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Antarctica's Cultural Heritage

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Cultural heritage is a dynamic concept, incorporating the ideas and values of many different organisations and individuals; it is heavily dependent on the context of the item or site being conserved, and transforms something from an old article into a historically significant object. A formal definition of cultural heritage did not appear in the Antarctic Treaty System until 1995, however Antarctic heritage value has been applied to various sites and monuments since the inception of the Treaty, from Shackleton's *Nimrod* Hut to a heavy tractor. This report examines a number of case studies to determine the various ways in which heritage items and sites can be managed – such as the removal of the South Pole Dome – as well as their conservation after natural disasters, for instance the Christchurch earthquakes.

Antarctica's Cultural Heritage

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Captain Scott's *Terra Nova* Hut at Cape Evans, Ross Island, Antarctica.
Image source: Jessie McEldowney.

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Abstract

Cultural heritage is a dynamic concept, incorporating the ideas and values of many different organisations and individuals; it is heavily dependent on the context of the item or site being conserved, and transforms something from an old article into a historically significant object. A formal definition of cultural heritage did not appear in the Antarctic Treaty System until 1995, however Antarctic heritage value has been applied to various sites and monuments since the inception of the Treaty, from Shackleton's *Nimrod* Hut to a heavy tractor. This report examines a number of case studies to determine the various ways in which heritage items and sites can be managed – such as the removal of the South Pole Dome – as well as their conservation after natural disasters, for instance the Christchurch earthquakes.

Introduction

An old book you find in the corner of your attic may be rubbish to somebody, but a treasure to somebody else. A language that is dying out may be of no significance whatsoever to somebody on the other side of the world, but a major loss of identity to the people whose language it is. Words that people associate with something they hold of value include reminiscing, appreciation, and significance. The importance placed on an item by an individual is the difference between it being classed as rubbish to one person, and worthy of preservation by another.

The meaning placed on Antarctic heritage is highlighted in a recent example that took place in December 2012. The remains were found of what is thought to be the highest campsite used by the team who ascended Mt Erebus during Captain Scott's *Terra Nova* expedition. While the site appears the same as in photographs taken at the time, the New Zealand Antarctic Heritage Trust (NZAHT) was asked to confirm the identity of the site. ("National Science Foundation...", 2013) This discovery came a few days before the Postgraduate Certificate in Antarctic Studies (PCAS) group arrived at Scott Base, where the find was displayed on screens around the base. This illustrates the importance put on sites linked to the *Terra Nova* Expedition, which hold value because of their background story. Discoveries such as this allow historical events to be brought to life.

This report will discuss heritage and cultural heritage definitions in an Antarctic framework, and how context is vital for defining an items value. The major aims are to answer the following key questions which are fundamental to the understanding of heritage in Antarctica.

- Who is involved in Antarctic heritage?
- What is 'cultural heritage'?
- What does the Antarctic Treaty say about heritage?
- Who are we preserving heritage for?
- Who decides what becomes heritage?
- How do they decide?

The national and international organisations involved in Antarctic heritage

There are a number of organisations involved in Antarctic heritage, both at a national and international level. The International Council of Monuments and Sites (ICOMOS) aim to protect the world's historic monuments and sites, and to provide advice on Cultural World Heritage Sites directly to the United Nations Educational, Scientific and Cultural Organisation (UNESCO). The International Polar Heritage Committee (IPHC) is a scientific committee of ICOMOS. It was formed in the year 2000, and aims to provide information and guidelines to people involved in polar heritage, both in the Arctic and Antarctic; it also promotes co-operation between people working on polar heritage.

In 2004, the World Monument Fund (WMF) listed Shackleton's *Nimrod* Hut at Cape Royds on their list of the top 100 most endangered sites. This was followed by repeat listings, along with Scott's *Terra Nova* Hut at Cape Evans and Borchgrevink's *Southern Cross* Hut at Cape Adare, in 2006 and 2008. This raised the profile of the huts and attracted funding from a range of sources.

At a national level some countries such as New Zealand and the United Kingdom have their own Antarctic heritage trusts. In Australia, heritage work is done by their national Antarctic science institution (the Australian Antarctic Division), and the Mawson's Hut Foundation. New Zealand formed the New Zealand Antarctic Heritage Trust (NZAHT) in 1987, and in 1993 its sister organisation, the United Kingdom Antarctic Heritage Trust (UKAHT), was created. These organisations have informal links, and both work under the banner of the Antarctic Heritage Trust (AHT). Although no official relationship exists between the NZAHT and the IPHC, Nigel Watson is currently the Executive Director of the NZAHT and the Secretary-General of the IPHC. Nigel co-organised the 2012 IPHC conference in Hobart and invited AHT project staff to give presentations on areas of interest to delegates (Watson, pers. comm., 16 January, 2013).

A number of Antarctic societies exist in different countries, consisting of groups of Antarctic enthusiasts with a range of interests. In the UK, the Captain Scott Society and the James

Caird Society promote the legacies of Scott and Shackleton respectively. The New Zealand Antarctic Society was formed in 1933 and “brings together people interested in Antarctica, to share knowledge in the fields of all sciences, exploration, discovery and mapping ...[and] to promote New Zealand's interests in Antarctica” (New Zealand Antarctic Society, 2013). The president of the New Zealand Antarctic Society is always a trustee of the NZAHT, which ensures the two societies remain connected.

There are many museums around the world which have Antarctic collections in them, including items ranging from past expedition artefacts to modern paintings. Museums play an important role in preserving Antarctic heritage, and are often the first place where members of the public encounter Antarctic heritage. For examples of museums with Antarctic sections, see Figure 1.

