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The RAAR Project — Heritage Management Aspects on Reburial After Ten Years of Work

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The general purpose of the international reburial project, Reburial and Analyses of Archaeological Remains (RAAR), is to evaluate reburial as a method for the long-term storage and preservation of waterlogged archaeological remains. Since 2001 material samples have been buried, retrieved, analysed systematically, and the results reported.

RAAR has mainly focused on the degradation of materials commonly encountered on archaeological sites, and on environmental monitoring techniques in order to determine what type of material can be reburied and for how long. The project has concluded that a heritage institution could provide short- or long-term curation for its archaeological archive by using reburial depots provided they are set up according to guidelines and restrictions stipulated by the RAAR project.

However, there are management and legal aspects that need to be discussed and resolved before each reburial project. Actual reburials that have been carried out so far are often a solution to emergency situations and lack

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collection and management policies. The questions 'what', 'why', and 'for how long' have been forgotten and need to be addressed. The legal protection of a reburial site is also important. This paper discusses these aspects and their consequences and highlights possible differences in approaches between the countries involved in the RAAR project.

KEYWORDS reburial, heritage management, underwater archaeological heritage

Introduction

In situ preservation of shipwrecks and other archaeological underwater sites represents a new field of interest. Over the past few years it has received increased attention by both policy makers, as well as heritage management institutions, such as museums.

Non-destructive and non-intrusive conservation strategies, such as *in situ* preservation, are emphasized in the UNESCO Convention of 2001 (UNESCO, 2001). Furthermore, they are highlighted in the ICOMOS Charter for the Protection and Management of the Underwater Cultural Heritage from 1996 (ICOMOS, 1996) to protect fragile and non-renewable archaeological heritage.

Reburial can be seen as the other side of the coin in that it seeks to emulate a pre-excavation (*in situ*) environment that has been conducive to the preservation of archaeological remains. The approach also offers the potential to create alternative storage repositories for the preservation of underwater archaeological heritage.

Perhaps because *in situ* preservation is a fairly new field, the terminology is still not strictly defined. In particular, this seems to be true for 'reburial'. During the work with the RAAR project, it has become increasingly clear that we need, for legal reasons if for nothing else, to differentiate between artefacts that are recovered, recorded, and reburied on the site from which they were discovered (*in situ*) and artefacts that are reburied elsewhere (*ex situ*). The term *in situ* storage has been used for artefacts reburied in a new, specially created site (Ortmann et al., 2010: 28). In our view, this is neither a correct nor adequate term to use. It is likely that more adjustments to *in situ* preservation terminology will be necessary as we fine-tune the methods, but until general agreement dictates differently, the RAAR project will use the following definitions regarding reburial:

- Reburial *in situ*: artefacts that are recovered, recorded, and reburied on the same site from which they originated.
- Reburial *ex situ*: artefacts that are recovered, recorded, and reburied on a specially created site outside the original site; that is, artificially created reburial depots.

The aim and structure of the project

In 2011, ten years have passed since the RAAR project was initiated. Extensive archaeological investigations that took place in Marstrand harbour from 1998 to 1999 and the subsequent reburial *ex situ* of recovered artefacts was the catalyst for RAAR.

FIGURE 1 The reburial site at Marstrand (foreground).

The principle goal of RAAR is to evaluate reburial as a method for long-term storage and preservation of waterlogged archaeological remains. The scope of the study is to provide, where possible, guidelines for the material types that can safely be reburied in environments similar to the one at Marstrand (Figure 1) and to identify those that should not be reburied.

RAAR is coordinated by the Bohusläns Museum and Studio Västsvensk Konservering in Sweden and consists of six sub-projects co-ordinated by museums and universities in Sweden, Denmark, Norway, and Australia (Table 1). The study aims to

TABLE 1

THE SIX SUBPROJECTS AND THEIR COORDINATORS

Sub-project	Coordinator	Institute/University
Silicates	Carola Bohm and Eva Christensson	National Heritage Board, Sweden, (RAÄ)
Metals	Vicki Richards and Ian MacLeod	Western Australian Museum, Fremantle, Australia, (WAM)
Wood	Charlotte Björdal and Thomas Nilsson	Swedish University of Agricultural Science, Uppsala, Sweden, (SLU)
Organic non-wood materials	Elizabeth E. Peacock	Norwegian University of Science and Technology, Trondheim, Norway, (NTNU)
Packing and labelling materials	Inger Nyström Godfrey	Studio Västsvensk Konservering, Göteborg, Sweden, (SVK)
Environmental monitoring	David Gregory	National Museum of Denmark, Brede, Denmark, (NM)

