

The Megalithic Temples of Malta World Heritage Site

# Management Plan

2012-2017



Parliamentary Secretariat for  
Culture and Local Government



 Heritage Malta

The National Agency for Museums,  
Conservation Practice and Cultural Heritage

The Megalithic Temples of Malta World Heritage Site

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**2012-2017**

November 2011

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# 1 The Management Plan

## 1.1 The main aims of the Plan

The Management Plan for the Megalithic Temples of Malta is intended to provide a holistic framework for decisions about the conservation, management and enjoyment of the property for five years from its date of adoption in 2012. In essence, it aims to:

1. Provide a formal description and statement of significance of the property
2. Outline current problems and challenges
3. Define objectives to guide policies
4. Identify specific actions to be implemented.

## 1.2 The need for the Plan

A management plan is a basic requisite for all sites inscribed on the UNESCO World Heritage List. In the case of a serial inscription such as the Megalithic Temples of Malta (ref. 132 bis), the need for a coherent and adequate plan is all the more pressing, because such sites face a complex range of problems that may vary from one part of the inscribed property to another.

This is the first time that a management plan is being finalized for the Megalithic Temples of Malta. It is also the first management plan for any site in Malta inscribed on the UNESCO World Heritage List. The experience of delivering and implementing this plan should therefore also yield benefits for Malta's two other inscribed sites, where a plan has yet to be prepared. These are namely the Ħal Saflieni Hypogeum (ref. 130) and the City of Valletta (ref. 131), both of which were inscribed in 1980.

## 1.3 The scope and status of the Plan

The scope of the management plan includes the management of the six megalithic temple sites presently included in the serial inscription of the Megalithic Temples of Malta on the UNESCO World Heritage List. These are namely Ġgantija; ta' Ħaġrat; Skorba; Ħaġar Qim; Mnajdra; Tarxien. The scope of the management plan also includes the buffer zones that form part of the same inscription.

Ġgantija, on the island of Gozo, was inscribed on the World Heritage List in 1980, while the other five sites, on the island of Malta, were included in the inscription in 1992. These six sites were nominated for inscription as they were considered the most significant and representative of the known examples of Maltese prehistoric buildings. There exist in fact over twenty other megalithic buildings of the same period that are not part of the present scope, except where it is proposed as an objective to study whether the inscription should be extended to include other sites.

The present version of the plan is being presented to the Parliamentary Secretary for Tourism, the Environment and Culture for adoption by government in 2012.

## 1.4 The preparation of the Plan

While the drafting process has been led by Heritage Malta's Prehistoric Sites Department, it is intended to bring together a much wider spectrum of views and opinions. The plan embodies the results of an extensive consultation process with all interested parties and the general public, defining the way forward for the management of the property in the coming years.

Key national policy documents have been used in the preparation of the plan, to ensure that management objectives identified within the plan fit within the overall national policy framework, and to be able to identify any lacunae which still need to be addressed. The main documents consulted are, the National Cultural Policy (2011), the National Strategy for Cultural Heritage (2006) and Heritage Malta's Strategic Plan for 2011 – 2013 (2010). Additionally, these policy documents identify the preparation of management plans as a national requirement (National Strategy for Cultural Heritage 2006: 11, National Cultural Policy 2011: Key Policy Action 4.7).

For the final stage of public consultation, a Draft of the Plan was printed and published in 2008, and circulated to stakeholders for their feedback and comment. The present version is the result of this final consultation.

## Description & Statement of Significance

### 1.5 Description

The Megalithic Temples of the Maltese Islands are prehistoric monumental buildings constructed during the 4<sup>th</sup> millennium BC and the 3<sup>rd</sup> millennium BC. They are unique in that they rank amongst the earliest free-standing stone buildings in the world, and are witness to an exceptional prehistoric culture that produced remarkable architectural, artistic and technological developments.

Although each monument has its distinctive features, they all share some common characteristics. They are typically approached across an elliptical forecourt, delineated on one side by the monument's concave façade. The façade and internal walls consist of upright stone slabs, known as orthostats, surmounted by horizontal blocks. The horizontal courses that have survived indicate that these monuments were originally roofed. The roof was formed of corbelled masonry courses probably capped by a flat roof, a remarkably sophisticated solution for its time.

The external walls are usually constructed in larger blocks which are set alternately face out and edge out, tying the wall securely into the rest of the building. The space between the external wall and the walls of the inner chambers is filled with stones and earth, binding the whole structure together.

