

**“HISTORIC HUTS;  
REMOVE, REPAIR OR RESTORE?”**



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## 1. Syndicate Brief

The Antarctic, and in particular the Ross Sea region, contains some irreplaceable Heritage sites that include Scott and Shackleton's huts at Cape Evans and Cape Royds. The huts are visited by many people each year both from national programmes and from tourist companies operating in Antarctica. They are a visible reminder of the heroic era, a time when humans strived to conquer the hostile Antarctic environment. They have stood for nearly 100 years. Their life span has undoubtedly been extended by parties of dedicated workers who have repaired visible damage where appropriate using limited funding donated by individuals who have an interest in preserving the huts for posterity.

On 25<sup>th</sup> March 2003, one hundred years after Shackleton returned to Lyttleton from his first visit to Antarctica on Scotts Discovery expedition, the Antarctic Heritage Trust (AHT) launched a conservation initiative to restore the hut Shackleton built three years later at Cape Royds. During centenary celebrations before assembled international media and supporters, Her Royal Highness Princess Anne launched the Trusts fundraising appeal for 10 million pounds to restore four historic huts and their contents. The project strategic plan is based on the comprehensive restoration of the huts and their contents over multiple seasons. In launching the appeal, Princess Anne presented a donation of £70,000 from the British government representing the British Antarctic Territory.

The conservation plan raises many interesting questions about the huts:

- Should many millions of dollars be spent restoring the huts to their former state or should we simply leave the huts to decay naturally and eventually be lost from the landscape?
- Who should pay?
- Whose responsibility are the huts?
- Who will benefit?
- Would the money be better spent on Antarctic Science that will address fundamental issues concerning the future of our planet?

The Trust pointed out that the conservation of Antarctic heritage would not mean there would be an influx of tourists to the continent. In fact, the Trust does not believe that it is in the best interests of the fragile environment within the huts for tourist numbers to increase.

## 2. Introduction

The historic huts of Antarctica, and in particular the Ross Sea region, have been described as “*irreplaceable heritage sites*”. The question of what does the term heritage mean and why should heritage be conserved, needs to be answered in general terms before examining the specific question of conservation of historic huts in Antarctica.

Aplin (2002 p.1) has provided some useful discussion on definitions of heritage and heritage conservation; he points out that “we are all products of our personal and collective pasts, including those of our forebears and of local, ethnic, religious, and other groups to which we belong. We are also products of our present physical, social and cultural environments. Not surprisingly, we each identify and value *our heritage* according to our backgrounds and experience. Our heritage is made up of existing ‘things’ that often, but not always, have historical associations, for example important buildings, landscapes, plant and animal species and less tangible cultural features. Furthermore, we value the components that make up our heritage for a wide range of reasons, and at many different scales, from personal through to local, regional, national and global.....At the most intimate level, heritage is an intensely personal concept.”

Such a definition could lead to a conclusion that heritage is a matter of personal choice or preference at a purely individual level. However, Aplin also points out that heritage “...also helps define the various groups of which we are a part, including nations and, ultimately, humanity. Not surprisingly, then, heritage can also be intensely political as well as intensely personal.” (Aplin 2002 p.1)

The common element in this definition of heritage is that “we identify items in our heritage as worth preserving and sharing with present and future generations.” (Aplin 2002 p.1). Certainly, the historic huts of Antarctica have been identified and discussed as worth preserving and sharing with present and future generations, since the 1950’s at least. A.S Helm, Secretary to the Ross Sea Committee of the Commonwealth Trans Antarctic Expedition 1955-58, and Secretary to the Wellington branch of the New Zealand Antarctic Society, had written from Antarctica urging preservation of the huts. At the same time (1957) early recommendations for preservation of the historic huts and their contents were documented by Lieutenant Commander J. Foster RN, a British observer on the icebreaker U.S.S. Glacier (Harrowfield 1990 p.57).

Cultural heritage has been defined as:

- things – items including landscapes, buildings, structures, relics, places and other works, which are not renewable, and as
- the meaning of heritage items to people,

inspiring present and future generations. The two sets of ideas about heritage merged in the 1960’s, so that heritage now refers to things that represent ideals. As such, heritage says a lot about who we think we are, as the things we save from change make certain ideals real and reinforce our identity (Aplin 2002 p.15).

Other reasons for conserving heritage include:

- the preservation of aspects of our culture and history, adding to our sense of belonging and group identity;
- maintaining and defining the context in which we live, assisting us to locate ourselves in the world and in society, past and present.
- the existence of a continuity between past, present and future, and a recognition that preserving key items, ideas, and practices adds meaning to that continuity, and to people's lives within it;
- its contribution to the *sense of place* – defined by natural and cultural features, and *sense of time* – which illustrates past stages in history; and allows us to locate our present lives geographically and historically.

However, any statement of justification for the retention of a particular heritage item or site involves an exploration of the concept of *significance* and the criteria used to establish it (Aplin 2002 p.19). The arguments for the cultural significance of the historic huts will be explored in detail in a later section.

The other question, which needs to be addressed by this report, relates to the question of the value of revisiting this particular topic of whether to conserve or not. The questions relating to the significance of the historic huts and the value of conserving them have already been addressed, in a sense, by the management decisions made and the actions taken to conserve them to date.

The debate has resurfaced in relation to both the Ross Sea region huts and Mawson's Huts in the last few years. The debate in relation to the Ross Sea region huts has been stimulated by recent fund raising and conservation planning initiatives, as outlined in the syndicate brief

The debate on the question of conserving Mawson's Hut in-situ or by repatriating it to Australia can be followed through the pages of [Aurora](#) (the newsletter of the Australian ANARE club) since 1978 when the issue of conservation by repatriation was first raised. The debate has intensified with public fund raising activities by the AAP Mawson's Huts Foundation for conservation work and is accessible in a more recent forum – the Cape Denison Conservation Management Plan Seminar held in Sydney in October 1998, which is available on the internet (AAP, 2003).

The context within which the management of the Ross Sea region huts has been set is one of planning rather than cultural resource management. When the issues of the value and appropriate management of the huts was initially addressed in a formal planning sense, it was by way of planning guidelines and philosophy. "A Strategy for the Preservation and Management of Historic Sites in Ross Dependency Antarctica" was written by G.A.Turner in 1979. At that time Turner was a Senior Planning Surveyor with the Department of Lands and Survey, so naturally he drew on the discipline he was familiar with – planning theory – to develop his arguments for the formulation of historical values for the huts and methods for implementing management. The bibliography for the Strategy does not refer to any works on the theory or practice of cultural resource management.

A more recent examination of the debate by a previous Graduate Certificate of Antarctic Science (GCAS) syndicate, entitled “Human Artefacts in Antarctica: treasure to be conserved or junk to be removed” (Cadenhead, Johnston, Kestle & Webb 1999), does not refer to the theory or practice of cultural resource management in relation to the question.

The International Charter for the Conservation and Restoration of Monuments and Sites (the Venice Charter 1966) has given rise to many charters, which set out the principles to guide historic and cultural heritage management in countries. The 1970’s were a significant period, within Australia at least, during which guidelines for the assessment of cultural significance and appropriate management guidelines were being developed, for example in both the Australian Heritage Commission Act (1975), and in the Australia International Council on Monuments and Sites (ICOMOS) Burra Charter (1979). However, the adoption of legislative protection for historic places (the Historic Places Act 1993) and a charter for heritage management (the New Zealand Charter adopted by the New Zealand National Committee of ICOMOS in 1993) appear to have developed at a later date in New Zealand (Office of the Parliamentary Commissioner for the Environment 1996 p.2-3).

Therefore, it is useful to revisit the issues of the assessment of cultural significance of the huts and the consequent appropriate management regimes from the perspective of the now highly developed body of philosophical and management frameworks provided by the discipline of cultural resource management.

### **3. Definitions and Descriptions**

#### **3.1 Definitions**

The Syndicate decided to define an Historic Hut as:

“The living and working quarters with a particular association with an expedition that played an important role in the exploration of Antarctica prior to 1958 and particularly those with an association with a notable feat of endurance.”

In its broadest sense this definition means that nineteen sites over the whole Antarctic continent are included. If rock shelters were to be added a further four sites could be included on this list (Appendix 1). However, for the purposes of this report the main focus will be on six of the most famous huts on the continent, see Figures 1 & 2, namely those of:

- Borchgrevink’s *Southern Cross* Expedition at Cape Adare, 1898 - 1900;
- Scott’s *Discovery* Expedition at Hut Point, 1901 - 04;
- Shackleton’s British Antarctic Expedition at Cape Royds, 1907 - 09;
- Scott’s *Terra Nova* Expedition at Cape Evans, 1910 - 13;
- Mawson’s Australian Antarctic Expedition at Cape Denison, 1911-14; and
- Commonwealth Trans-Antarctic Expedition at Scott Base, 1957 - 58.

However, a comparison will also be drawn with the British Antarctic Survey (BAS) hut conservation activities on the Antarctic Peninsula.

#### **3.2 Description of the huts**

Many modern descriptions of the huts are available (*inter alia* Harrowfield 1987, White 2003) but some of the most succinct come from Rubin, J. (1996).

##### **3.2.1 Borchgrevink’s Hut, Cape Adare (Plate 1)**

"May I never pass such another 12 months in similar surroundings and conditions"

- Louis Bernacchi expedition physicist, 1900 (quoted in Rubin 1996)

In 1899 Borchgrevink's expedition built two huts on Ridley Beach; an accommodation hut and a stores hut.

The accommodation hut is 5.5m by 6.5m and built of interlocking boards of Norwegian spruce that has outlasted the newer huts built by Scott's Northern Party twelve years later. The interior consists of an office/storeroom and a darkroom followed by a living area with a stove, table and chairs and 5 double-tiered coffin-like bunks. The hut was insulated with papier-mâché and had a single double paned window.

The Antarctic Heritage Trust re-roofed the hut during the 1989-90 season and installed support braces down to the ground. The stores hut is now roofless but still contains some of the expedition provisions including butter, coal and ammunition.

**FIGURE 1**

**FIGURE 2**

### 3.2.2 The *Discovery* Hut: (Plate 2)

"Having discovered a spot in which we felt confident the 'Discovery' could winter with safety, the living hut was no longer of vital importance, but ... it was obvious some sort of shelter must be made on shore before exploring parties could be sent away with safety ... Later on we hoped the large room would come in useful as a workshop or as a playroom, or for any purpose which might tend to relieve the congestion of the ship." (Scott, 1905)

This hut was built in February 1902 by Scott's National Antarctic Expedition. It is of a design still found in rural Australia where it was purchased and is typified by wide overhanging verandas. It was not used as accommodation by Scott's men as it was difficult to heat. Instead it was used for storage, repair work and as an entertainment centre known as "The Royal Terror Theatre".

The *Discovery* hut was used extensively by all the expeditions of the Heroic Age that came after it. Both Shackleton in 1907-09 and Scott 1910-13 used the hut as convenient shelter on sledging trips to and from the Ross Ice Shelf. However, it was the unfortunate Ross Sea Party of Shackleton's Imperial Trans-Antarctic Expedition that benefited the most when they took refuge inside during 1915 and 1916. The hut not only provided them with shelter but also with such necessities as food, sleeping bags, long underwear, cigars and that basic for survival in Antarctica - *Crème de Menthe*. This party are also responsible for the blackened condition of the interior of the hut, the soot being the result of the seal blubber stove they used to keep warm.