TABLE 2

RETRIEVAL PROGRAMME FOR THE PROJECT

Phase	Proposed retrieval year	Proposed reburial interval (yr)	Retrieval year	Reburial interval (yr)	Comments
1	2003	1	2003	1	Final report published in 2007
	2004	2	2004	2 (1)[1]	
	2005	3	2005	3 (2)	
2	2008	6	2009	7 (6)	Final report published in 2011
2	2014	12			Subject to funding
3	2026	24			Subject to funding
3	2050	48			Subject to funding

[1] Number in brackets denotes the reburial interval for the metal samples, which were reburied in 2003 one year after the other sample units.

determine the stability of the most commonly encountered materials on archaeological excavations, as well as that of packing and labelling materials. The project concurrently monitors the burial environment in Marstrand to complement the studies on materials degradation and to determine the physico-chemical criteria necessary for a successful reburial programme. In order to determine the long-term effects of reburial on the different material types, sufficient samples were buried to allow sampling to continue for up to fifty years (Table 2).

The results of the project to date have been extensively reported and published (e.g. Bergstrand and Nyström Godfrey, 2007; Nyström Godfrey et al., 2009; 2011; in press; RAAR website, 2002). This paper will focus on legal and management aspects that are connected with the reburial preservation method.

Consequences for heritage management

Legal aspects of reburial

There are differences between countries with regards to the legal protection of maritime archaeological heritage. However, if we look at Swedish law, there are important differences between the protection of *in situ* and *ex situ* reburial sites, and it is likely that there are similar differences in other countries.

In Sweden, a reburial *in situ* will be protected by the Swedish Heritage Act (1988), which is the same Act that protects the site itself. The finds will belong to and be the responsibility of the Swedish state. It will be marked on maps and charts and registered in the Heritage Site Register available for national planning.

A reburial *ex situ*, on the other hand, is not a heritage site; therefore, it is not protected by the Heritage Act. The artefacts would be managed by the state or a regional museum and protected by civil laws. Whether or not a museum is responsible for archaeological artefacts depends upon whether it seeks and is given permission by the state to curate the finds. However, this legal process has not been fully investigated (Bergstrand and Nyström, 2001; Statens Maritima Museer, 2005:14–16; Riksantikvarieämbetet, 2008: 17–18).

The procurement of land for the reburial depot is an important consideration. Depending on where the *ex situ* depot is located, the land might need to be purchased, leased, or encumbered with an easement. An easement should contain all details on timeframes, management, and closure and marked on maps and charts. Most construction developments in water are regulated by the water rights court. It is possible that an underwater *ex situ* reburial depot would need to be granted permission by such a court.

Collection strategies for reburial?

Today many museums are updating their collection strategies regarding, not only what to collect and keep, but also what to de-access from their collection. With a constant increase in the number of finds comes the need for larger storage areas. Already, many museum storage areas are almost full and, with often limited funds, it is valid to question what should be preserved and at what cost.

In the same way that traditional conservation and storage preserves an object for future study and exhibition purposes, so too is reburial designed for preservation so that artefacts can be accessed and researched in the future. Reburial of artefacts *in situ* is no doubt the better and less complicated option, since the artefacts are returned to their original context and protected by the same heritage legislation as the site itself. However, in many cases underwater archaeology occurs when a heritage site is threatened because of planned construction work. After the archaeological excavation, the heritage site will no longer exist, so any reburial would have to be *ex situ*.

A reburial *ex situ* is a museum storage area that requires management and the application of collection strategies. It is easy to use reburial depots as 'archaeological artefact dumps' when the decision to discard is difficult or controversial. However, it is important to make a clear distinction between reburial and disposal. Reburial is preservation. If there are no thoughts about future use of an artefact or a collection, there is little point preserving it at all. Reburied artefacts are not meant to be forgotten in the sediments. Reburial *ex situ* should not be chosen instead of conscious disposal if the artefacts have been evaluated as of no or little use based on, for example, scientific, technological, educational or aesthetic grounds. In reality, even if there are three ways of dealing with the physical finds from an excavation: conservation, reburial (*in situ* or *ex situ*) and disposal, the decisions the practitioners face are between preservation and disposal.