Typically, the entrance to the building is found in the centre of the façade, leading through a monumental passage-way onto a paved court. Within the buildings, semi-circular chambers, usually referred to as apses, are found symmetrically arranged on either side of the main axis. The monuments vary in the number of apses; some have three apses opening off the central court, whilst others have successive courts with four, five, or in one case, six apses.

Depending on what materials were available in the vicinity, the builders preferred to raise the exposed external walls in the hard Coralline Limestone, and to use the softer Globigerina Limestone for the more sheltered interiors. Globigerina Limestone was also used for decorated elements. The builders of these monuments evidently had a thorough knowledge of the construction materials that were available on the islands.

Decorated features found within these buildings bear witness to a high level of craftsmanship. These elements consist mainly of panels decorated with drilled holes, as well as low-relief panels depicting spiral motifs, trees, plants and various animals. The form and layout of these buildings, as well as the artefacts found within them all suggest that they were an important ritual focus of an organised community.

#### 1.5.1 Ġgantija Temples:

The prehistoric monument of Ġgantija stands near the south edge of the Xagħra plateau on the island of Gozo. It overlooks the central plain of the island, which was probably exploited intensively by the prehistoric inhabitants for agricultural purposes. Even today, the monument is

a striking landmark that dominates the surrounding landscape. The open space in front of the building is an artificial terrace built probably in the 3<sup>rd</sup> millennium BC. The building itself consists of two adjacent structures enclosed by a common external wall and façade. They are mainly constructed in Coralline Limestone. Globigerina Limestone was used for the door-jambes and decorated elements.

The South Temple was the first to be built, by around the mid-fourth millennium BC. The original arrangement may have consisted of the three inner apses. By the beginning of the third millennium BC, two outer apses had been added to the South Temple, and the adjacent North Temple consisting of four apses and a small niche was constructed. The façade and exterior wall of the South Temple was adapted and extended to incorporate the North Temple.

### 1.5.2 Ta' Ħaġrat Temples:

This megalithic complex is found in Mġarr, Malta, less than a kilometre away from another prehistoric monument, Skorba Temples. Ta' Ħaġrat is one of the earlier examples of such buildings, dating from around the mid-fourth millennium BC.

The principal building has a three-apsed plan with a concave façade and a monumental trilithon entrance in its centre. Unlike most of the other surviving monuments, this building's entrance is reached by three steps. The entrance opens onto a paved rectangular courtyard. Another structure of smaller dimensions was added later to the North-east of the main structure. The entire structure is built using the Upper Coralline Limestone which outcrops in this part of Malta.

### 1.5.3 Skorba Temples:

Skorba has yielded evidence of every known phase of the first three thousand years of human habitation of the Maltese islands. The site, which is located in Żebbiegħ, Malta, is characterized by a monumental complex consisting of two adjacent buildings, as well as a series of more modest structures, several of which appear to have had a domestic purpose.

During the fourth millennium BC, the West Temple was constructed on a three-apsed plan. At a later stage, various alterations were carried out to the building and the four-apsed East Temple was constructed alongside the earlier structure. The excavation of this site between 1961 and 1963 led to the establishment of the culture-sequence for Maltese prehistory that is still accepted today, and also provided crucial evidence for dating the Maltese Prehistoric Temples.

### 1.5.4 Ħaġar Qim Temples:

Ħaġar Qim Temples are located along the south-west coast of Malta, some 2km from the village of Qrendi. They are only 500m away from another major prehistoric monument, Mnajdra Temples. Standing at the top of a ridge, with the ground sloping away on three sides, this monument has always been a conspicuous landmark.

The complex of Ħaġar Qim consists of one large building and two smaller separate structures. All three buildings are entirely constructed in Globigerina Limestone, the material which outcrops in the immediate vicinity. The main building appears to have been created in a

succession of building interventions during the fourth millennium BC, resulting in an unusually irregular and complex ground plan.

North of the main building are the remains of a four-apsed building, whilst to its east are the remains of another structure with a less regular plan.

#### 1.5.5 Mnajdra Temples:

Mnajdra consists of three main buildings. The earliest of the three is the small three-apsed East Temple, built around the mid-fourth millennium BC. The South Temple, which has a four-apsed plan, was constructed early in the third millennium BC whilst the Central Temple, similar in plan, was last to be built.

Unlike Ħaġar Qim Temples, the external walls here were built of the Coralline Limestone which outcrops naturally in the vicinity. A particular characteristic of this site is the orientation of the South Temple. This building is aligned with the rising position of the sun during the Equinox and Solstices. During the Spring and Autumn Equinoxes the rays of the rising sun pass directly through the main doorway and reach the innermost central niche. During the Summer Solstice the first rays of sunlight illuminate the edge of a decorated megalith found within the first apses, whilst during the Winter Solstice the same effect can be seen on the corresponding megalith in the opposite apse.

