'[21] as a result of the huge build-up of deer. The principal takahe food – tussock grasses – had been heavily grazed. Hut building began at nearly the same time, in 1961 and was a great fillip to hunting. Over time the increasing number of huts made it easier for hunters to reduce and then manage the deer population.

Hut building in the Murchison Mountains

It is possible that there were huts in the Murchison Mountains before 1949. There is a suggestion that Orbell built a log cabin in the Mid-Ettrick prior to 1949, but it is more likely that he built it in or after 1949. Another suggestion is that Orbell backpacked army huts to the tops above Junction Burn.[22] Nevertheless, in the absence of any firm record, it must be assumed that hut building prior to 1949 was pretty unlikely. Indeed, the Murchison's very remoteness had precluded much human activity,[23] and this had of course helped save the takahe.

Early in 1949, Orbell encouraged the Government to build accommodation in Takahe Valley, pointing out that 'the valley is so bleak and unfriendly that it would seem advisable to erect a small hut or log cabin at the lower end at some suitable spot.'[24]

Year after year, FNPB annual reports state, retrospectively, that huts were built by the Wildlife Branch in Takahe Valley and nearby Point Burn in 1949.[25] They also later reported that the Wildlife Branch built a hut in the Chester Burn, also in 1949. However, no other direct evidence for the construction of these huts at that time has been located. In the case of the Takahe Valley, which would have been the most obvious place to

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[20] Parkes, Tustin and Stanley p. 148. While 1962 is the date commonly considered to be when the Forest Service took over hunting in the Special Area, there is some conflicting evidence. One source suggests it might have been as late as 1964. (See Meeting memo, 24 March 1964, FNP 19 – Huts 1962-1966, Archives New Zealand (ANZ))

[21] Evans p.4

[22] The source is a comment made on the forum of the fishnhunt.co.nz website following Orbell's death in 2007.

[23] Maori did visit Takahe Valley and left behind evidence in the form of butchered birds and the remains of fire. Maori had also known of the takahe's presence in Takahe Valley, naming it Kohakatakahea – 'the nesting place of the takahe'.

[24] Orbell to Under-secretary, DIA, 18 January 1949, File 4/300/13, Historic and Scenic Reserves – Fiordland National Park – Notornis Area Pt.2, 1954-58, ANZ

[25] See Appendix 'A' of the Fiordland National Park Annual Reports, 1966-1978. During the latter half of the 1960s and early 1970s, Chester Burn was listed as being built in 1949 by the Wildlife Branch. This date was later dropped by the FNPB in its reports, which suggests that it was not true.

build the first hut, nothing permanent was built there in 1949. One letter from the Wildlife Branch to the Director-General of Lands and Survey in 1953 asked for a hut to be built in the valley because hunters and researchers were living out of a tent camp which had to be reinstated regularly.[26]

Permission was granted and Takahe Valley Hut was erected in 1954 by the Amphibious Airways Company Ltd of Invercargill under contract, covering the costs of transport, erection and materials. Presumably the materials

Gordon Williams and Elwyn Welch (with takahe in boxes) standing outside Takahe Valley Hut in 1958. (Peter Morrison, Crown Copyright)

came in on a flying boat that landed on Lake Orbell. There is no reason to think that the present building in Takahe Valley is not that same hut.

At some point a hut was built at the mouth of the Ettrick Burn by a possum trapper, J.A.D. Brown, who was working in the Special Area and in 1959 this hut was bought by the Wildlife Branch and later moved to a more suitable position.[27] This hut was almost certainly the same hut that was dismantled and parts of it reused for the McKenzie Burn Hut by the NZFS in 1964.[28]

Thereafter no huts were built until 1961, when it recommenced in earnest. Curiously, those huts that were built by other government agencies in

[26] File 4/300/13, A.G. Harper to Director-General, L&S, 27 July 1953.

[27] Meeting memo, 16 December 1959, FNP 19 – Huts 1957-1962, ANZ

[28] Pers. comm. John Von Tunzleman 25 November 2008

the Fiordland National Park (including Wildlife Branch) were supposed to have been transferred to the FNPB in 1958,[29] but this may have only applied to huts outside the Special Area.

As three departments shared oversight in the Murchison Mountains, arrangements for hut building were complicated. Although the FNPB approved hut locations, and funded and built huts itself, it was the Forest Service which built and owned most of the huts. Nevertheless, as the huts were needed for both bird observation and hunting, a level of co-ordination was required and correspondence files suggest that there was rarely any rancour over the placement and construction of huts. The funding of many of the huts was shared between the FNPB and one of the two outside agencies. The huts were, on the whole, evenly spaced and strategically situated. All three organisations – the Forest Service, Wildlife Branch and FNPB – built huts for their specific needs, and hunters and scientists alike used them. The Forest Service had the greatest need, with various hunting parties in the mountains for long periods, sometimes all year round.

Max Evans standing in the middle of the partly built Lake Te Au Hut, 1963. This was its first site, before it had to be moved following a flood. (John Von Tunzelman Collection)

The first hut in the new building programme was the two bunk Wisely Hut, built by the FNPB in 1961. It was named for H.B. (Baughn) Wisely, a biologist attached to the Canterbury Museum, who did much work searching for populations of the takahe in the 'special area' following the takahe's rediscovery. The new hut was built about three kilometres from the lake that also bore his name and was quickly regarded as a

[29] Conservator of Forests to Sec. FNPB, 9 September 1958, FNP 19 – Huts 1957-1962, ANZ

A typical (but unnamed) bivouac being carried into the Murchisons by helicopter, date unknown but probably mid-1970s. (John Von Tunzelman Collection)

big boost to hunting.[30] The FNPB also commissioned Geoffrey Orbell and colleagues to build a four bunk hut at Island Creek, near Miller Peak, early in 1962. Also that year, a hut was built near Robin Saddle, again by the FNPB, but to a different design from Wisely. Much of the work on these huts was expected to be done by 'expert volunteer labour',[31] but there is a possibility that the Forest Service was involved in some way. It is not known if these huts were prefabricated and flown in by fixed wing aircraft, which was the Forest Service's preferred approach to getting materials to hut sites.

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30 Memo for meeting, FNPB, 15 February 1962, FNP 19 Huts 1957-1962, ANZ

31 Ibid.

At the same time the Forest Service began to take over hunting operations in the Murchisons, the naturalist and writer Gerald Durrell visited the Special Area with two BBC cameramen. He talked to the *New Zealand Listener* for its 25 May 1962 issue and poured scorn on the 'astonishing assortment of departments' managing the Special Area. 'I don't know which imbecile has been responsible for this extraordinary sort of spider's web, but it completely enmeshes the wildlife people and obviously doesn't give them the chance they need.' He finished by telling New Zealanders that he was 'horrified at the way you've wrecked this country, biologically speaking.'[32] Official reaction to Durrell's comments was not captured on file.

The Forest Service began building its own huts in 1963. Aurora Point Hut was built close to the lake, so the opportunity was taken to ship the prefabricated sections in by boat – the *Tawera* – prior to its construction.[33] Lake Eyles was flown in via floatplane and built by the well known Forest Service deer culler Johnny Reardon.[34] Lake Te Au (1963) was also flown in by floatplane. The remainder of the huts were flown in by Dominies, with the materials tied in bundles and parachuted to the ground. Many of the early Forest Service huts were built by two Australian carpenters Lou Griffiths and Alan Tough.[35]

The first flush of hut building took place between 1961 and 1967. At the most, four huts per year were built. This has to be seen in the context of the FNPB's overall hut building programme. There were, for instance, 14 huts built in the national park during the 1964/65 financial year, of which four were in the Special Area. The nature of the negotiations between the Forest Service and FNPB over the construction of huts in the Murchison Mountains is revealed by correspondence from Senior Ranger Max Kershaw to the FNPB secretary in Invercargill in July 1965 regarding the construction of a hut in the Esk Burn catchment.

> To ensure a more efficient coverage being achieved in the field of Noxious Animal Control, this Service requests the Board's approval to establish a four bunk hut within the Esk Burn catchment at the head of [the south arm of] Lake Te Anau, this winter season.
>
> I believe this matter has been discussed with your Chief Ranger, Mr Scholefield by our ranger, Mr Fisher.
>
> I might add that this hut would be invaluable to official culling parties (board sponsored parties) entering the Robin Saddle region.[36]

This hut can only be Lake Te Au, which was actually built in 1963[37] and was later moved to avoid a flood, so the discrepancy in dates is difficult to explain.

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32 *New Zealand Listener,* 25 May 1962

33 Pers. comm. John Von Tunzleman, 25 November 2008

34 Ibid.

35 Ibid.

36 Senior Ranger, NZFS to Secretary FNPB, 12 July 1965, File Lands and Survey D.O. FNP 19, ANZ

37 The date of 1963 is provided by a contemporary account (FNPB annual reports) and John Von Tunzleman, who built the hut and confirmed its date of construction.

Wildlife biologist Gordon Williams (l) and Elwyn Welch feeding caged takahe at Takahe Valley Hut, 1958. (Peter Morrison, Wildlife Service Image Collection, DOC)

Chester Lake Bivouac has been employed in numerous locations in Southland's high country and is today used for deer control in and around the Chester Burn. It is shown here at Homer Tunnel en route to its first site, probably the Tutoko High Bench, in the summer of 1976-77. (Andy Cox)

The first year that prefabricated huts were borne by helicopters was 1965, with Bill Black, the legendary Te Anau-based helicopter pilot, responsible for undertaking the early flights.[38] These were movements of materials; in the 1970s, whole bivouacs were lifted and dropped on sites.

By 1967 the Forest Service had built five huts [Aurora Point (1963), Junction Plateau (1963)[39], Snag Burn (1963), Top Ettrick Burn (1964), Lake Te Au (1963)] and two bivouacs [Lake Eyles and Dana Peaks (both 1963)]. The FNPB had built four huts – Wisely (1961), Island Creek (now Camouflage, 1962), Robin Saddle (1963) and Junction Burn (1966), while the Wildlife Branch retained the Log Cabin, Point Burn and Takahe Valley Huts (and possibly Chester Burn).

Thereafter, hut building went into something of a hiatus, with the exception of a small two bunk bivouac built in the lower catchment of the Chester Burn.[40] The reason for this may well be encapsulated in a letter written in 1971 by chief ranger of the FNPB, H.A. Jacobs to a New Zealand Electricity Department deerstalker. In it he states that 'maintenance of our 50 huts is five years behind now. As a result, new huts are kept to an absolute minimum and those that are erected are built of materials that require little maintenance.'[41]

In October 1973 the Forest Service reported that it was investigating the use of lightweight bivouacs that could be moved about by helicopter, which it hoped would 'enable hunting pressure to be increased in specific areas as required.'[42] This proposal came to fruition two years later.

The next hut built in the Special Area was in 1973/74 by the Wildlife Service (as it was by then known), after it sought the approval of the FNPB, plus half the funding, to build a hut in the upper reaches of the Chester Burn. Also in 1974, the FNPB sought old ranges to install in their huts to protect adjacent forests.

The year 1975 was a busy one, with the first three of the lightweight bivouacs installed via helicopter at various sites. One site was Mystery Burn, while another was McKenzie Burn, (Bivi 1059) a combined FNPB and Wildlife Service effort.[43] Two-man bivouacs of this type were built in Te Anau before being flown in. Point Burn Bivouac was erected in 1976. Also in 1976, the Forest Service extended Wisely Hut - in timber.[44] Another portable hut was erected that year by the Wildlife Service, although not named. There may have been more during this period. Just how many huts were in the Special Area at any given year can be

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38 Pers. comm. John Von Tunzleman, 24 November 2008

39 This hut name and location is not known to present staff.

40 NZFS Noxious Animals Advisory Committee Meeting, 26 February 1969, File 90/20/7, Noxious Animals – Control – Field Operations –Southland Conservancy, Pt.3, 1962-65, ANZ

41 Chief ranger, FNPB to NZED deerstalker 29 April 1971, FNP 19 – Huts 1971-77, ANZ

42 NZFS Noxious Animals Advisory Committee Meeting, 17-18 October 1973, File 90/0/1/1G, Noxious Animals – Control – Advisory Committee – Southland Conservancy, Pt.5, 1971-75, ANZ

43 L.W. Stanley, Forest Ranger, Te Anau to Senior Ranger, NZFS, 29 April 1976, 4/10/0/19 – Buildings High Country Huts (Noxious Animals), ANZ

44 Chairman, FNPB to Chairman, National Parks Authority 6 October 1975, FNP 19, ANZ

a confusing matter, because of the multiple agencies involved and the discrepancy between their records, and the fact that none of them was solely responsible for all hut construction. By 1975, according to one report, there were 15 huts and two relocatable bivouacs in use.[45]

Concerned about fire safety, the Forest Service installed fire screens and candle holders at a number of their huts in 1976.[46] In 1977 the Wildlife Service reported to the FNPB that it owned three huts in the Special Area; Plateau Creek Hut, which was moved from the upper Chester Burn about 1974, the aforementioned unnamed transportable hut (1976), and Takahe Valley Hut (1954).[47]

By 1984, 21 of the present 26 huts had been built,[48] or there were at least huts occupying original sites (some were later replaced). More huts were to come, but AMIS suggests that only four were constructed in the period from 1984 onwards – Miller and Dana Bivouacs (1984), and Log Cabin, Ettrick Burn (1999, to replace the dilapidated Log Cabin built by Orbell et al). Mystery Burn was replaced in 1986. Whatever the precise numbers, it's clear that the past 25 years have seen no more than a handful of huts added to the area. The greater effort was put into improving the appearance and condition of huts, from minor repairs to major refurbishments.

Hunting

It was not until the late 1960s that a sufficient network of huts was in place to aid hunters, but in the meantime hunting carried on with men using tent camps and bivouacs. One example is a rock shelter at Woodrow Flats which was used prior to the construction of the hut nearby.[49] Hunting generally took place from October to May and the first year of Forest Service operations – to the year ending 31 March 1963 – also yielded the biggest total of kills at 1767.[50] That was 700 more deer than were ever killed again in one calendar year, suggesting that there had been a major build up of deer in preceding years and that 'the increased effort of 1962/63 caused a large reduction in the size of the deer herd.'[51] The deer were in very poor condition, an indication that the favoured habitats had been eaten out. Only 260 man days were used at an average of 6.8 kills per man day.

The 1963/64 hunting season was beset by poor weather and the final

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45 Slater M.J. 1982, Wild Animal Control – Murchison Mountains (discussion paper), NZFS, Southland Conservancy p. 1. AMIS on the other hand suggests many bivouacs were built in 1975.

46 M. Evans, Ranger in Charge to R. Lamb, Invercargill, NZFS, 4/10/0/19 – Buildings, High Country Huts (Noxious Animals), ANZ

47 Controller, Wildlife Service to Secretary, FNPD, 24 May 1977, FNP 19, ANZ

48 See 'Fiordland National Park: List of Huts to 31.3.1984', FNP 19 Huts 1983-86, ANZ

49 Pers. comm. Dave Crouchley, 17 July 2009

50 Parkes, Tustin and Stanley p. 148. Any analysis of hunting tallies must take into account the diverse set of numbers offered by separate sources. Parkes et al's numbers are very different from those used by Te Anau forest ranger Max Evans (op. cit. p. 5). Evans cites a figure of 2953 deer killed in the 1962/63 season, which is so much higher than Parkes that it must be a mistake.

51 Ibid.

figure of 1020 took 575 man days to achieve. What Parkes et al's figures show is that over a 15 year period a gradual reduction in the kill rate per man day was achieved, demonstrating that deer were becoming both harder to find and shoot and also less numerous. As events showed, that did not necessarily lessen the threat to the takahe, because of the slow recovery of tussock.

Te Anau ranger Max Evans, in a report written in 1967, distinguished the difficulty that weather and inexperienced hunters played in getting good tallies. To improve the efficacy of hunting, the track system played its part, with the cutting of tracks from the mouth to the head of burns, from one valley to another and tracks connecting the mouth of burns along the head of the peninsula. Bridges were built where necessary. Together with the huts, this infrastructure made life much easier in what was steep and difficult country.

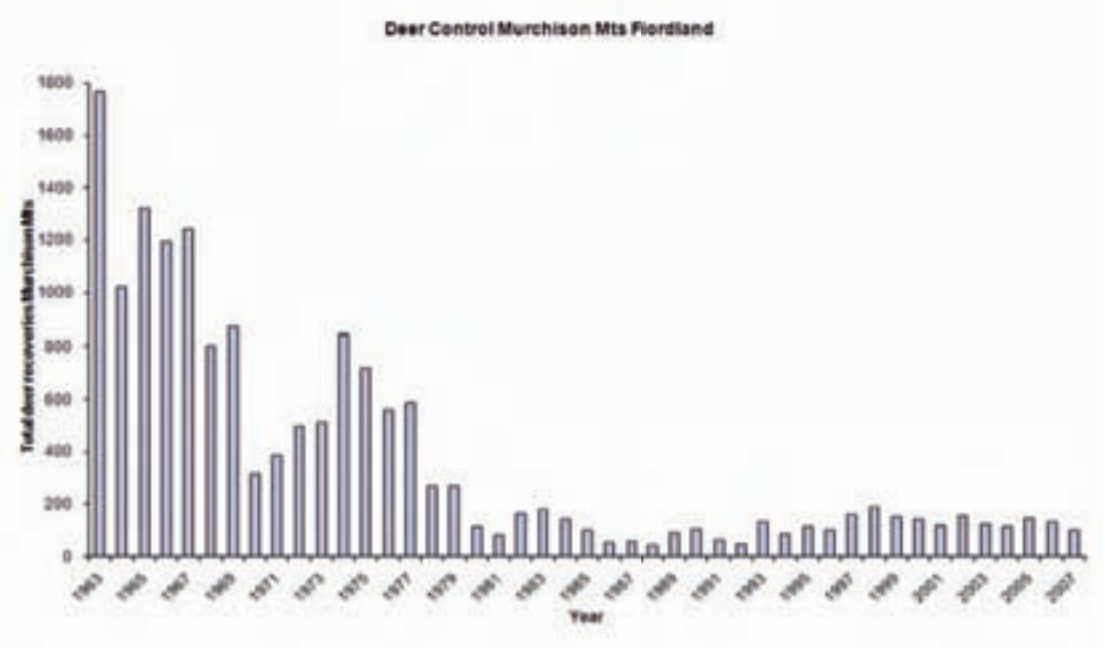
Hunting was also bedevilled by a range of factors that made control difficult. One of these was the turnover of hunters. Along with Evans, FNPB annual reports bemoaned the loss of experience from the field – both the loss of experienced hunters and also hunters with experience in the Murchison Mountains. The weather too played its part. The Murchison Mountains are very wet, and poor conditions not only restricted hunting or led to an early conclusion to a season's work but it also put parties off from returning. Hunters were on a bonus system, which had its rewards when there were plenty of deer (and the weather was good), but once the situation changed, that system was dropped (in 1974) and hunters went on wages.

On the whole, the FNPB and Forest Service were satisfied with kill rates in the first half of the 1970s and in 1976 a new approach added optimism that deer control would be even easier. The introduction of helicopter hunting in the Special Area had been delayed because of uncertainty over how it would impact on takahe, but it debuted in 1976 and complemented ground hunting in a significant way. Cuddihy and Slater, in their c.1979 report on hunting in the Murchison Mountains agreed that the drop in the number of kills per man-day from 1976 to 1978 was partly due to helicopter hunting, but they identified lower deer densities and the difficulty of hunting for deer in the bush as playing their part.[52] The latter was a reference to the fact that most hunters found shooting deer easier in more open country. Forced into the bush, where the wary deer had retreated, they found the going harder.

Since the late 1970s, deer culling has operated in much the same way – a mixture of ground and aerial shooting. Neither is sufficient on its own, but the general approach has kept deer numbers at low levels and ensured that the takahe's habitat has been allowed to revive. The table on page 21 shows how deer kill numbers have levelled off, a sure indication that control is keeping deer numbers at consistently low levels.

Deer are not the only species that have been controlled in the Special

[52] Cuddihy M.J. and Stanley L.M. c.1979, 'The role and effectiveness of ground shooting and the impact of helicopter hunting in the Murchison Mountains', RI 3059, DOC, Southland pp. 7-8



Area. At the north-western margins of the park is an area occupied by wapiti and these animals have been culled inside the Special Area when they have been located. Stoats were long suspected of predating takahe eggs or young and even adults. Conversely, takahe have been known to kill stoats. The threat from stoats was particularly acute during the 2008 season, when dozens of takahe fell prey to them (see 2.1.3 below). Trapping stoats has been a smaller component of controlling pests in the Special Area, and has traditionally been concentrated on the period just before and during nesting to lessen the risk to takahe chicks. Like deer hunting, this pest management involves a considerable amount of fieldwork, with the huts providing comfortable accommodation in the often wet and cold weather conditions.