The Swedish Heritage Act (1988) demands that every archaeological excavation has a find strategy. This strategy contains an assessment of the expected number and types of finds, how these are to be collected and managed during the excavation, and, furthermore, the motives for the collection and selection of finds to be conserved. These motives should be guided by the scientific aim of the individual excavation. A similar attitude and strategy is appropriate for artefacts that are to be reburied *ex situ*.

Collection dilemmas

Preservation strategies should be based on scientific reasoning — first of all site-specific questions, but sometimes taking into account regional and national aspects. While most practitioners would agree, in reality, it is not always that easy. An examination of existing archaeological stores would confirm the presence of an

endless number of small flint artefacts (inexpensive to preserve and store) but fewer large conservation/storage-costly artefacts. A preservation strategy based on what is affordable, while realistic, is not acceptable as it leads to an unrepresentative picture of a particular archaeological site or region.

Consequently, collection and preservation strategies are necessary. These will vary from one country to another and over time. The Marstrand project used a set of general criteria to help decide what to conserve and what to rebury (Nyström, 2002). However useful, such general criteria tend to be just that, and each excavation needs its own, more detailed guidelines based on the particular situation at hand.

Limited time for the assessment process is a situation that is common to most excavations. The discussions of what to preserve or discard often begin too late. The assessment of sites and artefacts are not easy, but it would become less difficult if the process started early and was coherent and consistent with regional and/or national collection policies. With such policies in place and collaboration between the site manager, conservator, and other specialists, the process has a chance of being as successful as possible. However, only the future can tell if coming generations will praise or curse us for what we choose to preserve or discard.

Reburial time frames

If we accept that artefacts reburied *ex situ* should be used in the future, we need to discuss time frames and strategies for closure. The RAAR project recommends that stipulated time frames be part of any reburial strategy. The project has previously used the terms short- and long-term reburial as a way of categorizing the reburial potential of different materials, but it was only recently we asked ourselves what we actually meant by these terms. How long is long term, and does the short term get longer with coming retrievals, if the material survives? Long term certainly does not mean eternity, since reburial depots (*ex situ*) are not meant to last forever.

Retrievability has been discussed by RAAR as a way of defining long-term reburial, relating it to the working life of a person, for example, approximately twenty-five years. This definition argues that information gets lost, and foci and agendas change when a person retires. Against this, one could argue that a reburial depot is the responsibility of a museum or similar institution and is, thus, secure. Unfortunately, in reality it is often not the case. Eventually, it was decided that, for the RAAR project, long-term reburial is twenty-five to fifty years, since fifty years is the planned life of the project. The project defined short-term reburial as lasting between nought to five years. A third term was introduced, medium-term reburial. Below is a first draft of the suggested time frame categories:

- *Short term: 0–5 years*. Storage solution while preparing for documentation, conservation, traditional storage, and/or analyses.
- *Medium term: 5–25 years*. Artefacts or collections awaiting analysis to answer future research questions, improved analytical techniques, and/or the development of more suitable conservation treatments.
- *Long term, 25–50 years*. Exceptional conditions. Finds with a very high archaeological potential, but where documentation and conservation is not possible due to a structural lack of resources and/or competence.

To these time frames, collection strategies and programmes should be added: documents that describe the intentions with the reburied finds, time schedules, and funding proposals. Failure in this system must also be considered. Even if a reburial programme is designed with strategies for future retrieval and funding, there is always the potential risk that this will not occur. How do we prepare for that? Do we physically dispose of the artefacts in such circumstances or can we 'only' rid ourselves of the problem legally and administratively? An easement can and should be very precise, but could an *ex-situ* reburial easement state that the depot is no longer a depot after a certain number of years? Would that be a way to part with ownership and responsibility? Would that be ethical?

Reburial — comparing the situation in the RAAR countries — Australia, Denmark, Norway, and Sweden

A minor questionnaire was sent to the RAAR participants in order to get an update on what is happening in the respective countries with regards to reburial and heritage management issues. The questions addressed general perceptions, as well as legal and management issues. The summary below is based on the answers received, which may not necessarily be the complete picture of the reburial situation in each respective country.

- Has your perception (opinion) on reburial changed during the last ten years?
- If so, in what sense?

The RAAR participants' view on reburial has changed over the past ten years, and become more nuanced. Initially, some had more positive and others more negative opinions of the method as a way of preserving archaeological artefacts. We now believe that the method is scientifically valid for certain materials. However, there is a danger that heritage managers and government officials will apply these methods as the cheaper alternative to full or even partial excavation and conservation of recovered materials. Recent research results highlight the fact that these techniques cannot be simply used as a blanket model for all sites and each site must be analysed and considered separately.