This phenomenon suggests that the prehistoric society that built these monuments observed the motion of the stars, the moon and sun, probably relating them to the changing seasons and times of planting and harvesting crops.

#### 1.5.6 Tarxien Temples:

These megalithic buildings are found at Tarxien, Malta, in the vicinity of another prehistoric site, Ħal Saflieni Hypogeum. Unlike the other megalithic sites it is found in a predominantly urban context.

The Tarxien complex consists of four main buildings. The earliest, five-apsed building lies at the eastern end of the site, and dates from the fourth millennium BC. The East, South, and Central Temples were probably added during the third millennium BC. The six-apsed Central Temple is unique in plan and bears evidence of corbelled roofing.

The South Temple is the most highly-decorated of all these megalithic buildings, containing a considerable number of low-relief panels as well as the remains of a colossal statue. The famous reliefs of two bulls and a sow with piglets are located in a chamber in the thickness of the wall between the South and Central Temples area.

### 1.6 The cultural and natural context

The six inscribed properties are positioned in very different cultural and natural contexts. Ħaġar Qim and Mnajdra are positioned in an area of outstanding natural beauty on the south-west coastline, while Ġgantija, ta' Ħaġrat and Skorba lie near the edge of present-day settlements. Tarxien lies in the heart of the conurbation around the Grand Harbour. A checklist of sites that

lie within the buffer zones of the six properties, and are scheduled and protected by the Malta Environment and Planning Authority (MEPA), is provided as Appendix 1.

## 1.7 Statement of Significance

This statement outlines the principal values that give the Megalithic Temples their significance today.

### 1.7.1 World Heritage: Outstanding Universal Values

The value of the Megalithic Temples of Malta has been recognized by the United Nations Educational, Scientific and Cultural Organization (UNESCO). The 1972 UNESCO World Heritage Convention provides for the inscription of sites of outstanding universal value in the World Heritage List. The Ġgantija Temples were inscribed on this List in 1980. In 1992, this inscription was extended to include the sites of Ғaġar Qim, Mnajdra, Skorba, ta' Ғaġrat, and Tarxien. The inscription of the Maltese Megalithic Temples recognizes that they fulfil Criterion iv as laid out in the Operational Guidelines for the Implementation of the World Heritage Convention, as sites that are "an outstanding example of a type of building or architectural or technological ensemble or landscape which illustrates a significant stage in human history."

The Megalithic Temples represent a unique architectural tradition that flourished on the Maltese Islands between the mid-fourth and the mid-third millennium BC, making them one of the earliest groups of monumental buildings of such sophistication in the whole world. All six sites are in a reasonably good state of preservation, and all key attributes are within the boundaries of the property. Surviving remains attest to the techniques used in the building of these complex structures, and the knowledge and skill of the people who built them.

The Megalithic Temples may also fulfil two of the other Criteria laid out in the Operational Guidelines. They represent a masterpiece of human creative genius (Criterion i). They also bear unique testimony to a civilisation which has disappeared (Criterion iii).

Furthermore, all sites inscribed on the List must satisfy two other conditions. They must meet the test of authenticity, and they must have adequate protection to ensure their sustainable management. The six sites forming the property have a high level of authenticity, in that they consist of well-preserved remains of megalithic temples, with evidence of different phases of construction in antiquity. The sites have been recorded in travel accounts since Early Modern times, and photographic records of the sites go back to the early 1900s. Various restoration interventions have been carried out in the past on five of the six sites since their excavation, ranging from moving decorated blocks indoors to protect from weathering to capping of surviving blocks with cement. Current conservation interventions are guided by international Standards, Guidelines and Charters.

At present (2011) there are 936 sites worldwide inscribed on the list, of which 3 are in Malta. In nominating these monuments for inclusion in the World Heritage List, the Government of Malta

has committed itself to safeguard these sites for the enjoyment of present and future generations on behalf of the international community.

### 1.7.2 Cultural Heritage Values

#### Evidence of human activity in prehistory

The Megalithic Temples are the best indicator available to us at present to help us understand how the Maltese islands were organized and inhabited during the Late Neolithic period. As the evidence for domestic structures is much harder to detect, archaeologists still rely heavily on the evidence of the Megalithic Temples to understand the demography and social organisation of the period.

#### Architectural

The Megalithic Temples represent a distinctive architectural form that was highly innovative and sophisticated for its time. It is therefore a fundamental reference point for the history of architecture.

