

Ivory Lake Hut Maintenance and Repair.



April 2016.

Urgent works. Door replaced.

Coordination with other backcountry users and Andersons Helicopters enabled Keith Riley and Martyn Bisdee a brief time window to replace a missing front door and to assess hut condition prior to the onset of winter. Some damage has occurred to wall linings in foyer area.



Figure 1 Missing front door replaced with temporary door.

24-27 February 2017. Philip Palzer, Keith Riley, Rata Lovell Smith, Martyn Bisdee.

Front row, Dean Arthur.

Cooking Alcove.

This structure was a metal box constructed of sheet metal and angle iron bolted to the side of the hut. Its upper surface had a sealed flue outlet (like a chimney) and sheet metal sloping back towards the hut. There were numerous visible historical attempts to waterproof this attachment.

The initial intention was to repair this structure and build a new roof over it. We understood there was some historical significance to keep this structure.

After careful consideration, it was decided that the structure would need to be completely rebuilt at significant cost and man-hours. We believed there were far more pressing issues than building an extra 'micro wing' onto the hut.

The structure was flat packed and flown out.

The remaining cavity was rebuilt as a straight wall matching existing structure inside and out. Insulated and clad with sheet metal as per existing hut.



Figure 2 Removal of cooking alcove.



Figure 3 Repaired North wall.

Lean To.

Upon closer inspection, it was discovered that the lean that had historically functioned as a workshop had suffered snow load damage including cracked or bending rafters and failing stringer connections to the main hut. Decayed roofing paper and rotten rimu purlins Added to the woes of this area.

The stringer was jacked back into level and raised by 70 mm enabling the roof line to reconnect with the main hut roof at its top plate. The stringer was fixed with 100mm bugle screws. Coach screws will be added at next working bee. Roof was removed, purlins replaced, z nails attached where possible. New building paper added.

An extra row of purlins added to strengthen structure.



Figure 4 Lean to structure and connection to main hut.

Existing roofing iron was removed, laps primed and 2 coats of Dulux 'pioneer red' applied.

A new change of pitch flashing was added between junction of main hut roof and lean to roof.

The roof was extended 150 mm on the west wall enabling it to finish inline with the main hut roofline. This hopefully provides improved water tightness at a small internal corner at the lean too/ main hut junction, west wall.



Figure 5 Extended roofline and new bargeboards/ soffits on southwest corner

Roofing iron was reattached with 70 mm roofing screws and cyclone washers.



Figure 6 Cyclone washers and change of pitch flashing.

The lean to space was very cluttered with bolts, pipes, buckets, boxes paint tins etc, reminiscent of grandads workshop. This was all sorted and flown out. Anything appearing to have historical significance was cleaned and stored at the hut.

Both windows of the hut were reinforced with Perspex.



Figure 7 Reinforced windows

Door painted.

A small soffit and barge board has been added to the lean to in hope of reducing wind blown moisture and to reduce the snow stress on the over hanging roofing iron at its end. See figure 4.

Main Hut Roof.

Height safety. The low angle of the lean to and the low height made this acceptable for a conscious working area. The north side of the hut had a steeper pitch and a greater height. Scaffolding was built here to work on the lower section of the roof. Working on the upper section was protected through a belay from the lean to roof.

Removal of this roof indicated both building paper and insulation in good condition. Moisture damage may have been caused by existing building paper being tucked inside the external cladding, rather than over. This was remedied on the south pitch by cutting and repositioning, plus adding new building paper. Both roofs were primed and 2 coats of 'pioneer red' Dulux paint applied. All nails replaced with 70 mm roofing screws and cyclone washers.



Figure 8 Roof cavity revealing good batts and building paper.

The existing ridge capping and barge flashings were reused after priming the underside.

Windows.

The removal of both windows indicated they were a likely source of moisture into the hut.

Both windows were replaced with new double glazed units. Both had 10mm Perspex attached 5-10 mm in front of the glass. This is to protect against windblown stones at the previous windows had suffered from.



Figure 9 West window with Perspex protection.

Ventilation.

Floor and wall vents have been installed to create ventilation across the hut. Floor vent in the west end of the hut. Wall vent at the east and the apex of the roof.



Figure 10 Floor ventilation. See fig 12 for wall vent.

Wall Cladding.

Corner flashings have been added to the 4 corners and a full paint x 2 coats (lichen colour). Extra screws and silicon added at likely trouble spots. Cladding sheets added to seal old opening on west wall.

New flashing added to junction between roof and wall on north face.

Main Access.

New external door and landing area.

Drainage.

Gravels and vegetation on the East wall were higher than the bottom of the hut this was dug back to bedrock. Vegetation replanted and stonewalls established to keep gravels away from hut.



Figure 11 New landing and drainage on East side. Wall vent is visible at top of hut.

To reduce airflow under the hut, stonewalls were build between external piles.



Figure 12 Stone works to reduce sub floor airflow.

The inside of the hut was cleaned out, chairs and tables repaired, surplus kitchen paraphernalia, historical food and mildewy paper removed.



Figure 13 The chair of recession ready for another decade.



Future work.

- Completing lining repair on inside of hut.
- Painting inside of hut.
- Architraves and skirting boards on windows, doors and vents.
- Screw lean to stringer to main hut wall with coach screws.

There are sufficient pink batts and almost enough ply sheets to line and insulate the lean too. This would bring it up to a similar, or better standard to the main hut.

An internal access between main hut and lean to could be established at foyer area.

Now that the Lean to area is free of clutter, it has become a useable and easy to maintain/ keep clean space. This adds significant dry sheltered space to the hut area.