2.1.3 Contemporary biodiversity management

The formation of DOC changed little with regard to the conservation of takahe. The bird remained under threat and the new regime was in the midst of strenuous efforts to ensure its survival and rejuvenation. Many Wildlife Service staff transferred to DOC and kept their previous roles with regard to species management.

From 1987 onwards, captive reared takahe from Burwood were released into the Stuart Mountains (to the north of the Murchisons), and by 1992, 59 birds had been transferred into the wild. Birds reared in Burwood were released into the Murchison Mountains from 1991 onwards. One of the other key initiatives continued by DOC was the removal of birds to off-shore islands (predator and competitor-free). Beginning in 1984 under the Wildlife Service, birds have been removed to sanctuaries at Maud Island, Mana Island, Kapiti Island and Tiritiri Matangi Island. Some birds have since been moved 'back' to the Murchison Mountains to restock their prime habitat.

A plague of stoats in 2008 badly reduced takahe numbers in the Special Area and by the end of that year only 93 takahe were thought to have

survived. As a result the total number of takahe in New Zealand in 2008 stood at approximately 234. Saving the takahe remains a struggle.

2.2 SECRETARY ISLAND

Secretary Island, part of Fiordland National Park, is a large island abutting the mainland. It is 8140 hectares in size and is notable for the height of its mountains, which rise to nearly 1200 metres above sea level. At its closest, in Thompson Sound, the island is just 950 metres from the mainland. In 1962, the island was made a Special Area because of the importance of its unmodified flora.

At some point in the early 20th century[53] stoats arrived on Secretary Island, having swum across from the mainland. Still, the island's flora was largely unaffected as it remained free of introduced grazing or browsing mammals. Then, some time in the late 1950s or early 1960s, red deer, also good swimmers, breached the gap. Accurately dating this event is difficult. A deer was shot trying to cross in 1959[54] but it is not known if deer were already on the island. It is known that deer were not in the southern section of the island in early 1960[55] but could have been elsewhere on the island in low numbers. When breeding began is also not known but there was activity on the island from at least 1963. A hind and fawn were photographed in 1966.[56] The effect of all this was that a formerly pristine wilderness now contained two significant pests.

Stantley Burn Hut in the late 1970s, soon after its construction. (Southland Conservancy, DOC)

Concern about the potential impact of deer was sufficient for the FNPB, as early as 1965, to investigate building a hut at Deas Cove, Doubtful Sound to act as a headquarters for animal control work on Secretary Island. It was built, but not until 1977. Operations began in 1970, with the aim of eradicating all deer from the island. Hunters lived in tents when they were on the island. Kill numbers were not high initially. There were two deer killed in 1970, none in the next two years and then 25 in 1973. By that year helicopter operations

[53] This is based on the fact that Resolution Island, 35 kilometres to the south, was known (through the observations of Richard Henry) to have been colonised by stoats in the early 1900s. See Brown D. 2005, *Secretary Island Deer Eradication Scoping Document*, Southland Conservancy, Department of Conservation p. 3

[54] Ibid.

[55] Ibid. A visit from an Otago University botanical group took place over the summer of 1959/60.

[56] Ibid.

YEAR	DEER KILLED
1970	2
1971	0
1972	0
1973	25
1974	30
1975	33
1976	17
1977	11
1978	13
1979	24
1980	18
1981	34
1982	28
1983	48
1984	60
1985	48
1986	64

and ground observations confirmed the spread of deer over most of the island. Despite periods of success, deer kill tallies continued to rise over the period to 1986, as can be seen from the table (left).[57]

In 1973, the Forest Service responded to the growing deer numbers by proposing the construction of huts and tracks 'so that maximum hunting pressure can be applied.'[58] It was not until 1978 that the first huts were built on the island. A six-person hut was built at The Gut while three two-person bivouacs were erected at South West Point (now Stantley Burn), Rocky Point and another smaller, portable bivouac at Secretary Lake.[59] The huts offered the first proper accommodation for hunters on what was a difficult place to hunt, highlighted by the difficult terrain, poor weather and dense bush. A partial track system was also cut.

Nevertheless, there were grave doubts about the efficacy of hunting on the island. The number of deer was relatively low and foot hunters rarely saw prey. Little of the island is open so helicopter hunting, while efficient, did not make enough of a dent in numbers. In 1975 natural bait poisoning with 1080 began and while it was reasonably effective, it also could not ensure the eradication of deer.

As the years went by, deer pushed into more remote parts of the island and more modification of its pristine ecology occurred. In studies undertaken in 1982 and again in 1987 Otago University biologist Dr Alan Mark, who prepared a number of reports on the ecology of Secretary Island, reinforced his view that it was not possible "to achieve eradication nor even a level of control compatible with the 'Special Area' status recognised for the Island in the management plan of Fiordland National Park".[60] Although Forest Service hunting had kept the deer population from exploding,[61] removing deer from Secretary Island was clearly going to require a huge effort. Even if deer were eradicated from the island, there was always the chance that more would swim across from the mainland. A Wild Animal Control Plan prepared in 1985 by John von Tunzelman and Lou Sanson concluded that it was possible to achieve low population levels, but no better.[62] Following this report, more huts were built on Secretary Island.

The depressing scenario was played out on the ground, with the budget for deer control ending in 1989, soon after DOC took over. Hunting all but ceased with the exception of some aerial culling in the 1990s. The state of the island declined.

DOC (and its parent departments) had achieved success in removing pests

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57 Mark A.F. 'Response of indigenous vegetation to contrasting trends in utilisation by red deer in two southwestern New Zealand national parks, in *New Zealand Journal of Ecology*, Vol.12 (supplement), 1989 p. 112

58 NZFS Noxious Animals Advisory Committee Meeting, 17-18 October 1973, File 90/0/1/1G, ANZ

59 *Fiordland National Park Annual Report* 1978-79 p. 14, DOC, Invercargill

60 Mark, 1989 p. 112

61 Mark A.F. and Baylis G.T.S. 1982, 'Further Studies on the Impact of Deer on Secretary Island, Fiordland New Zealand', p. 9 (RI 2923, DOC Southland Conservancy)

62 Von Tunzleman J.R. and Sanson L.V. 1985, 'Wild Animal Control Plan, Secretary Island, Fiordland National Park', New Zealand Forest Service, Invercargill pp. 1-2

from a number of off-shore islands and, in Fiordland, stoats had been cleared from three islands along the Fiordland coast. In the wake of that, a proposal was prepared in 2001 to eradicate deer and stoats and restore Secretary Island's habitat. In 2004 the government announced funding for a 10-year project to remove pests off Secretary and Resolution Islands.

A network of over 120 kilometres of track was cut on Secretary Island to prepare for the stoat and deer control programmes. Then 940 wooden and wire mesh trapping tunnels were fixed across the island and stoat trapping began in 2005. The initial kill was 95 stoats. When the traps were rebaited in November that year, only nine more were taken. The traps have been rebaited three times per year since with a small number of stoats being caught. It is expected that in time the small number of remaining stoats will be removed and only the occasional swimmer to the island will need to be trapped in future years. By the summer of 2008, 168 stoats had been removed. Stoats were also trapped on the mainland nearest the island. In association with this work, a bivouac (formerly Esk but renamed Kiwi and now known as Marley) was moved from the Murchison Mountains to Secretary Island in 2007. Deer control began in October 2006 and since then over 580 deer have been removed from the island. The work continues, with success now more likely than ever.

3.0 Physical Background

3.1 MATERIALS

The huts included in this report contain an eclectic mixture of materials. Although the predominant materials are timber and iron – the former for framing and foundations, the latter for external cladding – there are other materials in use that add to the unusual mix.

Almost every hut is timber framed and/or has timber foundations. Timber was the most effective framing material due to its durability, flexibility and weight. This was true whether the hut materials were flown in by plane or helicopter. Timber is also the choice of manufactured linings, such as hardwood or plywood, which line walls and ceilings. Plywood flooring is also a common sight, along with traditional tongue and groove (T&G).

There are at least aluminium, or dexion-framed, bivouacs in the study group. Although, nationally, such framing was not in wide use, it was a useful component that gave a structure strength and saved space and weight.

Cladding is mostly iron (or more accurately, galvanised iron or galvanised steel) – either corrugated or flat. Many huts, including most of the flyable bivouacs, are also clad (walls and roof) in aluminium, which is lighter and impervious to decay. The cladding is either flat or with a shallow corrugation to add some rigidity. Corrugated iron was used for the roof material on the two man bivouacs while aluminium was the exterior cladding for the hexagonally shaped versions that were built by Brian Watt at the NZFS's Te Anau base. Chimneys, where they exist, are mostly made of flat iron. Perspex is a common sight on huts, used as a rudimentary skylight, particularly where its profile matches the standard corrugated iron shape. The standard corrugated iron profile, known today as 'custom orb', is in common use. Other profiles are evident, including a trapezoidal rib at Robin Saddle Hut and a high rib on the annexes attached to the standard bivouac.

Apart from timber-based linings, hut interiors (particularly early huts) feature aluminium foil insulation (sisulation), or paper and chicken wire.

3.2 STYLES

The huts can be grouped loosely into two types – the small standard-designed hut (often the Forest Service S81 with variations or an expanded 2-person bivouac), and the flyable bivouacs, of which there was one main type. Beyond that are the huts built by the FNPB, most of which

were based on other designs in use in the park. The Wildlife Service also built huts but these would also seem to have been at least based on Forest Service designs. There are also one-offs that cannot be readily categorised; one – McKenzie Burn – was built out of materials salvaged from an earlier hut.

Possibly the first hut built in the Murchisons – Takahe Valley – still stands and its traditional gabled form is recognisable today. The second period of construction began with FNPB huts, Wisely and Robin Saddle, neither of which appear to have been built from standard NZFS designs but more research might identify some park board antecedents. Certainly the cladding used on these huts is similar to that used on other FNPB huts built at the same time, such as on the Dusky Track.

Forest Service built huts followed standard designs. The majority were S81 designs – capable of incorporating four bunks but mostly only two or three bunks – that were used in the lower reaches of rivers or at least below the bushline. These were mainly built between 1963 and 1967. There were 2-bunk dog-box bivouacs, but in the Southland style they were adapted to make them bigger and more suitable for regular use.

The main era of bivouac construction was in the 1970s. The NZFS acquired a bivouac design that was light enough to be flown by helicopter. These flyable bivouacs were identified as coming in two types – Bivvy 1058 and 1059 – and it was a simple matter to attach to strops and drop them at pre-prepared sites. The most common bivouac is the hexagonally shaped version, designed (as noted in 3.1) by Brian Watt and initially built by him and Charlie Rhodes at the NZFS's Te Anau base. Later bivouacs of this design, such as Miller and Dana, were built by Rex Cockburn. The other versions include an arched structure (e.g. Mystery Burn, brought in from elsewhere). A purpose-built annexe, gabled and clad with corrugated iron, was later appended to many of the bivouacs to provide a place to remove boots and store gear. All the bivouacs were simple structures internally, with room for one or two bunks and a cooking area, which is presumably why so many were fitted with an addition to store gear and allow the removal and storage of wet clothing and footwear.

3.3 FUNCTION

The huts in the Murchisons and Secretary Island were intended primarily to offer those men and women in the field more comfortable overnight accommodation. Hunters and researchers were, with the exception of a few valleys in the east of the Murchisons, without huts and either lived in tents or tent camps. The functions of the huts was simply to offer better shelter, warmth, a base for operations – vitally necessary in a place as wet as Fiordland. It also offered security against the destructive activities of kea.

For the hut builders, the structures had to be able to be constructed cheaply, easily and quickly, and to offer a standard of accommodation sufficient for the requirements of their users. None of the huts were

lavish, but by comparison with the alternative they were a major benefit to the work of those in the field.

A singular aspect of the huts, and particularly the bivouacs, is how many of them were modified by additions over time. The most obvious addition was the fixing of annexes to the fronts of bivouacs, possibly as a response to greater use, or to allow better use of the principal structure, or as staff came to grips with the environment in which they were working.

4.0 Significance

4.1 HISTORICAL

The historical significance of the huts in the Murchison Mountains and Secretary Island is derived from the decisions to declare both places Special Areas within the Fiordland National Park. Because of their hugely important fauna and flora, these places had to be managed in ways that extended beyond the general policy (begun in 1930) to reclaim New Zealand's forests and national parks from introduced species. The actions taken after that were a consequence of the government's determination to protect the biodiversity in these special places, driven by the way that takahe became an icon species.

The huts in the Murchison Mountains were built with at least two main uses in mind – animal control and bird research/monitoring and management. Over the ensuing decades there have been many more uses. Huts in many other parts of the country have been used for multiple purposes over their history, but not a large collection of huts in one place and not from the time of their construction. Animal control was never instituted anywhere else on this scale to protect the habitat of one bird. The government has since spent tens of millions of dollars in the bid to save the takahe, a huge input of resources for the conservation of a single species on the mainland.

At Secretary Island, it was primarily the flora that the government was trying to conserve, but the construction of huts became a matter of priority as the difficulty in eradicating the species that had colonised the island (and the challenges to protecting the biodiversity) became more apparent.

The huts themselves are, like tracks and bridges, a physical manifestation of government effort to protect the biodiversity of these places. Together they tell the story of human effort expended to save threatened species and exceptional habitats. Their historical uniqueness is that they have never been used (certainly not officially) by private parties or anyone not on government business. Many hundreds if not thousands of specialist staff, contractors and volunteers have used the huts and each place wears the legacy of that use. These people who have used these huts are leaders in their field and scientists and researchers of national and international importance.

4.2 CULTURAL/SOCIAL

The social or cultural value of the huts in the Special Areas is constrained on one level by the relatively narrow use they have had, i.e. the minimal or non-existent public use of the huts has removed that dimension from their histories. However, the almost exclusive use of the huts by professional hunters, biologists, government workers, volunteers and invited visitors has brought its own character to the huts. Over a period of up to 50 years these huts have seen a sub-culture develop away from the public eye, with features and fittings, literature and hut books all reflecting the nature of the government's scientific and animal control work and the personalities who have undertaken that work. This is evident also in the appearance of the huts, many of which have benefited positively from not having had to host generations of public trampers and hunters.

In a general sense, the cultural value of the huts is the same to the men and women who use them regardless of whether the public is also using them. The huts are highly regarded for the shelter they provide in a hostile environment, for the comfort and security they offer and for the efficacy with which they can be used as a base of operations. Some huts are regarded with more affection than others, for a host of reasons – because of their character, for events that took place there, for the nearby scenery, and for their association with admired figures in the above-mentioned sub-culture.

4.3 PHYSICAL

The importance of this collection of huts is that it represents the contributions of the three departments that played a role in the Special Areas – the Forest Service and, to a lesser extent of the FNPB and Wildlife Service. There are no truly outstanding huts in this collection, but it does showcase variations and curiosities that are part and parcel of hut construction in Southland. The Murchison Mountains was certainly not the only place in New Zealand where multiple government agencies built huts, but they do offer an interesting assortment of huts built over a largely 20 year period in one specific area.

In the Murchison Mountains, the huts were predominantly built by the Forest Service and the types and styles of their huts do reflect their assessment of the needs of the area, particularly with regard to hunting. This selection is dominated by two main types of hut – the timber framed S81 (and some smaller timber bivouacs), and the flyable bivouacs. Their physical significance is not so much in any uniqueness but in the way they were built and used and adapted to the challenges of the terrain and the work required. The Te Anau base used much the same type of huts in the Eyre and Takitimu mountains. The Secretary Island huts were built by Lands and Survey, for the FNPB, for work to be done by NZFS.

4.4 NATIONAL CONTEXT

From a national context, the importance of these huts lies primarily in their historical role and the uses they have been put to. The huts are, together with the tracks and bridges and other facilities, the legacy of government decision to place the highest priority and protection on these places of great ecological significance. In that sense, they are nationally unique — there being no land areas of a comparable size protected in this fashion in New Zealand.

The huts themselves are largely unremarkable, in the sense that they are not physically dissimilar to other huts built in Southland's national and forest parks. Some huts have been changed to suit particular needs – some quite eccentrically – but their principal point of difference is that they have had no public recreation use. This has allowed at least some to evolve or be used in a fashion different from other parts of the country. In other words, the development of, or change to these huts has been outside the standards applied to visitor huts. This is best exemplified at Wisely Hut, which has literature, hut books and hut gear that would be unlikely to be found in any publicly accessible hut.

5.0 Recommendations

5.1 RANKING OF HUTS

Introduction

Decisions on ranking should be based on as broad a range of values as possible. The overall value of the resource is relatively easy to quantify but for most of the huts, sources of information have been inaccessible or reside in the unexpressed reminiscences of individuals. In circumstances such as these, the huts' physical value often becomes the primary determinant. This is not ideal, but the limitations of this project make such an approach necessary. It may mean that huts with strong historical or cultural significance will be removed or altered unwittingly. However, as far as is possible, huts with as wide a range of values as possible have been ranked the highest. It is also possible that the huts visited by the author may be favoured over the others, but again this was kept in mind while the selection was made.

Ranking

The goal of ranking is to determine the relative significance of the collection of huts and recommend the level of protection necessary to retain a representative range of heritage. All the huts were ranked from Grade 1 to 3, with 1 being the highest and 3 the lowest.

Grade 1 huts are those that have high historic, cultural and/or physical significance. They may have high significance in just one of those values but sufficient to mark them out as worthy of retention. Some of these are the best representative examples of their theme or type, or they have some rarity or association value. They should be managed akin to actively managed historic assets.

Grade 2 huts also have heritage value but are either not the best representative examples or have had changes made to them that detract from their value or lack rarity or strong association value.

Grade 3 huts have relatively low heritage value and, if required to be kept, should be managed for uses other than heritage protection.

Table of ranked huts

NAME OF HUT	AREA	YEAR BUILT	RANKING
Takahe Valley Hut	Murchison Mountains	1954	1
Robin Saddle Hut	Murchison Mountains	1962	1
Lake Te Au Hut	Murchison Mountains	1963	1
Wisely Hut	Murchison Mountains	1961	1
Top Ettrick Hut	Murchison Mountains	1964	1
Dana Bivouac	Murchison Mountains	1984	1
Stantley Burn Hut	Secretary Island	1978	1
Aurora Point Hut	Murchison Mountains	1963	2
Chester Burn Hut	Murchison Mountains	1965	2
Chester Lake Bivouac	Murchison Mountains	1975	2
Dana Hut	Murchison Mountains	1979	2
McKenzie Burn Hut	Murchison Mountains	1964	2
Miller Bivouac	Murchison Mountains	1984	2
Snag Burn Hut	Murchison Mountains	1963	2
Top McKenzie Hut	Murchison Mountains	1979	2
Rocky Point Hut	Secretary Island	1978	2
Mystery Burn Bivouac	Murchison Mountains	1985	3
Lake Eyles Hut	Murchison Mountains	1963	3
Camouflage Hut	Murchison Mountains	1972	3
Snag Burn Bivouac	Murchison Mountains	1975	3
Chester Burn Bivouac	Murchison Mountains	1975	3
Jennings Bivouac	Murchison Mountains	1975	3
Plateau Creek Hut	Murchison Mountains	1979	3
Waterfall Creek Bivouac	Murchison Mountains	1975	3
Woodrow Bivouac	Murchison Mountains	1975	3
Marley Bivouac	Secretary Island	1975	3
Point Burn Bivouac	Murchison Mountains	1976	3
Log Cabin Bivouac	Murchison Mountains	1999	Not assessed

5.2 GUIDELINES FOR MANAGEMENT

Guidelines are provided for the future management of each grade of hut. These outline constraints on hut work, and what changes can be implemented without advice from the Historic Heritage TSO. Guidance specific to individual huts is included in the Hut Inventory Sheets (appendices) and these highlight the most important features to retain when undertaking work on Grade 1 and 2 huts.

5.2.1 Grade 1 huts

These huts should be treated as actively managed historic assets.

Service Standards

DOC visitor huts service standards should be applied only where they do not conflict with the principles of heritage management and the guidelines below. Otherwise, technical support staff will need to be consulted and it may be necessary to request an exception to the standards through the line.

Work planning

Ideally a conservation plan should be commissioned prior to any work that would alter the fabric of the building. Conservation plans should be completed where there are complex conservation issues and competing values that need to be weighed against each other. This would be established on a case by case basis. Alternatives to the preparation of a plan would be to a) prepare a general management guideline for such buildings (if acceptable to the Historic TSO), or b) a work specification prepared in conjunction with the Historic TSO, based on a sound knowledge of the history and significance of the hut. (See Appendix 3.)