#### Prehistoric culture sequence

The Megalithic Temples have yielded evidence dating from a wide span of prehistory ranging from the earliest settlement of the Maltese archipelago during the Neolithic, to the Bronze Age. One site in the series, the Tarxien Temples, was the first to provide stratified evidence for the culture that succeeded the Temple Culture, which was in fact named the 'Tarxien Cemetery' culture. The site of the Skorba Temples, meanwhile, has yielded evidence of an unbroken succession of activity from the earliest settlement of the archipelago to the Bronze Age.

The evidence from Tarxien and from Skorba remains foremost among the known indications of the circumstances in which the Maltese islands were first settled, and in which the Temple Culture emerged, flourished, and came to an end, eventually being replaced by the Bronze Age cultures.

#### Artistic

The Megalithic Temples have yielded an extraordinary concentration of sculpture and other art-forms. This is composed mainly of a number of architectural elements decorated with low-reliefs, as well as a range of anthropomorphic representations in a range of sizes. Collectively, they form a distinctive and sophisticated assemblage, representing a very specific system of beliefs and modes of representation.

#### Development of archaeology

The Megalithic Temples have played a central role in the development of archaeological research in Malta. During the 19th century, the major temple sites of Ġgantija, Ғaġar Qim and Mnajdra were cleared by early antiquarians. During the early 20th century, Sir Temi Zammit became one of the pioneers that introduced scientific excavation techniques to Malta,

developing his methods considerably during his excavation of the Tarxien Temples. He kept detailed written and photographic records of the progress of the excavation and also published a succession of reports on the discoveries made. This resulted in a wealth of evidence that is still crucial for our understanding of the Late Neolithic and the Early Bronze Age today.

### 1.7.3 Social Values

#### National identity

The Megalithic Temples have become a powerful symbol of Maltese national identity. The unique nature of these structures has made them synonymous with the Maltese islands, making the temples instantly recognizable as a distinctive Maltese creation.

#### Recreation

Malta has one of the highest population densities in the world. Land use is consequently a highly contested issue. The availability of open spaces for recreation is no exception.

The presence of the Megalithic Temples has contributed to the preservation of significant open spaces, in urban as well as rural contexts, that are today invaluable for recreation purposes.

#### Economic value

Tourism has become one of the pillars of the Maltese economy. Cultural tourism is a vital component in the promotion of the Maltese islands as a distinctive holiday destination. The Megalithic Temples are a key component in this strategy, so much so that Ġgantija is the most visited cultural site in the country. The exceptional character of these monuments makes them important magnets for cultural tourism, and they are heavily relied on to promote Malta as a unique cultural destination.

### 1.7.4 Research and Educational Values

#### Educational resource

The Megalithic Temples are an educational resource of great potential. They may be utilised to illustrate the achievements of the Temple Culture, the transition from the Neolithic to the Bronze Age, the prehistoric origins of human exploitation of the Maltese archipelago, the changing relationship between people and their environment, and the problems of sustainability and resource conflict in a small island context.

#### Research potential

There is great scope for further research within and around the Megalithic Temples. Potential foci of research within the sites themselves include the sequence, methods and techniques employed in the buildings, their high-quality documentation, their purpose, their conservation history and the development of appropriate conservation treatments. Foci of research in the surrounding landscape may include the study of the relationship of the monuments to

prehistoric demography, prehistoric perceptions of the landscape, and its exploitation through agriculture, quarrying and other activities. Multidisciplinary research may shed light on the question of the degradation of the landscape, and the interaction between human activity and ecological communities, which is a key issue in the search for sustainable relationships with the environment. Such issues need to continue to be addressed through the development of an ongoing research agenda.

## 2 Current Framework & Key Issues

### 2.1 Legal framework

#### 2.1.1 Ownership and responsibilities – stakeholders

The six megalithic complexes that together constitute the serial inscription of the Megalithic Temples of Malta on the UNESCO World Heritage List are all state property. They are managed by Heritage Malta, the national agency for museums, conservation practice and cultural heritage. It is the agency's mission to 'safeguard and render accessible the cultural heritage entrusted to it thus contributing towards a better appreciation of Malta's cultural identity'. Heritage Malta is however just one link in the governance framework administering cultural heritage in the Maltese islands. Other key structures include the Ministry responsible for culture, the Committee of Guarantee, the Superintendence of Cultural Heritage. Duties and responsibilities of these structures were outlined in the National Cultural Policy for the Maltese Islands (2011) and are reproduced in the table below.

