

The Protective Shelters at HagarQim and Mnajdra: Impacts, dilemmas and values

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ABSTRACT: Engineering technology has opened up many new possibilities for the protection of cultural heritage, which have brought with them the attendant dilemmas on the risks and impacts posed by those possibilities themselves. The case of the protective shelters over HagarQim and Mnajdra, completed in 2009, is examined here in order to explore some of the dilemmas that were faced from inception to completion, the values that informed the decisions that were taken, and some reflections two years after their completion. Apart from the benefits for the material conservation of the monuments, it is argued that their symbolic and aesthetic values may have been reinterpreted rather than degraded by the intervention.

1 CONTEXT

The Megalithic Temples of Malta are generally considered to be of outstanding importance for world prehistory because they are the oldest freestanding stone monuments to achieve such architectural sophistication, and are for this reason inscribed on the UNESCO World Heritage List. The material and structural characteristics of the temples, and the deterioration processes that led to the decision to shelter the temples of HagarQim and Mnajdra, have been discussed in detail elsewhere (Cassaret *al.* 2010), and will be dealt with only briefly here. Following an extensive collapse that took place at Mnajdra during a severe rainstorm in April 1994, and another collapse that took place at HagarQim in November 1998, the need for a long-term conservation strategy for the Megalithic Temples was brought to the fore. An international meeting of experts convened in Malta in 1999 to discuss the issue recommended the creation of an interdisciplinary committee for the conservation of these sites. The Scientific Committee for the Conservation of the Megalithic Temples was instituted shortly after, and the first task it undertook was to identify the different agents and processes that were contributing to the deterioration of these sites. Rain, sun, wind and salts were identified as the principal agents causing deterioration. The combined action of these agents subjected the sites to repetitive and frequent wetting-drying and heating-cooling cycles, which in turn cause severe material deterioration, as well as progressive loss of the internal earth fill of the megalithic structures, compromising their structural stability.

These processes are believed to have accelerated when the excavation of HagarQim in 1839 and Mnajdra in 1840 increased their exposure to the elements. After more than a century and a half of such exposure, these processes have cumulatively resulted in significant and widespread losses of material and of structural stability.

2 RATIONALE OF SHELTERING

In August 2000, the Scientific Committee made recommendations for the installation of protective shelters, as part of a broader strategy for the long-term conservation of these sites. In simple terms, a two-pronged approach was proposed. Under the first prong, appropriate methodologies were to be researched, tested, and developed in order to implement micro-interventions addressing specific deterioration problems. The sheer complexity and extent of this task, however, made it immediately evident that it was a long-term project. The second prong was conceived for this reason. In order to slow down the rate of loss, even during implementation of the first prong of the strategy, a preventive measure was considered necessary. The Scientific Committee recommended sheltering as a measure that could be implemented in a relatively short space of time, yet provide literally umbrella protection for the entire site, while being relatively easy to reverse, in contrast to direct interventions on the megalithic remains themselves. For a more detailed discussion of the deterioration processes and the effect of sheltering, readers are referred to the paper cited above (Cassar et al. 2010), and the earlier work cited therein. For the present discussion, however, the key consideration is that the advice from the appropriate conservation specialists was that sheltering would create a much more favourable micro-environment for the conservation of the megalithic structures, and significantly slow down the rate of deterioration.

The proposal to shelter in itself raised a number of concerns about the impacts of such an intervention, particularly those on the aesthetic and contextual values of the site. In the discussion that follows, the benefits of the shelter for the material conservation of the megalithic structures will be taken as read, in order to focus on the debate on values and impacts that informed the decisions taken in implementing the project.



Figure 1. The collapse that occurred at Mnajdra in 1994.

3 DESIGN CONSIDERATIONS

The design process was launched in November 2003 with an international design competition under the auspices of the International Union of Architects. A number of key principles were established in the design requirements in the initial design brief, and were respected throughout the design and implementation process. These included a number of constraints and measures to minimise the impacts of the shelters on the site and its context. The structures were to be as simple and lightweight as possible, and were to be completely reversible, except for the foundations where strictly necessary. Foundations were to have the least possible permanent impact on the ground. Sightlines along the various axes of the prehistoric structures were not to be interrupted, and a number of possible astronomical alignments with the prehistoric structures were likewise safeguarded. While screening from sun and rain were primary design requirements, the shelters were also required to be sufficiently well-ventilated to avoid the risk of a greenhouse effect.