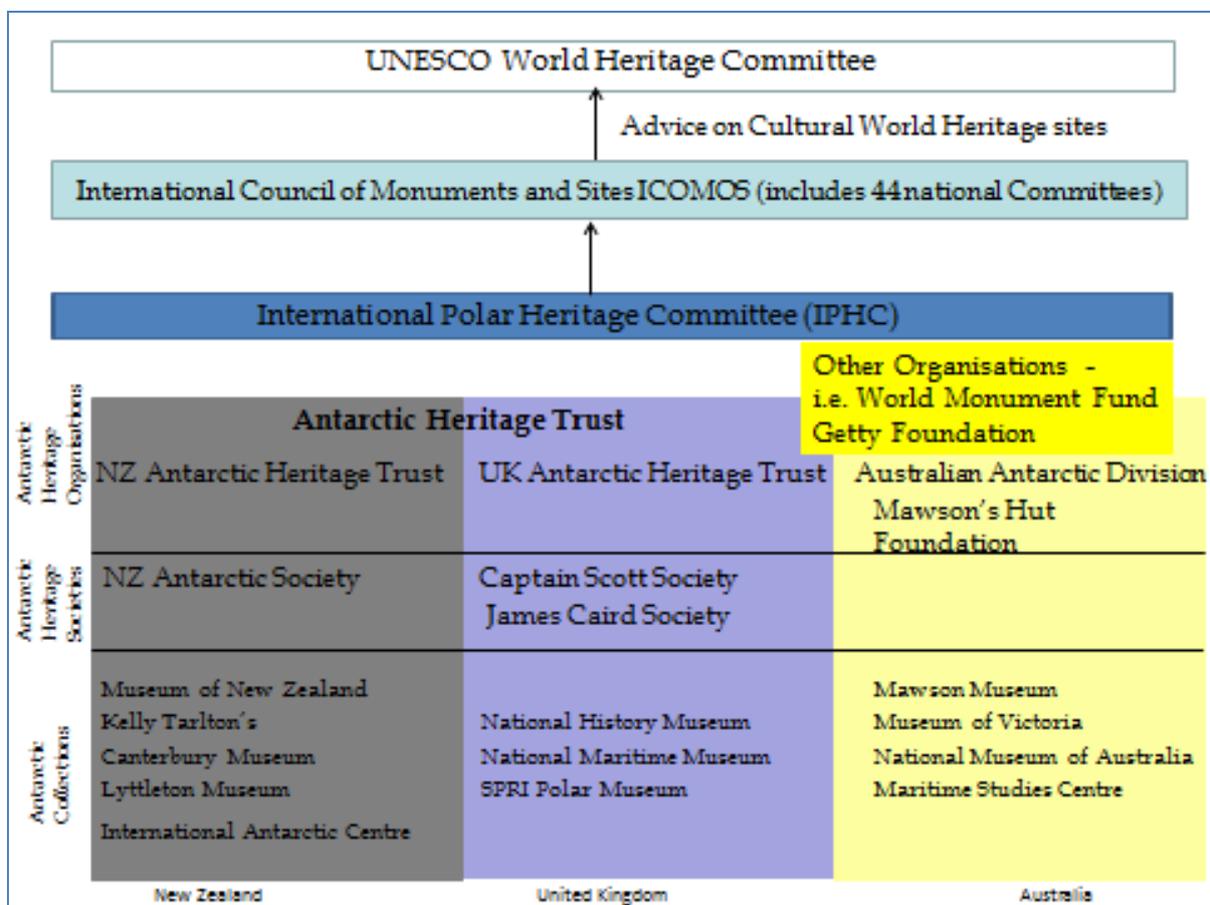


Figure 1: A diagram of the international Antarctic heritage organisations and national organisations in New Zealand, United Kingdom, and Australia. The connectivity between the organisations is apparent, as many of the organisations provide advice to each other, and sometimes swap board members.

Definitions of heritage

Amongst the different organisations involved in heritage work around the world, there are varying definitions of the term ‘heritage’. This variation is a reflection of their different mission statements, and people’s individual perceptions of the relative importance of the multiple aspects of cultural heritage, i.e. the reason why an item is classified as ‘cultural heritage’ will depend on the way it is perceived.

The following examples illustrate how the definition of heritage varies between different people and organisations; the underlined words highlight what we have identified as common threads.

- “The cultural heritage consists of manifestations of human life which represent a particular view of life and witness the history and validity of that view” (Prott and O’Keefe, 1992).
- “The designation of heritage is closely tied to questions of ‘value’ attributed to example of an object, place, or tradition, and requires the balancing of often contradicting values, such as expressive, ecological or economic values” (Forrest, 2010).
- Historic heritage is defined in New Zealand’s Resources Management Act 1991 as: “those natural and physical resources that contribute to an understanding and appreciation of New Zealand’s history and cultures, deriving from any of the following qualities: archaeological, architectural, cultural, historic, scientific and technological” (New Zealand Ministry of Education, 2008).
- The Davis Area “assessment considered eight separate values, evolutionary, rarity, educational, representatively, aesthetic, technical/creative, social and historic – which together constitute a measure of cultural significance” (Davis and Rando, 1996).
- “The use of the term ‘cultural heritage’ refers to Indigenous, historic, aesthetic, scientific and social values expressed in places and their associated objects. The fundamental aspect of natural heritage which most clearly differentiates it from cultural heritage is that of dynamic ecological processes, evolution and the ability of ecosystems to be self-perpetuating. Where the dominant value of a place or places is being discussed, the place is referred to specifically by that value, as for instance an Indigenous heritage place” (Australian Government: Department of Sustainability, Environment, Water, Population and Communities, 2001).

- “The product and witness of the different traditions and of the spiritual achievements of the past and thus an essential element in personality of the peoples of the world” (UNESCO, 1968).

These key concepts were then used to create the following definition: *heritage and cultural heritage are based around the activities, items and ideas of mankind from the past, and are worthy enough of preservation for mankind in the future.*

There is a lot more to cultural heritage than just this one definition, which is represented in UNESCO’s Draft Medium Term Plan which contains their definition of cultural heritage: “cultural heritage should be considered both in time and space” (UNESCO, 1989). This document covers the full range of heritage from that which is intangible, such as languages, folk songs and ways of life, to the more familiar physical items such as buildings, signs and artefacts. In New Zealand, for example, a tangible item would be the Christchurch Cathedral. In Antarctica, an example of intangible heritage is the way of life that was experienced by the early explorers, where the climate and the lack of natural resources enforced a unique lifestyle.

Knowing the background story of an item or idea may be the difference between it being seen as useless, and being worthy of preservation. One of the reasons for preserving something as heritage is so that the story behind the item, idea or person is remembered. This idea can be supported with two case studies. The first is Jessie’s Chinese heritage, a story of direct connection to us as a PCAS group, and the second is the account of Shackleton’s whisky in the Heroic Age of Antarctic Exploration.

Case Study 1: Jessie’s Chinese Heritage

Jessie McEldowney’s father was cleaning out her grandfather’s tobacco shed, which involved throwing away old timber. He picked up an old board, was about to throw it out, when he turned it over. On the reverse side were Chinese characters carved into the timber. This was a board from the opium den of her Chinese great-great-grandfather, which ran on the Victorian goldfields. The board is now on display in a Chinese cultural heritage museum in Beechworth, Australia (McEldowney, pers. comm., 16 January, 2013). Finding the Chinese characters on the reverse side of this board meant it wasn’t just an old board anymore; it had meaning, historical significance, and value attached to it for Jessie’s family. This is reinforced by Rack, who states “an object without context is only old stuff” (Rack, pers. comm., 14 January, 2013).

Case Study 2: Shackleton's Whisky

The NZAHT presents the story of three crates of Mackinlay branded whisky which were found along with two crates of brandy under Shackleton's Hut at Cape Royds. They had been left there for 114 years. In the summer of 2010 the crates were excavated and thawed. The owner of Mackinlay Whisky came and transported three bottles back to Scotland. *"The bottles of whisky have provided a unique opportunity to apply modern sensory and chemical analytical methods to establish the flavour and composition of a product manufactured more than one hundred years ago"* (Antarctic Heritage Trust, 2011). Through this method an exact replica of the whisky was produced, and today only 50,000 bottles are in circulation.

Whilst some people may drink it purely for the taste, the popularity is likely because of the background story. The unique nature and rarity of the whisky may even attract those who don't drink whisky, but perhaps would buy a bottle as a collector's item. This is another example of how the context of an item is important in order for it to be appreciated.