Today there are few artefacts in the hut (Plates 3 & 4).

"Stores line the right hand wall as you enter; a central area is occupied by a stove, piles of provisions and a sleeping platform. Much of the hut feels empty ... A mummified seal lies on the open southern veranda ... If anything the hut sharply conveys the hardships that were endured by the early explorers ... this hut would quickly become a home, albeit a rough one." (Rubin, J. 1996).

Along with the later *Terra Nova* hut this site has considerable scientific value due to the advances in many branches of science that were made here during the *Discovery* Expedition.

**PLATE 1 & 2**

**Plate 3& 4**  
**Interiors of Discovery**

### **3.2.3 Shackleton's British Antarctic Expedition Hut (BAE) at Cape Royds** (Plate 5)

"The inside of the hut was not long in being fully furnished, and a great change it was from the bare shell of our first days of occupancy...As winter came on and the light grew faint outside, the hut became more and more like a workshop, and it seems strange to me now, looking back to those distant days, to remember the amount of trouble and care that was taken to furnish and beautify what was only to be a temporary home." Ernest Shackleton. (Ralling C. 1983)

"... the little hut, which had been our home for a year that must always live in our memories ..." Ernest Shackleton (ibid)

The prefabricated hut was home to fifteen men and measures 7m by 8.5m and the insulation was improved by stacking boxes of supplies around the outside walls and filling the space between with volcanic scoria. Boxes of supplies were also used to form the walls for a garage and the stables.

Unlike Scott, Shackleton did not impose a division between officers and men, although he did insist on having a private room for himself as leader. Successive expeditions have made use of the hut and changed it's interior - few of the bunks survive and the large table which was hoisted to the ceiling each night to make more space has gone, probably burnt by one of the later groups who ran out of fuel (Plates 7 & 8).

"The feeling inside is still very ghostly, though perhaps not as eerie as Cape Evans" (ibid). A large number of artefacts such as a sleeping bag, cooking equipment, photographs, food rations and tins of motor lubricant are still in place. Whilst around the outside of the hut pony oats spill from feed bags in the stables, one of the Arrol-Johnston motor car wheels leans up against the provisions boxes.

Today cables run over the hut to lash it to the ground and the Antarctic Heritage Trust attached rubber sheathing to the roof in 1990.

### **3.2.4 The *Terra Nova* Hut at Cape Evans** (Plate 6)

A contemporary description of the hut suggests that much had been learnt from previous attempts to build a home away from home on the ice:

"The hut was a roomy place, 50 feet long by 25 feet wide with 9 feet to the eaves. The insulation, which was very satisfactory, was seaweed, sewn up in the form of a quilt ... We thought we should be warm, and we were. In fact, during the winter ... the hut not infrequently became fuggy ... We started to live in the hut on 18 January, beautifully warm, the gramophone going, and everybody happy." (Cherry-Garrard, 1922)

Built at Cape Evans in 1911 during Scott's *Terra Nova* expedition the hut is imbued with a far greater feeling of history than its predecessor at Hut Point.

**Plates 5 & 6**  
**BAE & Terra Nova**

**Interior BAE  
Plates 7 & 8**

**Interior of Terra Nova**

**Plates 9 & 10**

The hut itself was divided in two; a “mess deck” where the nine men (i.e. non officers) lived and the galley stove was located and a “wardroom” containing the officers’ living and working quarters. There is a significant amount of equipment, stores and scientific paraphernalia remaining in the hut and its environs (Plates 9 & 10) including photographic supplies, food stores with remarkably familiar labels, a stuffed emperor penguin and the geologist Griffith-Taylor’s bicycle.

“This is the real thing, what you came for ... Here dog skeletons bleach on the sand in the Antarctic sun, chiding *momento morii* of Scott’s death march from the Pole. Inside the hut, unquiet ghosts glide soundlessly through memories of sledging pennants, the rustle of pony harnesses and a sighing wind. It’s an absolutely amazing feeling to stand at the head of the wardroom table and recall the famous photo of Scott’s final birthday party ... You definitely feel their ghostly presence.” (Rubin, J 1996).

In addition to the associations with the people of the Heroic Age of Antarctic exploration the Hut has considerable value in terms of the history of science. Some of the earliest advances in the study of earth sciences, meteorology and flora and fauna were made on the *Terra Nova* expedition based in this hut.

The history of these activities and the contribution they have made to the understanding and awareness of Antarctica give this area significant scientific value.

### **3.2.5 Mawson's Australian Antarctic Expedition (AAE) Hut at Cape Denison (Plate 11)**

“The largest of the huts was 24 feet by 24 feet inside - not a very big room when it is remembered that it had to serve as bedroom, kitchen, dining-room, and living room for eighteen men. Still we managed to pack in.” (Laserson 1957).

The site includes the living quarters and workshop huts joined to form a single unit and the Magnetograph House and Magnetic Absolute Hut. The main living hut is about 53 square metres and surrounded by verandas on three sides where additional provisions and equipment were stored. The central living area is surrounded by Mawson’s room, the darkroom, bunks and the cooking area. Entrance to the hut was via a ‘cold porch’ with the door facing north to avoid the ferocious southerly winds.

The workshop hut is attached to the main hut via a connecting door and measures approximately 30 square metres. It contained maintenance equipment, generators, laboratories and a wireless operating area.

The AAE undertook observations of the earth’s magnetic field whilst at Cape Denison which is located close to the South Magnetic Pole and is therefore well situated for this purpose. The magnetograph house and magnetic absolute hut are located NE of the main hut the former being the best preserved building at the site.

Due to the violent katabatic winds in the area, conservation of the huts is very difficult. There is current controversy over the removal of snow and ice from the interior of the main hut which may ironically be helping to support it and prevent it being blown away.

### 3.2.6 TAE/IGY Hut at Scott Base (Plate12)

The Commonwealth Trans Antarctic Expedition (TAE) hut now known as the TAE/IGY Hut was previously called Hut "A". This hut was part of the original Scott Base. Construction of Hut "A" was begun on 12 January and was completed on 20 January 1957; the base being opened on the same day with a flag raising ceremony.

It is built on railway sleepers and a raft of Oregon pine, the panels are made of "explosive stress skin type, timber frame, 3 inch Onozote insulation infill, aluminium outer skin, quarter inch asbestolux inner face panels" (ANZ 2001). Before the final panel was put in place the stove, radio transmitters, water tank and snowmelter were put in position.

Hut "A" included the mess, radio room and the leader's office. "During the winter it became the focal point for many important events. Meals were cooked and eaten there, the radiogram played, films were shown, a library was available and lectures and debates on future plans were raised and resolved." (ibid)

Originally Scott Base was conceived by TAE for the Expedition's New Zealand party which was to lay depots on the Polar Plateau for the Crossing Party starting from Shackleton Base on the Weddell Sea. With the advent of the International Geophysical Year (IGY), additional accommodation was required for the five IGY scientific personnel. These additional needs were included in the original design and construction, carried out by the New Zealand Ministry of Works, this being done by their project architect, Frank Ponder (Antarctic, 2001). By the mid 1980s planning was underway for the new Scott Base, and the older buildings had to make way. After a vigorous campaign, Hut "A" was saved from demolition, but it was moved in December 1989 seawards by approximately 30 meters (Harrowfield, 1998).

The interior was re-built to reflect its original lay-out of 1957, including Sir Edmund Hillary's 'bunkroom' and office which had been fitted out by himself after it had been decided that an extra man would over-winter in 1957 (Claydon J., pers.comm.).

**PLATES 11 & 12**

### **3.3 Current Management Status**

#### **3.3.1 Ross Sea Region huts**

The current management status of all four of the Ross Sea region huts can be summarized together, and the relating Antarctic Special Protected Areas (ASPAs) are listed in Appendix 1.

Each management plan covers the following topics:

- A description of the values to be protected;
- The aims and objectives of the plan;
- The management activities including “a regular programme of restoration and preservation work”;
- The period of designation as a specially protected area (indefinite);
- Maps;
- A description of the area; and
- Conditions attached to receiving a permit to visit the area

In addition the conservation report that has been prepared for the Shackleton hut at Cape Royds (AHTNZ, 2003) enters into greater detail, covering topics that, *inter alia*, include a statement of cultural heritage significance, an outline of environmental and other constraints, conservation policies on hut and artifacts, recommendations on conservation works, and an implementation plan.

This Conservation Report also contains a number of detailed appendices including: biographies of expedition members, a bibliography, the original hut specifications, artifact lists, original expedition supply and equipment lists, a copy of the ICOMOS Charter and a list of key conservation personnel (with short curriculum vitae), who were involved in the production of the report.

For the Terra Nova hut at Cape Evans, recently initial survey work has been carried out in anticipation of producing a Conservation Plan for the hut ([heritage-antarctica.org](http://heritage-antarctica.org) 2003).

### **3.3.2 Mawson’s AAE hut at Cape Denison**

Mawson Hut is listed as Specially Protected Area No. 13 and is covered by the “Management Plan for Specially Protected area (SPA) No. 13 for Historic Site No ? (see Appendix 3.)

This plan has seven sections:

- It sets out a description of the values to be protected;
- Lists the aims and objectives of the plan;
- Lists the management activities including “a regular programme of restoration and preservation work”;
- The period of designation as a specially protected area (indefinite);
- Maps;
- A description of the area; and
- Conditions attached to receiving a permit to visit the area

Initial survey work has recently been carried out in anticipation of producing a Conservation Plan for the hut ([heritage-antarctica.org](http://heritage-antarctica.org) 2003)

### **3.3.3 TAE/IGY Hut**

The TAE/IGY Hut is listed as Historic Monument No 75 in Appendix 1, and is subject to the “TAE/IGY Hut Management Plan” dated May 2001.

This plan has six main sections:

- The historical background and the hut’s status is set.
- Lists the hut’s features
- Sets out the conservation considerations
- States the policies and procedure that apply.
- Defines the management responsibilities.
- Sets out an action plan.

The action plan has yet to be fully implemented. Conversations with Antarctic New Zealand indicate confirm that the action plan will make the Hut a repository for artifacts from the TAE/IGY era, as well as others showing the history of New Zealand’s first fifty years in the Antarctic. This is a pragmatic approach applied to a Historic Monuments that is still part of a modern working base.

## 4. Legal Status

This section is an introduction to the legal status of the historic huts that are being considered.

### 4.1 The Ross Sea Region

To discuss the legislative framework of the Ross Sea region's huts, it is necessary to go back to 1923 when New Zealand (NZ) was given sovereignty over the Ross Dependency. At this time there was no written material (e.g. Memorandum of Understanding) stating that NZ was to be responsible for the conservation of the huts. Neither New Zealand or Britain is willing to take sole responsibility for these huts.

The question then arises as to who is responsible for the implementation of management and conservation actions in respect of any particular ASPA. Under the ATS the *de facto* responsibility lies with the country nominating the site for Protected Area status. Therefore it follows that the responsibility for the Ross Sea region huts lies with NZ, and for Mawson's hut with Australia.

International best practice in protected area management includes cultural heritage. The national Antarctic programmes of these countries have adopted the role of protected area managers. Therefore they are duty bound to accept ultimate responsibility for the huts, although they may choose how this is achieved.