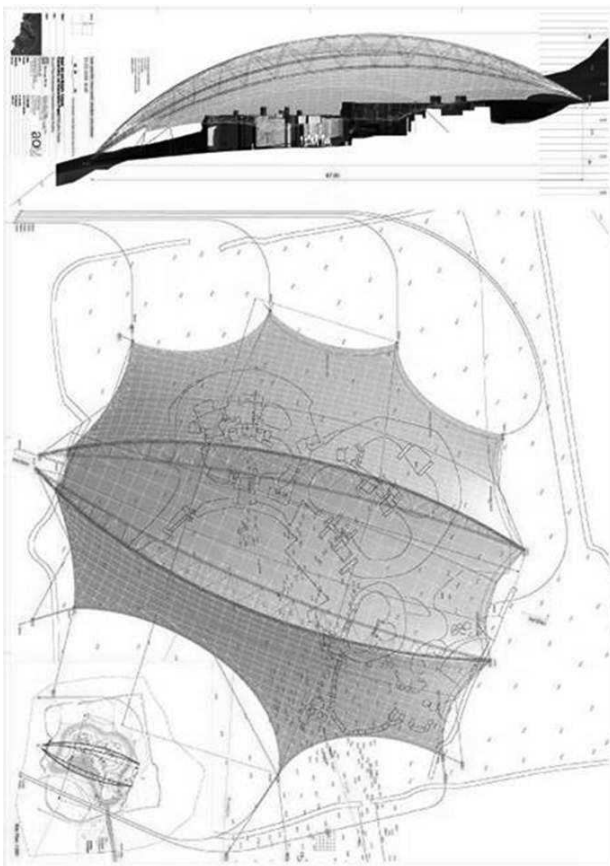


Figure 2. Plan and section of the shelter for Mnajdra.

The design selected from over forty submissions from around the world was that by the Swiss architect Walter Hunziker. During the development of the design submitted for the competition into the detailed tender document, the original, single-arch design for the tensile membrane structures was developed into a two-arch structure, to permit the lowering of the overall height of the shelters by several metres. At tender stage, it was also specified that the membrane, while screening most of the sun's rays, was to allow around 15% light transmission in order for the site to remain readable to visitors. Following the award of the contract, the design of the foundations went through a number of iterations between the contractor and the client and client's consultants, as well as national and international regulators, in order to minimise their visual and physical impacts to the least possible. A fuller discussion of these design considerations and iterations is given elsewhere (Cassaret *al.* 2010).

4 DESIGN CONSIDERATIONS

When the case was made for the benefits of sheltering for the material conservation of the megalithic monuments, a fundamental question that needed to be addressed was whether the visual intrusions that the shelters would create, and the radical changes in the way the sheltered sites were seen and experienced, were indeed justified by the gains for the material conservation of the site. The definition of the design requirements and the subsequent refinement of the shelter designs, outlined above, helped ensure that the visual and physical impacts would be kept to the least possible that one could hope to achieve. They could not, however, alter the fact that the shelters would fundamentally change the appearance of the monuments for as long as they stood. How did one go about deciding whether such a change was justified, or indeed desirable? The remainder of this paper focuses on this question, first, by discussing how the effects of sheltering on the various values of the sites were weighed at the time of the decision to shelter, and second, by making some retrospective reflections, two years after completion of the shelters.

5 SOME TRENDS & PRINCIPLES IN CURRENT CONSERVATION PRACTICE

The foundation texts of current conservation practices are the charters and declarations that have codified, articulated and re-interpreted fundamental guiding principles for best practice in conservation over the past century. Anyone hoping to find clear and unequivocal answers in these documents to the basic questions of whether and when it is advisable to shelter a site, and under which conditions, is likely to be disappointed. This is largely due to the fact that the primary aim of conservation charters is to distil and define generalised underlying principles, which may then be applied to the practical realities of as wide as possible a range of specific scenarios.

A further trend in recent decades has been the progressive acknowledgement that perceptions of value in cultural heritage resources may vary considerably from one cultural tradition to another, and that consequently the specifics of what may be defined as good conservation practice may also vary from one cultural context to the next. Perhaps the most significant watershed in this process was the (1994) Nara Document on Authenticity, where the euro-centric bias in some earlier conservation principles, particularly on the safeguarding of authenticity, was recognized and addressed. One result of this development was that conservation charters became even more wary of prescribing specific solutions. The need to recognize the specific traditions, materials and circumstances when applying conservation principles had itself become a fundamental principle.