The Antarctic Treaty and heritage

The way in which the Antarctic Treaty System has addressed the issue of heritage has continually evolved since it was formed in 1959 (see Appendix 2). When the Treaty was first signed, there was no mention of the word 'heritage'. At the 1st Antarctic Treaty Consultative Meeting (ATCM) in 1961 'the need to take steps to protect historical sites and monuments was recognised' (Antarctic Treaty System, 2002). At the 5th ATCM in 1968, consultative parties drew up lists of historic sites and monuments to be preserved, and at the 7th ATCM in 1970 this list was consolidated into one. The 14th ATCM in 1987 received a report which included the following observation:

"Attention was drawn... to the need to provide for continued and improved protection for those historic monuments that stand as witness to a significant human presence in the Antarctic: and which are an essential part of human activity in Antarctica, the only continent in which some of the original buildings constructed for human habitation still stand."

(Antarctic Heritage Trust, 1997)

This statement reiterated that there was still no formal documentation to having these sites acknowledged officially with appropriate protection. A clear definition of 'heritage' was not applied until the 1991 Protocol on Environmental Protection, under Annex V on Area Protection and Management. Criteria for defining the sites and items which were to be classified as heritage did not come into force until the 19th Antarctic Treaty Consultative Meeting (ATCM) in Seoul, Korea in 1995 (Figure 2). At this meeting all the consultative

parties drew together five main articles, which formally acknowledged the protection of historical sites and monuments. After 46 years, this is the first time that heritage or ‘historical value’ was formally defined under the Antarctic Treaty.

The main articles range from Article 9 on Information and Publicity, stating that those people who visit must understand relevant prohibition or restrictions of those sites, to the two most significant, Articles 3 and 8.

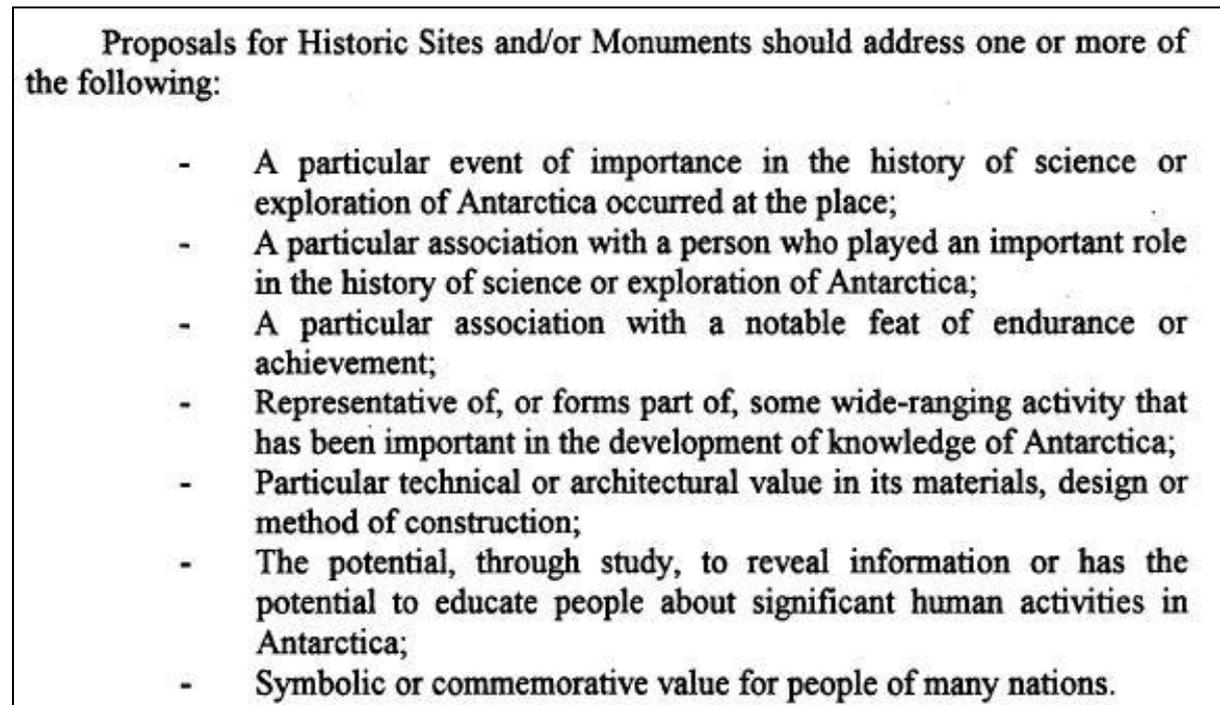


Figure 2: Final Report of the Nineteenth Antarctic Treaty Consultative Meeting (1995), after Antarctic Treaty System, 1995. This demonstrates the criteria used to define heritage under the Antarctic Treaty System (ATS), outlined for the first time in the proceedings of the ATS.

Article 8 states that: “the Antarctic Specially Protected Areas (ASPAs) permit system may be the best means of ensuring protection of historic monuments where direct oversight management is not possible... where such management is possible, Article 8 provides for the possibility of designation as ASMAs” (Antarctic Treaty System, 2002). Article 3, Clause 2(h) states that “any parties shall seek to identify ‘sites or monuments recognised of historic value’” (Antarctic Treaty System, 1995).

Cultural heritage under the ATS originally had some complications. Prior to 19th ATCM, the onus was on governments to declare sites perceived as culturally significant. Individual

governments were to declare any sites they wished listed at an ATCM, consulting with other organisations or regimes with regards to their restoration or preservation whenever appropriate (Antarctic Treaty Consultative Meeting I [ATCM I], 1961). This is seen in the collaboration of the UKAHT and NZAHT working on publicity and funding together. Appropriate reports on the condition of these heritage areas and items, any preservation put into place, and adequate measures for the protection of these areas and items, were reported to the meetings of the Antarctic Treaty Consultative Parties. Due to this, governments effectively ‘own’ historic sites and monuments, as they were (and still are) responsible for their preservation.

Individual volunteers also accepted some responsibility towards carrying out conservation and preservation work within the Antarctic continent. For example, Baden Norris, a prominent New Zealand polar historian, assembled the Lyttelton Museum in 1968, utilising various funding sources, including at first, some of his personal savings at first (Norris, pers. comm., January 14, 2013). This museum had a distinctly Antarctic flavour, and reflected the strong connection this region has with the frozen continent.

Despite the diverse range of heritage sites and monuments around the continent, most are seen as being ‘owned’ by the governments taking responsibility for them. This hangover from pre-definition days may possibly lead to political sensitivity, as while the Treaty disallows territorial claims, it also creates a situation where there is no clear responsibility for the preservation and protection of historic sites; management plans for heritage listings have actually been carefully worded to avoid ownership suggestions (Barr and Chaplin, 2004). However, a sticking point of liability for preservation then occurs, i.e. there are no discrete guidelines for who undertakes conservation work within Antarctica; is the country whose territory it is, the country whose monument or site it is, or is it the responsibility of whoever steps up to claim management rights?