Any plan, including a conservation plan, should meet DOC best practice standards and include policies that conform to the standards of the International Committee on Monuments and Sites (ICOMOS), as presented in the ICOMOS New Zealand Charter 1993.

Acceptable levels of change

Relocation, removal or replacement of, and additions or alterations to these huts are not acceptable and should not be considered. The placement of windows and doors, and internal layout or floor plan of the building should be retained unless it takes the form of restoration (which is subject to controls – see below).

Exceptions are where user safety will be compromised. For example where a building might be affected by serious natural disaster such as flood, erosion, slip, earthquake, avalanche, or rock fall, there will need to be consideration of either relocation or removal.

Restoration

Where modification of original design (for example introduction of wood-burners, re-poured concrete hearths, and aluminium doors or windows) has already occurred these can be left in place until the end of their

useful life, unless otherwise stated in a conservation plan. When these modified features are due for replacement consideration should be given to reinstating (if fabric exists) or reversing the modern work/feature back to the original form of construction. An example of this may be the return to timber joinery from aluminium when it is due for replacement.

There may be instances where modifications have become part of the history of the place and it is important or at least acceptable to retain them, in which case the newer material should be managed as significant fabric. In other cases, where modifications cannot be reversed without triggering the need for a building permit, some mitigation work may be required to lessen the visual impact of the modification, or more innovative solutions sought. These are issues that should be addressed through the preparation of a conservation plan.

General principles

All work carried out at Grade 1 huts should meet conservation standards, and in particular should follow the conservation principles set out in the *ICOMOS Charter for the Conservation of Places of Cultural Heritage Value.* In summary, this means:

Repairing the hut with original or matching materials, retaining as much as possible of the original fabric. (Repairs to a technically higher standard than the original are allowable where the life expectancy of the element or building as a whole is enhanced.)

Restoring lost features where there is clear evidence of the original form and detail.

Maintaining the hut to a high standard so that it is always weatherproof, tidy and functional. Maintenance should be carried out regularly and according to a plan.

Identifying new materials used in maintenance, repair and new work to distinguish them from the old.

Keeping records of all work.

5.2.2 Grade 2 huts

Summary

Huts in this grade should be treated as actively managed historic assets, but some adaptation may be acceptable. Where there is doubt about the relative impact of such work, it may be necessary to seek the approval of the TSO Historic. Key visitor hut service standards can be met, but in as sympathetic a manner as possible.

Service Standards

DOC visitor huts service standards can be applied but they should not conflict with the principles of heritage management and the guidelines in Appendix 3. Where intervention comes into conflict with heritage values, technical support staff should be consulted

Work planning

A conservation plan is not required prior to any work but a work specification, developed in line with the guidelines (see Appendix 3) and approved by the TSO Historic, should be prepared.

All work planning should be to DOC best practice standards and should have regard to the standards of the International Committee on Monuments and Sites (ICOMOS), as presented in the ICOMOS New Zealand Charter 1993.

Acceptable levels of change

Relocation, removal, or replacement of, and major additions or alterations to these huts are not acceptable and should not be considered. The placement of windows and doors, and internal layout or floor plan of the building should be retained as much as possible. However, minor changes or alterations to these huts (particularly internally) may be acceptable, depending on the level of change contemplated.

Reversion

Where modification of original design (for example introduction of wood-burners, re-poured concrete hearths, and aluminium doors or windows) has already occurred these can be left in place until the end of their useful life. When modified features are due for replacement, consideration should be given to reinstating fabric (if it exists) or reversing the modern work/feature back to the original form of construction. An example of this may be the return to timber joinery from aluminium when it is due for replacement.

There may be instances where modifications have become part of the history of the place and it is important or at least acceptable to retain them, in which case the newer material should be managed as significant fabric. In other cases, where modifications cannot be reversed without triggering the need for a building permit, some mitigation work may be required to lessen the visual impact of the modification, or more innovative solutions sought. These are issues that should be addressed through the preparation of a work plan.

General principles

All work carried out at Grade 2 huts should meet conservation standards, and in particular should follow the conservation principles set out in the *ICOMOS Charter for the Conservation of Places of Cultural Heritage Value*. In summary, this means:

Repairing the hut with original or matching materials, retaining as much as possible of the original fabric. (Repairs to a technically higher standard than the original are allowable where the life expectancy of the element is enhanced.)

Restoring lost features where there is clear evidence of the original form and detail.

Making alterations or additions only where such change is essential to continued use, where the change is the minimum necessary, and where

there is no loss of heritage value. Reversible change is preferable to irreversible change.

Maintaining the hut to a high standard so that it is always weatherproof, tidy and functional. Maintenance should be carried out regularly and according to a plan.

Identifying new materials used in maintenance, repair and new work to distinguish them from the old.

Keeping records of all work.

5.2.3 Grade 3 huts

Summary:

These huts should be managed as any other asset.

Service Standards

There are no restrictions on the application of Service Standards but if it is decided to apply a higher conservation standard then advice for Grade 1 or 2 huts should be consulted, along with the guidelines in Appendix 3.

Acceptable levels of change

Relocation and removal at the end of life are acceptable. Modification during hut life is acceptable.

5.3 HUT SERVICE STANDARDS

As noted in Harsveldt and Egerton's report on Southland huts, the Hut Service Standards (HSS) for Standard Huts and Basic Hut/Bivvy do not inherently conflict with the protection of heritage values; it's the way they are interpreted that seems to be the problem.

As with Southland's other historic huts, it's the time taken to train, educate and advocate to staff members that will ensure that the values of the huts are maintained by those responsible for the maintenance of the huts. The temptation to see these huts as open to a wider variation in standards given that the public does not use them should also be guarded against. Adherence to the HSS and a measured response to any issue should ensure that heritage values are not undermined.

Here are the major issues that arise over service standards:

Colour schemes: There is no requirement to follow any particular standard, which the HSS deems need only be 'appropriate' i.e. a hut need only be bright where a building needs to be seen in marginal conditions, and otherwise it should blend in. The huts in the Murchisons and Secretary Island are – generally - painted sombre tones or in the case of aluminium and claddings with a protective coating, not painted at all. Unless it is desirable to revert to a hut's original colour, at some Grade I huts for instance, this arrangement should remain.

Signage: The HSS states that 'The name of the hut shall be on a sign on the outside of the building'. That means that it need be no bigger than to identify the hut to those arriving. A sign too large will detract from the appearance of the hut. There are few signs on the huts in this study, but commonsense should ensure that they remain discreet. Likewise, the profusion of internal signs e.g. the standard hut notice, local hut notice, carbon monoxide warning and a water quality notice etc. also have the potential to detract from the aesthetic value of the interior of a hut, especially smaller huts. Apparently, these signs are now to be merged into one, which should assist with this issue.

Associated buildings: Meat-safes, dog kennels, and toilets have to be a specified distance from huts, depending upon hut type. However, where a hut is Grade 1 or 2, the original structure should be retained, either in its present position, or somewhere nearby if it must be moved. It should not be necessary to replace such a structure but if a new structure is required, it should be carefully designed and placed. The new toilet at Lake Te Au for instance is an example where the construction of a new Norski style toilet could have been better handled.

Verandahs and decks: While considered desirable as an addition to many huts, verandahs and decks are frequently impossible to append without severely detracting from the appearance of huts with heritage values. At the least, such an approach should be avoided, particularly on standard NZFS huts. If they must be built, then they should be sited away from main elevations.

Cooking benches: While the HSS offers a desirable total length of cooking bench per person, this should not be seen as mandatory. If there is a negative impact on heritage values, cooking bench space should be left as it is.

Fireplaces and chimneys: These are becoming rarer due to diminishing dead wood supplies and risk of live vegetation being cut. If a fireplace is closed up, the chimney can still be left in place, especially where they are such a key feature of many huts. Standard NZFS designs come to mind here.

Candle holders: There is no need to remove old NZFS candle holders and replace with them with new DOC-approved designs. The former meet the required standard and can be used safely.

There are more such examples. All these issues can be dealt with by ensuring that any intervention is tested against the heritage values of the hut.

5.4 ARCHAEOLOGICAL SITES

There is at least one archaeological site in Takahe Valley associated with temporary Maori occupation of the valley. This is a rock shelter with the remains of various birds, including moa and kiwi, and evidence of butchery (Site D42/1). Other than that, no other archaeological sites are

known to be in either Special Area. For any biodiversity programme work that involves ground disturbance near the rock shelters in Takahe valley, archaeological advice should be sought from the historic TSO. For any accidental discovery of archaeological sites, artefacts or human remains the Historic TSO should be contacted, and standard DOC processes should be adhered to.

5.5 NETWORKS

Over the past 50 or more years, a number of networks have been established in and around the Special Areas. Those networks are based around the key activities that take place in those areas, viz. hunting, takahe research and monitoring, vegetation monitoring, kiwi management, stoat and possum eradication. The staff who undertake this work use different sets of huts and different routes. Such routes might also depend on the season, the type of activity and the specific priorities. Collectively, the huts of the Murchison Mountains form a network of national significance.

Recommendation: Although hut removal might undermine the value of the network, the changing nature of work in the special areas, which drives hut use, means that changes to the network should generally be seen as part of that continuum.

5.6 REVIEW

This report has limitations in its scope and the depth of information gathered. There is every likelihood that new and better information may change the nature of the assessments and the recommendations – if they have not been acted on already. Perspectives of heritage value may also change and some places seen in a new light. It is therefore important that this document and its conclusions are reviewed regularly and the appropriate changes made.

Recommendation: This report should be reviewed and updated as new information comes to light.

5.7 FURTHER RESEARCH

Much more could be done to establish the history and relative significance of these huts. There are generations of hunters, scientists, researchers, volunteers, carpenters, track workers and the like who will have memories of using the huts and the activities associated with them. They should be interviewed if and when the opportunity arises. This report should be made widely available and potential contributors given the opportunity to offer any new information to the historic TSO, who will update the report. In addition, the inventory sheet for each hut should be put in

that hut with a similar request for further information.

Correspondence files have been only been partly useful in this work. There are large gaps in the record of the activities in these areas, particularly surrounding the construction of huts, to the extent that there almost appears to be a conscious effort to reduce the record of these activities on government files. In other words, it is possible that the various departments were trying to keep their activities in the Special Area quiet. It is also possible that there are more files in existence that were not located, particularly files generated by the Forest Service's Te Anau office that deal with the construction and maintenance of the huts.

Recommendation: New sources of information should be pursued and incorporated into the report when they are found. Special emphasis should be placed on any specific hut building files, if located.

6.0 Sources

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Appendix 1: Inventory entries

INDEX OF HUTS

AURORA POINT HUT

Construction date: 1963

Grid reference: D42 E93619 N40634

Site visited: No

AMIS asset number: 47021

Original department: New Zealand Forest Service

Original type: SF81

Designer: NZFS

Builder: Lou Griffith & Alan Tough

Sleeping capacity: 4 Bunks

Floor area: 4 x 3.2 m, one room

Location: Located on slightly sloping site close to Lake Te Anau at the entrance to Middle Fiord, about 4 km north of the mouth of Ettrick Burn.

Associations: Sited on lakeside track between Snag Burn and Ettrick Burn.

Hut history: One of the first huts constructed by the NZFS after it took over hunting the Murchisons in 1962. As it was located so close to the lake, the prefabricated sections were brought in by the *Tawera*. The large window was brought in by floatplane. In 2004, the hut foundations were upgraded, wood store removed and a deck built. Never used much for takahe work, the hut is still primarily used for deer control on a limited basis.

Fabric description: S81 with a timber frame, flat iron cladding on walls and corrugated iron roof (with skylights). 'External' chimney, two windows and timber piles. Porch and deck built in front of hut entrance, with access via a ledged and braced door. Floor is timber lined. Original fireplace, with lintel, and benches all intact. AMIS says four bunks but photos show just two.

Fittings and chattels: Chairs, cooking utensils (table?)

Modifications: n.d. Porch added, 2004 Foundations upgraded, wood store removed, deck added

Associated buildings: Toilet

Associated historic features: None known.

Significance: One of the first – if not the first – NZFS huts in the Murchisons. Construction was aided by the use of a boat to drop materials. Built to assist with deer control, it has kept that use ever since. Remains in largely original condition.

Recommendation: Retain (G2)

CAMOUFLAGE HUT

Construction date: 1972

Grid reference: C42 E80800 N45300

Site visited: No

AMIS Asset number: None

Original department: Wildlife Service

Original type: Not known

Designer: Not known

Builder: Not known

Sleeping capacity: 4 Bunks

Floor area: Unknown, one room

Location: Just below the bushline about 2.5 km west of Miller Peak.

Associations: Just below the bushline about 2.5 km west of Miller Peak.

Hut history: Built in 1972 to replace Orbell's hut (Island Creek) built by the Wildlife Service nearby in 1961. The latter had been reduced to a shelter by the 1970s. Built for takahe work initially, the hut was also used for animal control before falling into disrepair, presumably through lack of use.

Fabric description: **A** timber-framed hut, clad all over in corrugated iron. The piles and bearers are timber. Images show two windows and one ledged and braced door but no evidence of a chimney. The interior has timber lined floors while the internal framing is exposed in front of aluminium insulation. There are benches and seats fixed to the interior framing. [Note: Images from 2003 show the hut in poor condition internally. It is not certain if this is still the case.]

Fittings and chattels: Table, chairs

Modifications: None known

Associated buildings: Toilet

Associated historic features: None known.

Significance: The hut does have tenuous historical links to the work of Orbell through his construction of the previous hut on this site. Its historical and physical significance is otherwise relatively modest.

Recommendation: Remove (G3)

CHESTER BURN HUT

Construction date: Early 1960s (in Eyre Mts)

Grid reference: B42 E30400 N34560

Site visited: Yes (no internal access possible)

AMIS Asset number: 19492

Original department: NZFS

Original type: SF81

Designer: NZFS

Builder: Lou Griffith & Alan Tough

Sleeping capacity: 2 bunks

Floor area: 3 x 2.4 m, two rooms

Location: On true left of Chester Burn, a short walk from the river mouth at South Fiord, Lake Te Anau.

Associations: Start of Chester Burn track system.

Hut history: FNPB annual reports state that there was a Wildlife Branch hut in Chester Burn from 1949. The location of this hut, if built, is not known. The current hut was originally a bivouac sited in the Alton catchment of the Eyre Mountains in the early 1960s. Once obsolete it was dismantled and moved to Chester Burn (date unknown). The porch and woodshed were added later. Chester Burn was an early catchment of interest because of its easy accessibility from the lake. This hut has always been an important deer control hut. It is locked to keep the public out.

Fabric description: A small hut, but not a standard design, this was enlarged with the addition of a small anteroom (like an enclosed porch) with separate entrances for each space. There is also a lean-to for firewood on the west elevation. Timber framed with timber piles, the hut is clad (walls and roof) with corrugated iron. There is a chimney and fireplace. There are three windows, one of which lights the anteroom. The cosy arrangement has two bunks closely juxtaposed with the cooking facilities.

Fittings and chattels: Table, stool, fire screen, cooking utensils

Modifications: n.d. Addition of porch, firewood storage

Associated buildings: Toilet

Associated historic features: None known.

Significance: This hut has been associated primarily with animal control, having played a significant role in deer culling since the mid-1960s.

Recommendation: Retain (G2)

CHESTER BURN BIVOUAC

Construction date: 1975

Grid reference: C42 E78200 N35800

Site visited: Yes

AMIS Asset number: None

Original department: NZFS

Original type: Flyable bivouac

Designer: NZFS

Builder: Brian Watt?

Sleeping capacity: 2 bunks

Floor area: 9 m^2 (AMIS), two rooms

Location: A short walk from the mouth of Chester Burn, South Fiord, Lake Te Anau.

Associations: On Chester Burn track system and close to track up to Lake Eyles.

Hut history: Flown in by NZFS in 1975. Built primarily for deer control.

Fabric description: Composed of a 'flyable' bivvy with an annexe, the structures are timber framed and clad in flat aluminium on the original and corrugated iron on the annexe. The interior of the rear (or west) portion, used for sleeping and food preparation, is lined with hardwood. The front (or east) portion is used for boot, coat and gear storage. The floors are lined with timber boards.

Fittings and chattels: Cooking utensils, cooker, bucket, blanket

Modifications: n.d. addition of second bivvy.

Associated buildings: Toilet

Associated historic features: None known.

Significance: Not known.

Recommendation: Move (G3)

CHESTER LAKE BIVOUAC

Construction date: 1976

Grid reference: C42 E78200 N35800

Site visited: No

AMIS asset number: 46595

Original department: NZFS

Original type: Flyable bivvy

Designer: Lionel Lobb

Builders: Rodney Russ, Dave Garrick & Andy Cox

Sleeping capacity: 2 bunks

Floor area: 8m^2 (AMIS), one room

Location: In clearing adjacent to Chester Lake, at head of Chester Burn.

Associations: Part of Chester Burn track system; one of three huts in that catchment

Hut history: Originally built as a flyable bivvy for kakapo work, it was first sited on the Tutuko High Bench, north of Milford Sound, in 1976. It was designed by Southland farmer and conservation volunteer Lionel Lobb, and built by Wildlife Service workers Rodney Russ, Dave Garrick and Andy Cox. It was brought to Te Anau in 1984 and it was refurbished by Dave Crouchly and Nic Torr. They pulled the cladding off, rust-proofed the dexion framing, placed reflective paper over it, and then reinstated the cladding. Perspex was inserted in the gable end opposite the door, and bunks and a bench installed. It occupied a number of sites in the Murchisons, including a side branch of the McKenzie Burn and in the eastern side of the mountains for managing stoat control trap lines and tracks. In about 2003 it was moved to Chester Lake. Since then the hut has mainly been used for deer control.

Fabric description: Aluminium (dexion) framed hut – one of the only ones in the Murchisons – with flat iron cladding on walls and roof. No chimney and no porch. Hut sits on skids with eyebolts for attaching cables for flying in. Timber framed door, also clad with iron. T&G floor. Interior walls are lined with reflective paper.

Fittings and chattels: Cooking utensils, cooker, bucket, blanket

Modifications: None known

Associated buildings: None

Associated historic features: None known

Significance: Hut has had a remarkably diverse history, having been located in at least four different places and on a variety of roles, inside and outside the Murchisons. The only hut or bivouac in the Special Area with an aluminium frame, a system of hut construction that was used from the late 1950s onwards on a small number of New Zealand huts. The hut is also the only bivouac with the basic gable form and no additions. It has had regular if low-scale use.

Recommendation: Retain (G2)

DANA HUT (CROWS NEST?)

Construction date: 1979

Grid reference: C42 E88500 N40100

Site visited: No

AMIS asset number: 19754

Original department: Lands & Survey and Wildlife Service

Original type: Not known

Designer: Not known

Builder: L&S & Wildlife Service

Sleeping capacity: 2 bunks

Floor area: 4.2 x 2.6 m, one room

Location: Sits above the bushline on the eastern end of the Dana Peaks, which straddle the Ettrick and Snag Burns.

Associations: About 3 km from Dana Bivouac. No nearby track system.

Hut history: Probably the hut previously known as the Crows Nest on Dana Peak and built by L&S and Wildlife Service as a combined initiative. Used almost solely today for takahe work although some hunting may have been undertaken in earlier decades.

Fabric description: No bigger than a bivouac, this hut is a one-off in the Murchisons, having a pitched roof, narrow eaves and flared walls. The roof is clad with corrugated iron and the walls appear to be sheathed in plywood. There is an aluminium framed door at one end (accessed via a small platform) and a double window at the other. The interior has two bunks - at right angles to each other – while the bench and cooking facilities occupy the rest of the space. It is understood to contain some interesting graffiti.

Fittings and chattels: Cooking appliances and utensils. Bunk squabs.

Modifications: Addition of second bivouac.

Associated buildings: None

Associated historic features: None known

Significance: Its one-off design is interesting and a sensible response to the terrain. Not enough is known about its history to make any claims under that criterion.

Recommendation: Retain (G2)

DANA BIVOUAC

Construction date: 1984

Grid reference: C42 E85300 N41000

Site visited: Yes

AMIS asset number: 19928

Original department: NZFS

Original type: Flyable bivouac

Designer: Not known

Builder: Not known

Sleeping capacity: 2 bunks

Floor area: 2.4 x 1.8 (x 2), one room

Location: Located high at the top of a valley in Dana Peaks, which lies between the Snag and Ettrick Burns.

Associations: Approx. 3kms from Dana Hut and Snag Burn Bivouac. Sits between the tracks up the Snag and Ettrick Burns.