Table 1. Some trends in conservation thinking and practices

	from...	...to
SOLUTIONS	Universally applicable	Culture-specific, site-specific
PERSPECTIVES	Euro-centric	Multicultural
VALUES	Immutable	Subject to re- interpretation

A key distinction that is fundamental to the debate on sheltering is that between the conservation of intact buildings which still function as complete structures, and ruins which do not. This distinction is clearly recognized in the 1964 International Charter for the Conservation and Restoration of Monuments and Sites (the Venice Charter), which still provides the baseline for conservation practice on built monuments. Article 15 of the charter is dedicated to excavations. It lays down the general principle that 'Ruins must be maintained and measures necessary for the permanent conservation and protection of architectural features and of objects discovered must be taken.'

The main focus of the charter is however aimed at restoration and consolidation interventions on the monument itself, and it provides no further guidance on how to approach the question of sheltering.

The same train of thought is also pursued in the 1990 ICOMOS Charter for the Protection and Management of the Archaeological Heritage which asserts the principle that ‘...the archaeological heritage should not be exposed by excavation or left exposed after excavation if provision for its proper maintenance and management after excavation cannot be guaranteed...’. The scenario that this principle is more commonly applied to is that of an excavation in progress, where it informs decisions on how large an area to excavate, and how to backfill it for protection after the excavation campaign. As a principle, however, it nevertheless has relevance to the debate on sheltering.

The 2003 ICOMOS Charter for the Analysis, Conservation and Structural Restoration of Architectural Heritage provides more detailed principles and guidelines. It recognises, for instance, that on archaeological sites, the ‘...structural responses to a rediscovered building may be completely different from those to an exposed building...’. The charter does not, however, make any specific reference to the concept of sheltering. Turning now to a charter that focuses on regulating visitor-related interventions, we may note that the 1999 ICOMOS Charter on Managing Tourism at Places of Heritage Significance provides guidelines on the provision of visitor facilities, but stops short of discussing the impact on the visitor experience of a conservation measure such as sheltering.

In a parallel tradition, a succession of documents has sought to safeguard the landscape setting of historical and archaeological monuments. The UNESCO (1962) Recommendation concerning the Safeguarding of Beauty and Character of Landscapes and Sites laid the foundations for the safeguarding of the context and setting of a monument. From 1978 onwards, the Operational Guidelines of the UNESCO (1972) World Heritage Convention stipulated that the setting of sites must meet the test of authenticity for them to be inscribed on the World Heritage List. The (2005) Vienna Memorandum articulated these principles in greater detail in the context of historic urban landscapes, while the ICOMOS (2005) Xi’An Declaration on the Conservation of the Setting of Heritage Structures, Sites and Areas laid out broader guidelines for the safeguarding and management of such settings. New intrusions in the views and vistas of such settings are identified as a primary cause for concern in both of the latter two documents.

6 WEIGHING THE IMPACTS

Against the backdrop that has just been outlined, the decision whether to shelter was evidently caught between a rock and a hard place. On the one hand, some of the most important values of the megalithic monuments were intrinsic to the original fabric and structure of the megalithic monuments, which were deteriorating at an alarming rate, and which the shelters would be instrumental in protecting. On the other hand, the shelters would have a severe (however reversible) visual impact on the monuments and their setting, and on their symbolic and aesthetic value. This Hobson’s choice scenario, where it appeared that one set of values or another had to be sacrificed to safeguard the other, was uncharted territory in terms of the principles and guidance provided by the charters. The pragmatic line of reasoning that was developed in order to resolve this dilemma was to define an order of priority between the two sets of values, not with the purpose of dismissing or diminishing from any of these values, but to permit cogent and well-informed decision-taking to fulfil the present generation’s responsibilities towards future generations. The extraordinary importance of the Maltese megalithic monuments, and the basis for their outstanding universal value and their inscription on the UNESCO World Heritage List, evidently lay in the remarkable and unprecedented architectural solutions that made these the oldest stone monuments of such architectural sophistication, anywhere in the world. The only witness to this remarkable achievement lay in the surviving fragments of the original material and structure. Their progressive deterioration by the elements was threatening these fundamental values. In this scenario, safeguarding the relationship of the monuments to their setting, and of its symbolic value, would have little meaning if the monuments themselves were progressively lost as a result.