In actual fact the heritage trusts within these countries have accepted management responsibility for these cultural resources, and receive significant logistical support from their national Antarctic programmes. However the responsibility for management compliance of ASPAs remains with the national programmes, and by extension national governments. This division of responsibilities can lead to an uncoordinated approach to the management and financing of conservation efforts.

These huts were erected by explorers who were not necessarily supported by their country of origin. They had different relationships with their governments, and therefore, it has never been made clear whether it is the country who had original ownership of the huts or the explorers themselves. For this reason Britain has been unable to demonstrate that they had ownership of the huts in the first place and therefore unable to state that NZ now has ownership. (Hemmings, A. 2003 pers.comm.).

In 1969 the Antarctic Division of NZ Department of Scientific and Industrial Research – introduced the hut caretaker programme. This programme was more of an 'informal favour' which had no legal responsibility, and this continued when, in 1979, an action committee was established to investigate the long-term conservation of the sites. At the time, this direction seemed to be the best solution that would work. During this process, the committee changed the locks on the huts and issued keys to Scott and McMurdo bases, thus controlling who had access.

The Antarctic Heritage Trust (AHT) was formed in 1987 to hold responsibility for and to provide a co-ordinated approach for the preservation and management of the Ross Sea region huts on behalf of the international community. The AHT is not recognised by the Treaty system and has no legal precedence. Therefore it is seen as an internal mechanism for New Zealand to provide the expertise for the conservation of the huts.

The objective of AHT is to conform to the principles, purposes and spirit of the Antarctic Treaty, in particular, Annex V, Area Protection and Management, of the protocol on Environmental Protection of Antarctica (The Madrid Protocol). It is understood that, beyond the Treaty and Madrid Protocol, there are no New Zealand or British governing laws, that these countries have to abide by, when dealing with the protection of heritage sites or historic huts. This is because no one legally owns the land, and therefore no one legally has ownership of the buildings on the land other than buildings erected as the current permanent bases. (AHT, 2003).

The Madrid Protocol was created under the Antarctic Treaty System in 1991 to make certain mutually agreed resolutions on the environment were legally binding upon member nations. The Protocol is legally binding and is updated with Agreed Measures, as well as by subsequent Treaty meeting recommendations relating to the protection of the environment. (AAD, 2002).

Annex V of the Protocol requires that historic sites and monuments are not damaged, removed or destroyed. The Protocol does not in fact require historic sites to be conserved. The critical obligation relates to the requirement under Article 8 of the Protocol for an environmental assessment of any activity in Antarctica. (APP, 1997)

A hut is determined to be a 'Special Protected Area' in accordance with Annex V. The process of a site to be designated as a protected area is formulated by Article 5 and is set out in Appendix 2. Briefly, the particular country, interested in an area they wish to protect, writes a proposal in the form of a draft management plan. This plan is discussed at a Treaty meeting, and a decision is made as to whether or not the site is adopted as such. Once a site is protected, it has legality under the Treaty which will come into force when all parties have verified this, and has a position under international law. In addition once protected, the provisions relating to the management and conservation of the specially protected area are also binding on Treaty members. The site will be reviewed every five years by the particular country that has assumed responsibility. (Hemmings, 2003, pers comm).

Under the Treaty and Protocol, inspections can be made of these 'Protected Areas' by any other Treaty country at any time.

## **4.2 Mawson's Hut**

Mawson's hut, located in Australian territory has a slightly different situation. Early in 1933, Britain asserted sovereign rights over the Australian claimed territory and placed this territory under the authority of the Commonwealth of Australia. Sovereignty over the Territory was transferred from Britain to Australia under the *Australian Antarctic Territory Acceptance Act 1933*, which came into effect in 1936. The Australian Antarctic Division (AAD) represents the Commonwealth as owner of the huts and believes that the huts are on Commonwealth Crown Land. Thus the Antarctic Division has the responsibility for ensuring that a number of legal requirements are met. These have a basis as international obligations, as well as in Australian law, for which the Antarctic Division in its role of administering the AAT is responsible. Currently, the AAD controls activities at the site through the Antarctic Treaty (Environment Protection) Act 1980 which implements the Madrid Protocol.

Another key legal obligation derives from the Australian Heritage Commission Act, and the requirement for referral of proposals under Section 30 of that Act. For an activity which may affect a place on the Register of the National Estate, the practice is to satisfy the Section 30 requirements by referring the draft environmental evaluation to the Heritage Commission. (AAP, 1997).

The question of the veracity of Australia's claim of ownership of Mawson's hut will not be covered in this report.

## **4.3 TAE/IGY Hut**

The historical significance of the TAE/IGY hut was officially recognised in 2001 under the Antarctic Treaty with its designation as an historic monument.

The hut is listed under the Antarctic Treaty as Historic Monument, and under this listing a permit is not required to enter the hut. Therefore there are limitations on the use to which the hut is put, which are set out in the Management Plan. Visitors to the Hut have to follow the Code of Conduct set out in the Management Plan.

## 5. To Conserve or Not to Conserve

The first question, which needs to be answered, is why bother to conserve the huts at all? Why not simply remove them?

### 5.1 Remove

The arguments for removing the huts include:

- the huts were never intended to be permanent structures, but were built as temporary shelters to serve a specific purpose,
- the huts are now a “blot” on an otherwise pristine landscape, and should be removed to restore the “wilderness” experience, and
- artifacts associated with the huts have the potential to impact negatively on the environment (e.g. spilt food being eaten by penguins), so everything should be removed.

The thesis which will be argued in this chapter is that the huts have demonstrable cultural significance as heritage, which people wish to conserve. So the question of ‘not conserving’ is irrelevant to this report’s considerations, and besides the consideration of this alternative is made unproductive due to the launch of a major fund-raising campaign for £10 million in 2001, including an approach to the National Heritage Memorial Fund in London.

The question of whether money should be spent on restoring the huts to their former state or leaving them to decay naturally has been answered by a community which has identified the huts as part of its heritage and worth conserving. The question of how they should be conserved will be explored in the following paragraphs.

### 5.2 Conserve

The counter-argument is to conserve the huts as valuable historic places, either in-situ or elsewhere.

The Australia ICOMOS *Charter for the Conservation of Places of Cultural Significance (The Burra Charter)* 1979, amended 1981&1988, has been the key heritage conservation doctrine widely adopted by heritage agencies and governments in Australia. The process of determining the value of a heritage place is usually known as *the assessment of cultural significance*. The Burra Charter defines *cultural significance* as meaning “aesthetic, historic, scientific or social value for past, present or future generations”.

The argument for the conservation of the huts is based on a number of these and other values that are summarised below.

### 5.2.1 Scientific Value

Archaeologists recognise that the huts and associated artefacts contain valuable information that is not available in the documentation or photographs of the various expeditions, and can supplement those records. The huts and associated artefacts offer insights into the life and technology of the expeditions.

The huts are also part of a unique historical record as it is the first time that human involvement on a continent has been recorded, preserved and protected since the very first contact with land (Antarctica NZ nd).

The huts are “*signs of foreign impact, which today not only are keys to the historical events themselves and to human adaptation – or indeed to failure to adapt – to the hostile environment, but also can uniquely preserve remains of a ‘home’ culture poorly documented in the country of origin*” (IPHC 2002).

“*..combined with existing records ....sites help to unfold the details of life and work, suffering and death, at and beyond the (southernmost) boundary of human habitation..*”(IPHC 2002).

The huts may contain unrecognised scientific information on other topics, as illustrated by this quote regarding the magnetic hut of Mawson’s expedition:

“*In the event of the station being reoccupied, it is earnestly suggested that neither this hut (the magnetic hut) nor the absolute hut (100 yards south) be interfered with e.g. stores removed, in order that the magnetic elements may be determined again at any time under precisely the same conditions ....*”

(Bage 1913/Brookes 1978 p.109)

### 5.2.2 Intangible Values

Intangible values, usually thought of as social and aesthetic values, are values, which express community feelings about place.

Places with social value, are places that are essential reference points or symbols for a community’s identity, places where major events took place and places embodying spiritual values. (Johnston 1992)

Places with aesthetic value include places where a response is derived from the experience of the environment or particular natural and cultural attributes within it. This response can be either visual or non-visual elements and can embrace emotional response, sense of place, sound, smell and any other factors having a strong impact on human thought, feelings and attitudes. (AHC 1994b)

Social value and aesthetic value, both intangible values, have long been included as cultural heritage significance, for example in both the Australian Heritage Commission Act (1975), and in the Australia ICOMOS Burra Charter (1979). However, although recognised by most heritage practitioners as values expressing community feelings about place, heritage agencies did not use these criteria in

heritage identification. Truscott argues that while these values have not been central in much past heritage conservation, they are now emerging in heritage practice, potentially as a unifying force. (Truscott 2003 p.2).

Undoubtedly, the huts of the “heroic era” have significant intangible values for some communities, including spiritual value as a shrine or memorial. Values illustrated by some of the following quotes:

*“a valuable icon”* (Burch, 1999).

*“ a perpetual tribute to the men ..... ”* (anon, 1977).

*“ the contents of some (huts) remain as a testimony to the living conditions endured by their occupants.. ”* (IPHC 2002).

It is argued that the scientific and intangible values identified for the huts are not heritage values that are restricted to the white, Anglo-Saxon world; but are part of international, world heritage, as an extraordinary legacy of human’s first contacts with Antarctica.

### 5.2.3 Political Value

There are some people, among them politicians, who are still convinced that the existence of relics such as huts, strengthens a nation’s sovereignty claims and/or status within the ATS, as evidenced by this quote from a former Tasmanian senator in relation to Mawson’s hut :

*“I have become convinced that it would be a criminal act to remove Mawson’s hut from its present site, I say that for a number of reasons ..... it is important for us in Australia to be aware of our history, especially in the present Antarctic climate – I am not talking about weather but about the world scene in relation to Antarctica – to make sure that what we have done there is recognised. If we have buildings like Mawson’s hut and other installations there we can say ‘We have been here for 60 or 70 years and there is evidence of it there. ‘ If we take away that building that evidence is gone.”*

(Devitt 1978 p. 104)

*“Since 1911 the huts have taken on a much greater importance than just a place where a party stayed a long time ago. The huts are a reminder of the bravery and fortitude of the expeditioners that we can only dream about. They are a symbol of the change from The Heroic Age of Antarctic Exploration to the Scientific Age which has remained to this day, and they are the only outpost Australia can claim in the Eastern portion of the Australian Antarctic Territory. (authors’ emphasis)  
“(Thomas, 1998)*

#### 5.2.4 Conservation Issues

Nigel Watson, the executive director of AHT, has been quoted as saying “ *The rate of decay is increasing and the expert opinion is that we need to act now to ensure the legacy is preserved for future generations. We are lucky they have lasted 100 years but they won’t last 200 years without a major restoration effort*” (Titus, 2002).