New Zealand overcame this problem of responsibility and sovereignty by weighing up the long term benefits of preserving and restoring the wealth of historic sites, monuments and artefacts on Ross Island against the cost of logistics, financial expenditure, and man power; the benefits won out, and the NZAHT undertook conservation. Today, the NZAHT are restoring four huts within the Ross Dependency from the Heroic Age of Exploration:

Borchgrevink’s *Southern Cross* Hut at Cape Adare (1898 – 1900), Scott’s *Discovery* Hut at Hut Point (1901 – 1904), Shackleton’s *Nimrod* Hut at Cape Royds (1907 – 1909), and Scott’s *Terra Nova* Hut at Cape Evans (1910 – 1913).

Reasons for historic classification

There are a number of reasons why objects can be deemed historic. Potential reasons why Antarctic items and sites may be classified as heritage are values such as those of sentimental, importance to territorial claims in the future, intellectual value, monetary value and logistics (Table 1). On the right side of the table are some examples to back up these potential values.

Table 1: Potential reasons for historic classification under the Antarctic Treaty System, after Rack, personal communication, 14 January, 2013. These could potentially be the reasons countries apply for heritage for particular sites and monuments.

| <u>Reasons for historic classification</u> <u>(after Rack, pers. comm., 14 January, 2013)</u> | <u>Examples</u> |
|--|---|
| Sentimental value | Diaries of Scott; display tales of endurance of man. |
| Potentially important to territorial claims in the future (if the Antarctic Treaty was ever to change) | Continued presence and occupation in Antarctica, along with research and posting curators down there year long. |
| Intellectual value | First documentation of science records such as collecting the first Emperor penguin embryos (after “The Worst Journey in the World”). |
| Monetary value | Postage stamps and associated collections currently being sold on eBay. |
| Logistical effort – time and money to remove it from Antarctica | Have some nations tried to classify unwanted items or bases as historical monuments in order to avoid removing them from Antarctica? |

Historic site and monument listing under the Antarctic Treaty System

Under the ATS, Resolutions 8 (1995) and 5 (2001) define the process for identifying sites and monuments of historic value. First, the site and/or monument must meet one or more of the previous heritage criteria defined at the Seoul 1995 ATCM.

Once the area/item has been determined to be heritage-associated, it may be presented along with an appropriate management plan to the next ATCM, for consideration for protection under the ATS; this plan is crucial to the acceptance of the site and/or monument, as if there is not seen to be an effort to properly conserve it, objections may be raised. After the close of

the ATCM, the Parties have ninety days in which to lodge an objection to the heritage listing. If none are made, then consensus is assumed, and the site and/or monument will be defined as heritage at the next ATCM (Antarctica New Zealand, 2008).

Countries may propose a site in conjunction with other countries who are interested in their conservation and management, for example New Zealand and the United Kingdom placed a joint nomination and management plan for the four huts from the Heroic Age of Exploration within the Ross Dependency (Historic Sites 16, 17, 19 and 23). Figure 3 shows the countries under the ATS which are currently managing the 84 listed historical sites around the Antarctic continent.

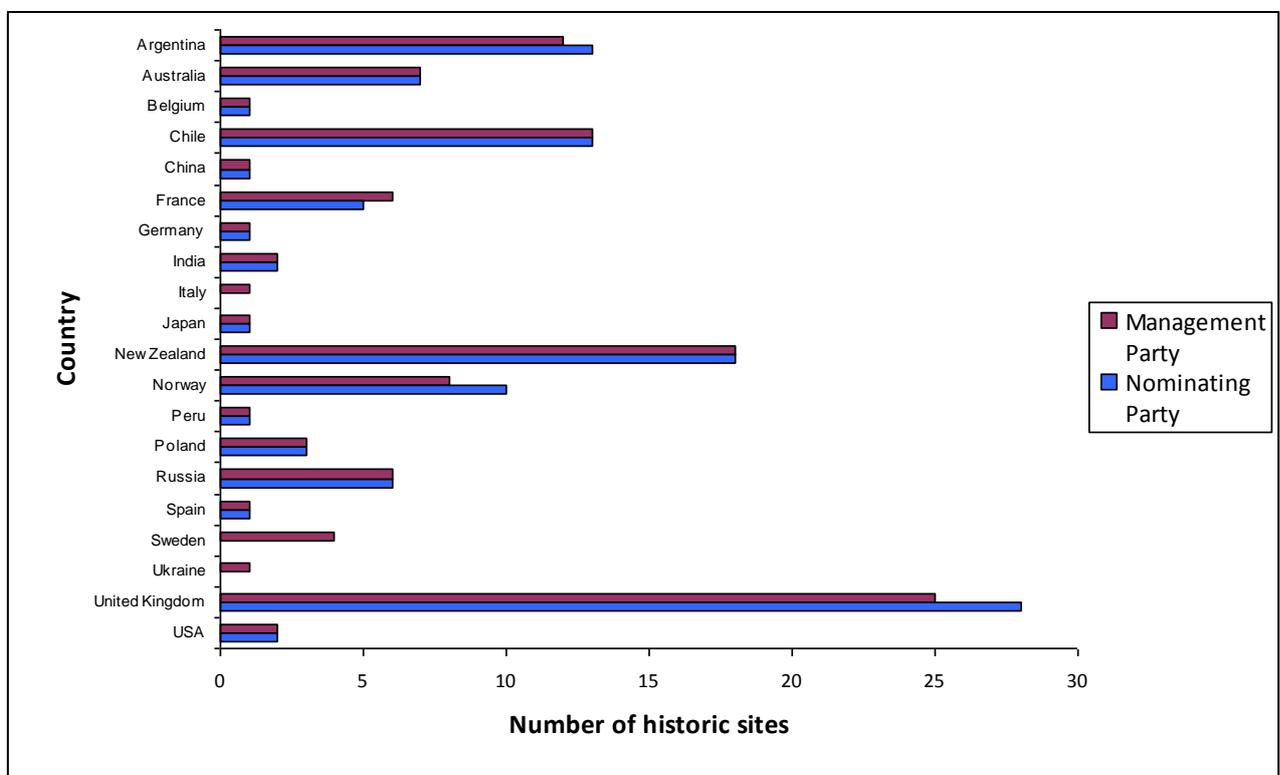


Figure 3: Antarctic Treaty parties who have nominated historic sites, and those which are currently managing their conservation. Many countries presented a partnered proposal for a heritage site with another country, for example Argentina and the UK put forward site 41 on Paulet Island, but Argentina in combination with Sweden and Norway are the ones actually managing the site. Data obtained from the Antarctic Treaty Secretariat.

Many countries, while they cannot be on site to preserve items and areas within the continent, will encourage fundraising and financial support for the societies who can. For example, in 2011, Norwegian Prime Minister Jens Stoltenberg announced NZD\$900,000 funding for the

NZAHT to help conserve Norwegian explorer Borchgrevink’s 1899 Cape Adare expedition base (New Zealand Ministry for Culture and Heritage, 2011).

There are many different types of sites and items that have been defined as heritage around the continent (Figure 4), ranging from the grave of Norwegian biologist Nicolai Hanson (a member of Borchgrevink’s *Southern Cross Expedition*) at Cape Adare, to a heavy tractor at Vostok Station which commemorates the opening of the station in 1957.