Table 2. The debate on values prior to shelter implementation

<i>Protecting:</i>	<i>Temporarily sacrificing:</i>
TYPOLOGICAL	AESTHETIC
STRUCTURAL	LANDSCAPE
CONSTRUCTION	SYMBOLIC
FUNCTIONAL	VALUES
ARCHITECTURAL	
HISTORICAL VALUES	
<i>(basis of WH OUV)</i>	
(based on checklist of values in Gomez-Robles 2010)	

Prioritising values and weighing them against each other in this manner, it was decided that it was more important to do everything possible to retard the damage being caused by the elements to safeguard the core values of the monuments, even at the expense of a colossal visual intrusion in the immediate setting of the monuments, which would persist for as long as the shelters were left in place. This pragmatic reasoning, which formed an important part of the rationale of the decision to shelter, finds parallels in a set of guidelines and principles written for a very different context, namely heritage sites in China (Agnew & Demas 2004). This document is worth citing here, notwithstanding its very different geographical scope, because it is one of the very few documents which give practical guidelines on whether and when to shelter an archaeological site:

11.4 Construction of protective buildings or shelters is an exceptional conservation measure for aboveground sites when no alternative is available. This solution is most appropriate in the case of excavated archaeological sites that have been approved to remain exposed (Agnew & Demas 2004, 84).

The scenario contemplated in the guideline cited above closely resembles that faced at Haġar Qim and Mnajdra. The same document then continues by defining a number of principles which must be observed when sheltering, all of which were fully addressed at Haġar Qim and Mnajdra:

11.4.1 The primary consideration in the design and construction of such a building or shelter is its protective function.

11.4.2 Protective buildings or shelters must not adversely affect the historic condition of a site and their construction should be reversible.

11.4.3 The function of a protective building or shelter should not be compromised by blindly attempting to replicate an ancient style (Agnew & Demas 2004, 84).

7 CONSERVATION & INTERPRETATION

When the decision to implement the shelters had been taken, an important element in the preparations for implementation became the communication of the rationale of the intervention to the general public, for whom these monuments were iconic sites, not only in terms of their archaeological value, but also in terms of their value as symbols of national identity. The approach that was taken to public information and engagement from the early days of the implementation of the project presaged a charter that was still being drafted at the time.

The 2008 ICOMOS Charter for the Interpretation and Presentation of Cultural Heritage Sites maps out seven key principles of best practice for the integrated conservation and management of cultural heritage sites. It underscores the principle that ‘...the choice of what to preserve, how to preserve it, and how it is to be presented to the public are all elements of site interpretation’, and sets out to ‘...define the basic principles of interpretation and presentation as essential components of heritage conservation efforts and as a means of enhancing public appreciation and understanding of cultural heritage sites’ (ICOMOS 2008, preamble). Although the Haġar Qim project was already at an advanced stage of implementation when this charter was ratified, the project is a good example of several of the principles that this charter articulates so clearly for the first time. Most notably, the charter repeatedly emphasises the inseparability of interpretation from conservation. For example, under Principle 5 ‘Sustainability’, Point 4 states:

Interpretation and presentation should be an integral part of the conservation process, enhancing the public’s awareness of specific conservation problems encountered at the site and explaining the efforts being taken to protect the site’s physical integrity and authenticity.



Figure 3. The visitor centre at Haġar Qim. A section of the permanent exhibition is dedicated to explaining conservation issues.



Figure 4. The spring equinox in March 2009, when the shelter over Mnajdra was nearing completion.

Even before the charter was ratified, the Haġar Qim project had become a case study in public engagement in the conservation issues surrounding the site. The installation of the shelters constituted an unprecedented change in the appearance of two very iconic monuments, and it was evident from the outset that the rationale of such an intervention needed to be carefully explained to the public. The site curators and consultants made repeated use of all the available media, from the press and the web to radio and television, locally and internationally, to engage the public in the conservation process, by explaining the dynamics of the deterioration process, and the role of the shelters in the broader conservation strategy. Throughout the implementation of the project, the public continued to be updated regularly on progress of works, setbacks encountered, and precautions being taken to safeguard the site.