Hut history: Originally one flyable bivvy until a second one was added at a date unknown, possibly brought in from another site. It is used solely for takahe work and the hut book (and the hut's excellent condition) confirms that it gets relatively little use.

Fabric description: Essentially two flyable bivouacs fixed together (with strips of timber covering the join), this hut has two compartments – one for cooking and sleeping and the other for gear and boot removal. The former is timber framed with an aluminium cladding and an internal manufactured lining. The latter is the same but is unlined internally. The hut is lit by a window in the door and a window at the opposite end. There is a skylight in the gear room. There are cupboards below the cooking bench and two bunks in the main room.

Fittings and chattels: Cooker and cooking utensils, bunk squabs, various buckets, spade.

Modifications: Addition of second flyable bivouac

Associated buildings: None

Associated historic features: None known

Significance: Used primarily (and sparingly) for takahe work since its construction. Occupies a magnificent site at head of a valley. Hut in exemplary condition.

Recommendation: Retain (G2)

JENNINGS BIVOUAC

Construction date: 1975 (AMIS)

Grid reference: C42 E74714 N46786

Site visited: No

AMIS asset number: 12277

Original department: NZFS

Original type: Flyable bivouac

Designer: NZFS?

Builder: Brian Watt, NZFS

Sleeping capacity: 2 bunks

Floor area: Two rooms

Location: In forest on true right of Junction Burn, in the Woodrow Burn catchment, several kilometres from main divide.

Associations: None known.

Hut history: Hut built during flush of flyable bivouac construction. Mainly used for deer control over its history. In 2005 the hut had a major upgrade (described below) that required its removal off-site.

Fabric description: Another conjoined hut ('extended bivi' design), Jennings is composed of the original steel-framed and flat aluminium-clad gabled structure, and a timber-framed and corrugated iron clad annexe, the latter presumably used for gear removal and storage. There is a skylight and a vent on the roof. There are two bunks in the main space, along with a cooking bench and shelves.

Fittings and chattels: Cooker, cooking utensils, bunk squabs, heater

Modifications: 2005 hut removed off-site to a workshop, stripped down, framing sand blasted and powder coated, then linings replaced.

Associated buildings: Not known

Associated historic features: None known

Significance: This hut has no specific features of significance although it does have representative value as an example of a flyable bivouac.

Recommendation: Uncertain (G3)

LAKE EYLES HUT

Construction date: 1963

Grid reference: C42 E76635 N35656

Site visited: Yes

AMIS Asset number: None

Original department: NZFS

Original type: S81

Designer: NZFS

Builder: Johnny Reardon

Sleeping capacity: 3 with 4 bunks

Floor area: 20m^2 (AMIS), two rooms

Location: Above the bushline, just east of Lake Eyles, and west of Chester Burn

Associations: Part of a cluster of huts and tracks in the Chester Burn catchment.

Hut history: One of the first NZFS huts, Lake Eyles was an S81 with two bunks, later extended. It was, like many of the other early huts, built above the bushline to aid hunting on the tops. The hut materials were flown in by floatplane and erected by Johnny Reardon, celebrated NZFS hunter. It has been used for both deer control and takahe work over its history and was much favoured by hunters as a comfortable base.

Fabric description: A S81 two-bunk hut. This hut was extended (date unknown) on its south elevation and two more bunks added in the new space. The hut is timber framed, with corrugated iron cladding on the roof and flat iron on the walls. The fireplace and chimney have been removed. The entrance is located on the east side of the addition and the original entrance door opens into the original hut space. Each space is lit by just one window. The main space is lined with hardboard, but the addition is unlined, while the floors are T&G boards. There are double bunks in both spaces, shelves and a bench.

Fittings and chattels: Cooker, cooking utensils, bunks and bunk squabs

Modifications:
n.d. Small addition to west elevation to create storage alcove.
n.d. Addition to south elevation nearly doubles hut size
n.d. Removal of chimney and fireplace

Associated buildings: None

Associated historic features: None known

Significance: An early NZFS hut and a boon to hunting and takahe work in the mountains to the west of the Chester Burn. Not in original form due to substantial and somewhat clumsy addition. Spectacular location.

Recommendation: Uncertain (G3)

LOG CABIN

Construction date: 1999

Grid reference: D42 E90900 N37400

Site visited: No

AMIS Asset number: None

Original department: DOC

Original type: one-off design

Designer: John Heenan

Builder: Paul Holmes

Sleeping capacity: 2 bunks

Floor area: 10m^2 (AMIS), two rooms

Location: In regenerating forest on true right of Ettrick Burn several kilometres from lake.

Associations: None known.

Hut history: Named after a famous hut built in the Ettrick Burn by Dr Orbell in the early 1950s. This hut was used by Orbell and Wildlife Branch scientists but fell into disrepair and was replaced in the late 1960s by the NZFS. This hut was in turn removed to make way for the present hut, completed in 1999 and the most recent built in the Murchison Mountains. The design's success means that it has been transported for use in recent West Coast huts.

Fabric description: This contemporary hut is designed in a traditional way, with a pitched roof and corrugated iron cladding over a timber frame. In common with other Murchison Mountain huts, there is an unlined room for gear removal and storage, lit on the side by a perspex panel in the wall. The arrangement of the main room is similar to nearby huts, with two bunks and a bench and shelves. This room is lined and has what appears to be a lino floor.

Fittings and chattels: Cooking gear, bunk squabs

Modifications: None known.

Associated buildings: Toilet

Associated historic features: None known

Significance: This particular hut has little historical significance yet, although the perpetuation of the hut name was a nice historical touch by DOC. The nod to past designs in the hut's form is of architectural interest, as is the fact that this design has been exported to another conservancy.

Recommendation: Not assessed

MCKENZIE BURN HUT

Construction date: 1964

Grid reference: C42 E72800 N32000

Site visited: Yes

AMIS Asset number: 19493

Original department: NZFS

Original type: One-off

Designer: NZFS

Builder: Max Evans / JVT

Sleeping capacity: 2 bunks

Floor area: 21m^2 (AMIS), two rooms

Location: On true left bank of McKenzie Burn, a short distance from the South Fiord of Lake Te Anau.

Associations: McKenzie Burn track system.

Hut history: Hut built in 1964 by Max Evans and John Von Tunzleman, one of several huts accessible by water from Lake Te Anau. Parts for the hut were taken from a former possum hunter's hut at the mouth of the Ettrick Burn, brought in by jetboat and carried to the site. Built for deer control in the McKenzie Burn, the hut retains that role and is also used for possum control. The hut has had several alterations over its life, including two additions.

Fabric description: This small hut is timber-framed and clad in flat iron (walls) and corrugated iron (roof). Two significant additions have altered its appearance somewhat. One is an extension to the south facade, which added another (unlined) room with two windows and a skylight, while the other created a wood store to the west elevation. As a result the hut has lost its symmetry. The hut retains its chimney. The main room, which is lined and has a T&G floor, contains two bunks and shelves. The addition has shelves and is used for storage.

Fittings and chattels: Cooker, cooking utensils

Modifications: n.d. Addition to south elevation to create second room.
n.d. Addition to west elevation for timber storage

Associated buildings: Toilet

Associated historic features: None known

Significance: Another early NZFS hut with a long history of deer control activity. Its one-off design and unusual construction gives it some uniqueness. Having been sourced from an earlier hut, some of the fabric is likely to be the oldest in the Murchisons.

Recommendation: Retain (G2)

MILLER BIVOUAC

Construction date: 1984

Grid reference: C42 E83500 N45300

Site visited: No

AMIS Asset number: 19489

Original department: NZFS

Original type: Flyable bivouac

Designer: NZFS

Builder: Brian Watt

Sleeping capacity: 2 Bunks

Floor area: 2.4 x 1.8 (x 2) (AMIS says 10m^2), two rooms

Location: Near the tops due west of Miller Peak.

Associations: None known

Hut history: Originally one flyable bivvy constructed by Brian Watt until a second one was added by DOC at a date unknown. Little is known of its history, but like Dana Bivouac it is used solely for takahe work.

Fabric description: Essentially two flyable bivouacs fixed together (with strips of timber covering the join), this hut has two compartments – one for cooking and sleeping and the other for gear and boot removal. The former is timber framed with an aluminium cladding and an internal manufactured lining. The latter is the same but is unlined internally. The hut is lit by a window in the door and a window at the opposite end. There is a skylight in the gear room. There are cupboards below the cooking bench and two bunks in the main room. [From description of Dana Bivouac]

Fittings and chattels: Cooker, cooking utensils

Modifications: Addition of second bivouac – date unknown.

Associated buildings: None

Associated historic features: None known

Significance: A sparingly used but significant takahe programme bivouac.

Recommendation: Retain (G2)

MYSTERY BURN BIVOUAC

Construction date: c.1988 (moved to site)

Grid reference: C42 E86482 N30922

Site visited: No

AMIS Asset number: 19744

Original department: NZFS

Original type: Not known

Designer: NZFS

Builder: NZFS

Sleeping capacity: 3 bunks

Floor area: 8m^2 (AMIS), two rooms

Location: In semi-open country on true right of Mystery Burn, several kilometres from the lake. (This image shows the hut in its previous location).

Associations: None known.

Hut history: Files indicate that a biv was flown into this site in 1975 by the NZFS, but it was later removed for use on the South Coast track and replaced by this structure about 1988. It was built from the parts of two bivouacs used for kakapo work in Fiordland, which had both been badly damaged after being rolled over by high winds. They were brought out of the park as they were no longer needed for kakapo work. This hut is a significant base of takahe work, along with a range of other uses such as kiwi monitoring. It has recently been moved 400 m to avoid avalanche risk.

Fabric description: Made up of two conjoined buildings that were placed on the site at the same time. The arch roofed portion has timber framing and corrugated iron cladding. The gabled structure has timber framing, with flat iron cladding on walls and a perspex roof. The arched building has a lined interior, with a coved ceiling and three bunks (one of which is hinged to fall from the wall). There is a cooker and bench. The adjoining space is for gear removal and storage and is unlined.

Fittings and chattels: Cooker, cooking utensils, bunk squabs

Modifications: None known

Associated buildings: Toilet

Associated historic features: None known

Significance: Only known example of an arch roofed hut in the Murchisons.

Recommendation: Uncertain (G2)

PLATEAU CREEK HUT

Construction date: 1979 (AMIS)

Grid reference: C42 E81325 N37041

Site visited: No

AMIS Asset number: 19924

Original department: Lands and Survey

Original type: Not known

Designer: Not known

Builder: Not known

Sleeping capacity: 4 bunks

Floor area: 20m^2 (AMIS), one room

Location: In regenerating scrub on a gently sloping valley in the upper Ettrick Burn.

Associations: None known

Hut history: A FNPB file states that in 1974 the Wildlife Service re-erected a hut in Plateau Creek that was previously sited in Chester Burn. It seems unlikely that the present Plateau Creek hut is that hut. AMIS states its date of completion as 1979 and that it was built by Lands and Survey. It has been used mainly for takahe and deer control work.

Fabric description: This hut is a simple rectangular box, built with timber framing and foundations and a pitched corrugated iron clad roof. The walls are clad with vertical matchlined timber. The door, made of aluminium joinery, is on the south elevation, and there are aluminium framed windows on the east and north elevations. There is a flue for a stove. The interior contains two double bunks, a pot-belly stove and various shelves. The space is lined with hardboard but the roof trusses are exposed. The floor is composite board.

Fittings and chattels: Cooker, chair

Modifications: None known, other than small repairs to exterior sheathing.

Associated buildings: None

Associated historic features: None

Significance: Not known

Recommendation: Retain (G2)

POINT BURN BIVOUAC

Construction date: 1999
Grid reference: NZMS 260 D42 905317
Site visited: No
AMIS Asset number: None

Original department: NZFS
Original type: Not known
Designer: John Heenan
Builder: Paul Holmes
Sleeping capacity: 2 bunks
Floor area: 5m^2 (AMIS), two rooms
Location: On true left of Point Burn, in semi-open country bordering forest.
Associations: Takahe Valley to Point Burn track.

Hut history: The history of Point Burn huts is confusing. There was an early hut in the Point Burn. Built to assist with takahe research, the hut was replaced after it fell into disrepair. FNPB records show that a 2-person bivouac was built in 1976, possibly by Zig Kepka. This hut still stands as a store. The existing bivouac was built in 1999 to a design by John Heenan. It is used for takahe, kiwi and deer control.

Fabric description: This hut is a small, timber framed and corrugated iron clad bivouac with a perspex addition tacked on the front. The interior is lined with hardboard and varnished plywood. The internal arrangement is unknown but there appears to be just one bunk, along with a cooking bench. The earlier hut is timber framed and clad with corrugated iron. Its internal arrangement remains intact, with two bunks, fireplace and shelving.

Fittings and chattels: Cooker, cooking gear and utensils, bunk squabs

Modifications: Perspex addition – date unknown

Associated buildings: Former hut alongside, built in 1976, possibly by Zig Kepka. Now used as storage and not really required. Toilet.

Associated historic features: See former hut in 'Associated buildings'.

Significance: This is the only place in the Murchisons where two generations of hut sit adjacent to each other (as opposed to conjoined bivouacs). They are in turn linked through this site to early efforts at takahe conservation. This hut has had its own role to play in the Special Area over the past 25 or more years. Its perspex addition is unique in the Murchisons.

Recommendation: Uncertain (G3)

ROBIN SADDLE HUT

Construction date: 1962

Grid reference: NZMS 260 C42 666417

Site visited: No

AMIS Asset number: 21874

Original department: Lands and Survey

Original type: Not known

Designer: NZFS

Builder: FNPB

Sleeping capacity: 4 bunks, (FNPB records 6)

Floor area: 2.7m x 2.7m, one room

Location: Just west of Robin Saddle, due south of Mt Irene. Most westerly of Special Area huts.

Associations: None known

Hut history: Built by volunteers for FNPB using a square design. The materials were more than likely flown in by plane. It was the second hut built in the second period of hut construction in the Murchisons and was a boon to hunters and takahe researchers working on the tops. Sitting on the main divide, the hut is accessible from the west and is visited by recreational users. It gets relatively little biodiversity use today.

Fabric description: Timber framed hut with gabled roof and generous eaves. Walls and roof clad in corrugated iron with six-rib profile, with perspex inserts for skylights. This appears to have replaced earlier corrugated iron of the classic profile. Interior has a T&G floor, 4 bunks and a bench. The walls are unlined with the exception of sisulation over the iron.

Fittings and chattels: Bunk squabs.

Modifications: Iron cladding to roof and walls replaced – date unknown.

Associated buildings: None

Associated historic features: None

Significance: The second hut built by FNPB after hut building began in earnest in 1961. Like Wisely (1961) Robin Saddle ushered in a new era for hunters and researchers in the western margins of the Murchisons. Hut appears to be in largely original order, with the exception of the corrugated iron cladding.

Recommendation: Retain (G1)

SNAG BURN BIVOUAC

Construction date: 1975

Grid reference: C42 E84893 N43633

Site visited: No

AMIS Asset number: 19599

Original department: NZFS

Original type: Flyable bivouac

Designer: NZFS

Builder: Brian Watt

Sleeping capacity: 2 bunks

Floor area: 2.4 x 1.8 (primary space), two rooms

Location: In a large clearing on the true right of Snag Burn about 5 kilometres from the river mouth.

Associations: Snag Burn track system; Snag Hut – to the west

Hut history: The likely date of this hut's construction is 1975, when a number of bivouacs were flown into the Murchisons. Built by Brian Watt in Te Anau, the hut was extended with an annexe fixed to the front of the hut. Although mainly used for takahe work, this hut has also been utilised for vegetation monitoring.

Fabric description: Composed of two conjoined 'flyable' bivvys, one the original, the other an annexe added later. The huts are timber framed and clad in iron – flat on the rear and corrugated on the front. The interior of the rear (or west) portion, used for sleeping and food preparation, is lined with hardwood on a light timber frame. The front (or east) portion is used for boot, coat and gear storage. The floors are lined with timber boards and there is a bench and cooking area.

Fittings and chattels: Cookers, cooking gear and utensils

Modifications: Construction of addition – date unknown

Associated historic features: None known

Associated buildings: None

Significance: Not known

Recommendations: Move (G3)

SNAG HUT

Construction date: 1963 (1966 – AMIS)
Grid reference: Not known
Site visited: Yes
AMIS Asset number: 19497

Original department: NZFS
Original type: S81
Designer: NZFS
Builder: NZFS
Sleeping capacity: 3 bunks
Floor area: 4.06 m x 3.24 m (excl. sheds), one room
Location: On a platform above the river, near T-junction of Snag Burn, on true right.
Associations: Snag Burn track system and Snag Burn Bivouac.

Hut history: Listed by FNPB as being built in 1963, although AMIS says 1966. One of the early NZFS builds, this hut was built a short distance below the bushline and well placed for deer and takahe work. It remains in heavy use, as a base for kiwi monitoring and also stoat eradication.

Fabric description: The core of the hut is a standard S81; the additions – wood store, shed and cabinet – are attached and do not interrupt the original form. A chimney is fixed to the south elevation. Framing and foundations are timber with flat iron cladding on walls and a corrugated iron roof. Interior has T&G floor, three bunks (originally four) and an open fire. The walls and ceiling are lined with hardboard. Above the ledged and braced door is the characteristic storage area, without doors.

Fittings and chattels: Bunk squabs.

Modifications: Iron cladding to roof and walls replaced – date unknown.

Associated buildings: Toilet

Associated historic features: None

Significance: An early NZFS hut that is, even with the add-ons, in near original condition. Well sited for deer and takahe work.

Recommendation: Retain (G2)

TAKAHE VALLEY HUT

Construction date: 1954
Grid reference: D42 E93173 N32271
Site visited: Yes
AMIS Asset number: 19487

Original department: Wildlife Branch (DIA)

Original type: Not known

Designer: Not known

Builder: Amphibious Airways Company, Invercargill

Sleeping capacity: 4 bunks

Floor area: 3.13 m x 3.68 m (excl. porch and wood store), two rooms (incl. porch)

Location: On the gentle valley slope to the west of Lake Orbell, Takahe Valley.

Associations: Point Burn (to the south over the ridge)

Hut history: This hut was built for the Wildlife Branch of DIA in 1954 after complaints to the FNPB that tent camps were proving inadequate for hunters and researchers. The hut was built by the Amphibious Airways Company, Invercargill under a contract that covered the costs of transport, erection and materials. This is the oldest hut in the Murchisons and it has been the centre of many of the key activities in the Special Area, particularly early takahe research and deer control.

Fabric description: Takahe Valley Hut has an unusual form, the product of several alterations and additions. At its heart is a rectangular, gabled hut, timber framed and clad with corrugated iron – the classic hut design for much of the 20th century. The hut is aligned north-south, with a substantial addition – largely an open entrance porch – built onto the north-eastern corner. Timber framed and clad with corrugated iron, it has a concrete floor. Directly alongside this is a chimney, which (most unusually) sits directly in front of a window and is not even centred on the gable. This has always been the arrangement at this hut and it may have been used to deal with smoke from the fire and to make the fire draw better when first lit. To the rear of the hut is a large wood store, accessed from the exterior. The hut interior has four bunks and a cooking area along the north wall. The floor is T&G. Along with a toilet there is another store to the immediate rear of the hut. The dates of these buildings are not known but they are likely to be of some age.

Fittings and chattels: Cooker, cooking gear and utensils, bunk squabs

Modifications: 1985/86 hut lined (by Nick Torr). Addition of entrance porch – date unknown

Associated buildings: Toilet and another unspecified building

Associated historic features: None known

Significance: Takahe Valley Hut is a direct link with the very place where takahe were first rediscovered; it remains the best known location of takahe protection and preservation activity. As the oldest and most historic hut in the Murchisons, as well as the most used, it is a place of national significance.

Recommendation: Retain (G1)

LAKE TE AU HUT

Construction date: 1963
Grid reference: NZMS 260 C42 686367
Site visited: Yes
AMIS Asset number: None

Original department: NZFS
Original type: S81
Designer: NZFS
Builder: Max Evans / JVT
Sleeping capacity: 4 bunks
Floor area: 4 m x 3.2 m, one room
Location: In a small clearing at the head of Lake Te Au.
Associations: McKenzie and Esk Burn tracks; Te Au Saddle

Hut history: One of the early NZFS huts in the Murchisons, this is after it had to be moved to higher ground in 1965 because of flooding. Materials for the initial construction of the hut were flown in by floatplane. Located below the bushline, it has primarily been used for deer control and takahe work. The hut also receives public use.