	<b>Ministry Responsible for Culture</b>	<b>Committee of Guarantee</b>	<b>Superintendence of Cultural Heritage, Religious Cultural Heritage Commissions</b>	<b>Heritage Malta, National Archives, Libraries, Local Councils, NGOs</b>
<b>Duties and responsibilities</b>	Policy Consultation, Policy Formulation, Implementation, Monitoring and Revisions	Develop, monitor, and evaluate National Cultural Heritage Strategy	Contribute to National Cultural Heritage Strategy formulation, implementation, monitoring and evaluation	Fulfill operational duties in line with Cultural Heritage Act and its amendments. Fulfill operational duties in line with the National Archives Act and the new Libraries legislation, including devising and implementing a national libraries strategy
	National (Interministerial) and International Coordination	Coordinate Cultural Heritage Sector in line with Cultural Heritage Act and its amendments	Fulfill regulatory role in line with Cultural Heritage Act and its amendments	Devise and implement management plans in line with legal obligations and/or formal agreements (e.g. Guardianship Deeds).
	Coordinate legislative clarification exercise			

Table: Governance Framework – Heritage (Source: National Cultural Policy, 2011: 39)

The buffer zones of the Megalithic Temples are largely composed of private property. During the late nineteenth century and early twentieth century, the state has invested considerable effort and resources to acquire the land in the immediate vicinity of the megalithic remains, in

order to guarantee the preservation of the sites in their setting. More recently, efforts have been directed towards acquiring even wider areas in order to safeguard the context of the sites. Around 1991, some 30 hectares of coastal landscape around ҒaҒar Qim and Mnajdra were acquired by the state, and earmarked for the creation of an Archaeological Park. In the same period, another extensive area of land was acquired around Ґgantija for the same purpose. The usefulness of expropriation as a conservation tool is underlined by the case of Tarxien, where considerable efforts were made by post-war town planners to preserve a green area around the archaeological remains (Figure 1). In spite of these efforts, the area intended as the green area was encroached upon by a bowling pitch, a street, and a cemetery. At ta' ҒaҒrat and Skorba, the area expropriated is more restricted, and may require extension and consolidation.

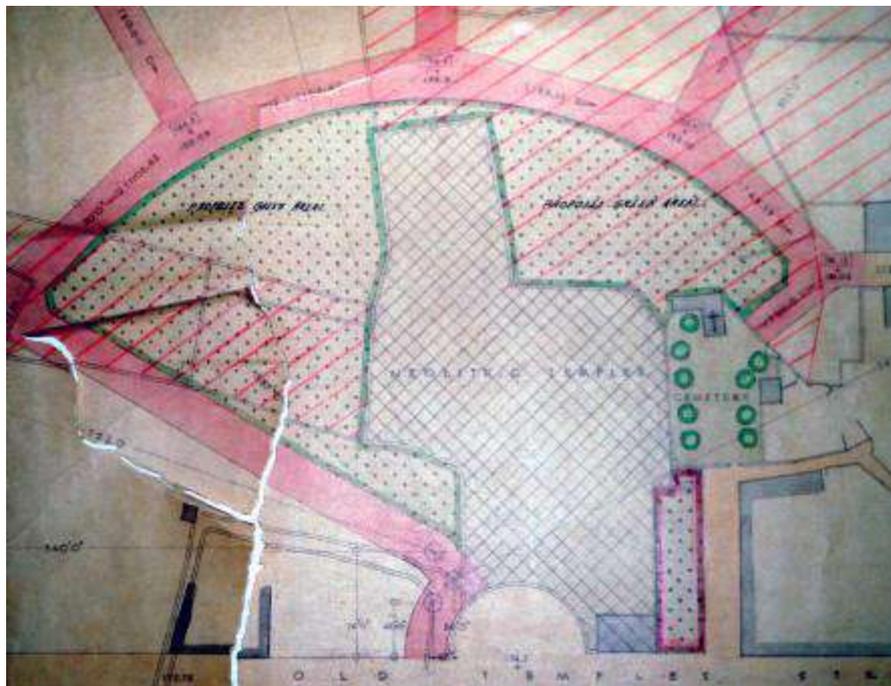


Figure 1. The green area around Tarxien proposed in the post-war period.

### 2.1.2 Legislation

The principal legal instrument for the protection of cultural heritage resources in Malta is the Cultural Heritage Act (2002 and subsequent amendments), which provides for and regulates national bodies for the protection and management of cultural heritage resources. Building development and land-use is regulated by the Development Planning Act (1992), which provides for and regulates the Malta Environment and Planning Authority. There is no Maltese legislation enacted specifically to protect UNESCO World Heritage.