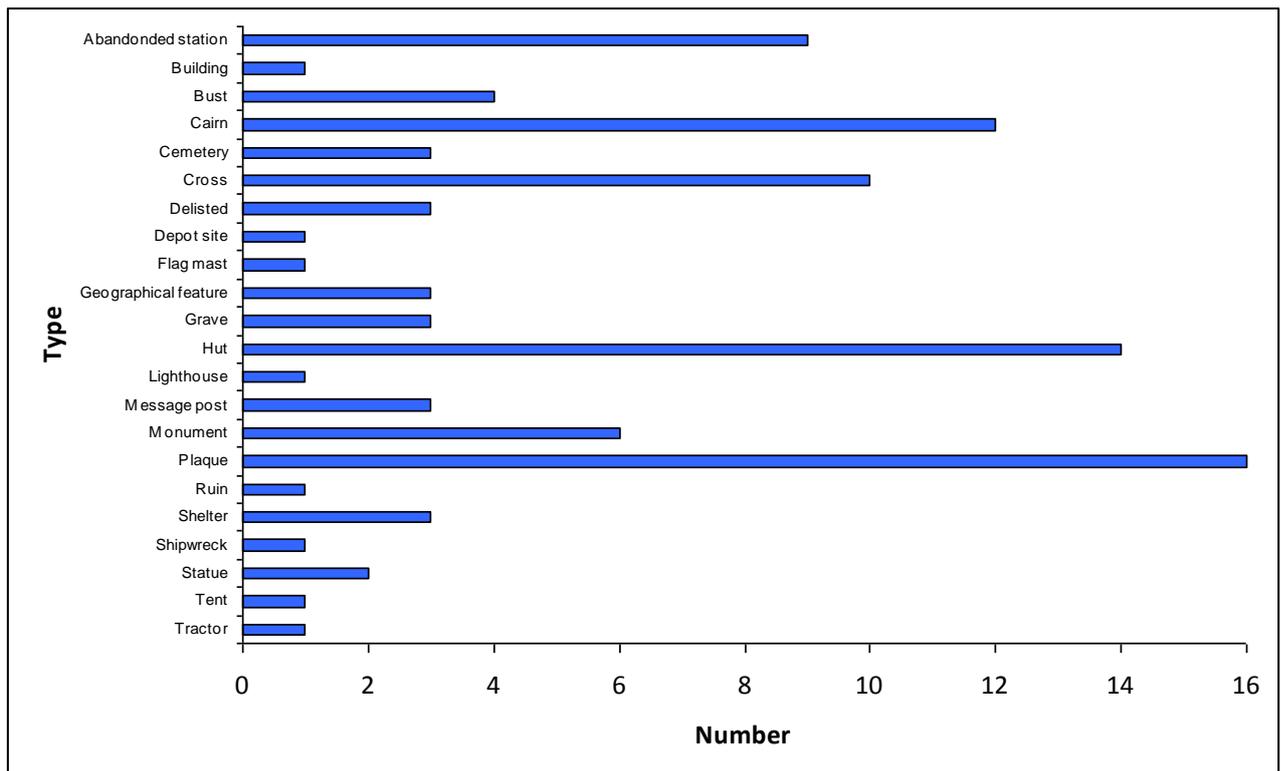


Figure 4: Types of historic sites present in Antarctica, and how many of each are still present. By far the greatest number of historic sites are plaques, followed closely by huts. Many of these heritage items are included in more than one of the 84 Antarctic Treaty-listed heritage areas. Data obtained from Antarctic Treaty Secretariat.

In-situ preservation or removal: South Pole Dome, Case Study 3

In 1975, construction began on a new station at the South Pole; a geodesic dome 53 feet high and 165 feet in diameter was to replace the military-style tents and wooden buildings which had comprised an outpost present since 1957 (Ingalls, 2003). This dome was originally designed to house a maximum of 33 people during the winter, which included scientists and support personnel; the summer population of between 40 and 100 would live on the snow in a ‘summer camp’. Despite being an architectural wonder when first constructed, by the mid-

1990s the station was already beginning to surpass its design life and population capability; a number of science and sleeping structures were added to account for the growing summer populace (by this time, 220 people) (Ingalls, 2003). Over the years, the dome had slowly been half-buried under ice and snow, and serious structural damage was occurring as the extra weight began to collapse the supporting wooden and aluminium beams (Rejcek, as cited in Baker, 2009). As such, the decision was made to avoid preserving it *in situ*, and remove it before it became completely buried (and therefore a safety hazard) (National Science Foundation, 2012).

The vicinity around the station was declared an Antarctic Specially Managed Area (ASMA) in the 2007 ATS Management Plan for Antarctic Specially Managed Area Number 5 at the 30th ATCM in New Delhi, India. At this meeting, the dome was considered beyond its useful life, and it was agreed that its removal from the area should be completed as soon as possible. This was in accordance with the Madrid Protocol to the Antarctic Treaty (1991), which designates Antarctica as a natural reserve, and as a result waste materials must be removed from the continent.

Construction (or deconstruction) in Antarctica poses unique difficulties, not the least of which is the harsh climate; because of the extreme environmental conditions, each hour of planned construction work takes approximately two times longer to accomplish at the South Pole than the rest of the globe (Ingalls, 2003).

There are numerous other challenges, for example: all materials must be flown in to the South Pole station, as it sits approximately 1400 kilometres from the nearest port; the majority of work can only be carried out during the relatively small time frame of austral summer; and it is very difficult to increase work force size during summer, and impossible during the winter when no flights occur (Ingalls, 2003).

The National Science Foundation (NSF) budgeted approximately US\$150,000 for the removal of the dome, planning to cut apart the 904 panels and 60,000 bolts and send it to landfill outside of Antarctica. An outcry from previous station inhabitants convinced the agency to disassemble the top three rings (about 45 triangular panels), for eventual installation and preservation in a Seabee museum in Port Hueneme, California. They had tried to discover a way to send the whole dome back to the United States for display at the museum (or other locations interested in the history of the dome); however, the labour costs alone would have been six times more expensive (an extra US\$500,000 above the budget), and the amount of time it would have taken to do so would not have fitted into the proposed end date of the project (Rejcek, as cited in Baker, 2009).

This case study demonstrates that sometimes, preservation *in situ* is not always possible, as the item or artefact would either be lost under ice or snow, or pose a significant safety hazard to people living and working in the area. In these cases, it is better to remove the artefact for conservation at a non-Antarctic site, where it will be available for posterity.

Removal of non-listed items

Under the 1991 Madrid Protocol to the Antarctic Treaty, anything regarded as ‘waste’ must be removed from the Antarctic continent; however, if they are designated as historic sites and/or monuments, then they are permitted to remain. Antarctica New Zealand (2008) also makes mention of items that would cause a greater environmental impact if they were to be removed from Antarctica than if they were to be managed in place.

Designating sites and/or monuments could potentially be a way of avoiding the need to remove some types of waste; however we found no tangible evidence for this.

Who are we preserving heritage for?