Fabric description: Framing and foundations are timber with flat iron cladding on walls and a corrugated iron roof. A chimney is fixed to the south elevation, while a recessed porch gives access to the entrance. There is a hood over the entrance. Interior has T&G floor, three bunks (originally four) and an open fire. The walls and ceiling are lined with hardboard. In the cavity above the ledged and braced door is a storage area, but without doors.

Fittings and chattels: Three hand-made chairs, cooking table, bunk squabs, cooking gear, utensils, lamp

Modifications: Hood built over entrance to porch – date unknown

Associated buildings: Toilet

Associated historic features: None known

Significance: Classic NZFS S81 in very good and largely original condition – the best preserved of any NZFS hut in the Murchisons. Has had a long association with deer control and takahe work. Three 'bush' chairs made from packing case timbers are a highlight of the interior.

Recommendation: Retain (G1)

TOP ETTRICK HUT

Construction date: 1964

Grid reference: C42 E83724 N36327

Site visited: Yes

AMIS Asset number: 19921

Original department: NZFS

Original type: S81

Designer: NZFS

Builder: Not known

Sleeping capacity: 3 bunks

Floor area: Not known, one room (plus porch)

Location: Sited on a river flat some distance up the Ettrick Burn, just before it turns east towards Lake Te Anau.

Associations: Ettrick Burn track; Plateau Creek hut

Hut history: Built by the NZFS part way through the second wave of hut building in the Murchisons, Top Ettrick was a standard S81 augmented with a series of small additions. It has been used mainly for deer control and that remains its primary use. It is also used for takahe work and stoat control.

Fabric description: Framing and foundations are timber with flat iron cladding on walls and a corrugated iron roof (relatively new). There is a chimney (standard NZFS) while a meat safe and firewood shelter are both fixed to the exterior of the hut. Another storage box stands alone a short distance from the hut. A recessed porch gives access to the entrance. The interior has a T&G floor, three bunks and an open fire. There is a cupboard alongside the door. The walls and ceiling are lined with hardboard and battens. In the cavity above the ledged and braced door is a storage area, but without doors.

Fittings and chattels: Table, cooker, shelves (2), first aid kit.

Modifications: Some structures fixed to the hut have been removed (date unknown).

Associated buildings: Toilet.

Associated historic features: None.

Significance: This is among the most original of any of the NZFS huts in the Murchisons, the re-roof notwithstanding. It has been in consistent use for deer control since its construction. It occupies a most attractive site in the upper Ettrick Burn valley.

Recommendations: Retain (G1)

TOP MCKENZIE HUT

Construction date: 1979

Grid reference: C42 E76436 N38615

Site visited: Yes

Asset number: 19484

Original department: NZFS

Original type: Not known

Designer: NZFS

Builder: Not known

Sleeping capacity: 3, 4 bunks

Floor area: Not known, two rooms plus toilet

Location: Sited above the bushline next to a large tarn at the head of the McKenzie Burn. Surrounded by mountains.

Associations: McKenzie Burn and Chester Burn track and hut systems

Hut history: Nothing is known of the construction or early history of this hut, which was built to the same design as Plateau Creek. It does not feature in FNPB annual reports from the 1980s. Used extensively for takahe work since its construction, the hut has recently been refurbished.

Fabric description: The hut is rectangular in plan with a gabled pitched roof, timber framing and timber piles. It has an addition on its south elevation that includes an internal porch/storage area (unlined) and a toilet alongside. The hut is clad with standard profile corrugated iron on the walls and a broader rib on the roof. There are aluminium framed windows overlooking the tarn on the north and east elevations. The main interior space has a hardwood floor, a pot belly stove (centrally located), two double bunk frames, shelves (various), and benches.

Fittings and chattels: Cooker, bunk swabs, stove, shelving and benches

Modifications: None known, although hut has been upgraded in recent years.

Associated buildings: None

Associated historic features: None

Significance: One of the first huts built following the portable bivvy phase of the mid-1970s, this hut has had a significant role in takahe work. It occupies a fine site in a bowl surrounded by mountains.

Recommendations: Retain (G2)

WATERFALL CREEK BIVOUAC

Construction date: c.1976/77
Grid reference: Not known
Site visited: No
Asset number: 19927

Original department: NZFS
Original type: Flyable bivvy
Designer: Not known
Builders: Jim Stark & Nick Torr
Sleeping capacity: 2 bunks
Floor area: 2.4 x 1.8 m (x2), two rooms plus toilet
Location: Above the bushline in steep country at the top of Waterfall Creek, near South Fiord.
Associations: On Waterfall Creek track; close to Chester Burn and Lake Eyles huts as the crow flies.

Hut history: This was originally a single bivouac built by NZFS using a donation from the World Wildlife Fund near the end of the initial period of the construction and installation of flyable bivouacs in the Murchisons. It was originally sited in the adjacent valley and known as the Panda Bivvy because of the WWF logo on it. Located above the bushline, this bivouac was mainly used for kakapo work and that remains its primary use. It was, like most of the bivouacs, extended at some stage.

Fabric description: This is composed of two flyable bivouacs fixed together – the original hut, for cooking and sleeping, and an annexe, for gear and boot removal. The former is timber framed with an aluminium cladding and an internal manufactured lining. The latter is the same but is unlined. The hut is lit by windows in the upper portion of one wall of the annexe and at the far end of the main space. The interior of the latter contains two bunks and a bench with a cooker alongside and shelves beneath. There are cupboards below the bench and two bunks in the main room.

Fittings & chattels: Cooker, bunk squabs, stove shelving and benches

Modifications: n.d. Hut moved from adjacent valley
n.d. Addition of annexe

Associated buildings: None.

Associated historic features: None.

Significance: This bivouac has modest physical value, being much like the other flyable bivvys in appearance. Its association with the WWF is a matter of some interest, although its history is prosaic in most other ways.

Recommendations: Uncertain (G3)

WISLEY HUT

Construction date: 1961
Grid reference: NZMS 260 C42 746415
Site visited: Yes
Asset number: 19488

Original department: Lands & Survey

Original type: FNPB design

Designer: Not known

Builders: Not known

Sleeping capacity: 4 bunks, two rooms (but one open space)

Floor area: Originally 8' x 8' (2.43 m^2), now approx. twice that size.

Location: Sits just below bushline on a prominent knoll above cirque (to the north) and surrounding mountainside, 3 km from Lake Wisely.

Associations: Woodrow Bivvy and Woodrow Burn nearby; access to other burns via passes over nearby mountains.

Hut history: Constructed in 1961 by FNPB and named after Baughn Wisely, biologist. Hut flown in by Dominie. Immediate benefit to hunters noted by FNPB. Addition to hut approved in 1975 and undertaken in 1976. Hut now primarily used for takahe work, but also some deer control. At some point a small addition was made to the north elevation but later removed, along with the fireplace, chimney and range. There is some minor public use of the hut.

Fabric description: This hut is composed of two parts, the original portion (western half) being an irregular pentagon in section. Aluminium cladding on the sides and a corrugated iron roof hut sit over a timber frame (oregon). The straight-sided addition is timber framed with timber cladding and a hardwood lining. Timber braced and ledged door is at east end of north side. The interior is likewise divided into two parts with sleeping at the western end (once 2, now 4 bunks) and living area in the south. There is now no chimney and therefore no fireplace; an enclosed area is set aside for cooking. There is a cupboard, fixed table and chairs. Timber piles elevate the hut above the ground (and any snowdrifts).

Fittings & chattels: Fine collection of period magazines and books, and early hut books (including info on daily shooting and intentions, lanterns, writing desk, shelving).

Modifications: 1976, hut extended with timber framed and line construction.

N.d.: Small extension to north elevation

2003: Addition to the north, chimney, fireplace and range. Bunks reconfigured and rebuilt and western end relined.

Associated buildings: External cupboards with drum above at east end. There is no toilet.

Associated historic features: None.

Significance: Historically important as first hut built in the Murchisons by FNPB at the start of the second wave of hut building. Although altered, it has a unique, quirky appearance and occupies a splendid site. Hut's significance enhanced by literature and hut books.

Recommendations: Retain (G1)

WOODROW BIVOUAC

Construction date: 1975
Grid reference: Not known
Site visited: No
Asset number: 19742

Original department: NZFS
Original type: Flyable bivouac
Designer: Not known
Builder: Brian Watt
Sleeping capacity: 2 bunks
Floor area: Not known, two rooms
Location: Occupies a narrow river valley below the bushline just to the south of the Woodrow Burn.
Associations: Wisely Hut; Woodrow Burn track system

Hut history: Named for Woodrow Burn, which was in turn named for famed Canadian-born hunter and trapper Frank Woodrow.

Fabric description: Composed of a 'flyable' bivvy with an annexe, the main structure is timber framed and clad in textured aluminium while the annexe to the front is timber framed and clad in corrugated iron. The interior of the main space is used for sleeping and food preparation and is lined (probably) with hardwood. There are two bunks, a cooking bench and shelves beneath. The annexe is unlined, except for the timber floor. Hut is apparently in poor condition.

Fittings & chattels: Cooker, bunk squabs

Modifications: n.d. Addition of annexe

Associated buildings: None

Associated historic features: None

Significance: Not known

Recommendations: Remove (G3) — replaced 2009

ROCKY POINT HUT

Construction date: c.1978

Grid reference: B42 E31680 N39642

Site visited: No

Asset number: 19858

Original department: NZFS

Original type: Flyable bivouac

Designer: Not known

Builder: Not known

Sleeping capacity: 3 bunks

Floor area: 4.8 x 3 m (plus porch), two rooms

Location: On terrace above beach at Rocky Point, located approximately halfway up the west side of the island.

Associations: Track system cut on west face of island ridge.

Hut history: This was one of the first three huts built on Secretary Island – in 1978. This followed eight years of only moderately successful hunting by hunters using tent camps, along with helicopter shooting. This hut, built to the same design as the other two, was used sporadically over the years, but by 2004 it was in very poor condition, despite having been re-roofed. At some point a hole was cut in the roof to get the burner going, which let the water in. It was refurbished in 2006 for the renewed attempt at deer eradication from the island.

Fabric description: Rocky Point is a simple mono-pitched hut with a timber frame and corrugated iron roof and wall cladding. The latter is shallow ribbed. The hut has two rooms, one smaller than the other, which are entered via a porch on its east end. The floor is timber lined and there are three bunks (one double) on the rear wall. The cooking bench and heater are on the opposite wall. The hut is well lit by windows on the north and west elevations.

Fittings & chattels: Cooker, flued heater

Modifications: 2006 Hot water cylinder (and shower?) removed

Associated buildings: Toilet

Associated historic features: None

Significance: This hut is one of the earliest of the Secretary Island huts and is therefore one of the first permanent buildings on the island.

Recommendations: Retain (G2)

STANTLEY BURN HUT

Construction date: 1978
Grid reference: B42 E30094 N36271
Site visited: No
Asset number: 19857

Original department: NZFS
Original type: Not known but same as Rocky Point
Designer: Not known
Builder: Paddy Gordon and others
Sleeping capacity: 3 bunks
Floor area: 4.8 x 3 m (plus porch) [if same as Rocky Point], two rooms
Location: Located on the western side of Secretary Island, near Southwest Point, on the true left of the Stantley Burn facing north. The beach and Tasman Sea are to the immediate west.

Associations: Track system on western side of island.

Hut history: Completed in 1978, Stantley was one of the three first huts built on Secretary Island. It acquired its name as an amalgam of the surnames of the first ground hunters on this part of the island, Les Stanley and John Stanton, both NZFS staff members. The name was given to the catchment and then the hut. It occupies a site on or near where a tent camp was established by the hunters. By the 2000s the hut was in poor repair, its exposed position near the sea proving a problem. It was restored in 2006 for use in the current pest eradication work.

Fabric description: This hut is rectangular in plan and has a mono-pitched, corrugated iron clad roof. The framing is timber and the walls also have corrugated iron (six rib) cladding. The former had a standard profile while the latter is shallow ribbed. If the hut is the same internally as Rocky Point it has two rooms, the main room (to the east) larger than the other. Entry to the hut is via a porch on its west end. The internal configuration has a timber lined floor, three bunks (one double) and a cooking bench. There are windows on the north and west elevations.

Fittings & chattels: Cooker, bunk squabs

Modifications: 2006 Hut refurbished, including recladding.

Associated buildings: Toilet?

Associated historic features: None

Significance: Stantley Hut's fortunes have ebbed and flowed but after a period of inactivity in the late 1990s and early 2000s, it is in regular use again. As one of the three first buildings on the island it has considerable significance, along with its periods of use for pest eradication.

Recommendations: Retain (G2)

MARLEY HUT

Formerly Kiwi Bivvy, Esk Bivvy
Construction date: 1975
Grid reference: B42 E30400 N34560
Site visited: No
Asset number: None

Original department: NZFS
Original type: Flyable bivouac
Designer: Not known
Builder: Brian Watt (possibly)
Sleeping capacity: 2 bunks
Floor area: 2.4 x 1.8 m (main space), two rooms
Location: On ridge inland of east coast of island and due south of Stantley Burn Hut. (Image above is of the hut in Murchisons).
Associations: Track system on east side of island. Relatively close to Stantley Burn

Hut history: This hut was built during the mid-1970s' period of construction of flyable bivouacs in the Murchisons. Its original location and role is not known but it was first known as Esk Bivi before being changed to Kiwi Bivi in 2004. It was moved to Secretary Island in 2007 to assist with the pest eradication work and renamed again.

Fabric description: Composed of a 'flyable' bivvy with an annexe, the main structure is timber framed and clad in textured aluminium while the annexe to the front is timber framed and clad in corrugated iron. The interior of the main space is used for sleeping and food preparation and is lined (probably) with hardwood. There are two bunks, a cooking bench and shelves beneath. The annexe is unlined, except for the timber floor. (Taken from description of Woodrow Bivouac).

Fittings & chattels: Cooker, bunk squabs

Modifications: None known – annexe added at an unknown date

Associated buildings: None

Associated historic features: None

Significance: Not known

Recommendations: Uncertain (G3)

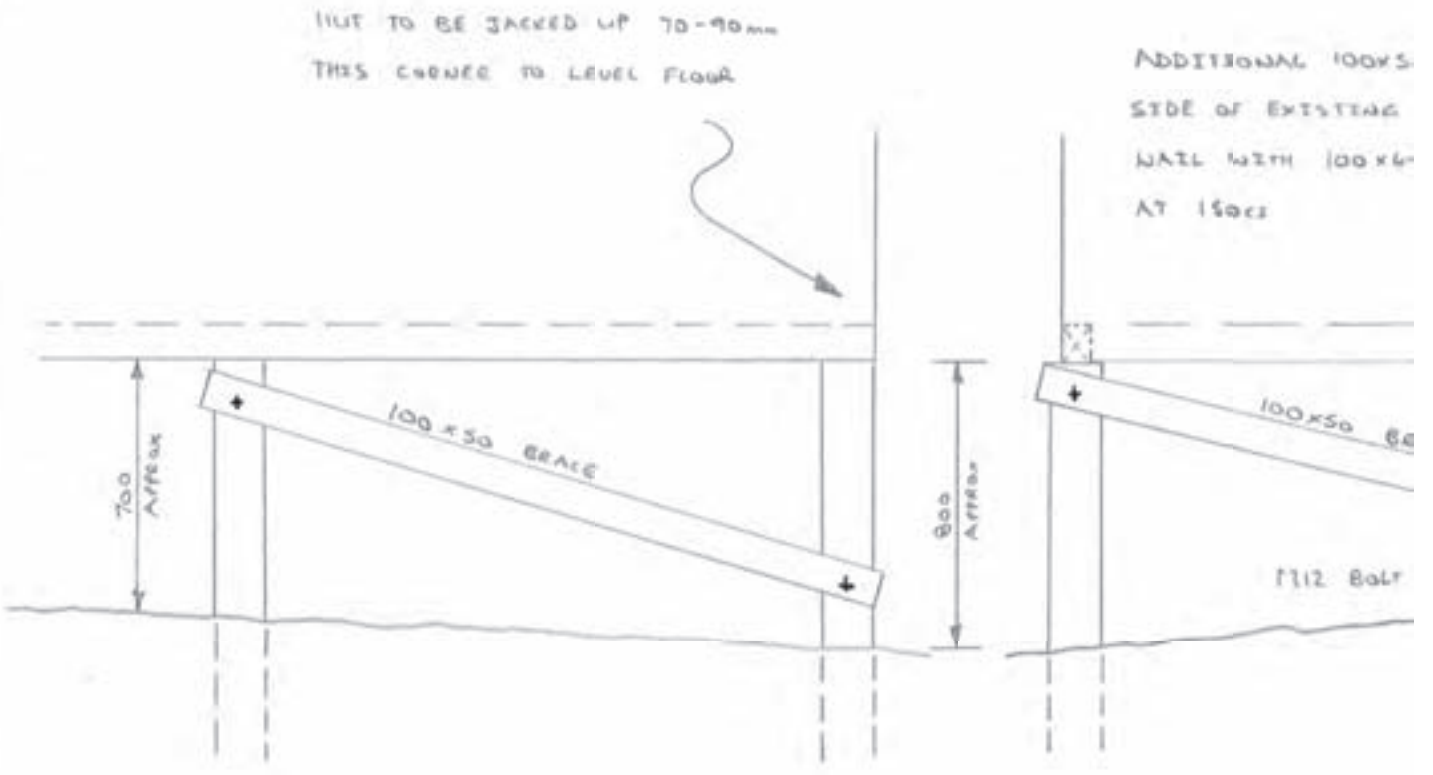
Appendix 2: Hut plans

INDEX:

BOLTS - M12 HEX HEAD GALVANISED BOLTS WITH 50x50x6 SQ WASHER UNDER HEAD & NUT. LIBERALLY COAT BOLT & HOLE WITH GENERAL PURPOSE HEAVY GREASE PRIOR TO INSTALLATION.

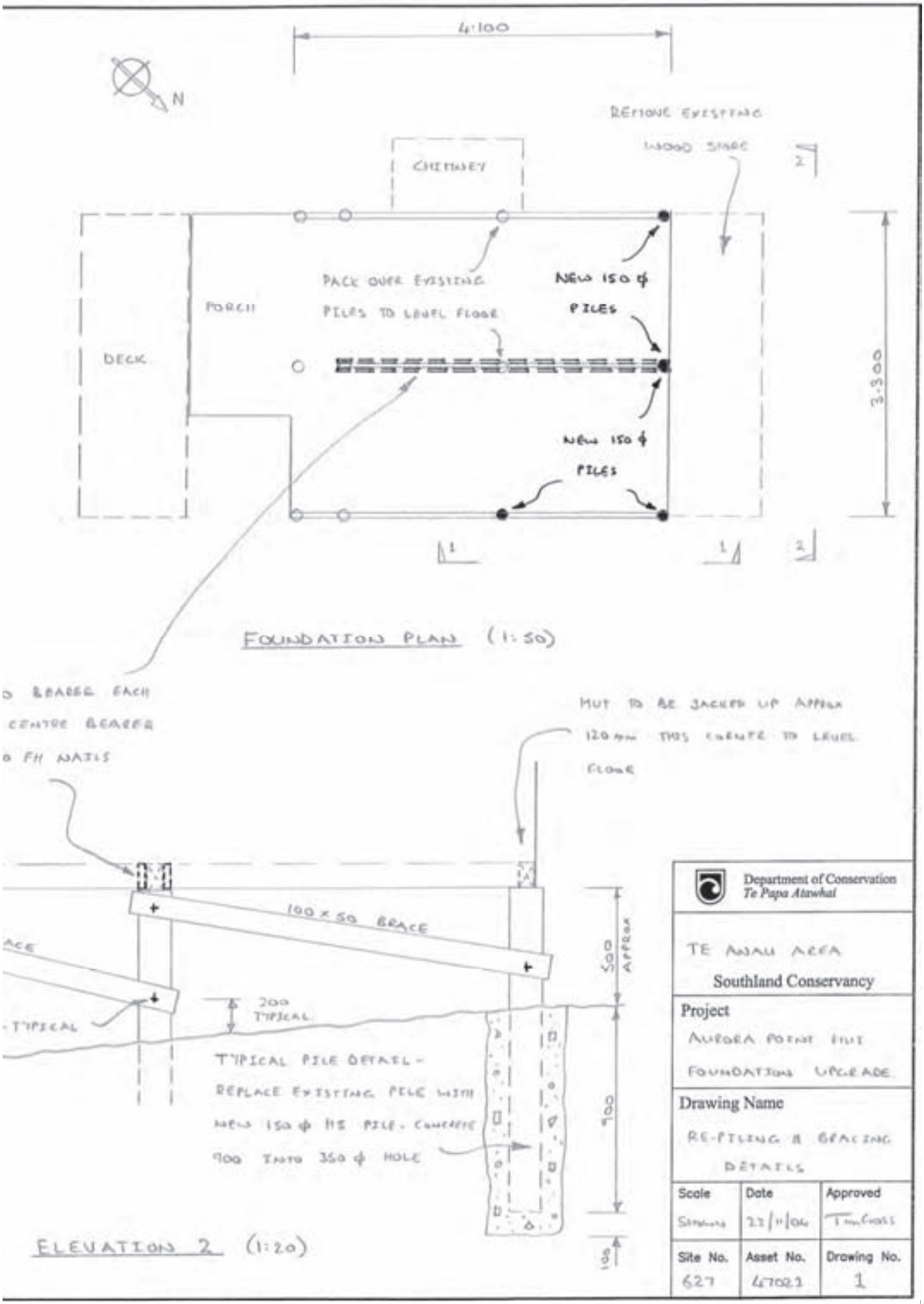
PILE FIXINGS - FIX BEARERS TO NEW PILE USING 4 S/S CT160 CLEATS (8 NAILS/CLEAT) PLUS 4/100 x 4.0 S/S SKEW NAILS.