Hughes (1991) has summarised the main conservation issues which need to be addressed in relation to the continued preservation of Mawson’s Huts (which are relevant to all of the huts), including:

- corrosion of the fabric of the huts due to windborne ice particles,
- melting of interior ice leading to increased humidity and defibering of timber, possible damage to the timber structurally, and also accelerating the deterioration of the artefacts inside the hut,
- fungal contamination in the woodwork and corrosion (in relation to Mawson’s Hut, but also Borchgrevink’s Hut and Scott’s Northern Party huts at Cape Adare),
- corrosion of metallic elements in the huts due to their close proximity to the sea, including deterioration of critical elements such as nails and ridge cappings,
- visitation to the huts, both by tourists and members of scientific programs, which increase the relative humidity in the huts accelerating the deterioration of artefacts – and can also lead to loss or damage to artefacts and hut elements either through carelessness or deliberate theft of items as souvenirs

Hughes responses to some of these conservation issues, in summary, are that:

- the effects of corrosion have been overestimated by visitors, and accurate measurements would be useful in estimating how many years are left for decision-making,
- it is worth considering alternatives to repatriation, such as the insertion of impermeable barriers in walls, re-cladding and insulation, and also research to develop a suitable coating to protect the building from corrosion – a short-term solution could be to develop a removable protective coating that would allow time for the development of more permanent measures,
- the necessity for long-term studies to determine rates of corrosion,
- treatment of fungal infection may involve, removal of fungus-affected items from the huts to some suitable location until appropriate treatment can be devised,
- the necessity for recording the number of visitors to sites, measuring their impact on the site and developing strategies for their management and limitations.

### 5.3 Conserve Somewhere else

Having demonstrated that the huts do have some values, which arguably should be conserved, the question still remains as to whether the huts should be conserved in-situ or removed from Antarctica.

The argument for removal of the huts focuses on a number of issues including:

- the difficulty of long-term conservation and short-term effective maintenance in such a hostile environment,
- the cost of conservation in-situ,
- the limited number of people who will be able to see the huts if they are left in Antarctica, and
- the opportunities for both revenue generation and education if the huts were more accessible to a greater number of people.

Although, Bill Burch's arguments relate to the debate over whether to remove Mawson's hut, they could just as equally be applied to any of the other historic huts in the Antarctic.

*"..it is not possible to devise a long-term preservation mechanism that does not modify either the hut or its environment..."* (Burch, 1989)

*"....the old chestnut of who is going to see the fruits of all this hard work and expense ...."* (Burch, 1999)

*"Visitors to the site will always be an infinitesimal privileged minority of Australians"* (Of the 60,000 tourists to Antarctica in the 1990's only 600 had visited Commonwealth Bay) (Burch, 1977)

*"Because there's big money in it and the bulk of the paying punters would not be able to make it to its current site ..."*(Burch, 1999)

*"In summary – there is no argument about the 'principle' of an historic icon and its setting – but there is the reality of preservation for all time – paying its way as it inspires countless of our citizens."* (Burch, 1999)

Indeed, there has already been some recognition of the commercial value of these sites, and the idea that the tyranny of distance can be overcome by providing a replica of a site, in a more accessible location.

Another option for making the huts more accessible to a wider range of people is through the use of new technologies, such as virtual reality tours on the internet.

*"The Antarctic is a place which few people on Earth will ever visit, yet there are numerous natural and historical attractions there which capture the human imagination, making people want to learn more. Further, there is increasing pressure on a few highly-valued sites in the region with a resulting desire to*

*preserve them, while at the same time increasing public knowledge and education. With this background, Antarctica is the ideal candidate for the kind of truly immersive, interactive virtual reality experience which is only now becoming possible outside of laboratories and military applications.” (Hyde, 2002).*

The idea of using virtual reality tours, as distinct from any question about continued conservation of huts in-situ, is certainly an interesting management approach to the question of the carrying capacity issue or longer-term preservation of the huts.

*“And, since the experience is almost like being there, complete with detailed and accurately measurable models of the sites, the same content could be used for detailed planning, research and inventory purposes, much of which could be accomplished without the researcher even leaving their office.” (Hyde, 2002)*

#### **5.4 Conserve in situ**

However, it must be obvious that some of the values that have been identified earlier will be diminished, if not destroyed, by removal. The argument for conservation of the huts in-situ includes:

- Concern that the scientific value of the huts and associated artefacts will be damaged or destroyed by their removal from their context,

*“The huts, the place, the ‘litter’ ... are artefacts which offer insights into the life and technology of the expedition.....These are all interconnected elements which combine to create a place – they are not simply objects awaiting any museum that will take them – they have a context of historical meaning, and symbolism to our society which would be lost if they were removed.” (Pearson, 1989)*

- Concern that the intangible values of the huts will be damaged or destroyed by their removal from their context,

*“....No amount of simulated setting in Australia could ever match the eeriness of crunching across crisp snow reviewing a scene unchanged in, then, 50 years .....” (Burch, 1977)*

- Concern that the huts may be physically damaged or destroyed during the removal process.

*“Nobody has been able to suggest how the hut would be removed without substantial damage to the original materials.... assure us that it can be taken apart, cased, transported to and stored on board ship and on return to Australia in a humidity and temperature controlled atmosphere, and that no damage will result from that massive intervention ? and what if the hut is partially dismantled when a blizzard hits? This all too frequent occurrence at Commonwealth Bay would probably rip the Hut apart.” (Pearson, 1989)*

## 5.5 Conserve, but how?

If there is to be an attempt to conserve the huts in-situ what does that actually mean – how much interference with or replacement of original fabric should occur?

The Burra Charter has defined some approaches to the management and conservation of cultural resources, which may be helpful in considering the question of appropriate management.

The Burra Charter distinguishes a range of possible conservation action, summarized by Pearson and Sullivan (1995) as:

*Conservation* – all the processes of looking after a place so as to retain its cultural significance, including maintenance, restoration, reconstruction and adaptation. (Article 1.4)

*Maintenance* – the continuous protective care of the fabric, contents and setting of a place, distinguished from *repair* which involves restoration or reconstruction (Article 1.5).

*Preservation* – maintaining the fabric of a place in its existing state and retarding deterioration (Article 1.6).

*Restoration* – returning the EXISTING fabric of a place to a known earlier state by removing accretions or by re-assembling existing components without the introduction of new material (Article 1.7). Restoration is appropriate only if there is sufficient evidence of an earlier state of the fabric, and only if returning the fabric to that state reveals the cultural significance of the place (Article 13). It is based on respect for all the physical, documentary and other evidence, and stops at the point where conjecture begins (Article 14).

*Reconstruction* – returning a place as nearly as possible to a known earlier state, distinguished by the introduction of materials (old or new) into the fabric, and not to be confused with recreation or conjectural reconstruction. (Article 1.8) Reconstruction is appropriate only where a place is incomplete through damage or alteration, and where it is necessary for its survival or where it reveals the cultural significance of the place as a whole (Article 17). Reconstruction is limited to the completion of a depleted entity, and should not constitute the majority of the fabric of a place (Article 18). It is limited to the reproduction of fabric the form of which is known from physical and/or documentary evidence. It should be identifiable on close inspection as being new work (Article 19).

*If there is a strong community wish for reconstruction, but also a danger of its inappropriateness destroying the cultural significance of existing remains, another alternative is to reconstruct the work elsewhere – that is, not on the original site. The cave paintings in France are duplicated for visitors, and so is Old Sydney Town, and the gold fields of Victoria (Sovereign Hill). (Pearson & Sullivan 1995 p.238)*

That option has already been explored for at least one of the Antarctic huts.

*“Those on a tighter budget can visit an Antarctic encounter much closer to home at Kelly Tarlton’s in Auckland. Exhibits include a replica of Scott’s Hut (based on the original, which was built in 1911 and still stands in McMurdo Sound) where whale blubber and tobacco odours provide an extra dimension to viewing Antarctic-related artefacts and authentic reproductions of the contents of the original hut....”* (Phare 2002 p.10)

*Conjectural reconstruction* – reconstruction based on guesswork with little or no evidence – for example, rebuilding a building when only its foundations remain, in what is believed to have been the style of the time. It is rarely appropriate, as it gives a misleading impression and usually destroys the cultural significance of the place.

*Adaptation* – modifying a place to suit proposed compatible uses (Article 1.9). Adaptation is acceptable where the conservation of the place cannot otherwise be achieved, and where the adaptation does not substantially detract from its cultural significance (Article 20). Adaptation must be limited to that which is essential to establishing a compatible use for the place (Articles 6,7,21). Fabric of cultural significance unavoidably removed in the process of adaptation must be kept safely to enable its future reinstatement (Article 22).

*Compatible uses* – a use which involves no change to the culturally significant fabric, changes which are substantially reversible, or changes which require a minimal impact (Article 1.10).

## **5.6 Conservation Planning**

A key principle of cultural resource management is the determination of why a place is significant, which could include more than one value, and therefore how it may be conserved in a way, which does not diminish or destroy that significance. It is the key concept, which links together the *why?* and *how?* of conservation, and is crucial to deciding on appropriate management techniques. The consequence of ignoring this linkage is that the very management actions intended to conserve a place may, in fact, destroy the values (the cultural significance) they were intended to conserve.

So, the question of what constitutes an appropriate conservation action will always be answered by - that depends on the impact it will have on the cultural significance of the site.

A strategy for addressing this issue is the development of a conservation plan for the site. Pearson points out that *“the details of fabric management approaches should be based on the implementation of agreed conservation policy, founded on a well researched and widely discussed statement of significance, these being the primary components of the conservation plan.”* (Pearson 1998 p.1) Pearson then goes on to outline some of the policies concerning fabric management which are present in the current Mawson’s Huts Conservation Plan, and which are relevant to the discussion on consideration of appropriate fabric management in any of the huts.

- *“All conservation objectives for fabric management should be consistent with the primary aim of conserving the significance of the Mawson’s Huts and surrounds.”*

- *“The fabric of the place is irreplaceable evidence. Disturbance of fabric must be limited to that essential to carry out the conservation works specified, or to that essential to investigate the place in order to develop further policy decisions.”*
- *“Decisions about when to replace original fabric in a building with new material should be based on the principle that no material should be removed unless there is, beyond reasonable doubt, the probability that the material concerned might fail, or might allow other parts of the building fabric to fail, or in some other way adversely affects the conservation of the building or associated artefacts. This decision should be based on relevant professionally competent judgement.”*

Pearson also comments that *“ If, for example, a policy is developed about progressive replacement of fabric when its failure occurs or is likely, a parallel policy and implementation strategy should put in place a method for monitoring the changing condition of fabric and establish the point where particular classes of fabric might be judged to need replacement. Otherwise the decisions to replace fabric will be highly subjective and ad hoc.”* (Pearson 1998 p.2)

However, as Pearson (1998 p.3) has also pointed out *“In recent times the past emphasis on the sanctity of fabric as the embodiment of heritage significance has been questioned within bodies such as Australia ICOMOS, and this debate about fabric and meaning has implications for Mawson’s Huts (and other Antarctic huts) planning. A key issue in fabric management at Mawson’s Huts is to decide where significance rests:*

*Is it the fabric made sacred by the events of 1911-12 ?*

*Is it the form of the huts in the landscape, rather than their fabric as such ?*

*Is it the symbolic value of the site as an historic memorial, and to what extent is symbolism embedded in the fabric ?*

*Is it the value of the buildings and artefacts as sources of information ?*

*Or is it, as is more likely, a combination of these and other values.”*

Richard Mackay, a Sydney archaeologist, has approached the same issue by looking at the difference between ‘form’ and ‘fabric’ in significance assessment and physical conservation: *“In considering the interpretation of significant fabric it is necessary to draw a distinction between significant form and significant fabric. In referring to significant form the example of an historic timber bridge is cited. In the 1980’s it may look the same as when it was constructed in the 1880’s. However, in the meantime traditional maintenance procedures would probably have resulted in the replacement several times over of every single timber member of the bridge fabric. This has major implications for proposed conservation work as it is clearly the conceptualisation and the design of the bridge which must be retained, rather than any particular member.”* (Mackay 1988 p.3-4)

Both, the concept of intangible values forming a strong element of the cultural significance of Antarctic huts and the debate about whether conservation emphasis should be on fabric or form, are relevant to any consideration of the long-term management of these huts.