The sheltering project also included the creation of site interpretation facilities for visitors. A section of the interpretation in the new visitor centre was expressly dedicated to explaining the conservation issues. A section of the permanent exhibition in the centre graphically communicates the mechanisms of deterioration and the degradation that the monuments have suffered as a result. The rationale of the shelters, and the process of installation, is explained in an accompanying audio-visual presentation, giving every visitor the opportunity to understand the fundamentals of the conservation issues even before visiting the sites themselves.

Public perceptions of the project went through an interesting evolution. At the outset, opinions were divided between those who supported the project because they believed that the material conservation of the monuments was the paramount consideration, and those who objected to the project because of its aesthetic impact, which was frequently described as a sacrilege of such a cherished place.

When the supporting arches were installed over HagarQim in December 2008, the sudden change to the skyline triggered the launch of a Facebook group called ‘Doesn’t Hagar Qim deserve better?’ (<http://www.facebook.com/group.php?gid=43478911374>. Accessed 13/11/2011). Criticism of the project peaked in the first quarter of 2009, following the two incidents when a membrane panel was damaged during its installation. Notwithstanding all the efforts to inform the public about the need for and nature of the project, much criticism was based on misconceptions and misinformation. A common complaint was that the shelters were going to obstruct the astronomical alignments with the rising position of the sun on the first day of each season. In fact, the design brief stipulated that these alignments be respected, and the shelters have actually made these phenomena more visible by reducing random light spilling in, making the contrast between areas lit up by the sun and those in shade more dramatic, and a little closer to what it would have looked like before the buildings fell into ruin.

Upon completion of the shelters in June 2009, the sites were fully re-opened to the public. A palpable shift in public perceptions started taking place when visitors started entering the monuments in their newly sheltered setting. The effect of the completed shelters on the way the monuments were experienced had been impossible to predict, and it was only at this point in time that opinions on the final result could start forming. As this began to happen, a number of pleasant surprises were registered. Visitor feedback began to indicate that many members of the public who had been bemused, or in some cases even dismayed, by the shelters from a distance completely revised this opinion after visiting. Independently of nationality, level of specialist knowledge, or familiarity with the site, the response of the overwhelming majority of visitors has been very positive.

One of the most frequent comments is that the shelters have restored a sense of entering a monumental enclosed building. The quality of the diffused light below the shelters has also attracted much favourable comment, as it permits a reading of subtle gradations in stone colour and texture that were previously washed out by the harsh sunlight. Likewise, the improved acoustics have had another unexpected effect on visitors, leading them to speak in lowered voices and inspiring a sense of awe on entering a hallowed place. Another side-effect of the shelters has been the significant improvement in visitor comfort. Protection from extremes of sun and rain has encouraged visitors to prolong their visit, and permits visits to proceed unhindered by weather conditions.

Some of these new gains in the way the monuments are encountered and experienced had not been planned or intended, but were simply very happy, and very welcome, accidents. During the two years that have elapsed since the completion of the shelters, however, the largely unintended benefits they have brought about in the readability of the site have led to some rethinking about the impact of the shelters on the symbolic and aesthetic values of the site, which will be discussed next.



Figure 5. A view of Mnajdra after completion of shelter.

8 RE-INTERPRETING AESTHETIC & SYMBOLIC VALUES

At the time of the decision to shelter HaġarQim and Mnajdra, part of the rationale was that, although the intervention would have a negative visual impact on the symbolic and aesthetic values of the monuments, this was justified because it was absolutely necessary as part of a strategy to preserve the very fabric of the monuments themselves. Following installation of the shelters, however, the actual effects of sheltering on how the sites were experienced in practice, and the response of the public to this experience, shed fresh light on the discussion. The overwhelmingly positive feedback of visitors to this new way of experiencing the monuments began to suggest that, contrary to most expectations, a number of gains had in fact been registered in the readability of the monument. Even more surprisingly, a consistent strand in the feedback from the public was the appreciation of the aesthetic and symbolic qualities of this new experience.

This emerging reality has led us to reconsider the question of the impact of sheltering on the aesthetic and symbolic values of HaġarQim and Mnajdra. The original concerns about the visual impact of the shelters were closely bound to the underlying idea that the intervention would intrude on the primordial and unchanging relationship between the sites and their setting, which not only had immense archaeological value but had also acquired immense symbolic value as a touchstone of Maltese identity.