### 2.1.3 Planning issues – buffer zones and skylines: enforcement and development

Malta presently has a higher density of World Heritage Sites than any other state in the world, barring only the Holy See. It also has one of the highest population densities in the world. As a

result, land use is a highly contested issue. The safeguarding of the Megalithic Temples and their buffer zone through the careful regulation of building development is therefore an issue of fundamental concern, and a central focus of the Plan.

### Buffer zones

The six megalithic sites that are together inscribed as the Megalithic Temples are all protected by a buffer zone that is formally recognized in the UNESCO Retrospective Inventory. Due to the proximity of ta' Ħaġrat to Skorba, and of Ħaġar Qim to Mnajdra, these two pairs of sites each share a single buffer zone, bringing the total number of buffer zones to four.

All six megalithic temples together with their buffer are formally scheduled by the Malta Environment and Planning Authority as Grade A archaeological sites. The buffer zone of a Grade A archaeological site must include a minimum of a 100m radius from the baseline of the site itself, and is subject to wide-ranging restrictions of building development. The application of these restrictions varies according to the local context. In certain instances, such as the buffer zone around Tarxien Temples and part of the buffer zone around ta' Ħaġrat and Skorba Temples, some land included within the buffer zone is already developed, and falls within the limit of development. In such cases, current practice is to permit controlled redevelopment. Irreversible changes to the landscape, such as rock-cutting, are usually prohibited during such redevelopment. On the other hand, redevelopment often poses challenges in the form of an increase in building mass, which may have a visual impact on the setting of the megalithic buildings.

In other instances, such as Ħaġar Qim, Mnajdra and Ġgantija, the buffer zone lies outside the area committed to development, permitting a more comprehensive protection of the landscape setting of the megalithic buildings.

A checklist of sites that lie within the buffer zones of the six properties, and are scheduled and protected by the Malta Environment and Planning Authority (MEPA), is provided as Appendix 1.