Certainly, as Pearson (1998 p.3) has pointed out “*The multiple associations between significance and fabric have to be fully and widely explored before the implications of the assessment of significance on fabric management can be articulated*”.

This review has not attempted to reach a decision about the level of intervention that is appropriate for the various historic huts, but supports the importance of undertaking a full and comprehensive assessment of significance before such decisions are made.

## 5.7 Summary

The syndicate argues that the historic huts should be conserved as part of our heritage, and in recognition of their cultural significance which comprises historical, scientific, political and intangible values. It is a decision which communities in the United Kingdom, New Zealand and Australia have already made. These huts are certainly “items which we have identified in our heritage as worth preserving and sharing with present and future generations”, as demonstrated by the fundraising and management activities to conserve the huts which have been undertaken since the 1950’s.

Over the years, various proposals have been put forward to preserve the huts including building domes over them or shipping them and/or their contents to New Zealand (Titus 2000 p.8). The AHT has moved on from this debate and developed a new strategic approach to the conservation of the huts of the Heroic Age.

The core of this approach is the development of detailed conservation plans for the four historic huts in the Ross Sea region, with differing degrees of intervention for each site. At Cape Adare the conservation focus will be on stabilisation and preservation. Maintenance and repair is the emphasis at Cape Evans, restoration at Cape Royds and adaptation at Hut Point. The Trust is committed to developing detailed professional conservation plans and undertaking all work to the highest international conservation standards (AHT, 2000). The current approach of the Trust to the continued conservation of the Ross Sea region huts is in accordance with recognised best practice standards in cultural heritage management.

## **6. Visitor Management**

### **6.1 Accessibility**

A major factor that determines whether or not a site is visited is its accessibility. Given the location of Antarctica, this immediately eliminates the casual tourist. For those tourists who can afford the cost of traveling to Antarctica, the tour itself may or may not include visits to places of historic interest. Some tours simply cruise the coastline without stopping. All tours, the majority being cruise ship based, are undertaken during a very narrow window of opportunity, namely the austral summer months. The next factor to consider is the weather and ice conditions. If one or both of these makes a shore landing impossible, then the “scheduled” stop is cancelled.

Antarctica Visitor Guidelines were adopted by all the Antarctic Treaty members in 1994; this was Recommendation XVIII-1, Guidance for Visitors to the Antarctic. These guidelines were originally drafted by tour operators in North America in the 1980s. In 1991 efforts to conduct environmentally conscious travel to the Antarctic resulted in the formation of the International Association of Antarctica Tour Operators (IAATO). All visitors traveling to Antarctica are briefed on these guidelines. With regard to visiting historic huts, the guidelines state these “can only be entered when accompanied by a specially-designated governmental representative or properly authorized ship’s leader.” (IAATO, 1991)

Certain locations are classified as Antarctic Specially Protected Areas (ASPAs) which were set up through the Antarctic Conservation Act of 1978 (U.S. Public Law 95-541). In order to visit a Specially Protected Area it is necessary for any member of IAATO to acquire such a permit when travel to a ASPA is desired. “Entry to the Area is prohibited except in accordance with a permit. Permits shall be issued only by appropriate national authorities and may contain both general and specific conditions. A permit may be issued by a national authority to cover a number of visits in a season. Parties operating in the Ross Sea area shall consult together and with groups and organizations interested in visiting the Area to ensure that visitor numbers are not exceeded.” (AHT, 1997)

### **6.2 Tourist Numbers**

Debra Enzenbacher (1992) defines tourists as “visitors who are not affiliated in an official capacity with an established National Antarctic Program. They include both fare-paying passengers, whose numbers are usually reported reliably by tour operators and private expedition members and adventurers aboard sea or airborne vessels, whose numbers are more difficult to determine.”

This definition should also be expanded to include off-duty Antarctic personnel, official inspection team members, distinguished visitors, and the crew and staff of cruise ships.

According to IAATO, the number of visitors to the Antarctic for the 2002-2003 season was 13,571. The majority of these visitors travelled to the Antarctic Peninsula. Out of this number, less than 500 were scheduled to travel to the Ross Sea Region. The number of people involved with the operations and science projects at Scott and McMurdo Bases averages approximately 1800 during the summer season, see Table 1.

**IATTO – TABLE 1**

## **6.3 Sites Visited**

It is mainly the wildlife and the lure of wilderness adventure, plus the possibility of visiting these huts that attracts visitors to the area (Hughes, 1994).

### **6.3.1 Borchgrevink's Hut**

When this rather isolated site is visited, access is allowed only from boats or vehicles capable of moving over sea ice. There are several beach landing sites available from the sea/ice. Helicopter landings are not permitted as their use would likely interfere with the wildlife. Vehicles are likewise prohibited from driving overland to the site. Pedestrian traffic "may need to be restricted to avoid harmful interference to penguins nesting around and on the structures and artifacts in the Area." (AHT, 1997). The maximum number of people allowed to the area at any one time is 40 including official representatives. No more than 4 people are allowed within the hut, including guides.

"Avoidance of cumulative impacts on the interior of Borchgrevink's hut requires an annual limit on visitor numbers. The number of visitors to the hut varies considerably from year to year but the effect of visitors to other Ross Sea area historic huts suggests that similar limits should apply. The annual maximum number of visitors is 2000 people." (ibid)

### **6.3.2 'Discovery' Hut**

Again no helicopters are allowed to land; this is to prevent scoria and ice particles from being blown against the hut and nearby artifacts, accelerating the erosion process. Boat landings are possible to the north of the hut along the beach. Vehicles may use a road from McMurdo Station to visit the site.

Similar restrictions on the number of people allowed at the site are in place, with a maximum of 8 people allowed in the hut at any time. No number is given for the site in general. Annually, the maximum is set at 2000 people.

### **6.3.3 Shackleton's Hut, Cape Royds.**

Access is from Scott Base and can be via helicopter or by ski-doo in the early part of the season. It is also possible to arrive there by Hagglands or other heavy tracked vehicle from Scott Base.

A maximum of 40 people are allowed at the site, with 8 allowed at any one time inside the hut. 2000 people are able to visit the area during a season.

### **6.3.4 'Terra Nova' Hut, Cape Evans.**

Helicopter landings are prohibited for the same reasons as above, although there are two landing pads located outside the protected area; vehicles are also prohibited within the Area. Boat landings can be made on Home Beach in front of the hut.

No more than 12 people are allowed inside the hut at same time. The maximum number of people allowed to the Area during a season is 2000.

### **6.3.5 Mawson's Huts, Cape Denison.**

This is a remote site and is accessible only from ships which use the Boat Harbour landing site during the summer months (Hughes, 1992).

Access into the main hut is not possible because it is full of ice.

### **6.3.6 TAE/IGY Hut, Scott Base**

This building is part of the active Scott Base. The Policies and Procedures paragraphs in the Management Plan state the uses to which the hut may be put; quiet space, briefings and tours, fire assembly point. No permit for entry is required.

For quiet space there is no time limit, but it is for only 8 people. For briefings and tours numbers are limited to 12 with no time limit. For fire assembly there is no time limit or limit on numbers. There is a Code of Conduct with which all visitors must comply.

## **6.4 Visitor Impact**

While damage to the huts, associated out-buildings, and their contents is overwhelmingly due to environmental factors - climatic, biological, and marine-related (Harrowfield 1990), the human impact to these sites is not without significance though minor in comparison. It is felt that as the number of visitors increases, the need for more stringent control measures is required. As the means of implementing such control, sites are designated as ASPAs.

## **6.5 Security Issues**

While the access to historic sites is well controlled by the use of permits, as well as through the measures put in place by IAATO, there are still problems with the illegal removal of artifacts from these sites. Unfortunately, items are more frequently removed during recreational visits by base staff, in particular those personnel from McMurdo Station (Harrowfield, pers.comm, 2003.).

On the positive side, there have been reports of items which had been taken many years earlier that are now being returned to the huts from which they had been removed. One item is a 91-year-old tin of cocoa taken by Ken Meyer, US Navy (Ret) over 40 years ago. He has recently returned it so that it can be repatriated, saying it was the right thing to do (Short, 2002). Other items destined for auction by Christie's in London were taken off the auction block by Royal New Zealand Air Force (Ret) Wing Commander John Claydon who had removed the items in the late 1950s. Mr. Claydon was quoted as saying "hundreds of New Zealanders and Americans who had visited the Antarctic took such items." (Evening Post, 1998)

Other artifacts have been removed for care by the Antarctic Heritage Trust. These were deemed “as being particularly rare or vulnerable to loss”. (AHT 2003) Still others have been have been put into a Reserve Collection in Christchurch.

*“The purpose of this collection is to provide a representative selection of items for long-term preservation; to provide security for some particularly valuable items, and to allow ready access to typical artifacts for specialists carrying out research on conservation processes.” (ibid.)*

## **6.6 Security**

A future model for protecting the structures and contents of historic huts may be based on the findings of the Antarctic Heritage Trust’s Conservation Report for Shackleton’s Hut at Cape Royds ( ibid.). If the huts continue to receive visitors the issue of security then becomes paramount as the contents of the huts and the huts themselves are so valuable and vulnerable to visitor activity.

The authors of the report considered two different approaches to address the potential for theft. These were security cameras and security tagging and monitoring of artifacts. Other alternatives were initially considered but later rejected on the basis that they conflicted with the intent of the project. These were:

- glass partitions,
- limited use of reproductions, and
- fixing objects in place.

### **6.7.1 Security Cameras**

Again drawing on the Conservation Report for Shackleton’s Hut, it is clear that the use of security cameras could keep track of everyone entering and leaving the hut, and “an eye kept” on the artifacts. While being placed discretely within the main hut, visitors would be made well aware that cameras would be in use while they were present.

The type of camera to be used is described as being capable of transmitting digital images to a monitoring station at either Scott Base or McMurdo Station. The camera would be activated by passive infrared (PIR) sensors located at the point of entry into the hut. Images would continue to be recorded for a predetermined amount of time before being turned off. Linking these images to a video recorder would ensure that any irregularities noticed during a visit could be reviewed and the appropriate action taken. An additional asset to the use of the PIR detectors would be the ability to detect fire. It is felt that the most likely time for a fire to occur is during and after the time visitors have been in the hut. A proposed “‘run-on’ time could be incorporated for the cameras once the hut is vacated (*i.e.*, 40 minutes)” (ibid.). Transmission of the camera images would be through a low power wireless transmission station near the hut to an existing repeater on Mt. Erebus and then on to Scott Base or McMurdo. Power to this system could possibly come from batteries which would be recharged through solar panels.

At the end of the “tourist season”, a final check by personnel from Scott Base could remove this security system and put it away for storage until the next summer and install it when the visitors return.

The authors of the report noted a few drawbacks to the use of security cameras. The first is that the ability to monitor activity within the hut would be severely decreased because of the natural low light within the hut and during the process of restoration, fabric partitions will need to be hung in certain areas.

