

Mawson's Huts Conservation Expedition 2005



Mawson's Huts Conservation Expedition 2005 Field Leaders Report.

Summary.

This expedition was an 8 day visit by a party of 4, with a works plan geared as a preparation and investigation for a major conservation effort in the summer of 2006-2007.

Access to Cape Denison, was through the Aurora Expeditions Russian chartered ship, the *Marina Svetaeva*, the 4 berths being generously donated to the Mawson's Huts Foundation by Aurora. Embarkation was from Hobart Dec 9, 2005 and disembarking, Bluff, New Zealand Jan 2, 2006.

Time spent on the continent was from Dec 16,-Dec 23.

The team had a total of 7 expeditions to Mawson's Huts between them, which made for a very experienced group to become deployed on the ice, get camp established, concentrate on the works plan and redeploy to the ship.

Luck always plays a large part in getting access from Commonwealth Bay to the continent because of the incessant katabatic winds, and the reverse is the same. We were therefore prepared with ample supplies to sit it out for an extra month if retrieval of the party was not possible. In both directions, luck was on our side, with the margin of 24 hrs proving it would have been impossible to get on or off the ship.

Most objectives of the works plan were achieved, the detail of which is further in this report.

Thanks must be given to the sponsors, Aurora Expeditions, as mentioned, for the spacious and comfortable berths, gourmet food and a commitment to the objectives of the conservation team.

Australian Geographic, for the cash donation for the many expenses incurred on this type of venture.

Cisco Communications, for the invaluable satellite phone and paying the inevitable bill.

Tasmanian Shipping Supplies for providoreing and social supplies.

Grateful thanks also to,

Tom Maggs and Bruce Hull of Environment and Heritage, for steering the project through the maze of requirements of the *EPBC Act* , the supply of Antarctic Division

clothing, tools, medical kits, communications equipment and pre-departure access to the workshops.

David Jensen, Chairman of the Mawson's Huts Foundation, for his enthusiasm and zealotry to *The Cause*.

Rob Easter, where his guidance and vast polar experience was invaluable.

Passengers and Crew of the *Marina* for their support in lugging equipment across the ice, up narrow gangways and enthusiastic bidding for items in the inaugural Great Southern Ocean Mawson's Huts Foundation Auction.

My colleague at Tasmanian Parks and Wildlife, Rachel Heaton, who came good with the typing when the heat was on.

My friends and fellow expedition members, David Killick , Communications, Cook, Photographer and Jester, Marty Passingham, Heritage carpenter, table tennis ace and Mike Staples Heritage carpenter and monitoring guru....thanks blokes for everything.

Conservation Works Plan.

1. Report on snow and melt water ingress.

a) Workshop.

It was with some surprise, to see a large amount of fresh snow in the area which had been excavated in 2002. It was inconclusive as how this may have happened as the re-roofing had been thought to effectively seal this section.

A possible explanation was that the timber baffle which separates the porch from the workshop was left ajar or had been pushed slightly askew which had allowed drift to swirl and settle into the space.

About 50% of this was removed.

A proposal to excavate ice to floor level in the swing arc would allow the original door to close and would be the obvious solution to this potentially recurring problem. Foam seals could also be discretely fitted to the jambs, which would also increase the effectiveness of this action.

There was also an accumulation on the north-eastern corner, which may have entered up the hip line. The best way to definitely source this would be to actually be in the hut during a blizzard.

b) Main Hut

As expected, there was recent ingress, primarily on the southern plane of the roof, above and in Mawson's cubicle, in "Hyde Corner" and the south western corner.

A large proportion was removed from the bunks of Ninnis and Mertz, primarily for the expected visit of *Marina's* passengers and crew.

As the remaining ice was acting as a plug against further ingress, until the re-roofing option is actioned, little gain could be seen in removing more, with the potential of damaging artefacts. We were also mindful of time constraints.

Stalactites of ice had also grown in some areas. Given the amount of possible ingress points, it would be a tall ask to define exactly where this was entering, subsequently melting in summer, and entering the hut and refreezing.

Some questioning the effectiveness of the foam seal is warranted. I consider this to be of only partially of any use in protecting against ingress, due to the varied depths of weathering of the cladding.

No further strip patching was done as there wasn't any discernable part of the roof which was in worse condition than any other part.

It seemed to be a late season with a lot of accumulation around the hut generally.

No melt water was seen around the hut at any stage, and no evidence of melt entering at floor level of the hut.