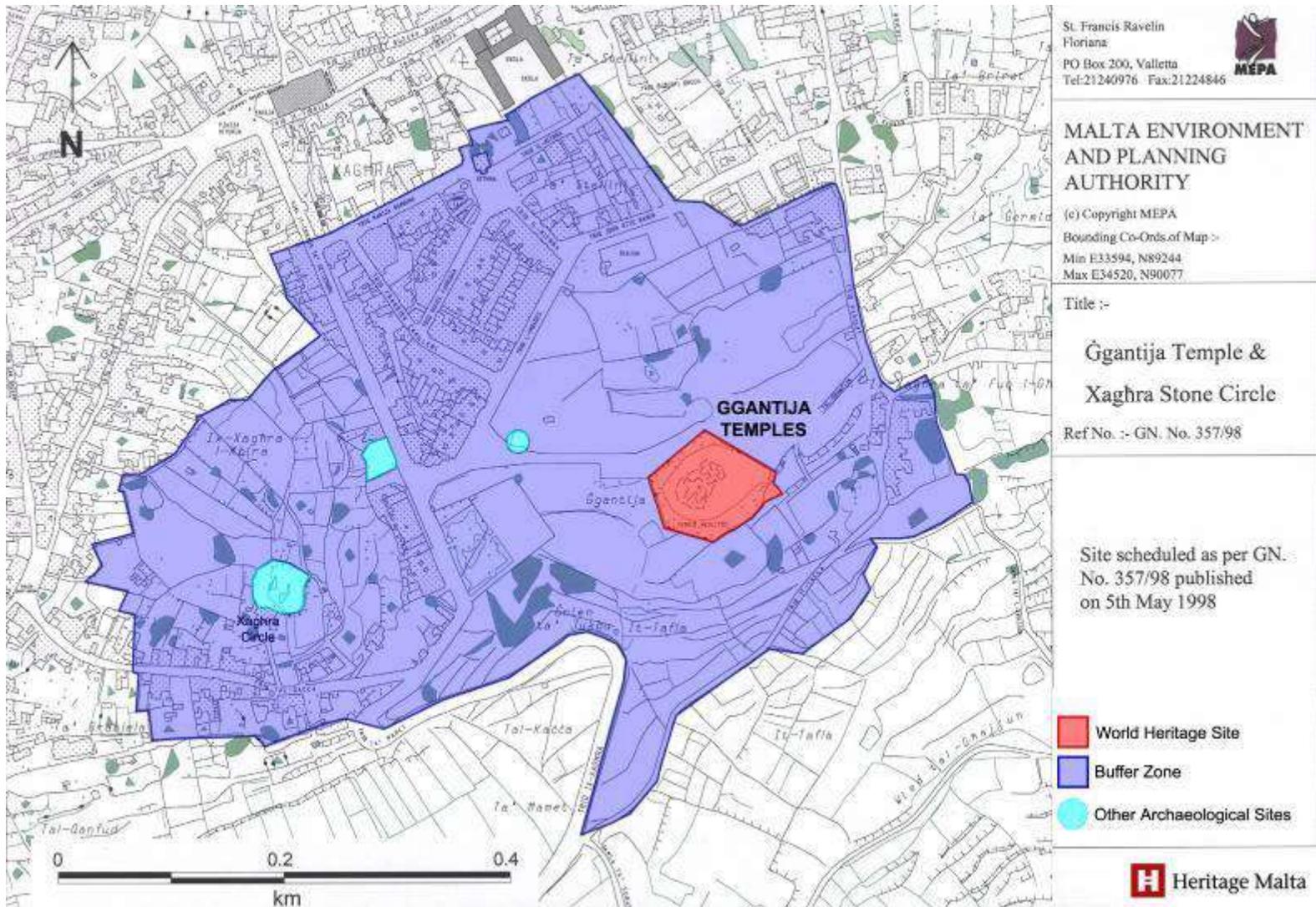


Figure 2. Buffer Zone around Ġgantija

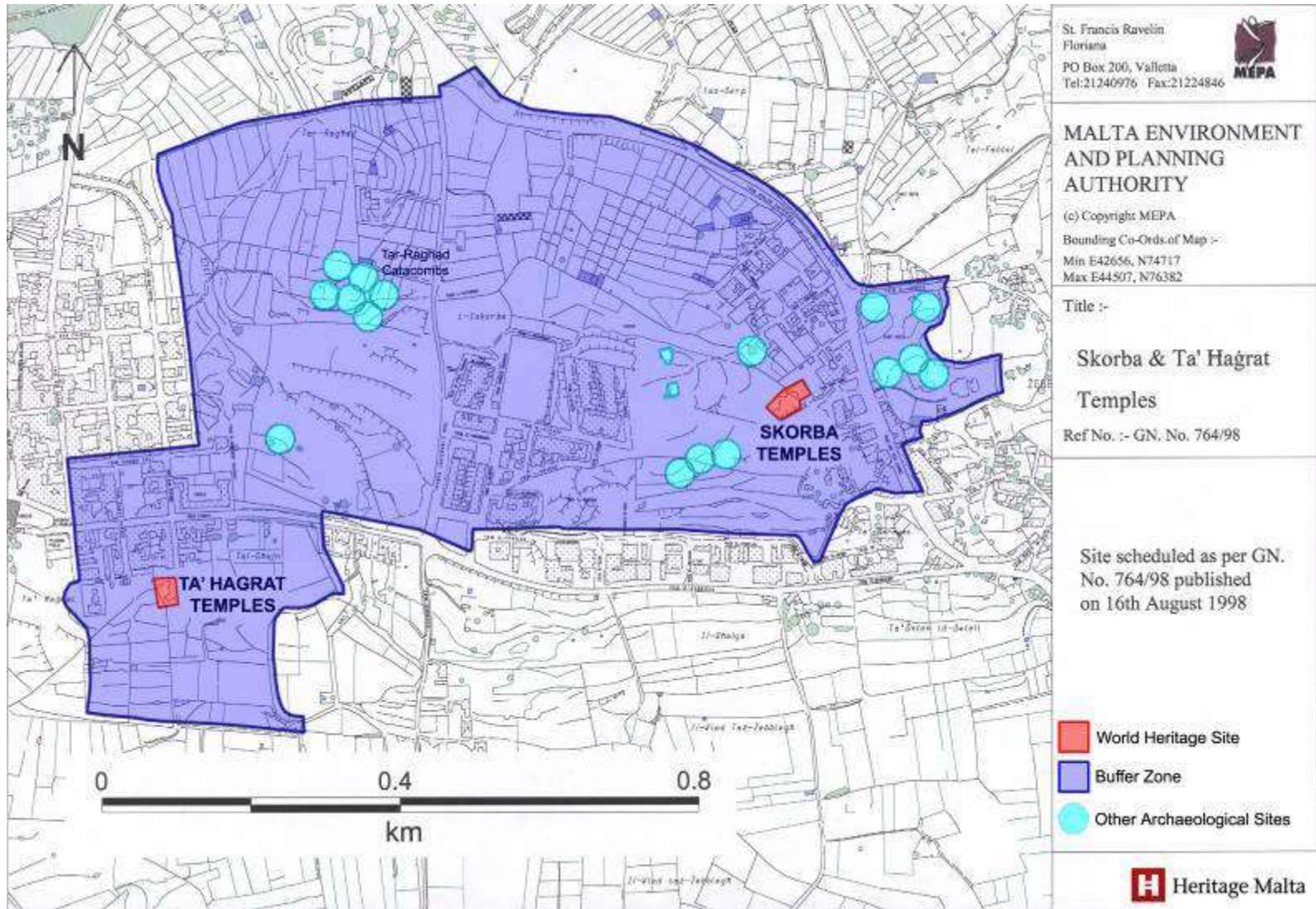