Secondly, it is felt that if something were missing its absence would not be picked up until the close of the season when an inventory was conducted. Even if the security tapes were reviewed and the act of theft revealed, tracking down the person responsible and notifying the appropriate national programme base manager or the cruise ship company would be a complex and difficult task.

Lastly, the type of surveillance system is relatively new technology in such an extreme climate and has yet to be tested. So its success would be subject to field trials. An alternative to this closed circuit TV would be the use dummy cameras, which retail businesses currently use successfully.

### **6.7.2 Security Tagging of Artifacts**

During the preparation of the Shackleton Hut Conservation Report, five different companies were contacted which specialize in security tagging. Three of these companies responded with varying degrees of willingness to work on some type of system. Major problems were envisaged, working at such a remote location, in an extreme climate, and with significant limitations posed by the artifacts themselves.

While this is the preferred method of tracking artifacts by AHT, there was no one type that was available for active security.

The recommendations for hut security were to:

- Continue investigating the security tag options and implement if suitable.
- Install dummy security cameras.
- Emphasize with visitors the impression of being under surveillance.
- Include discrete fixing of artifacts where practical.
- Emphasize self-control and clear rules of access. This includes a ‘no-bag’ policy, a limited number of visitors in the hut at any time, a ‘no-touching’ policy, and establishment that one person per party acted as an approved AHT monitor.

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The conclusions of the syndicate is that the security cameras and tagging may be a step too far financially, and that any new policy should concentrate on promoting the responsibility of visitors, and promote security by ensuring that a leader of each party ensured this behavior.

## **7. Antarctic Heritage Trusts and their responsibilities**

- 7.1 This report has already shown that the legal ownership of the Historic Huts is in question, and therefore it can be of no surprise that the financing of any projects for the sites has been as spasmodic and variable, as the work itself.

As early as New Zealand's first season in the Antarctic, 1956-7, initial maintenance work was undertaken. The following year in his report to the New Zealand Naval Board, Captain Kirkwood (Kirkwood, 1958) refers to working parties from the HMNZS Endeavour weatherproofing the huts; digging out snow at Cape Evans, loading up Shackleton's tractor from Cape Royds, and burning rubbish at each site.

These *ad hoc* type of repairs were carried out from time to time until the Antarctic Heritage Trust was formed and some sort of formal programme was initiated.

### **7.2 New Zealand's Antarctic Heritage Trust**

The Antarctic Heritage Trust (AHT) works to conserve the important heritage of these Historic Huts so that people may continue to appreciate, learn and draw inspiration from the legacies of the 'heroic age' explorers for generations to come. The Trust's primary focus lies in the protection and restoration of the huts and contents left by these first adventurers. These are the jewels in the crown of human heritage in Antarctica and are designated as ASPAs within the provisions of the Antarctic Treaty System (AHT, 2004). The Trust's focus is on the huts of the Heroic Age.

In 1979 a Strategic Plan was prepared to begin the structured management of all the historic sites in the Ross Dependency. These efforts contributed to the preservation of the huts but a major and coordinated conservation effort was necessary and in April 1987 Antarctic Heritage Trust was formed. In the first 10 years of operation the Trust had achieved a great deal including:

- Preparation of a Heritage Management Plan and Conservation Strategies.
- Restoration of the structural integrity and weatherproofing of the historic huts on Ross Island and Borchgrevink's hut at Cape Adare.
- Completion of an inventory of artefacts in the huts.
- Commencement of an artefact conservation programme.
- Collaboration with Britain for a conservation programme in the Antarctic Peninsula area.
- ASPAs designation within the Treaty system for the four Ross Sea area historic huts.

In recent years the structural integrity of all four huts has become more and more variable, and an assessment by NZ and overseas conservators confirmed they were at great risk of loss due to the ravages of time and extreme weather conditions.

In 2001 it was recognised a major conservation effort was required to ensure these legacies remained for future generations. In the following year HRH Princess Anne launched the Trust's international project to preserve, conserve and, to an extent, restore the huts with a fund-raising target of \$27 million (£10 million).

This is a long-term project and internationally recognised experts in their relevant fields have been contracted to work on the project. Experts include conservation architects, conservators, structural and fire engineers, quantity surveyors and historians. The wisdom of spending such large sums of money on the huts which will be seen by so few visitors each year is being constantly questioned.

The ultimate responsibility for the huts must lie with the international community through the Antarctic Treaty system, not just with New Zealand's AHT or, more correctly, the NZ Government through Antarctica NZ .

### **7.3 Funding of Antarctic Heritage Trust**

The Antarctic Heritage Trust has received only modest annual income over the years; the sources including:

- membership fees,
- donations from hut visitors; \$40 from tourists, and \$20 from people at bases.
- NZ Government; \$10,000 – 15,000 per annum.
- Grants from charitable foundations
- and benefit in kind in the form of logistic support from Antarctica New Zealand.

The funding-raising for the international project was given an initial boost by the NZ government donating \$400,000 over two years as 'seed corn', plus a contribution from the British Government through the British Antarctic Survey, and from the Paul Getty Trust in America. This is only a beginning and other sources have to be found, some of these being referred to later. However there would seem to be an argument for the national governments of NZ, Australia and the UK providing on-going direct financial support to the Antarctic Heritage Trusts as they do so for similar organization in their own countries.

### **7.4 UK Antarctic Heritage Trust**

UK Antarctic Heritage Trust was created in 1993 as a legally constituted charity. With the British Antarctic Survey, it has a liability for historic huts on the Peninsula. The British have had an ambivalent view, to be described below, on funding the conservation of the British Heroic Age huts in the Ross Sea region. As in New Zealand, there is the sensitive issue about expenditure of public funds; the Antarctic, particularly in the UK, is seen by the public, as a most remote national interest.

Antarctic New Zealand has made its view quite clear that the financial responsibility for the huts is not entirely New Zealand's. This is best illustrated by a quote from a letter from Gillian Wratt, CEO of NZ Antarctica to Antarctic Policy Unit (Wratt, 2000).

*'.....and the need for significant financial commitment from the UK if these important pieces of British heritage are not to slowly decay. This needs to be a stronger commitment than 'our Heritage Trust is doing what it can to help your Trust'.....'*

The latter phrase had been quoted from a letter to New Zealand's Prime Minister by the Chairman of UKAHT, but acting in his capacity as Chairman of The Trans-Antarctic Association, the successor to the Trans-Antarctic Expedition Ltd.

UKAHT's own annual income is modest circa £10-12,000 from membership subscriptions and from the arrangement with the British Antarctic Survey that around 50% of the income from the 'tourist shop' at Port Lockroy is donated to UKAHT. A significant proportion of this sum is in turn donated to AHT. (Heap, 2003)

Also for a number of years relatively modest fund-raising activity has been undertaken. A recent example for the benefit of the large project is a fund-raising dinner, organized by the James Caird Society, raised £14,000 in one evening. However such efforts are a 'drop in the ocean' if a target of £10 million is to be achieved.

Time has moved on and attitudes have changed positively. Recently in support of the international conservation project, the UKAHT has created a sub-committee with the specific task to raise funds.

Raising funds from UK taxpayers is particularly beneficial, as an additional 28% can be recovered from the Inland Revenue in Britain. In other words a UK taxpayer wishing to give £100 actually pays £72 and the Revenue pays £28. It is stressed that this can only be done through a UK taxpayer donating money to a registered charity based in the UK.

In addition to raising money from individuals, approaches have been made to the National Heritage Memorial Fund in London, a governmental organization, for a significant grant. A presentation was made to this body in October 2003, involving the Director of the Canterbury Museum, being the Vice-Chairman of the AHT. The proposal was not rejected, but certain comments made at the presentation indicate the difficulties in achieving a major grant (Heap,2003).

- "Who will see them?"
- "Why do you need to keep them going?"

This led to a discussion on Virtual Reality presentations which could make the historic hut experience more widely available. This would be one answer to the first question, and following from that, the answer to the second must be that 'They are there', and that their very existence supports and proves the truth of any visual reality presentation.

Any such grant would have to be spent over a number of years, bearing in mind the difficult logistics and the short season in the Antarctic. However, if this type of grant was forthcoming a significant sum of money annually would be available for a number of years, and would make a significant contribution to the speculative target of £10 million.

The idea of giving ‘access’ to the public throughout Britain through a virtual reality presentation, opens up other avenues for funding. For instance, the Heritage Lottery Fund, part of the overall lottery organization in the UK, has as a key requirement for funding projects that the public must have access. This avenue is to be explored.

Certainly there are prospects for funds to be found in the UK, and it is pleasing to note that at last some responsibility for funding the conservation of the ‘British’ Historic Huts in the Ross Sea area is being recognized.

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Currently the conservation of the Huts is being paid for by the public, charitable organizations, government seed money and logistical support. In the view of this syndicate it is entirely appropriate for Treasuries to directly allocate funds as it is the Governments who are ultimately responsible as signatories to the ATS and it is the national programmes that nominate sites for ASPA designation. This funding should be on-going and significant in order to discharge the governments’ responsibilities as signatories under the ATS.

The question “would the money be better spent on Antarctic science that will address fundamental issues concerning the future of our planet” does not take into account the significant amounts raised by public donation and membership of the heritage trusts. The money raised from these sources is proof that the community believe in the value of conserving this heritage.

Antarctic Programmes are investigating *inter alia* man’s effect on the Earth’s condition along with ‘blue sky science’, and these programmes are quite correctly governments’ domain, an issue for the tax payer.

The two issues are different, and so any comparison between Science Programmes and the Conservation project are based on a false premise.

## **8. Hut Conservation outside the Ross Sea region - Antarctic Peninsula**

Historic Huts are not just those of the Heroic Age, as this report is demonstrating, and are not just those in the areas where the Heroic Age expeditions took place. The Peninsula has been visited by expeditions for a great many years, and since the 1940s several nations have had permanent bases established there, continually manned; the British since 1944; the Americans from 1946/7; and also the Chileans and Argentines from early in the 1940s. All have been there from these early days to establish their territorial claims.

The British Antarctic Survey's (BAS) position is taken as a good example of what is happening outside the Ross Sea region, as that organisation has had a continuous scientific presence in the Antarctic for 60 years. This presence is quite definitely post Heroic Age, but of considerable historic importance and interest. Appendix 3 sets out the present situation that BAS has created on the Antarctic Peninsula.

Also it is clearly recognised that other nations have equally contributed to the history and science of the Peninsula.

### **8.1 British Antarctic Survey**

Prior to 1994, the BAS's attitudes to its old bases was one of benign neglect as scientific priorities set the agenda for expenditure of hard won funds.

After the establishment of Operation Tabarin's huts in 1944-46, in the 1950s there was a rapid expansion in number and geographical spread to emphasise UK's territorial claims.

In progressive stages post 1961 Antarctic Treaty, as the scientific topics expanded in number and content, BAS has increasingly concentrated its efforts at fewer and fewer stations – some being transferred to other Antarctic Treaty nations. But most of those bases that were surplus to requirements were left unused; were treated as 'emergency' refuges; or just never visited.

Following the ratification of the Madrid Protocol in 1991, BAS determined to implement a long term plan to 'clean up' all its sites. To help with this programme, a report was commissioned to determine the actions that needed to be taken over the coming decade (Cochrane, 1994). The report was delivered in 1994, and made a systematic assessment of, amongst other things, the heritage value of each of its surplus bases. Its recommendations have been the basis for BAS's action.