2. Investigation of fire damaged roof around the stove flue.

This proved to be a simple task and needed no intervention in the fabric, either ceiling lining or structural members.

During ice excavation around the stove area, a 30 cm section of the flue was freed from the ice. There was rusting around the jointing and a hole in the side of the flue which had the galvanising burnt off. This would be the obvious cause of the fire in 1912, as the metal flue was of quite a light gauge.

Damage to the hut was confined to scorching of a purlin. Despite the fact the fire would have disconcerting to the men of 1912, the structural damage is minimal and needs no further work before over cladding could begin.

3. Workshop skylight covers.

Marty Passingham constructed 2 new covers and frames as planned by Adrian Welke from Troppo Architecture.

4mm glass was cut on site and fitted to the sash on the western skylight of the work shop. Glazing putty was also applied to the sashes where required.

The new covers match the existing fabric perfectly.
All new fabric was date stamped.

4. Ice Removal

a) Kitchen.

Approximately, 5m³ of 'old ice' was removed by the usual chainsaw archaeological method. Excavation stopped within 20cm of the northern wall due to shelving being covered with a rich artefact presence.

A similar presence was on the cooks table and below that height and about 75 cm above floor height was found 2 cooking pots and a timber box which had evidence of Hurley's photographic belongings.

How these artefacts came to be in this resting place is of conjecture, possibly being placed at that level sometime in the past by persons unknown and subsequently recovered with snow and ice. Excavation ceased at this level.

The area around the stove, although not entirely uncovered, again due to artefacts, found a metal cylindrical container sitting on the stove top which would have held about 40 litres of water.

It would seem logical this is the container which was used to melt snow and ice gleaned from outside the hut and used for domestic purposes.

Next to the cylinder was a heavy duty mitt, which no doubt was used to open the fire box door, to reload with coal briquettes.

It would also have been used to lift hot pots from the cook top.

b) North Easter Corner.

A similar volume of ice was removed from this corner. A 20 cm layer between the bunks and the main room was retained as per the works plan, but along with ice removed from the kitchen, opened up the remainder of the main living space, completely transforming the main hut to the size members of the AAE would have recognised, despite the 45-60 cm ice covered floor area.

A void was discovered in the ice next one of the bunk spaces, and on opening up slightly, some artefacts could be seen on the lower bunk.

One was a wicker basket of about 45cm in height complete with lid, contents or use only to be guessed at, and some books, the titles of which could not be seen.

5. Environmental Monitoring.

A separate report by Mike Staples is included.

6. Over cladding Detail Investigation

All roof planes appeared free from structural defect, the hips reasonably true and rafter planes straight, as in previous expeditions observations.

The cladding is continuing to deteriorate as expected, but I was surprised at the rapid deterioration in the intervening years since my last visit on 2001. This is however a subjective observation.

Photographic evidence would probably confirm it however.

Sailcloth battens would also appear to be lost between visits.
All loose battens were refixed using Robertson stainless steel screws.
Photographic detail of all roof and wall planes were taken prior to any to any work and can be compared to previous expeditions records of the amount of original fabric, to which has been lost in the winds.

The proposed method of over cladding could not be assessed as it was not available at the time the team was on the ice.
Marty Passingham and self had a good hard look at how we might achieve this however and we think we have an alternative which will not detract from the important visual aspect of the roof of the main hut, be weatherproof, relatively simple, unobtrusive, and reasonably quick to fit.
Discussion can follow as when seen appropriate for this proposal.
The over cladding material lifted onsite by the French has unfortunately been buried under the ice. While this can be uncovered within a few hours, the moisture content could be high which will lead to shrinkage if fitted to the roof as is.
A priority in 2006 would be to move the stack to the moraine directly to the south of the hut and racked/chained to allow free air movement.
A specialist opinion on how long the timber would need to remain racked before use in this climate would need to be sought (Ian Godfrey?).
Both Marty and Mike commented on the damaged tongue and grooves of the cladding.
While this will take valuable time to pare of the offending shards and splinters, I didn't think the T&G was in any better or worse shape with which we over clad the work shop in 97-98. It all came from the same supply which had been piled in the Ant Div store at Kingston for many years. However, as mentioned the majority of the pile was buried.
An assessment of quantity has been undertaken and deemed sufficient, however if a quantity of T&G can be sourced, either purchased or perhaps sponsored, it will save valuable time in preparation of a damaged board prior to fitting.