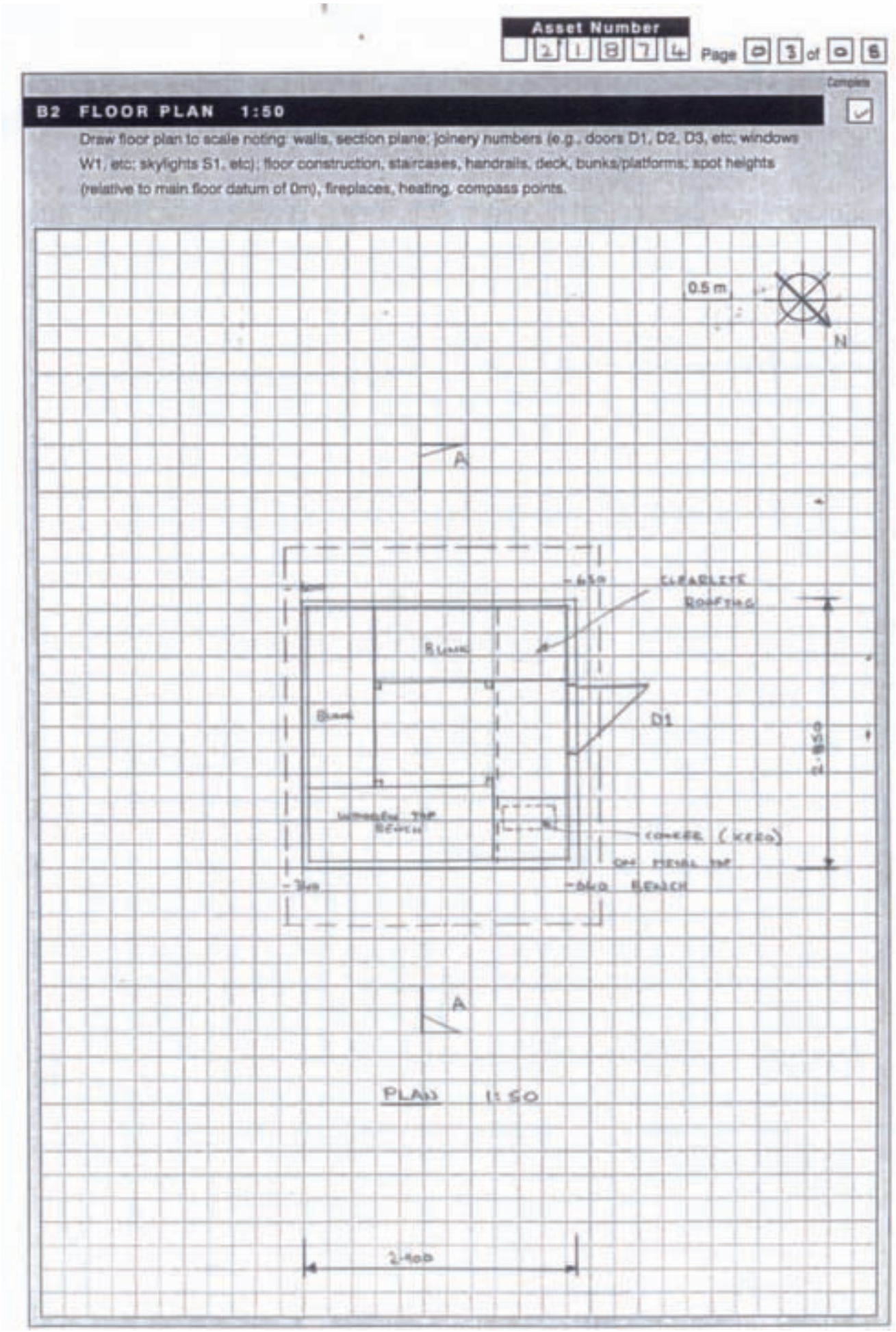
FLOOR DESIGN LIVE LOAD = 3.0 kPa.



ELEVATION 1 (1:20)

Aurora Point Hut foundation plan, 2004. (DOC)


4·100
N
REMOVE EXISTING
TIMBER STAIR
CHIMNEY
PACK OVER EXISTING
PILES TO LEVEL FLOOR
NEW 150 ϕ
PILES
PORCH
DECK
3·300
NEW 150 ϕ
PILES
1
1
2
2
FOUNDATION PLAN (1:50)
HUT TO BE JACKED UP APPROX
120 mm THIS CREATE TO LEVEL
FLOOR
100 x 50 BRACE
200
TYPICAL
TYPICAL PILE DETAIL -
REPLACE EXISTING PILE WITH
NEW 150 ϕ H5 PILE - CONCRETE
900 INTO 350 ϕ HOLE
500
APPROX
900
ELEVATION 2 (1:20)
Department of Conservation
Te Papa Atawhai
TE ANAU AREA
Southland Conservancy
Project
AURORA POINT HUT
FOUNDATIONS UPGRADE
Drawing Name
RE-PILING & BRACING
DETAILS
Scale
Date
22/11/06
Approved
Site No.
627
Asset No.
47023
Drawing No.
1



Robin Saddle Hut floor plan. (DOC)

Asset Number 2 1 8 7 4 Page 0 2 of 0 8

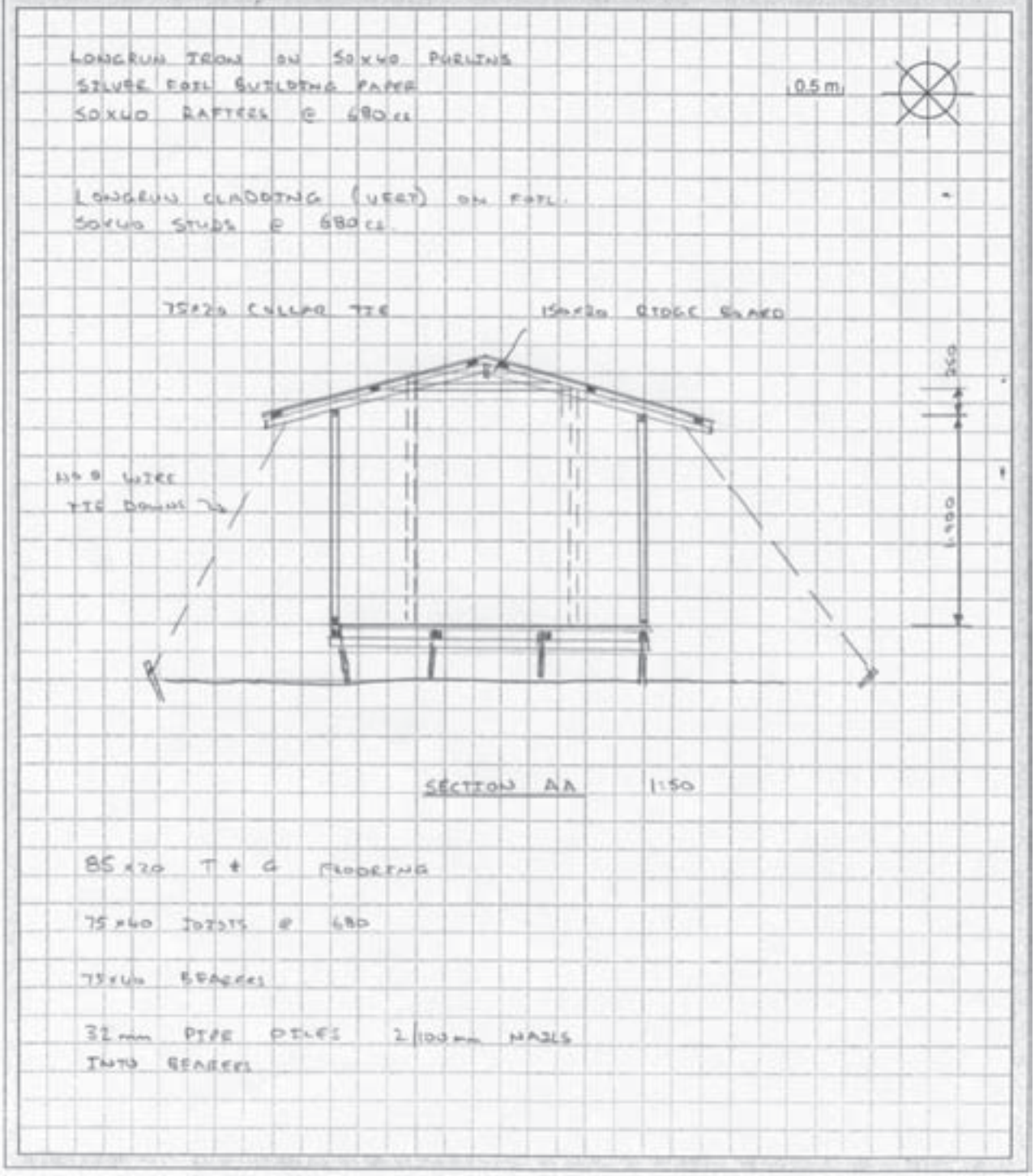
Complete

A DEFINITIVE PHOTOGRAPHS

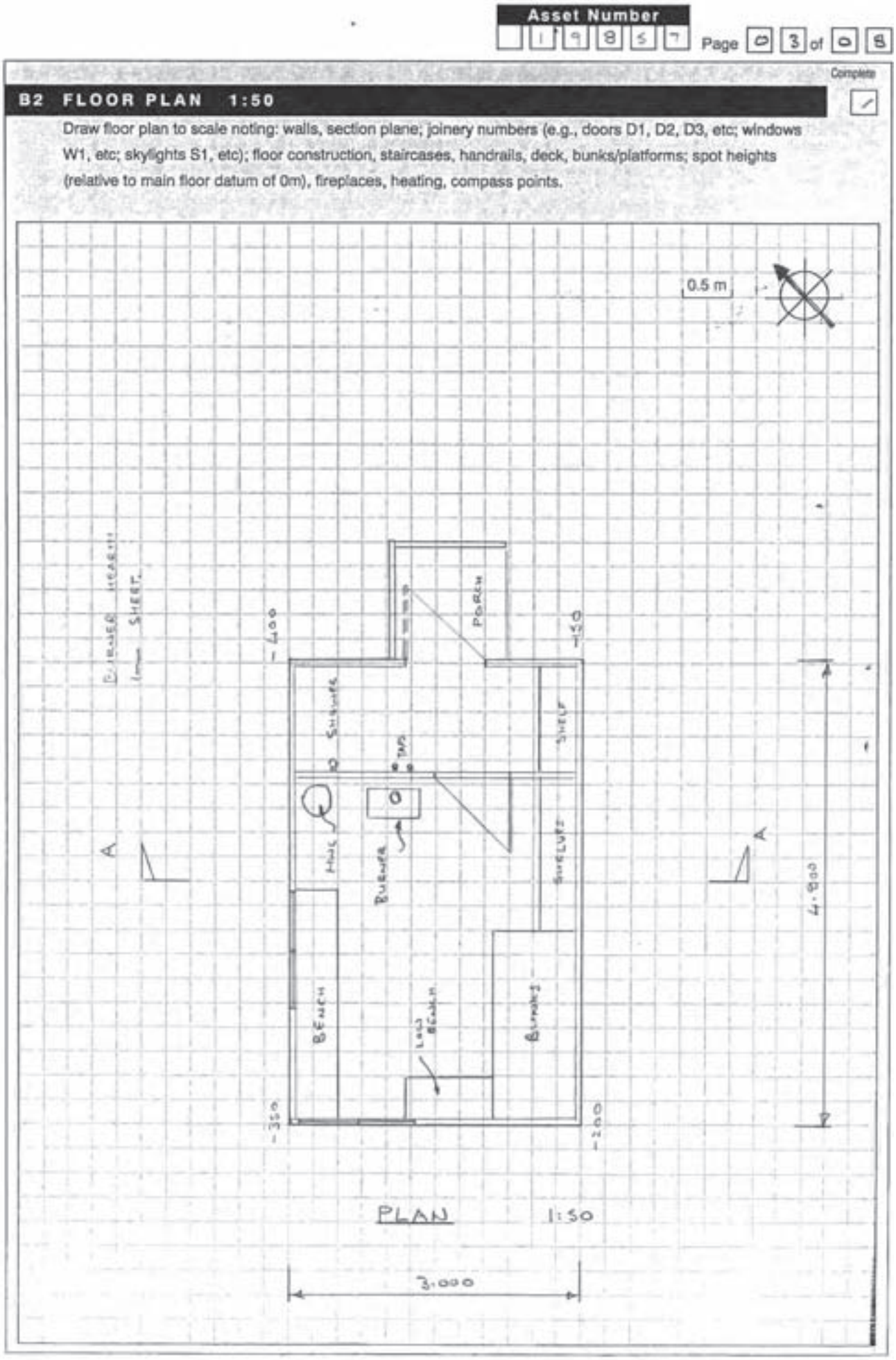
1. **Asset site photo (aerial approaches only):** Oblique, steep-angled photo showing the building and its immediate site.
2. **Ground context photo (all huts):** Ground photo(s) showing the building in relation to its surroundings.

B1 SECTION AA 1:50

Draw a floor section to scale in a way that best represents the building's basic construction. Note the following: Stud height and height of centre of ceiling; foundation, subfloor, wall and roof construction; flooring, decking, claddings, linings, gutters, downpipes; fixtures and fittings, joinery; floor, deck, ground levels and tie-downs.



Robin Saddle Hut section plan. (DOC)



Stantley Burn Hut floor plan. (DOC)

Asset Number 1 9 8 5 7 Page 0 2 of 0 8

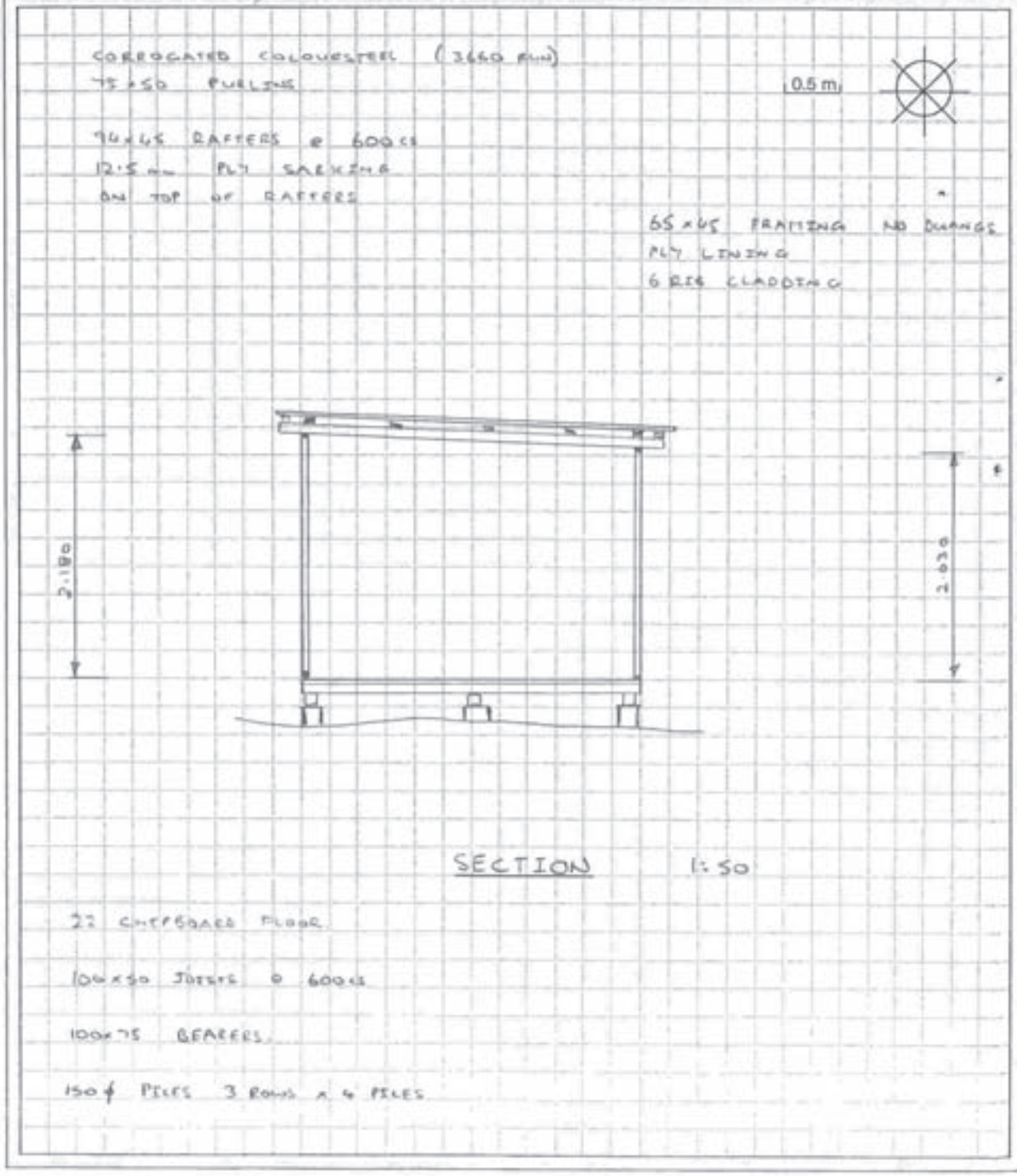
Complete

A DEFINITIVE PHOTOGRAPHS ✓

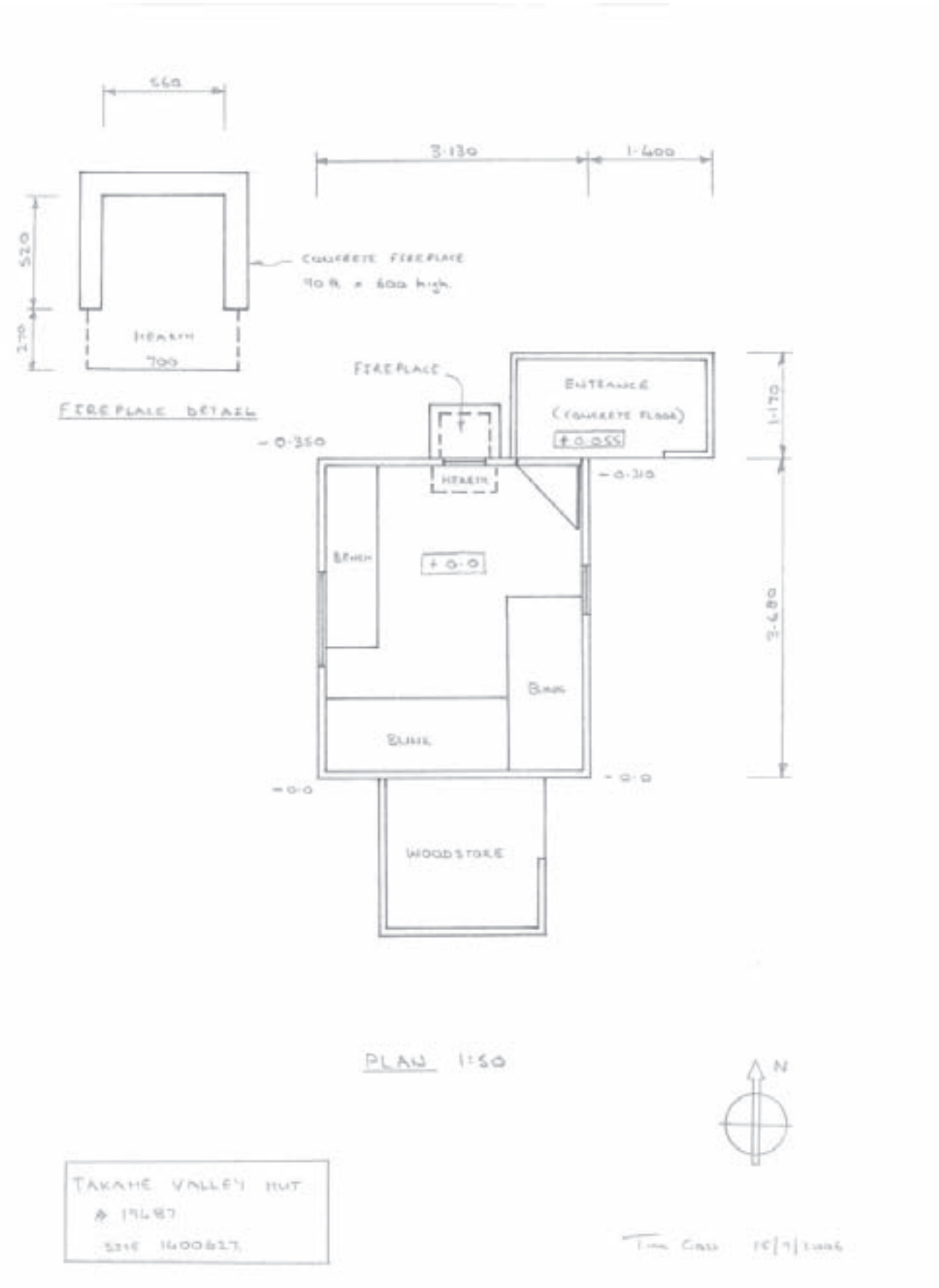
1. **Asset site photo (aerial approaches only):** Oblique, steep-angled photo showing the building and its immediate site.
2. **Ground context photo (all huts):** Ground photo(s) showing the building in relation to its surroundings.