Five sites have been designated under the Antarctic Treaty regime as historical sites; these being:

- Port Lockroy - Historic Site No.61
- Faraday – Wordie House - Historic Site No 62
- Horseshoe Island - Historic Site No.63  
with its associated refuge hut on Blaiklock Island.
- Stonington Island - Historic Site No.64
- Deception Island - Historic Site No.71

The dates of the creation of the original bases range from 1944 to 1955, and brief summary of their history is contained in Appendix 4.

The reason for setting out in some details the circumstances on the Antarctic Peninsula is to show that the ‘Historic Hut’ theme does not just apply to the huts of the Heroic Age. Each era has its heroes and its values, and by saying this nothing can or should be taken away from the characters and values of the Heroic Age, but to-day’s communities should recognise the more modern ‘heroes’ as well.

There are a number of interesting similarities and differences between the approach taken by BAS and the New Zealand AHT:

- BAS undertook a systematic assessment of the heritage value of each of its sites.
- The use of an historical site to generate funds for its own conservation – Port Lockroy.
- The transfer of management responsibility of historic sites from BAS to the UKAHT.
- The further transfer of the management responsibility of an historic site to another nation i.e. the transfer of Faraday Base to the Ukraine.
- The existence of a base unchanged since it was abandoned – Horseshoe Island.
- The parallel management issues of these post-heroic era huts are directly relevant to the present and future management of the TAE/IGY hut.

The recommendations of the Cochrane report continue to be implemented, and it will be noted that the chief of these has been achieved with the four sites becoming Historic Monuments under the Treaty regime. Deception Island has been added to these.

The programme of site clean up, hut removal or hut repair, and transfer of stations to other Antarctic Programmes is continuing. This is all too dependent on each season’s conditions, but progress to date demonstrates BAS commitment to reducing its footprint on the Peninsula.

## 9. Summary and Recommendations

- It is argued that the scientific and intangible values identified for the huts are not heritage values that are restricted to the white, Anglo-Saxon world; but are part of **international, world heritage**, as an extraordinary legacy of human's first contacts with Antarctica.
- the syndicate concludes that the historic huts **should be conserved** as a valuable part of our heritage, agreeing with the decision which communities in the United Kingdom, New Zealand and Australia **have already made**.
- The AHT and the AAD have **moved on from this debate** and developed new strategic approaches to the conservation of the huts of the Heroic Age.
- Decisions concerning the conservation of the Historic Huts should be made in accordance with **international best practice**.
- The heritage trusts have accepted **responsibility for these cultural resources**, and receive **significant logistical support** from their national Antarctic programmes. However the responsibility for management compliance of ASPAs remains with the national programmes. This **division of responsibilities** can lead to an unco-ordinated approach to the management and financing of conservation efforts.
- International best practice in protected area management includes cultural heritage. Therefore the **national Antarctic programmes** under ATS are duty bound to accept **ultimate responsibility for the huts**, although they may choose how this is achieved.
- **It is recommended** that the TAE/IGY Hut Management Plan is reviewed, especially now the Hut is designated under ATS as an ASPA. This review should ensure that the management of the hut derives directly from the results of the cultural significance assessment.
- **Management capacity** to complete the action plan for the TAE/IGY hut should be considered now, and there should be clarification as to who is responsible for completing the action plan and ensuring that the Code of Conduct is complied with.

- The question “would the money be better spent on Antarctic science that will address fundamental issues concerning the future of our planet” **presupposes that there is competition** for the same source of money. In point of fact national Antarctic science programmes are funded by national governments and/or universities that receive government grants whereas the heritage charities are funded almost entirely by private subscription or other non-governmental sources. The money raised from private subscription is proof that the community believe in the value of conserving this heritage.
- The Public have a far greater involvement in the decision and choice to spend money on conservation of the historic huts, in comparison to their involvement in the funding of science programmes.

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### List of Historic Huts

Historic Hut sites according to Measure 3 (2003) Antarctic Protected Areas System:  
Revised List of Historic Sites and Monuments. Adopted at ATCM XXVI (2003).

No.	Description	Location
10	Building (magnetic observatory) at Dobrowolsky Station, Bunger Hills, with plaque in memory of the opening of Oasis Station in 1956.	66°16'S, 100°45'E
13	Hut at Cape Denison, George V Land, built in January 1912 by Sir Douglas Mawson for the Australasian Antarctic Expedition of 1911 - 14. This was the main base of the expedition.	67°00'S, 142°42'E
15	Hut at Cape Royds, Ross Island, built in February 1908 by British Antarctic Expedition of 1907-09, led by Sir Ernest Shackleton. Restored in January 1961 by the Antarctic Division of New Zealand Department of Scientific and Industrial Research. Site incorporated within ASPA 157.	77°33'S, 166°10'E
16	Hut at Cape Evans, Ross Island, built in January 1911 by the British Antarctic Expedition of 1910-1913, led by Captain R.F. Scott. Restored in January 1961 by the Antarctic Division of New Zealand Department of Scientific and Industrial Research. Site incorporated within ASPA 155.	77°38'S, 166°24'E
18	Hut at Hut Point, Ross Island, built in February 1902 by the British Antarctic Expedition of 1901-1904, led by Captain R.F. Scott. Partially restored in January 1964 by the New Zealand Antarctic Society, with the assistance of the United States Government. Site incorporated within ASPA 158.	77°50'S, 166°37'E
21	Remains of stone hut at Cape Crozier, Ross Island, constructed in July 1911 by E Wilson's party of the British Antarctic Expedition (1910-13) during the winter journey to collect Emperor penguin eggs.	77°31'S, 169°22'E
22	Three huts and associated relics at Cape Adare. Two were built in February 1899 during the British Antarctic (Southern Cross) Expedition, 1898-1900, led by Carsten E. Borchgrevink. The third was built in February 1911 by R.F. Scott's Northern Party, led by V.L.A. Campbell. Scott's Northern Party hut has largely collapsed with only the porch standing in 2002. Site incorporated within ASPA 159.	71°18'S, 170°12'E
26	Abandoned installations of Argentine Station 'General San Martin' on Barry Island, Debenham Islands, Marguerite Bay, with cross, flag mast, and monolith built in 1951.	68°08'S, 67°08'E

- |    |  |                       |
|----|--|-----------------------|
| 30 | Shelter at Paradise harbour erected in 1950 near the Chilean Base 'Gabriel Gonzalez Videla' to honour Gabriel Gonzalez Videla, the first Head of State to visit the Antarctic. The shelter is a representative example of pre-IGY activity and constitutes an important national commemoration.  | 64°49'8"S,<br>62°51'W |
| 38 | Wooden hut on Snow Hill Island built in February 1902 by the main party of the Swedish South Polar Expedition led by Otto Nordenskjold.  | 64°22'S,<br>56°59'W   |
| 39 | Stone hut at Hope bay, Trinity Peninsular, built in January 1903 by party of the Swedish South Polar Expedition.   | 63°24'S,<br>56°59'W   |
| 41 | Stone hut on Paulet Island built in February 1903 by survivors of the wrecked vessel <i>Antarctic</i> under Captain C.A. Larsen, members of the Swedish South Polar Expedition led by Otto Nordenskjold, together with a grave of a member of the expedition and the rock cairn built by survivors of the wreck at the highest point of the island to call the attention of rescue expeditions.  | 63°34'S,<br>55°45'W   |
| 42 | Artefacts of Scotia Bay, Laurie Island, South Orkney Island, in which are found; stone hut built in 1903 by the Scottish Antarctic Expedition led by W.S. Bruce; the Argentine meteorological hut and magnetic observatory, built in 1905 and known as Moneta House; and a graveyard with 12 graves, the earliest of which dates from 1903.  | 60°46'S,<br>44°40'W   |
| 46 | All the buildings and installations of Port-Martin base, Terre Adelie constructed in 1950 by the 3 <sup>rd</sup> French Expedition in Terre Adelie and partly destroyed by fire during the night of 23/24 January 1952.  | 66°49'S,<br>141°24'E  |
| 47 | Wooden building called 'Base Marret' on the Ile des Petrels, Terre Adelie, where seven men under the command of Mario Marret overwintered in 1952 following the fire at Port-Martin Base.  | 66°40'S,<br>140°01'E  |
| 55 | East base, Antarctica, Stonington Island. Buildings and artefacts at East base, Stonington Island and their immediate environs. These structures were erected and used during two U.S. wintering expeditions: the Antarctic Service Expedition (1939-41) and the Ronne Antarctic Research Expedition (1947-48). The size of the historic area is approximately 1 000 metres in the north-south direction (from the beach to Northeast Glacier adjacent to Back Bay) and approximately 500 metres in the east-west direction. | 68°11'S,<br>67°00'W   |
| 56 | Waterboat Point, Danco Coast, Antarctic Peninsular. The remains and immediate environs of the Waterboat Point hut. It was occupied by the UK two-man expedition of T.W. Bagshawe and M.C. Lester in 1921-22. Only the base of the boat, foundations of the doorposts and an outline of the hut and extension still exist. It is situated close to the Chilean Station 'President Gabriel Gonzales Videla'.   | 64°49'S,<br>62°51'W   |

- 61 'Base A' at Port Lockroy, Goudier Island, off Wiencke Island, Antarctic pensinsular. Of historic importance as an operation Tabarin base from 1944 and for scientific research, including the first measurements of the ionosphere, and the first recording of an atmospheric whistler, from Antarctica. Port Lockroy was a key monitoring site during IGY. 64°49'S, 63°29'W
- 62 ' Base F – 'Wordie House' on Winter Island, Argentine Islands. Of historic importance as an example of an early British scientific base. 65°15'S, 64°16'W
- 63 'Base Y' on Horseshoe Island, Marguerite Bay, western Graham Land. Noteworthy as a relatively unaltered and completely equipped British scientific base of the late 1950s. 'Blaiklock', the refuge hut nearby, is considered an integral part of the base. 67°48'S, 67°18'W
- 67 Rock Shelter, 'Granite House', Cape Geology, Granite Harbour. This shelter was constructed in 1911 for use as a field kitchen by Griffith Taylor's second geological excursion during the British Antarctic Expedition of 1910-13. It was enclosed on three sides with granite boulder walls and used a sledge to support a seal-skin roof. The stone walls of the shelter have partially collapsed. The shelter contains corroded remnants of tins, a seal skin and some cord. The sledge is now located 50m seaward of the shelter and consists of a few scattered pieces of wood, straps and buckles. Site incorporated within ASPA 154. 77°00'S, 162°32'E
- 71 Whaler's Bay, Deception Island, South Shetland islands. The site comprises all pre-1970 remains on the shore of Whaler's Bay, including those from the early whaling period (1906-12) initiated by Captain A. Andresen of the Sociedad Ballenera de Magallanes, Chile; the remains of the Norwegian Hektor Whaling Station established 1912 and all artefacts associated with its operation until 1931; the site of a cemetery with 35 burials and a memorial to ten men lost at sea; and the remains from the period of British scientific and mapping activity (1944-1969). The site also acknowledges and commemorates the historic value of other events that occurred there, from which nothing remains. 6°59'S, 60°34'W
- 75 The A hut of Scott base, being the only existing Trans Antarctic Expedition 1956-57 building in Antarctica sited at Pram Point, Ross Island, Ross Sea Region, Antarctica. 77°51'S, 166°46'E

### Specially Protected Areas

#### 1.0 What is a Specially Protected Area?

**1.1** Any area, including any marine area, may be designated as an Antarctic Specially Protected Area to protect outstanding environmental, scientific, historic, aesthetic or wilderness values, any combination of those values, or ongoing or planned scientific research.