Preservation in Antarctica is time-consuming and costly, with a finite window of agreeable weather during the summer months, when winds and temperatures are not at extremes. The huts on Ross Island are geographically remote, yet conservation organisations toil away, so as many of the original items and stories are preserved as possible. But for whom, exactly, is the preservation occurring?

The NZAHT has made mention of “[ensuring] the expedition bases and the thousands of associated artefacts survive for the benefit of *future generations*” (New Zealand Antarctic Heritage Trust, 2013), and the UKAHT’s mission is “to promote and encourage *the public’s* interest in their Antarctic heritage” (United Kingdom Antarctic Heritage Trust, 2013).

Consequently, conservation is not just for the preservation of historic sites for the future of mankind, it is also for all the people present in the here and now. Everyone deserves a chance to associate with heroic explorers and their incredible feats of endurance, as well as the ground-breaking science they conducted in one of the harshest environments in the world.

Antarctic tourism and its heritage associations

Antarctic tourism had humble origins in the late 1950s and early 1960s, with the Argentinean craft *Les Eclaireurs* taking 100 tourists on voyages to the South Shetland Islands and the western coast of the Antarctic Peninsula (Liggett *et al*, 2011). It has since grown to over 30,000 tourists visiting per year, the majority of these in the Antarctic Peninsula (Gildea,

2007); Davison 2013 points out that despite these huge numbers, only 300 of these tourists visit the Ross Dependency each year, but contribute at least NZ\$5 million for the New Zealand economy.

The greatest involvement in an environment comes from tourists, not the people who live or work there; the visitors seek a deeper connection to the cultural heritage of an area. A well-organised tour group will consist of like-minded people sharing their mutual interests; this ensures the tourists treat the host location with respect, and will want to spend time at each point along the way. This is especially relevant in the Arctic polar tourism industry, as this means a willingness by tourists to pay for products and services offered by local people (Snyder, 2007). This is becoming relevant in the Antarctic also, as visitors are likely to donate to causes they have had direct experience with.

Tourism also has the potential to create ambassadors for an area, and has a high likelihood of being effective in providing experiences; this will educate the public as well as raising awareness about the issues surrounding Antarctic conservation (Powell, Kellert, and Ham, 2008).

Who decides what becomes Antarctic heritage and how do they do it?

The international organisations of UNESCO, ICOMOS and the IUPAC all have important, high level roles to play in Antarctic heritage. The IUPAC holds meetings and conferences to promote international cooperation, and provide a forum for experts to encourage the exchange of knowledge and ideas; by doing this they can influence what becomes heritage and what does not.

The Antarctic Treaty Parties themselves play a role in deciding what becomes Antarctic heritage, as they can nominate new historic sites and monuments within Antarctica.

Anecdotal evidence suggests that as long as the proposed management plan is sufficiently detailed and covers all that necessary issues, it is unlikely that any of the parties will object to nominations of historic sites and monuments (Walton, pers. comm., January, 2013). An example of the steps countries take to preserve their Antarctic Heritage is illustrated below in Case Study 4.

New Zealanders have been involved in the preservation of heritage in Antarctica since they were first involved in work to restore the historic huts in the 1960s. They worked with the conservation knowledge and skills available at the time, and their work included the cataloguing of items in the huts. At a location such as the Cape Evans *Terra Nova* Hut, where some of the work is now focussing on restoration of the stores kept outside of the huts, the

NZAHT staff work on a daily basis using the Trust's management plans as guidance, along with their experience and ICOMOS New Zealand Charter (Watson, pers. comm., 16 January, 2013).

The money given to the NZAHT for the restoration of the huts has come from various sources, ranging from governments, foundations, private companies and members of the public. A lot of effort is required to attract the necessary level of funding. Members of the public and other donors can be thought of voting with their money, when they make donations, as in donating they are deciding that they want to support the work of the NZAHT. The public can also get involved and support the work by becoming more involved in the trusts, and potentially influence their future direction.

Museums play a part in deciding what becomes Antarctic heritage, as they choose what to accept or obtain for exhibit. The items they select will need to be in keeping with their existing collections, and be of interest to the public they want to attract to the museum. The actions of expedition members can determine what becomes Antarctic Heritage. At the end of expeditions, equipment is sometimes sold off to help cover costs; equipment and artefacts can also be donated to museums and other institutions. Following the *Endurance* expedition, Sir Ernest Shackleton gave the *James Caird* (the boat which he travelled the 800 miles from Elephant Island to South Georgia; Figure 5) to a school friend John Rowett, who was a major sponsor in Shackleton's final *Quest* expedition. Rowett donated the lifeboat to Dulwich College (which he had attended with Shackleton) "as an inspiration for [the boys'] future lives" (The James Caird Society and Dulwich College, 2009). The *James Caird* can be viewed by the public at Dulwich College with prior arrangement.

The people who own artefacts can also play a role in preserving Antarctic Heritage. Some owners may loan artefacts to a museum, which allows them to be properly looked after, seen by the public and even studied if appropriate.



Figure 5: The *James Caird* at Dulwich College, South London. This boat was donated by John Rowett to inspire the boys of this college in their future lives, after its epic journey on the *Endurance* expedition. Image source: Talbot, 2012.

Case Study 4 – How Antarctica New Zealand decides what becomes heritage

In Scott Base Standard Operations Procedure 19 (SOP; Antarctica New Zealand, 2008), Antarctica New Zealand outlines their policy for Post-Heroic Age artefacts (located in Antarctica and New Zealand). The purpose of the procedure is given as:

Antarctica New Zealand will undertake measures which demonstrate its commitment to:

- Protection of historic artefacts and sites, which are significant in terms of their scientific, explorative, technical, architectural, symbolic or commemorative value to New Zealand or the wider community.
- Prevention of unnecessary loss of New Zealand heritage associated with our operations.
- High standards of environmental management at all sites of past New Zealand activity.
- Compliance with all relevant Antarctic Treaty agreements and domestic legislation.

The SOP then lists 16 measures which will be undertaken, and explains the context of the SOP by quoting the relevant sections of the Antarctic Treaty agreements and domestic

legislation. The Article Evaluation Process (see Appendix 3) then outlines the steps required: from finding a potential article or site, through a number of steps including documenting it, aging the item, establishing if it has historic value, and then deciding (using the relocation criteria) if it needs to remain in Antarctica; if it does, the final step is to develop a historic sites and monument proposal and management plan. If it is decided that the item can be removed from Antarctica, a removal process is followed, which may result in the item being transferred to one of the museums which are listed in the SOP.

It is interesting to see that the AHT only need to be informed regarding items dating from before 1917 (i.e. from the Heroic Age), and this suggests that the focus of their work at present is the preservation of these artefacts. The Trans-Antarctic Expedition (TAE) Hut at Scott Base ('A' Hut), dating from January 1957, is now 56 years old. Antarctica New Zealand currently manages the site, and the work they have done, and the code of conduct and controls they have put in place, will ensure that it is preserved for the future; it may be that once it becomes older, the NZAHT will take over the management of the TAE Hut. The SOP is very comprehensive, and demonstrates New Zealand's commitment to preserving heritage and meeting the requirements laid down by the ATS.