Symbolic and aesthetic values, however, are the values most likely to be reworked and transformed by successive generations (Gomez-Robles 2010, 154). On closer examination, the history of HaġarQim and Mnajdra reveals a succession of such reworkings over the centuries. For the purpose of the present discussion, two of these transformations will be picked out.



Figure 6. View of HaġarQim by Jean Houel (Houel 1787, Plate CCLX).

8.1 *The Romantic vision*

A formative and influential chapter in the history of the relationship between people and ruins was their discovery by the Romantic movement. Between the latter decades of the eighteenth century and the early decades of the nineteenth century, antiquities across Europe were widely adopted as sources of inspiration for poets and artists. Ancient ruins were particularly prized, their hauntingly incomplete nature conjuring poetic visions of lost worlds. The more craggy ruinous and overgrown they became as nature took its course, the more treasured they were for the epiphanies they could inspire.

The spread of this new way of thinking about archaeological sites through the Mediterranean region was inextricably bound with the Grand Tour. Of the many travellers' accounts that have come down to us, one of the most monumental was that created by the erudite artist and polymath Jean Houel (1787). The fact that the oldest known representation of HagarQimis that created and published by Houel is not simply a stroke of good fortune, it is itself significant as a record of what was considered worth representing. In Houel's drawing, some of the taller megaliths rise from the largely buried remains, which form a part of the surrounding agricultural landscape. The artist is shown listening to the narratives of the local inhabitants, while the donkeys that carried him there graze in the background. The drawing, and many that were to follow it, epitomises the romantic vision of the sites as timeless and mysterious testaments to a lost world, at one with the natural landscape.

8.2 Monumentalising the monumental

A new, and very different, paradigm in the way archaeological sites and monuments were perceived was to emerge during the second half of the nineteenth century. This was the search for monumental markers of past societies, to be pressed into service as part of the colonising project of every European power with imperialist ambitions, and in the nationalist reactions that imperialism was to provoke. Monuments now needed to be 'unjungled', excavated, measured, recorded, expropriated and fenced off (Andersen 1991). This new paradigm was being consciously articulated and put into practice in Malta by the early 1880s (Grima 2011). At HagarQim, the story of the successive interventions to clear, consolidate and reconstruct the monument (Stroud 2003) has revealed a symptomatic concern with making it appear even more monumental. The removal of the earth deposits that surrounded (and protected) the site, and particularly the reconstruction of the main façade during the early twentieth century, speak volumes of the new ways of perceiving and using the monument. The same paradigm continues to exercise influence to our times. The construction of a rectangular stone and steel enclosure around HagarQim in the late 1960s (removed in the late 1990s) in a sense completed the colonial project for the site.



Figure 7. Façade of HagarQim, showing reconstructions conducted during the first half of the 20th century (After Stroud 2003).

8.3 *Sustainable stewardship*

Each of these successive paradigms created new aesthetic and symbolic values for the monuments, and each took a toll on the sites' existing values, whether by destruction through neglect, or whether through deliberate disturbance or exposure to the elements. Against this backdrop, the sheltering of Haġar Qim and Mnajdra, and its impact on their aesthetic and symbolic values, may be read in a new light. Rather than being an unprecedented intrusion in a timeless and primordial setting, it is the latest chapter in a long history of flux and transformations. Not unlike the paradigms that preceded it, it too has had a cost, in this case on some of the aesthetic and symbolic values that had been invented for the site in the framework of the preceding paradigms. Yet the sheltering itself has arguably created new aesthetic and symbolic values, which are based on the concept of sustainable enjoyment and responsible stewardship of the site in the name of future generations. This, perhaps, is the more suitable paradigm for our times.

9 LIMITATIONS & FUTURE RESEARCH

The observations on public opinion and responses made here are mostly based on informal conversations with visitors and letters and comments in the press and online. A structured survey of visitor attitudes, and how they may change before, during and after a visit, is highly desirable, and would permit a deeper understanding of the themes explored here.



Figure 8. Façade of Haġar Qim, following completion of the shelter.

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CHARTERS & DOCUMENTS

The following documents may be consulted online at:

http://www.international.icomos.org/centre_documentation/chartes_eng.htm

ICOMOS 1964. International Charter for the Conservation and Restoration of Monuments and Sites (The Venice Charter).

ICOMOS 1990. Charter for the Protection of the Archaeological Heritage.

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