**1.2** Parties shall seek to identify, within a systematic environmental-geographical framework, and to include in the series of Antarctic Specially Protected Areas:

(a) areas kept inviolate from human interference so that future comparisons may be possible with localities that have been affected by human activities;

(b) representative examples of major terrestrial, including glacial and aquatic, ecosystems and marine ecosystems;

(c) areas with important or unusual assemblages of species, including major colonies of breeding native birds or mammals;

(d) the type locality or only known habitat of any species;

(e) areas of particular interest to on-going or planned scientific research;

(f) examples of outstanding geological, glaciological or geomorphological features;

(g) areas of outstanding aesthetic and wilderness value;

(h) sites or monuments or recognised historic value; and

(i) such other areas as may be appropriate to protect the values set out in paragraph 1 above.

**1.3** Specially Protected Areas and Sites of Special Scientific Interest designated as such by past Antarctic Treaty Consultative Meetings are hereby designated as Antarctic Specially Protected Areas and shall be renamed and renumbered accordingly.

**1.4** Entry into an Antarctic Specially Protected Area shall be prohibited except in accordance with a permit issued under Article 7.

## **2.0 How does an area become designated?**

- 2.1** Proposed Management Plans shall be forwarded to the Committee, the Scientific Committee on Antarctic Research and, as appropriate, to the Commission for the Conservation of Antarctic Marine Living Resources. In formulating its advice to the Antarctic Treaty Consultative Meeting, the Committee shall take into account any comments provided by the Scientific Committee on Antarctic Research and, as appropriate, by the Commission for the Conservation of Antarctic Marine Living Resources. Thereafter, Management Plans may be approved by the Antarctic Treaty Consultative Parties by a measure adopted at an Antarctic Treaty Consultative Meeting in accordance with Article IX(1) of the Antarctic Treaty. Unless the measure specifies otherwise, the Plan shall be deemed to have been approved 90 days after the close of the Antarctic Treaty Consultative Meeting at which it was adopted, unless one or more of the Consultative Parties notifies the Depositary, within that time period, that it wishes an extension of that period or is unable to approve the measure.
- 2.2** Having regard to the provisions of Articles 4 and 5 of the Protocol, no marine area shall be designated as an Antarctic Specially Protected Area or an Antarctic Specially Managed Area without the prior approval of the Commission for the Conservation of Antarctic Marine Living Resources.
- 2.3** Designation of an Antarctic Specially Protected Area or an Antarctic Specially Managed Area shall be for an indefinite period unless the Management Plan provides otherwise. A review of a Management Plan shall be initiated at least every five years. The Plan shall be updated as necessary.
- 2.4** Management Plans may be amended or revoked in accordance with paragraph 1 above.
- 2.5** Upon approval Management Plans shall be circulated promptly by the Depositary to all Parties. The Depositary shall maintain a record of all currently approved Management Plans.

### **3.0 Article 8 - Historic Sites and Monuments**

- 3.1** Sites or monuments of recognised historic value which have been designated as Antarctic Specially Protected Areas or Antarctic Specially Managed Areas, or which are located within such Areas, shall be listed as Historic Sites and Monuments.
- 3.2** Any Party may propose a site or monument of recognised historic value which has not been designated as an Antarctic Specially Protected Area or an Antarctic Specially Managed Area, or which is not located within such an Area, for listing as a Historic Site or Monument. The proposal for listing may be approved by the Antarctic Treaty Consultative Parties by a measure adopted at an Antarctic Treaty Consultative Meeting in accordance with Article IX(1) of the Antarctic Treaty. Unless the measure specifies otherwise, the proposal shall be deemed to have been approved 90 days after the close of the Antarctic Treaty Consultative Meeting at which it was adopted, unless one or more of the Consultative Parties notifies the Depository, within that time period, that it wishes an extension of that period or is unable to approve the measure.
- 3.3** Existing Historic Sites and Monuments which have been listed as such by previous Antarctic Treaty Consultative Meetings shall be included in the list of Historic Sites and Monuments under this Article.
- 3.4** Listed Historic Sites and Monuments shall not be damaged, removed or destroyed.
- 3.5** The list of Historic Sites and Monuments may be amended in accordance with paragraph 2 above. The Depository shall maintain a list of current Historic Sites and Monuments.

## ANTARCTIC PENINSULA

### Summary of UK Stations

#### A) Historic Sites

- **Port Lockroy – Historic Site No.61** **Station A**  
 Designated – 19 May 1995  
 Restored 14 January – 18 March 1996
- **Deception Island – Historic Site No.71** **Station B**  
 Designated 19 May 1995  
 Hut closed.  
 Site cleaned up 1990/1 and 1991/2
- **Stonington Island – Historic Site No.64** **Station E**  
 Designated 19 May 1995  
 Hut closed  
 Site cleaned up by BAS in 1991/2
- **Faraday - Historic Site No 62** **Station F**  
 Designated 19 May 1995 – Wordie House  
 Occupied continuously for over 49 years; 7 January 1947 – 6 February 1996;  
 Longest continuous occupation of any British station to date.  
 Original site on Winter Is was used by the British Graham Land Expedition (BGLE) 1935/6. Main hut on Winter Is is Wordie House.
- **Horseshoe Island - Historic Site No.63** **Station Y**  
 Designated 19 May 1995  
 Typical example of BAS 1950s base with authentic/original artifacts  
 Hut closed  
 Site cleared up by BAS March 1995  
 Building conservation work undertaken March 1997  
**With associated Site:**

**Refuge – Blaiklock Island ; – part of Historic Site No.63**  
 Designated 19 May 1995  
 Site cleaned up and minor repairs completed March 1997

## B) Closed, Transferred & Temporary Huts

- **Sanderfjord Bay Station C1**  
Hut in ruins; site derelict.
- **Cape Geddes Station C2**  
Hut closed
- **Hope Bay Station D**  
Transferred to Uruquay on 8 December 1997  
Now named Teniente Ruperto Elichiribehety
- **Admiralty Bay Station G**  
Demolished and removed by the Brazilian Antarctic Expedition  
at Commandante Ferraz Station July – February 1996.  
Only concrete foundations remain
- **Prospect Point Station J**  
Site closed  
Site to be cleaned up by BAS in 2003/4 season.
- **Anvers Island Station N**  
Hut destroyed. Debris removed by US Antarctic Programme in 1990/1  
Only concrete foundations remain.
- **Danco Island Station O**  
Closed – but occasionally used by field parties from other national  
Antarctic programmes.  
Associated refuge at Cape Reclus.  
Site to be cleaned up by BAS in 2003/4 season.
- **Livingston Island Station P**  
Temporary, mobile camp for use by field parties.
- **Adelaide Station T**  
Transferred to Chile, 14 August 1984, now named Teniente Carvajal
- **View Point Station V**  
Transferred to Chile, 29 July 1984, now named General Ramon Canas Montlva
- **Detaille Island Station W**  
Closed. Site to be cleaned up by BAS in 2003/4 season  
Associated refuge at Orford Cliff.

## C) Operational Sites

- **Bird Island Station B1**  
Operational throughout the year
- **Signy Station H**  
Operational during austral summers
- **Fossil Bluff Station KG**  
Advanced field station for Rothera during austral summers
- **King Edward Point Station M**  
Operational throughout the year
- **Rothera Station R**  
Operational throughout the year. BAS' main base with airstrip.
- **Halley Station Z**  
Operational throughout the year. Sited on Coats Land in the Weddell Sea.

### **Descriptions of British Historic Sites on the Antarctic Peninsula.**

#### **Port Lockroy**

Opened in 1944, during its scientific years it undertook topographical and geological surveys, meteorological and biological studies, and then mainly ionospheric research from 1950 onwards.

The main hut is named Bransfield House after the ship that was chartered to take members of Operation Tabarin south, itself named after Edward Bransfield, Master, RN, the first person to chart an area of the Antarctic mainland in 1819-20.

This site acts as the 'shop window' for BAS to tourists. There is a self-financing shop, a post office, with displays of artefacts from the site and other bases, as well as the old base environs that are the attractions to visitors. Half the income generated from the shop justifies its existence, so that it is no burden on the UK taxpayer. The other half is donated by BAS to the UK Antarctic Heritage Trust, who in turn donates this to New Zealand's Antarctic Heritage Trust. This income for AHT can be around £10,000 per annum (Heap, 2003).

#### **Faraday – Wordie House**

This site was occupied continuously for just over 49 years, from 1947 by the Falkland Islands Dependencies Survey (FIDS), later BAS, until 1996. This represents the longest continuous occupation of any British base so far. Originally the site was occupied by the hut of the British Graham Land Expedition (BGLE) of 1935-46, which is thought to have been swept away by a tidal wave in 1946. The main hut, Wordie House is named after Sir James Wordie, was a member of Shackleton's Imperial Trans-Antarctic Expedition 1914-16, and who was involved in the UK's earliest scientific endeavours on the Peninsula in the 1940s. The base's main science was geophysics, meteorology and ionospherics. There are two memorial crosses each in memory of three men who lost their lives on different occasions.

The base has been transferred to the Ukraine from February 1996, and is now named Vernadsky. Wordie House is maintained by them, and there is an associated refuge, the Rasmussen Hut.

## **Horseshoe Island**

This hut is an exceptional example of a British 1950s FIDS base, and has a remarkable complete set of artefacts; radio equipment, the kitchen and the other characteristic features of a hut of that era. Being so remote it has been seldom visited, and therefore has not been 'looted' by scientists' or even tourists. Other more accessible huts of a similar age have not been treated so kindly; in fact not only have the artefacts been taken but the huts themselves have been severely damaged.

## **Stonington Island**

This site is situated close to the American's 'East Base' of Operation Highjump, and both bases have a long and notable history, and being at the southern end of the Antarctic Peninsula had always been difficult to relief and re-supply. Originally it had been the intention to build this base on the east side of the Peninsula. Such a position would have made it even more difficult, if not impossible to relieve. Stonington's original base built in 1946 and was called 'Trepassey House' after the ship MV *Trepassey* in which it was transported. The station was revisited when a new main hut was erected in 1961. This was expanded in 1972, in part using the 'Passion Flower Hotel', 'Jenny's Roost' and 'Finn Ronne' which became workshops and stores. Trepassey House, which was the home of 'The Lost Eleven', called so as they were marooned for an extra year as the pack-ice remained in Marguerite Bay in 1949, was burnt down in 1974. It was from this base that FIDS personnel pushed further south than anyone had been in the summer seasons of 1948/9 and 1949/50, doing geological and survey work, as well as meteorology.

The conservation of the remaining huts has been difficult due to the sea-ice conditions and therefore the remoteness of the site. It is hoped to progress the idea of a joint programme with the US in this area.

## **Deception Island**

This base within the crater of a volcano was originally a Norwegian whaling station, the buildings of which were used for the early scientific stations. Some were destroyed by fire, some by the volcanic activity in 1969. The site was particularly noted for accommodating the Falkland Islands Dependencies Aerial Survey Expedition 1955-7 which completed one of the earliest comprehensive mapping work on the Peninsula. Due to the volcanic activity, there is only the remains of the whaling station that constitute the historic site.