If there is consensus between the RAAR participants on the technical side of reburial, there is less so when we discuss why and when we should rebury artefacts — this is particularly true for reburial *ex situ*. For some of us, reburial *ex situ* should be the very last option after traditional conservation or disposal. It should be temporary storage with time limits and programmes of intent. Decisions regarding what to preserve must be made at the time of excavation. Others believe that when faced with the loss of cultural heritage, reburial is a good method and a better option than 'preservation by record'. These differences in opinion within the RAAR project probably reflect a more general opinion on the subject among museum/heritage practitioners.

- Under what legal act would a reburial depot be protected, if the depot is not on the archaeological site?
- Who is the owner of the artefacts in a reburial depot in your country?
- Are the legal aspects of a reburial depot discussed in your country?

There has been no reburial depots (*ex situ*) established in Australia; therefore, the legislation has not been tested and the legal aspects are rarely discussed. In Australia, the Commonwealth would be the legal owners of artefacts in a reburial depot and there are possibly two ways in which a reburial depot might be protected under the legislation.

1. The legislation has the capacity to protect shipwreck artefacts even if they are not physically located on an actual shipwreck site.
2. The reburial depot is placed in close proximity to the actual shipwreck site, and a protected zone is established (large enough to incorporate the wreck site and the reburial depot together) through Commonwealth legislation.

In Sweden, Denmark, and Norway the legal aspects have been discussed, but are not a prioritized topic. Actual depots have most often been *ad hoc* solutions. In Sweden, the archaeological finds would be owned and managed by the state or a regional museum and protected by civil laws, not by the Heritage Act. In Denmark the *ex situ* finds would be protected by the Museum law, which is the same law that protects the archaeological site and management would be performed by the state or delegated to the regional museum. The current Norwegian law does not address the concept of artefact reburial. Several instances of the reburial of marine finds (both on land and in the marine environment) have now led to discussion of the legal aspects.

The long-term aspects of reburial are rarely considered. Even though there has been a step in the right direction in terms of international legislation (e.g. UNESCO, 2001; European Convention, 1992), the implications cannot be seen on the national level in terms of heritage agency or local museum policies.

- Are reburial depots managed locally, regionally, nationally, or a combination of all?
- Are reburial management issues discussed in your country?
- Are you aware of any reburial cases where reburial programmes have been put in place to outline why, what, and when the artefacts should/could be used or cases where time frames have been set?

General *in situ* preservation management issues are discussed in Australia, but the idea of reburial depots are not. If reburial depots were established in Australia, the delegated authority for the Commonwealth in each State would be the managers. For example, in Western Australia, the Commonwealth's delegated authority is the Western Australian Museum and they would be the managers of the depot.

In Demark and Sweden there are discussions both on general *in situ* management issues, but also on reburial depots. Money has been invested in research in Denmark and Sweden, but the problem is obtaining continued funding for monitoring of sites and a general acceptance of the strategy. In Denmark there has been no obvious general strategy — reburial depots are managed locally, regionally, and nationally. In Sweden, to date, depots have only been managed locally. In Norway, there is no general strategy. Marine reburial depots are managed regionally, if at all. However, several instances of reburial in the marine environment have initiated a review of the legal aspects.

In terms of the practicalities of *in situ* preservation both on land and underwater, questions of accessioning and so on underpin the problems. When the decision is

made, procurement of suitable pieces of land or areas of seabed has not usually been considered. No one is really prepared to pay for any subsequent monitoring.

No participant was aware of any reburial cases where reburial programmes have been put in place to outline why, what and when the artefacts should/could be recovered and used or cases where time frames had been set.

Final remarks

It seems apparent that the reburial method has been studied mainly from a degradation point of view. Different reburial studies have focused on the long-term physical stability of the different materials and much less on the long-term consequences of administration and management of the reburial site. Looking at actual reburials (both *ex situ* and *in situ*), they seem to have come about *ad hoc*. They are often responses to emergency situations and heterogeneous in their character. To make reburial a useful and comprehensive tool for heritage management we need to:

- Understand the pros and cons of reburial.
- Preferably use *in situ* reburial (depending on the laws of the country).
- Only use *ex situ* reburial depots that are fully managed and legally protected.
- Improve reburial programmes.
- Collaborate and actively discuss collection policies (what to preserve) on a local, regional, and national level.
- Stress the need for improved national legislation that incorporate *in situ* preservation and reburial strategies.

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