Case Study 5 – How finding artefacts in the field can influence what becomes heritage

In January 2011, an expedition led by Professor Bryan Storey from Gateway Antarctica, University of Canterbury, found a cache of crampons and survey poles near the base of the Scott Glacier in the Transantarctic Mountains. Bryan said that “[they] knew by the nature of what the items were, that they were old” (Storey, pers. comm., January 15, 2013); they also knew that the area hadn't been visited by many people before.

They discovered a crampon, separate from the cache, on the edge of the rock outcrop, where it could easily fall onto snow and be lost. After discussing the options, they decided to leave the cache where it was, and remove the at-risk crampon. Bryan said, “That was the one at risk, and that was the one we took... We had no intention of taking anything for our own personal collection or our use, we were going to give it to somebody – whoever that somebody was going to be – and I immediately thought of the Canterbury Museum”.

Once back at their main field camp, initials on the equipment allowed it to be identified as belonging to members of Admiral Byrd's 2nd expedition (1933-35). This case study shows that sometimes decisions have to be made unexpectedly, and that a number of factors have to be considered before any action is taken. An article published about the find attracted interest from the descendants of the 1933-35 expedition members; after consulting diaries in their

possession, the families were able to say the equipment had been cached during a return journey, when they were no longer needed.

This example has highlighted that items from earlier expeditions can be found without warning in remote locations. When this happens, a number of issues need to be considered. Our research has showed that no one organisation, body or trust decides what becomes Antarctic heritage; it is a decision that results from the actions taken by a number of individuals over time, sometimes decades. The earlier a decision is made to preserve an item and make it heritage, the better it will be preserved.

Purchasing Antarctic heritage

Items which can be classed as Antarctic heritage are occasionally put up for auction where they can be purchased by anyone with sufficient funds. The articles available vary from the sale of items such as personal diaries /drawings, to the sale of Antarctic philately on internet auction sites.

It is perhaps controversial that this is possible. Should the owners not be guaranteeing the future conservation of these items by ensuring they go to institutions – such as museums – where they will be cared for correctly, instead of going to the highest bidder?

Buyers can sometimes be members of the public who will then donate or loan them to museums, so as to allow them to be seen by more people and preserved correctly. Sir Ranulph Fiennes bought a biscuit for £4,000 at auction (Fiennes, 2003; Figure 6), on the belief it was from Scott's final tent. Afterwards, it was found it may have come from his hut at Cape Evans. This highlights the amount of money some of these items can fetch, and also illustrates that issues with the articles provenance can exist.

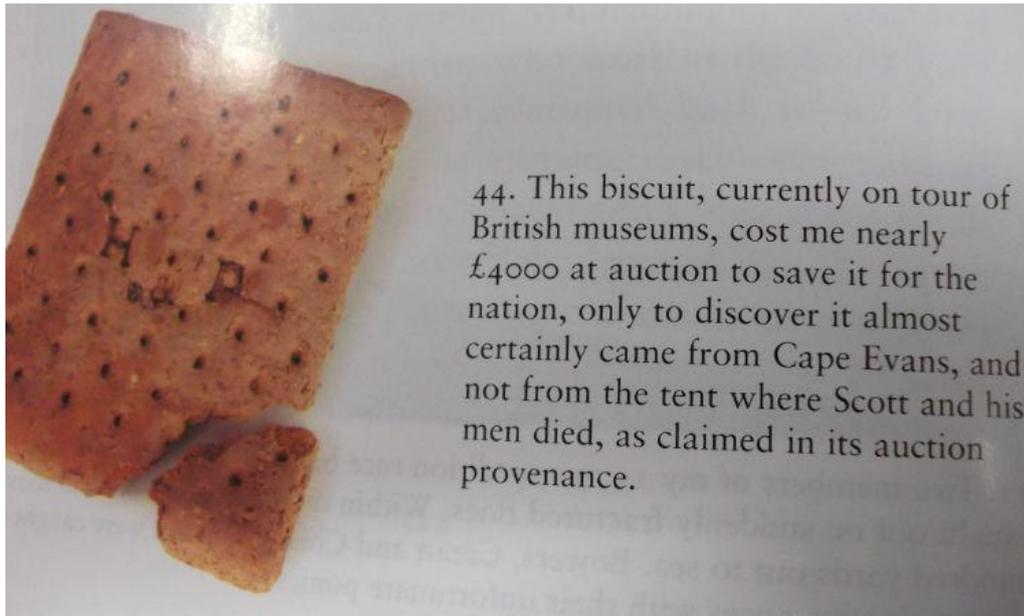


Figure 6: Biscuit purchased by Sir Ranulph Fiennes at auction. Image source: Fiennes, 2003.

The relationship between scientific study and the Ross Sea historic huts

A number of scientific studies have taken place at the historic huts in Antarctica, which have allowed them to be understood better, and meant that measures can be taken to protect them. The results of these studies are also available to other heritage projects around the world. The defibring of wood due to the corrosive action of salts at the historic huts has been investigated (Blanchette, Held, and Farrell, 2002). As a result of the extent of the damage which was occurring, a number of recommendations were made. These included steps to reduce the amount of moisture entering the hut, and to reduce the amount of snow drifting onto the huts. An analysis of timber weathering at the historic huts at Cape Adare (Harrowfield, 2006) concluded that it is mostly rock particles transported by the wind which causes timber weathering in the Ross Sea area.

A study of the pollutants around the historic huts from the Scott and Shackleton expeditions has been undertaken (Blanchette *et al*, 2004a). Hydrocarbons in high concentrations were found in the soils near where fuel depots had previously been located. Extensive amounts of asbestos fragments were found near the Cape Evans Hut, along with asbestos materials inside the other huts. The report concludes that all of the hazardous waste should be taken away, and an effort made to ensure the sites are restored.

There have been several studies into the growth of fungi in or on the historic huts. A study of wood-destroying soft rot fungi found that while this did not present a current threat to the

huts, this could change in the future (Blanchette *et al*, 2004b); it was suggested that the larger concentrations found at Cape Evans and Cape Royds (compared with the *Discovery* Hut at Hut Point) could be because these sites have a greater source of nutrients (e.g. from penguin/skua guano).

A study in 2006 looked at the diversity of wood-damaging fungi at the huts, and compared it with fungi found in soil at more isolated areas (Arenz, 2006). Similarities were found between them, and it was concluded that the fungi causing the damage is probably native, but that organic material introduced by the Heroic Age expeditions is likely to have affected them.

All the above studies have shown that the huts can provide valuable opportunities for specialised scientific research in fields not previously explored.

The need for on-going restoration as highlighted by the Christchurch earthquakes

The Christchurch region has become a major centre for Antarctic heritage, due to it being a long established ‘gateway city’, coupled with a desire from local people to preserve the history of this connection. An exhibition entitled ‘Scott’s Last Expedition’ has toured Sydney, London and now Christchurch over the last 2 years. The exhibition contains 203 items, of which 118 (almost 60%) are either owned by, or loaned to, the Canterbury Museum (Murray pers. comm., 15 January, 2013). The potential impact of an earthquake in Christchurch on Antarctic heritage is therefore very significant.

