

CRITERIA FOR PRESERVATION ASSESSMENT OF A HERITAGE SITE ON CERRO NEVADO ISLAND, ANTARCTICA

The aim of this work is to present an integral approach towards the preservation assessment of a heritage site as part of a broader context, related to geographical, environmental and historical issues. Several tasks were performed to determine the conservation status of a wooden cabin located on Cerro Nevado (Snow Hill) Island, In the Antarctic Continent. This wooden hut was brought by the Swedish expedition led by Otto Nordenskjöld since early 1902 until late 1903. Later on, it was abandoned. In 1979, the Dirección Nacional del Antártico (DNA), the governing body of Argentina's Antarctic activities, became involved in the restoration of this heritage site, counting with support from Sweden.

Gabriela Ammirati
gammi13@yahoo.com



The cabin is currently protected under Argentine legislation as "Site and Historical Monument No. 38 Cerro Nevado". In January and February of 2013, at the request of the DNA, a condition assessment was carried out to evaluate the conservation state of this hut, based on theoretical and methodological criteria that contemplate that a heritage site, in this case an immovable heritage asset, cannot be taken as a single isolated entity. In the first place it should be noted that the object had an original use and other subsequent uses. Once it has been studied, it will be possible to understand the alterations it may have suffered through time.

Alterations may have been caused by human interventions during the original use, during subsequent uses, or during modern restoration works. Use and its consequences must be taken in consideration at present time and in future preservation activities. Construction materials and techniques of the heritage asset is another issue to be analyzed, focusing on deterioration processes to determine what problems may arise at present time or in the future, and how they may affect the preservation of the asset. Finally, it is of great importance to contextualize heritage within the surrounding environment. It is necessary to analyze how it affects the preservation state now, and how this environment can change in the short, medium and long term.



Changes due to human interventions during the original use: Otto Nordenskjöld and his group stayed in the site for almost two years. Changes due to interventions during subsequent uses: Since 1979, the hut had been used as a shelter for travelers who visited the area. Changes due to modern preservation and restoration works: The conservation and restoration efforts began in 1979, and several maintenance tasks were performed over the years. It is necessary to conduct a detailed and comprehensive report to differentiate original materials from those that are not.

Nowadays, the hut is a site museum and is under the supervision of the museums of DNA (MuseosAntar), which along with the area of Environmental Management and Tourism, have generated a series of protocols regarding care and use of this heritage asset. It is important to mention that almost every summer a huge number of tourists from several international cruises visit the hut.

The hut was made by a Norwegian factory ("Jowengstrom"), which manufactured this type of construction in early 1900. It was transported disassembled and was assembled in site. The original building materials are wood, metal (nails and anchors) and glasses (windows). The expedition also used tar paper, linoleum, and textiles as barriers for the cold climate.

The hut is in Cerro Nevado (Snow Hill) Island (Lat. 64° 22' S, Long. 56° 59' W) Antarctica. It is located on a natural embankment of permafrost soil, about 3 meters over sea level. The north side of the hut is oriented towards the Seymour Island (Ross Archipelago), the west side faces the Weddell Sea and the east side faces a small mountain range. The south side of the hut receives the hardest winds, especially strong in winter. Harmful products from the sea and rock sediments, together with strong winds cause significant weathering on the outer surface of the hut. Meanwhile, permafrost soil suffers alteration due to higher temperature during the summer. This may cause destabilization of the hut anchor to the floor. Weather (T °, RH, snow, sleet, rain, incidence of UV and IR) can cause different problems depending on the time of year. The strong variations of these parameters and extreme climate conditions cause undesirable tensions and deterioration on the structural materials of the hut (wood, metal)

The current proposals for conservation of the hut consider certain desirable conditions, as follows:

- Several researchers working together and sharing their expertise (conservators, historians, geologists, etc.).
- Conservation works carried out by workers with specific knowledge on the Antarctic environment, coordinated and supervised by trained conservation staff.
- Adequate budget for laboratory and technical studies, since it is necessary to generate knowledge based on scientific research.
- Creating a set of protocols for conservation work to facilitate the understanding of the maintenance activities to be carried out every year.

Following the theoretical approach that considers the need for a comprehensive approach to assess the state of conservation of a heritage site, knowing that it is part of a broader context (geographical, environmental, historical, economic, political, etc.), conservation proposals will assess different problems, involving variables that can be evaluated in a synchronic and diachronic way. The conservation assessment of a cultural Heritage Asset based on this theoretical approach will provide more reliable data, considering multiple deterioration causes in the past, present and future. On the other hand, it will help to find solutions for the present dilemmas, based on criteria derived from broad spectrum observations.

Finally, it is important to know that any proposal implies a huge economic cost and adequate infrastructure, for that reason it is essential to work with theoretical frameworks that involve multiple views and analysis.

Acknowledgments: To the Dirección Nacional del Antártico (DNA), Instituto Antártico Argentino; The Director of MuseosAntar,(DNA), Lic. Verónica Del Valle, and DNA staff for their help in the field work; Dr. Ian Godfrey, Head of Department Materials Conservation, Western Australian Museum for send me bibliography and suggestion for the realization of this work; The Foundation of the American Institute for Conservation for the scholarship to attend the AIC Annual Meeting in San Francisco, California.