B1 SECTION AA 1:50 ✓

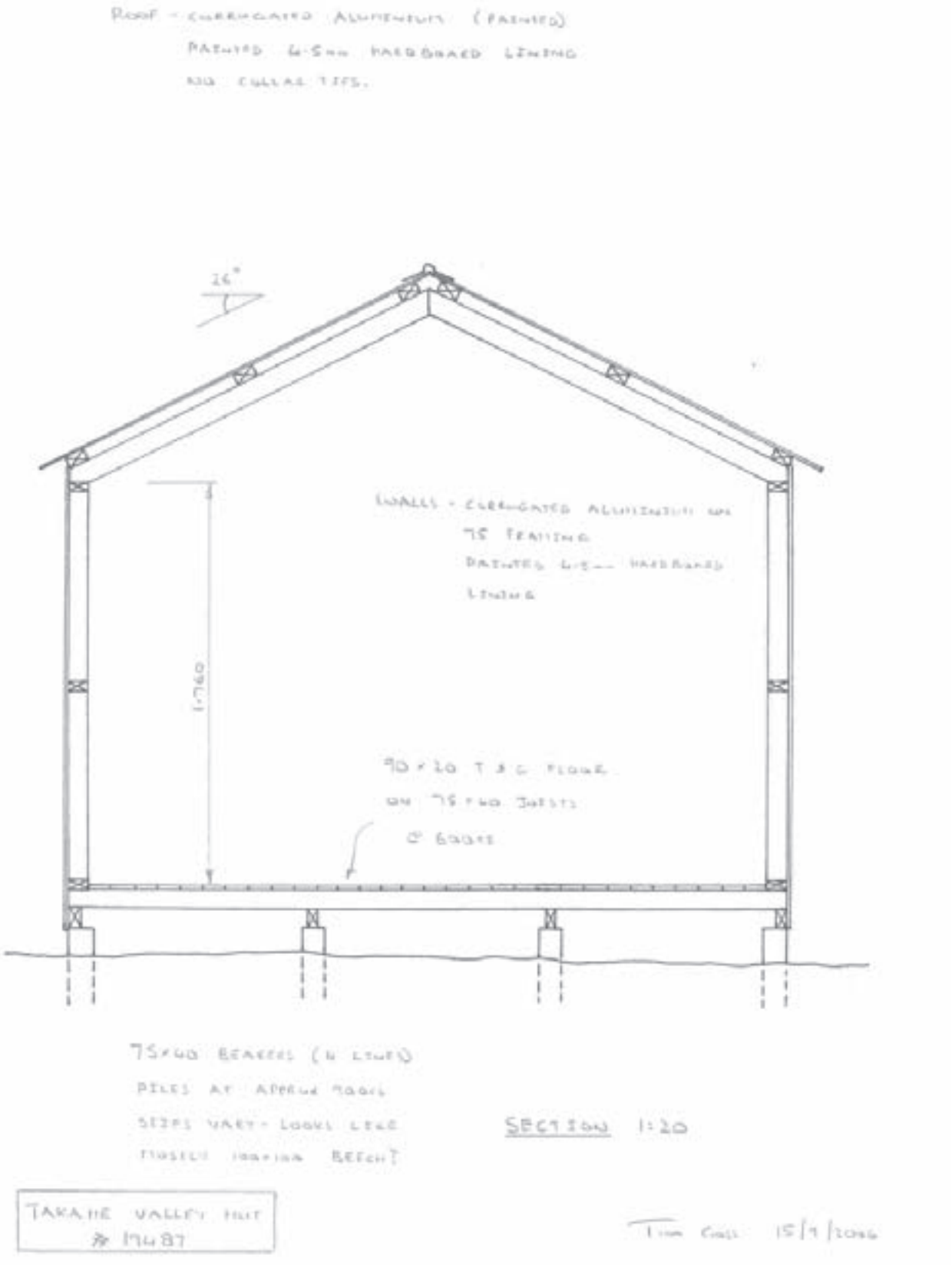
Draw a floor section to scale in a way that best represents the building's basic construction. Note the following: Stud height and height of centre of ceiling; foundation, subfloor, wall and roof construction; flooring, decking, claddings, linings, gutters, downpipes; fixtures and fittings, joinery; floor, deck, ground levels and tie-downs.



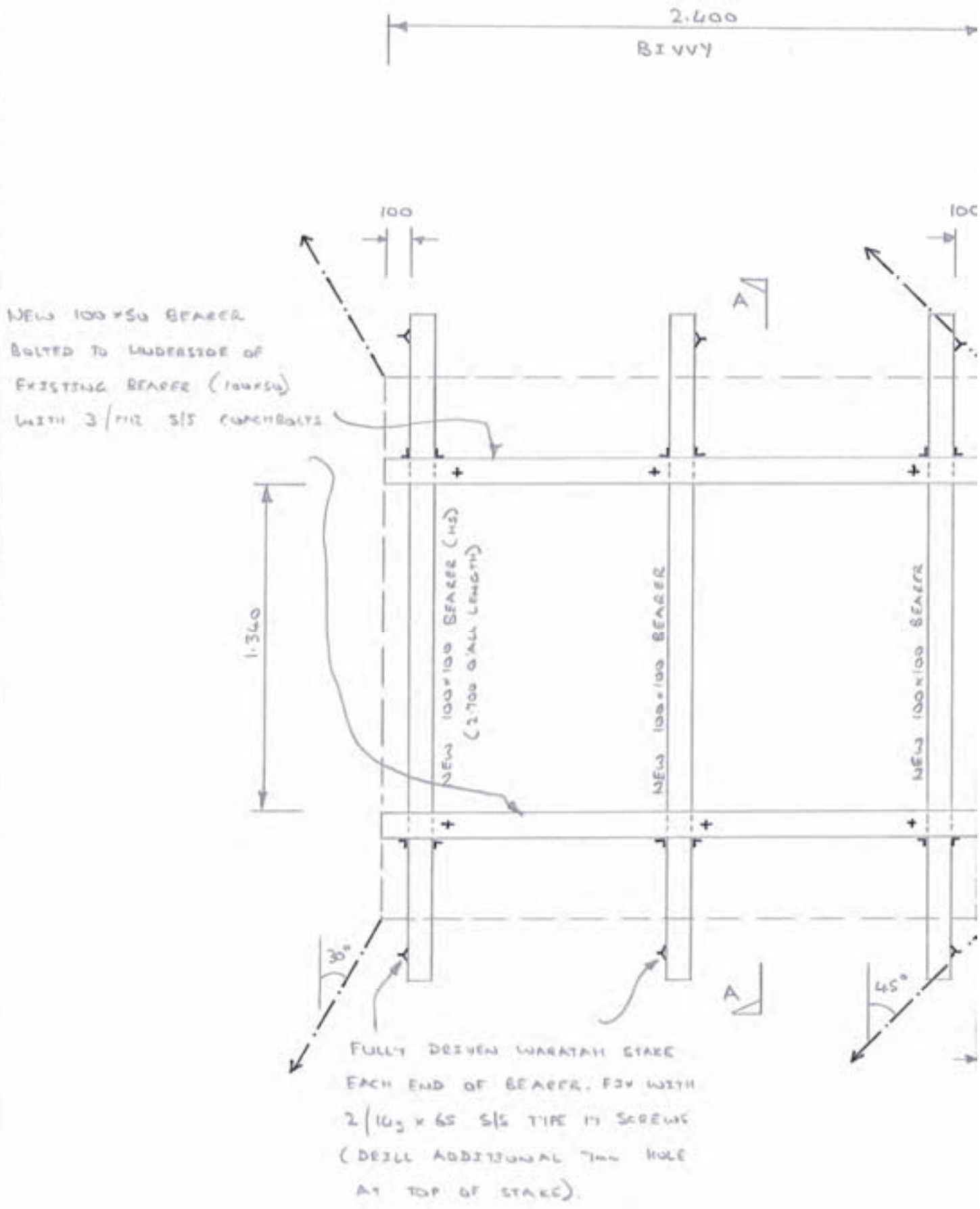
Stantley Burn Hut section plan. (DOC)