One of the main impacts of the earthquakes was the irreversible structural damage to Lyttelton museum (Norris pers. comm., 14 January 2013). Firemen had to remove the items inside within a two week period, once the decision was taken to demolish the structure.

Baden Norris, who set up the Lyttelton museum in 1960s has said that while he has been told that most of the items seem alright, he has not seen them himself and that there is a chance that some smaller artefacts may have been accidentally left behind, due to the nature of the exercise. The museum housed a number of Antarctic items, including things such as boxes from one of the historic huts, uniforms, medals and articles relating to local people who had been involved in some of the heroic age expeditions. All of the articles at present are stored in Wigram Air Museum, awaiting the completion of a new building which will provide space for an assessment to commence.

Canterbury Museum have said that ‘a handful’ of items have been damaged and removed from their Antarctic display. The museum has contracted a conservator to work on site, to restore some of the museums damaged items (Murray pers. comm., 17 January 2013). In

terms of the impact on the ‘Scott’s Last Expedition’ exhibition opening in Sydney Australia, “the Canterbury Museum material was in the process of being packed at the time of the 22 February 2011 earthquake ... With the Museum inside the red zone for a period of time ... it was quite a challenge to pack up the material in time for its departure to Australia” (Murray pers. comm., 23 January 2013).

The Akaroa Museum is closed because the main building is not safe. It is hoped the building will re-open in the summer of 2013/14 (Wallace, pers. comm., 15 January 2013). The museum housed a display relating to Frank Worsley’s life. This display was one of the most popular at the Akaroa Museum and is safe. The items originally obtained that relate specifically to his Antarctic connections were already located at the Canterbury Museum in their Antarctic section.

Conclusions

Antarctic cultural heritage is a diverse and wide-ranging concept, with an array of organisations involved in its definition and practical implementation. Context is essential when defining cultural heritage. This is what separates something which could potentially be defined as rubbish from historically significant artefacts with an incredible background story of the survival and endurance of man.

Although no clear definition of heritage existed until the 1991 Protocol on Environmental Management, the Antarctic Treaty System has continuously been used by multiple countries to conserve an extensive variety of monuments and sites. The early conservation work carried out by New Zealand has had a significant impact on the direction Antarctic heritage preservation has taken; the adoption of a clear heritage definition and set of criteria by the ATCM in 1995 proposed by the New Zealand government marked a turning point in heritage conservation under the Treaty System.

Raising the funds for preservation will always be a significant challenge, but the success of the Heroic Age hut restoration project so far, has demonstrated an encouraging level of support from governments, organisations, private companies, tourism, and the general public. In Antarctica, preservation *in situ* is not always possible, as the item may be lost or pose a safety hazard. A range of possible preservation options should be considered, as the same solutions are unlikely to be applicable to every situation.

While the impact of the Christchurch earthquakes has not been fully assessed, it would appear from the assessment so far, that the damage identified has mostly been to buildings rather than artefacts. The earthquakes have demonstrated that conservation is an on-going

process, as they generated further conservation work for items already considered safe. The two museums which are currently closed are a big setback, and are likely to reduce the numbers of visitors to the area coming specifically to see Antarctic artefacts.

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Appendix 1 - Glossary

AHT – Antarctic Heritage Trust (Comprising of the NZ AHT and UK AHT)

ASMA – Antarctic Specially Managed Area

ASPA – Antarctic Specially Protected Area

AT – Antarctic Treaty

ATCM – Antarctic Treaty Consultative Meeting

ATS – Antarctic Treaty System

HSM – Historic Sites and Monuments

ICOMOS – International Committee of Monuments and Sites

IPHC – International Polar Heritage Committee

NZAHT – New Zealand Antarctic Heritage Trust

PCAS – Postgraduate Certificate in Antarctic Studies

RSHRP - Ross Sea Heritage Restoration Project

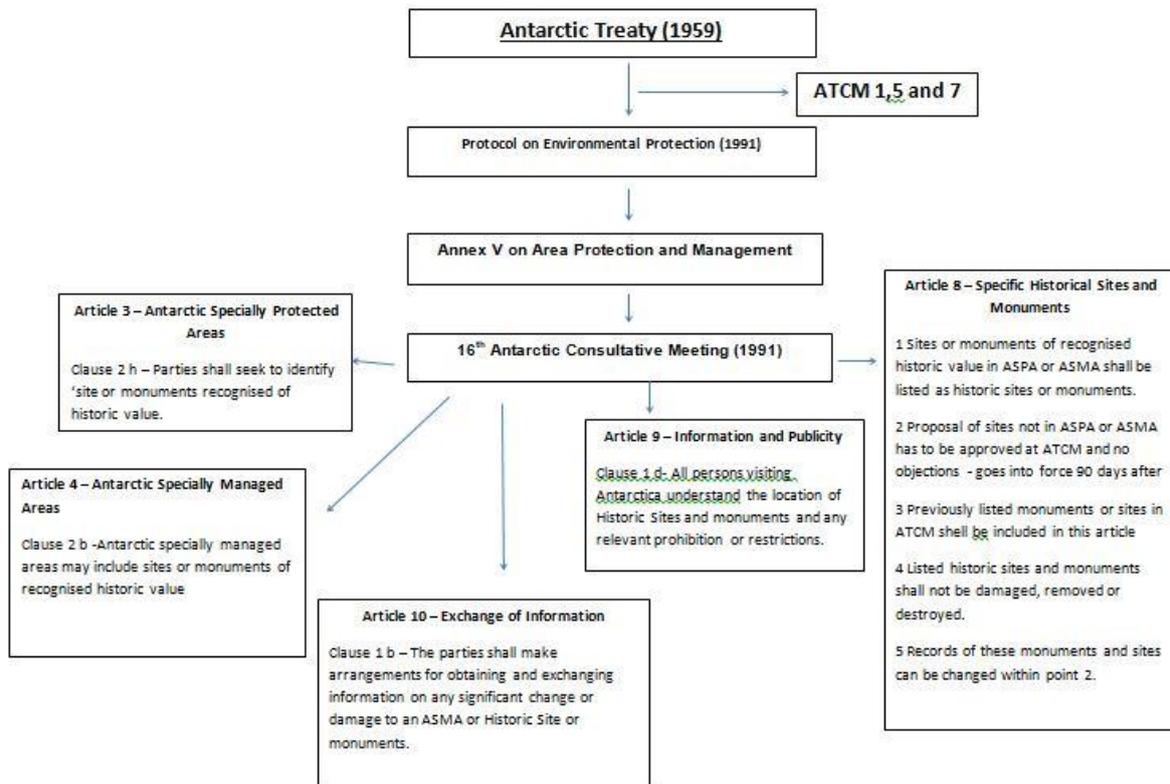
SOP – Standard Operating Plan

UKAHT – United Kingdom Antarctic Heritage Trust

UNESCO – United Nations Education, Scientific and Cultural Organisation

WMF – World Monument Fund

Appendix 2 – The breakdown of heritage definitions within the Antarctic Treaty System



Appendix 3 – Artefact Evaluation Process, Antarctica New Zealand, 2008