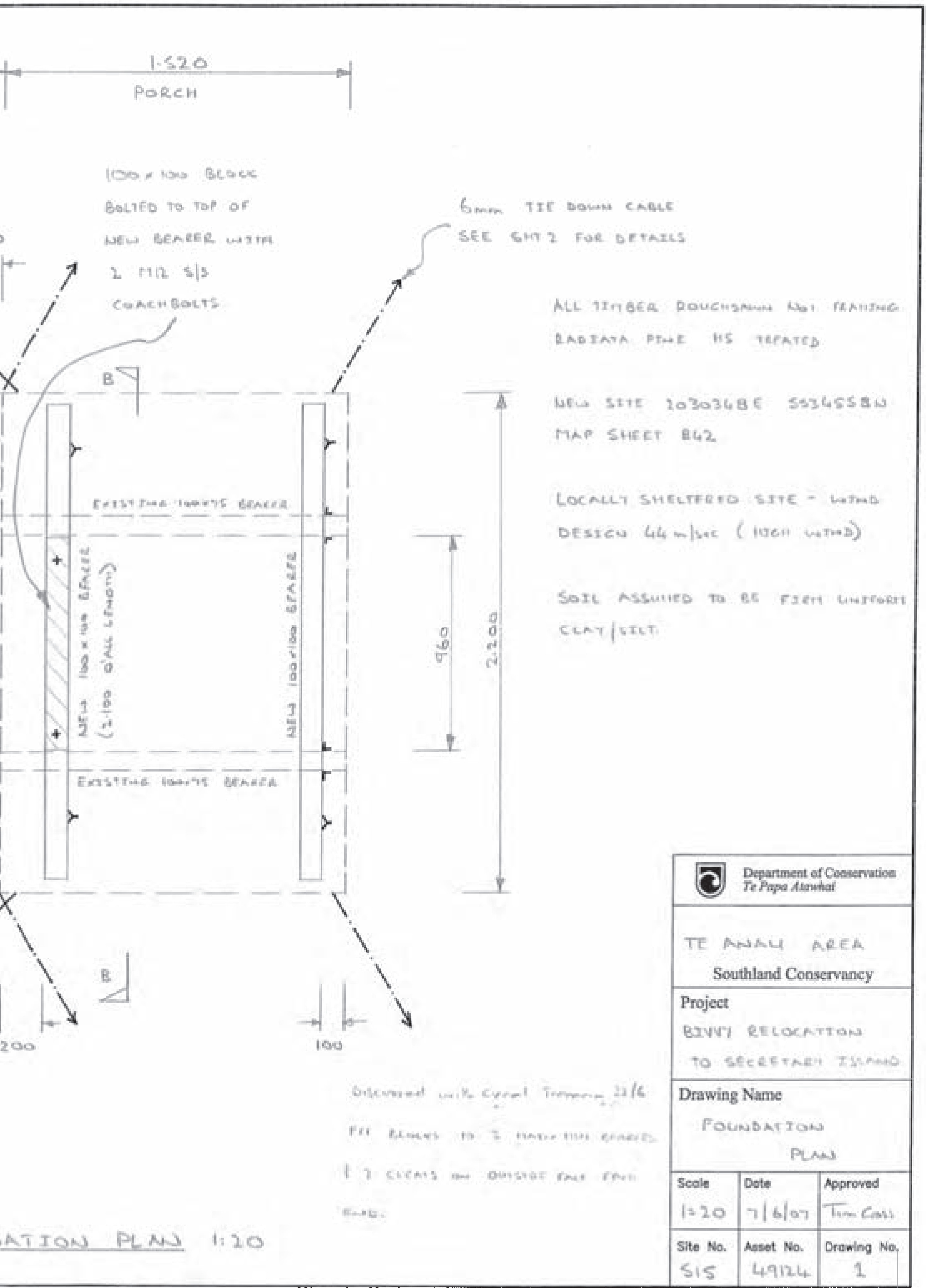
Takahe Valley Hut plan

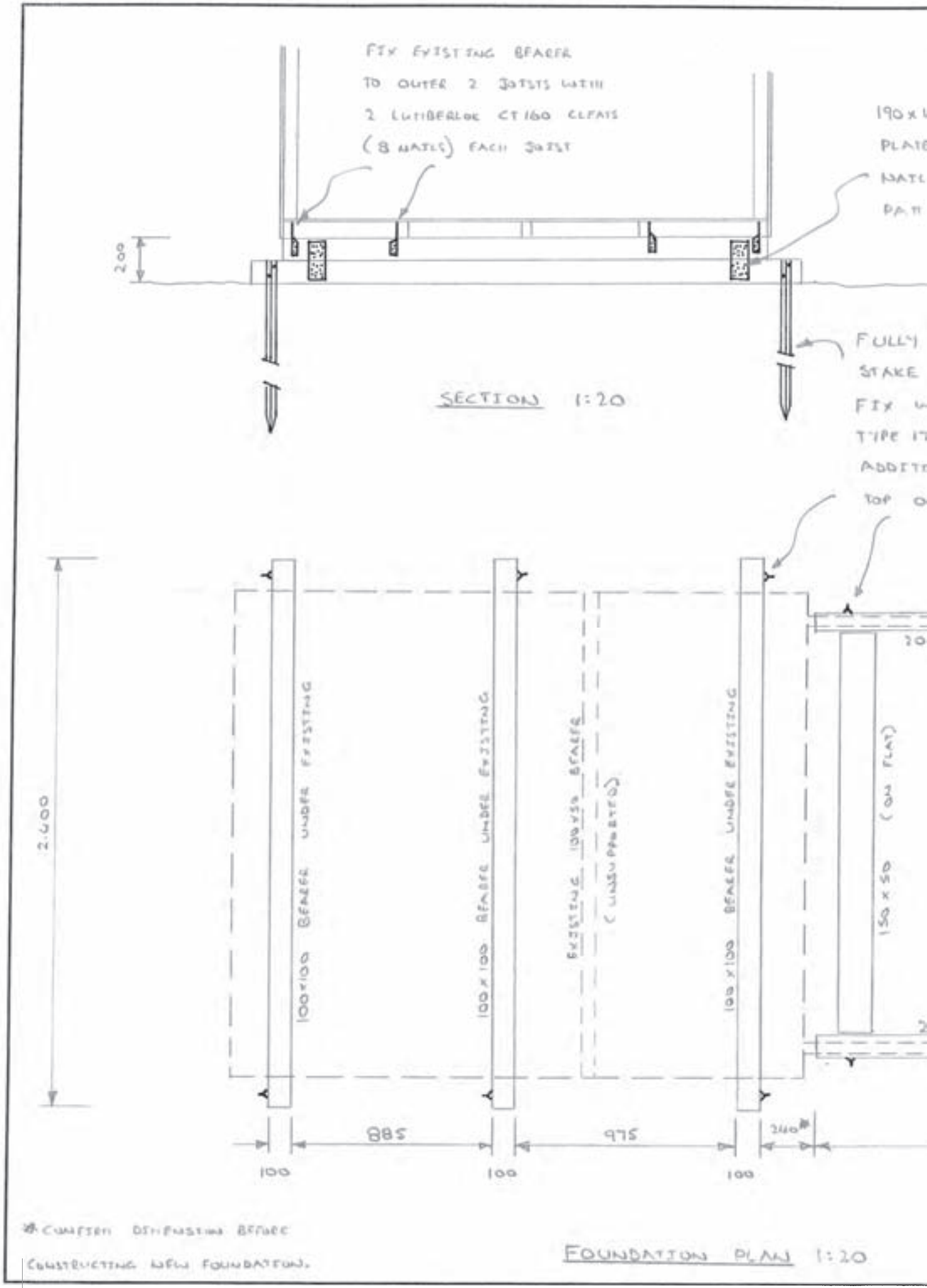


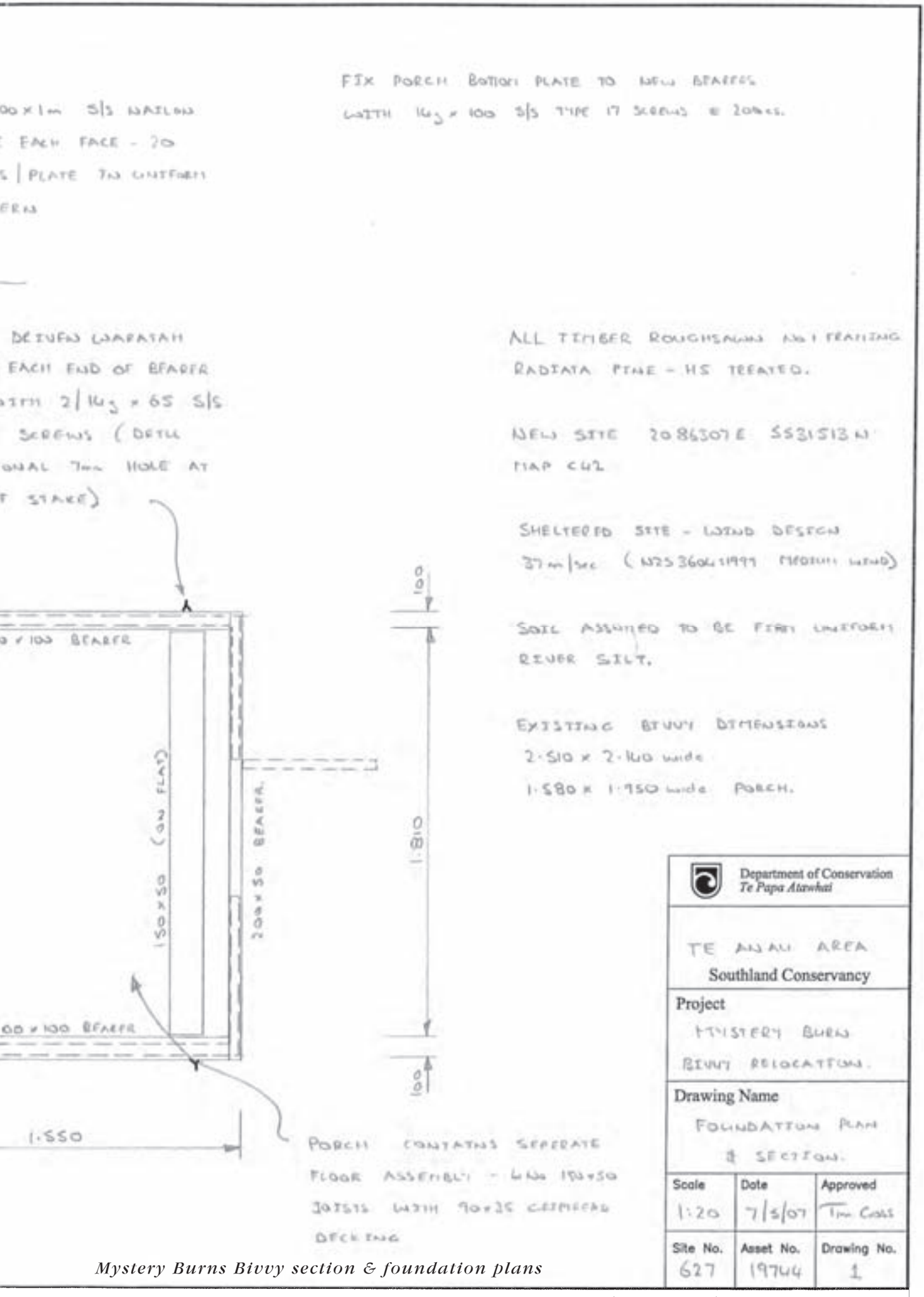
Takahe Valley Hut section plan



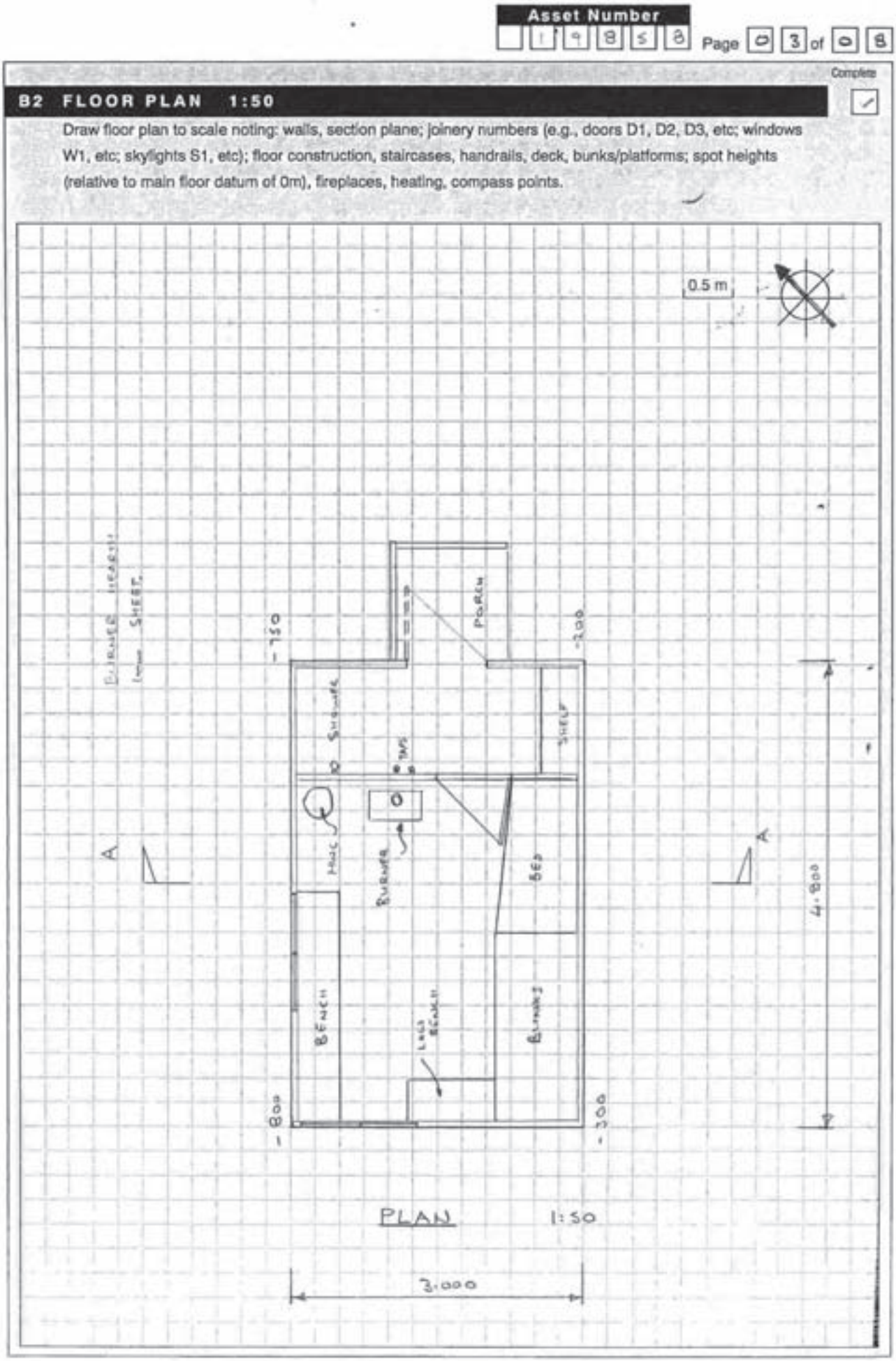
Kiwi Bivvy foundation plan


1.520
PORCH
100 x 100 BLOCK
BOLTED TO TOP OF
NEW BEARER WITH
2 M12 S/S
COACHBOLTS
6mm TIE DOWN CABLE
SEE SHT 2 FOR DETAILS
ALL TIMBER ROUGHSAWN NO1 FRAMING
RADIATA PINE H5 TREATED
NEW SITE 2030368E 5534558N
MAP SHEET B42
LOCALLY SHELTERED SITE - WIND
DESIGN 44 m/sec (HIGH WIND)
SOIL ASSUMED TO BE FIRM UNIFORM
CLAY/SILT
EXISTING 100x75 BEARER
NEW 100x100 BEARER
(2100 O'ALL LENGTH)
NEW 100x100 BEARER
960
2200
200
100
ATION PLAN 1:20
Department of Conservation
Te Papa Atawhai
TE ANAU AREA
Southland Conservancy
Project
BIVVY RELOCATION
TO SECRETARY ISLAND
Drawing Name
FOUNDATION
PLAN
Scale
1:20
Date
7/6/07
Approved
Site No.
515
Asset No.
49124
Drawing No.
1


FIX EXISTING BEARER
TO OUTER 2 JOISTS WITH
2 LUTIBERLOK CT 160 CLEATS
(8 NAILS) EACH JOIST
200
SECTION 1:20
FULLY
STAKE
FIX
TYPE
ADDIT
TOP
2,400
100x100 BEARER UNDER EXISTING
100x100 BEARER UNDER EXISTING
EXISTING 100x50 BEARER
(UNSUPPORTED)
100x100 BEARER UNDER EXISTING
150x50 (ON FLAT)
885
975
240*
100
100
100
* CONFIRM DISTANCES BEFORE
CONSTRUCTING NEW FOUNDATIONS.
FOUNDATION PLAN 1:20



Mystery Burns Bivvy section & foundation plans



Rocky Point Hut floor plan. (DOC)

Appendix 3:
Guidelines for intervention in fabric at Grade 1 and 2 huts

Note: Exceptions for Grade 2 huts are noted where relevant

Piles, sub-floor and flooring

Re-piling to current building standards when existing piles become rotten is acceptable[63] with the following conditions:

- it should first be specified in an approved conservation plan or management guideline
- care should be taken to ensure that the change is not visually obtrusive.

In practice, this will involve replacing timber with treated timber.

Sub-floor timbers should only be replaced when they are no longer functional and, where practical, like-for-like materials of the same type, dimensions and profile, as original should be used.

Only rotten or broken sections of floorboards should be replaced, and materials of the same type, dimensions, and profile should be used.

Where the floor of a hut is completely rotted and requires replacing the following conditions should be met:

- the floor should be inspected and recorded and an assessment undertaken by the Historic TSO or nominated person to determine if new flooring is appropriate
- an appropriate specification should be prepared, consistent with an approved conservation plan or management guideline
- the new flooring materials should be of a type consistent with the building style of the type and era of the hut
- all work should be supervised by someone qualified to do so to ensure that it is done according to the specification.

Other fabric

All original fabric should be retained and preserved wherever possible. Where original fabric is no longer sound it should be replaced but any necessary repairs or replacement should be the minimum necessary and sympathetic to the original construction techniques in size, dimensions, profile and type. This includes all joinery, fixtures and fittings.

Where fabric has special heritage value (such as bearing historic graffiti or demonstrating unique and important construction techniques)

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[63] The ICOMOS NZ charter allows for this: A technically higher standard of restoration may be justified where the life expectancy of the element is increased, the new material is compatible with the old, and the cultural heritage value of the place is not diminished.

it should, where practicable, be retained and new fabric of like kind placed alongside or in support of it. Careful consideration should be given to the type and placement of strengthening material in order to minimise its visual impact.

Chattels

Period chattels, such as books, older candleholders and fire screens should not be removed from the hut, provided these are still usable and safe. In some instances new and better alternatives can be introduced and the originals left for display only.

NZFS food storage tins, food, utensils, pots/camp ovens that remain in any huts should be considered heritage items and left in situ until further advice has been provided by the Historic TSO, or direction given in a conservation plan or management guideline.

Surface coatings

These assets should only be painted if there is evidence of paint on the cladding surfaces or where there is evidence of deterioration due to weathering. If painting or repainting is required, a paint scraping should be undertaken and filed in a labelled and sealed plastic bag for future reference. Repainting should be in original colours, or where painting has not been undertaken previously it should be consistent with the era and type of the hut. Graffiti that has historic value **should not** be covered.

Associated buildings

Where there are still original timber-framed and corrugated iron clad toilets at these huts they should be retained so far as practicable. Their replacement with a modern toilet is not permitted. If a Norski or similarly modern pit toilet is already located at the site or if a toilet has reached the end of its practical life, consideration should be given to possibly replacing it with a refurbished toilet of the original style (that may have been removed from a hut not in Grade One or Two), or with a replica toilet to original design. Air vents can be fitted to these original and replica toilets to improve airflow.

Where a meat safe or other associated asset is still present these should be maintained in their existing location and repaired to maximise their lifespan. Materials used in repairs and maintenance should be of like kind (same type, dimensions, profile and size). Painting should follow the same rules as stated for the associated hut.

The relocation of associated buildings within the hut site is allowable in some instances. For example the Hut Service Standards have a distance requirement between any hut and a meat safe. To satisfy this requirement a new site for the meat safe can be agreed with the Historic TSO.

Increasing capacity

If there is a need for increased capacity at a site in the future a separate building should be constructed outside the immediate and visible vicinity of the existing hut to reduce the impact on aesthetic values. At the

same time it is important that these buildings have an ongoing use, so if additional facilities are required to be built in their vicinity they should continue to be managed as bunk space to complement the new facility. Visitors should be actively encouraged to continue to use the old hut as bunk space. The Historic TSO should be consulted on the scale and location of such new facilities.

Some adaptation of Grade 2 huts is allowed. Specifically, modifications can be made to improve the efficacy of the internal space if they are deemed essential and are approved by the TSO Historic.

Recording work

The standards for recording all work to these buildings is the same as for any actively managed historic asset. Buildings that were not visited as part of this study should be inspected and recorded to at least the same standard as was undertaken for this project prior to any work being undertaken (this includes creating a detailed photographic record of the building).

Flyable bivouacs

Flyable bivouacs do not have to be kept on their original or existing sites but should not be moved unless:

- they are no longer required on their existing sites
- if they are required elsewhere, or
- if there is a threat to a hut that requires its relocation.

All Grade 1 or 2 flyable bivouacs should remain in use within the National Park i.e. not exported for use in another area.

Archaeology

None of the huts in this study can be considered an archaeological site under the terms of the Historic Places Act 1993. For any accidental discovery of archaeological sites, artefacts or human remains the Historic TSO should be contacted, and standard DOC processes should be adhered to.

Appendix 4:
ICOMOS New Zealand Charter

ICOMOS NEW ZEALAND CHARTER FOR THE CONSERVATION OF PLACES OF CULTURAL HERITAGE VALUE

Preamble

New Zealand retains a unique assemblage of places of cultural heritage value relating to its indigenous and its more recent peoples. These areas, landscapes and features, buildings, structures and gardens, archaeological and traditional sites, and sacred places and monuments are treasures of distinctive value. New Zealand shares a general responsibility with the rest of humanity to safeguard its cultural heritage for present and future generations. More specifically, New Zealand peoples have particular ways of perceiving, conserving and relating to their cultural heritage.

Following the spirit of the International Charter for the Conservation and Restoration of Monuments and Sites (the Venice Charter 1966), this charter sets our principles to guide the conservation of places of cultural heritage value in New Zealand. It is intended as a frame of reference for all those who, as owners, territorial authorities, tradespersons or professionals, are involved in the different aspects of such work. It aims to provide guidelines for community leaders, organisations and individuals concerned with conservation issues. It is a statement of professional practice for members of ICOMOS New Zealand.

Each section of the charter should be read in the light of all the others. Definitions of terms used are provided in section 22.

Accordingly this charter has been adopted by the New Zealand National Committee of the International Council on Monuments and Sites at its Annual General Meeting on 4 October 1992.

1. The Purpose of Conservation

The purpose of conservation is to care for places of cultural heritage value, their structures, materials and cultural meaning. In general, such places:

i. have lasting values and can be appreciated in their own right;

ii. teach us about the past and the culture of those who came before us;

iii. provide the context for community identity whereby people relate to the land and to those who have gone before;

iv. provide variety and contrast in the modern world and a measure against which we can compare the achievements of today; and

v. provide visible evidence of the continuity between past, present and future.

Biodiversity Huts, Fiordland

2. Indigenous Cultural Heritage

The indigenous heritage of Maori and Moriori relates to family, local and tribal groups and associations. It is inseparable from identity and well-being and has particular cultural meanings.

The Treaty of Waitangi is the historical basis for indigenous guardianship. It recognises the indigenous people as exercising responsibility for their treasures, monuments and sacred places. This interest extends beyond current legal ownership wherever such heritage exists. Particular knowledge of heritage values is entrusted to chosen guardians. The conservation of places of indigenous cultural heritage value therefore is conditional on decisions made in the indigenous community, and should proceed only in this context. Indigenous conservation precepts are fluid and take account of the continuity of life and the needs of the present as well as the responsibilities of guardianship and association with those who have gone before. In particular, protocols of access, authority and ritual are handled at a local level. General principles of ethics and social respect affirm that such protocols should be observed.

3. Conservation Practice

Appropriate conservation professionals should be involved in all aspects of conservation work. Indigenous methodologies should be applied as appropriate and may vary from place to place. Conservation results should be in keeping with their cultural content. All necessary consents and permits should be obtained.

Conservation projects should include the following:

i. definition of the cultural heritage value of the place, which requires prior researching of any documentary and oral history, a detailed examination of the place, and the recording of its physical condition;

ii. community consultation, continuing throughout a project as appropriate;

iii. preparation of a plan which meets the conservation principles of this charter;

iv. the implementation of any planned work; and

v. the documentation of any research, recording and conservation work, as it proceeds.

GENERAL PRINCIPLES

1. Conservation Method

Conservation should:

i. make use of all relevant conservation values, knowledge, disciplines, arts and crafts;

ii. show the greatest respect for, and involve the least possible loss of, material of cultural heritage value;

iii. involve the least degree of intervention consistent with long term care and the principles of this charter;

iv. take into account the needs, abilities and resources of the particular communities; and

v. be fully documented and recorded.

2. Respect for existing evidence

The evidence of time and the contributions of all periods should be respected in conservation. The material of a particular period may be obscured or removed if assessment shows that this would not diminish the cultural heritage value of the place. In these circumstances such material should be documented before it is obscured or removed.

3. Setting

The historical setting of a place should be conserved with the place itself. If the historical setting non longer exists, construction of a setting based on physical and documentary evidence should be the aim. The extent of the appropriate setting may be affected by constraints other than heritage value.

4. Risk Mitigation

All places of cultural heritage value should be assessed as to their potential risk from any natural process or event. Where a significant risk is determined, appropriate action to minimise the risk should be undertaken. Where appropriate, a risk mitigation plan should be prepared.

5. Relocation

The site of an historic structure is usually an integral part of its cultural heritage value. Relocation, however, can be a legitimate part of the conservation process where assessment shows that:

i. the site is not of associated value (an exceptional circumstance); or

ii. relocation is the only means of saving the structure; or

iii. relocation provides continuity of cultural heritage value.

A new site should provide a setting compatible with cultural heritage value.

6. Invasive Investigation

Invasive investigation of a place can provide knowledge that is not likely to be gained from any other source. Archaeological or structural investigation can be justified where such evidence is about to be lost, or where knowledge may be significantly extended, or where it is necessary to establish the existence of material of cultural heritage value, or where it is necessary for conservation work. The examination should be carried out according to accepted scientific standards. Such investigation should leave the maximum amount of material undisturbed for study by future generations.

7. Contents

Where the contents of a place contribute to its cultural heritage value, they should be regarded as an integral part of the place and be conserved with it.

8. Works of Art and Special Fabric

Carving, painting, weaving, stained glass and other arts associated with a place should be considered integral with a place. Where it is necessary to carry out maintenance and repair of any such material, specialist conservation advice appropriate to the material should be sought.

9. Records

Records of the research and conservation of places of cultural heritage value should be placed in an appropriate archive. Some knowledge of place of indigenous heritage value is not a matter of public record, but is entrusted to guardians within the indigenous community.

CONSERVATION PROCESSES

1. Degrees of Intervention

Conservation may involve, in increasing extent of intervention: non-intervention, maintenance, stabilisation, repair, restoration, reconstruction or adaptation. Where appropriate, conservation processes may be applied to parts or components of a structure or site.

Re-creation, meaning the conjectural reconstruction of a place, and replication, meaning to make a copy of an existing place, are outside the scope of this charter.

2. Non-intervention

In some circumstances, assessment may show that any intervention is undesirable. In particular, undisturbed constancy of spiritual association may be more important than the physical aspects of some places of indigenous heritage value.

3. Maintenance

A place of cultural heritage value should be maintained regularly and according to a plan, except in circumstances where it may be appropriate for places to remain without intervention.

4. Stabilisation

Places of cultural heritage value should be protected from processes of decay, except where decay is appropriate to their value. Although deterioration cannot be totally prevented, it should be slowed by providing stabilisation or support.

5. Repair

Repair of material or of a site should be with original or similar materials. Repair of a technically higher standard than the original workmanship or materials may be justified where the life expectancy of the site or material is increased, the new material is compatible with the old and the cultural heritage value is not diminished. New material should be identifiable.

6. Restoration

Restoration should be based on respect for existing material and on the logical interpretation of all available evidence, so that the place is consistent with its earlier form and meaning. It should only be carried out if the cultural heritage value of the place is recovered or revealed by the process. The restoration process typically involves reassembly and reinstatement and may involve the removal of accretions.

7. Reconstruction

Reconstruction is distinguished from restoration by the introduction of additional materials where loss has occurred. Reconstruction may be appropriate if it is essential to the function or understanding of a place, if sufficient physical and documentary evidence exists to minimise conjecture, and if surviving heritage valued are preserved. Reconstruction should not normally constitute the majority of a place. Generalised representations of typical features or structures should be avoided.

8. Adaptation

The conservation of a place of cultural heritage value is usually facilitated by it serving a socially, culturally or economically useful purpose. In some cases, alterations and additions may be acceptable where they are essential to continued use, or where they are culturally desirable, or where the conservation of the place cannot otherwise be achieved. Any change, however, should be the minimum necessary and should not detract from the cultural heritage value of the place. Any conditions and alterations should be compatible with original fabric but should be sufficiently distinct that they can be read as new work.

9. Interpretation

Interpretation of a place may be appropriate if enhancement of public understanding is required. Relevant protocol should be complied with. Any interpretation should not compromise the values, appearance, structure or materials of a place, or intrude upon the experience of the place.

10. Definitions

For the purposes of this charter:

adaptation means modifying a place to suit it to a compatible use, involving the least possible loss of cultural heritage value

conservation means the processes of caring for a place so as to safeguard its cultural heritage value

cultural heritage value means possessing historical, archaeological, architectural, technological, aesthetic, scientific, spiritual, social, traditional or other special cultural significance, associated with human activity

maintenance means the protective care of a place

material means physical matter which is the product of human activity or has been modified by human activity

Biodiversity Huts, Fiordland

place means any land, including land covered by water, and the airspace forming the spatial context to such land, including any landscape, traditional site or sacred place, and anything fixed to the land including any archaeological site, garden, building or structure, and any body of water, whether fresh or seawater, that forms part of the historical and cultural heritage of New Zealand

preservation means maintaining a place with as little change as possible

reassembly (anastylosis) means putting existing but dismembered parts back together

reconstruction means to build again in the original form using old or new material

reinstatement means putting components of earlier material back in position

repair means making good decayed or damaged material

restoration means returning a place as nearly as possible to a known earlier state by reassembly, reinstatement and/or the removal of extraneous additions

stabilisation means the arrest of the processes of decay

structure means any building, equipment, device or other facility made by people and which is fixed to the land.