Figure 3. Buffer Zone around ta' Haġrat and Skorba

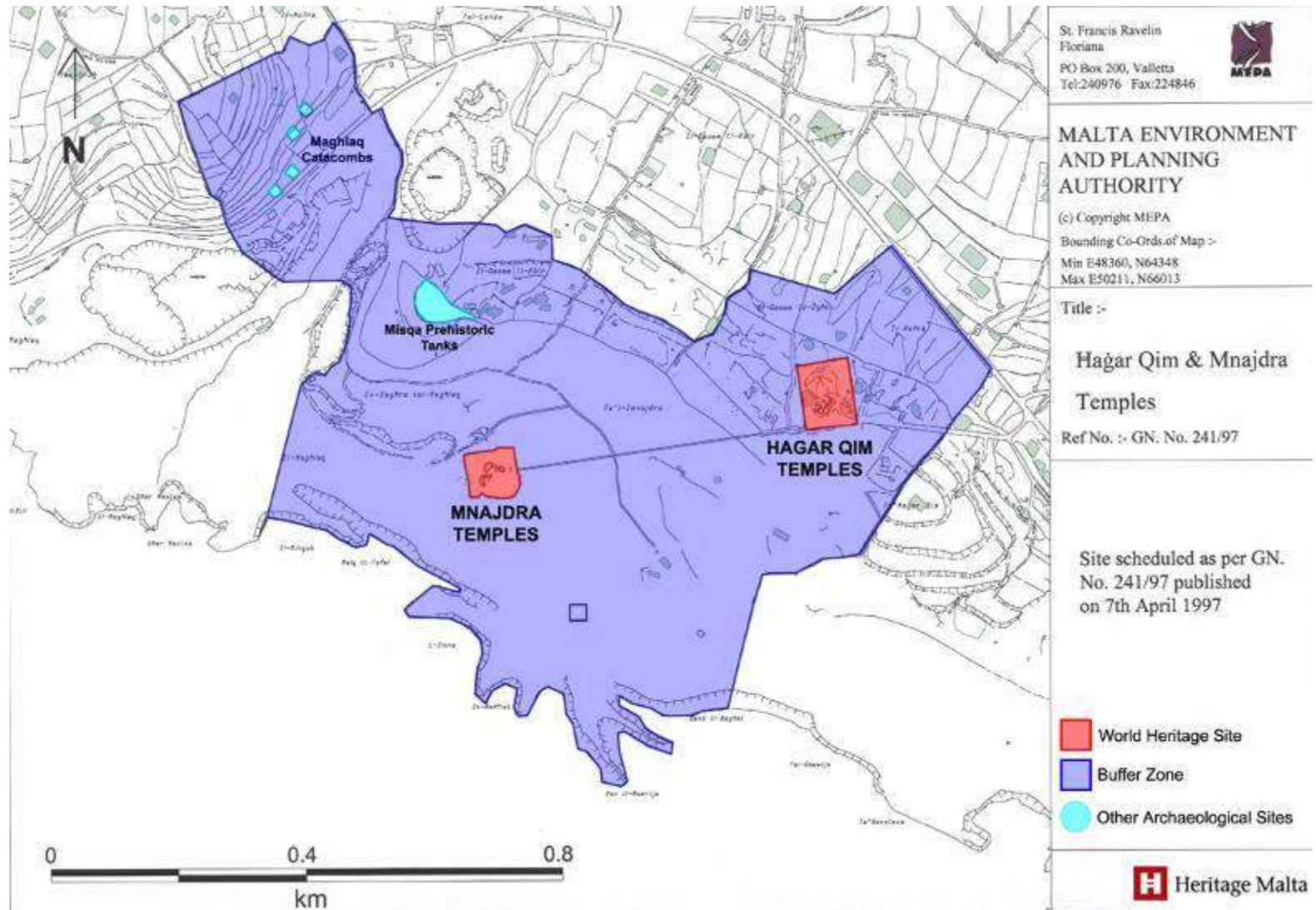
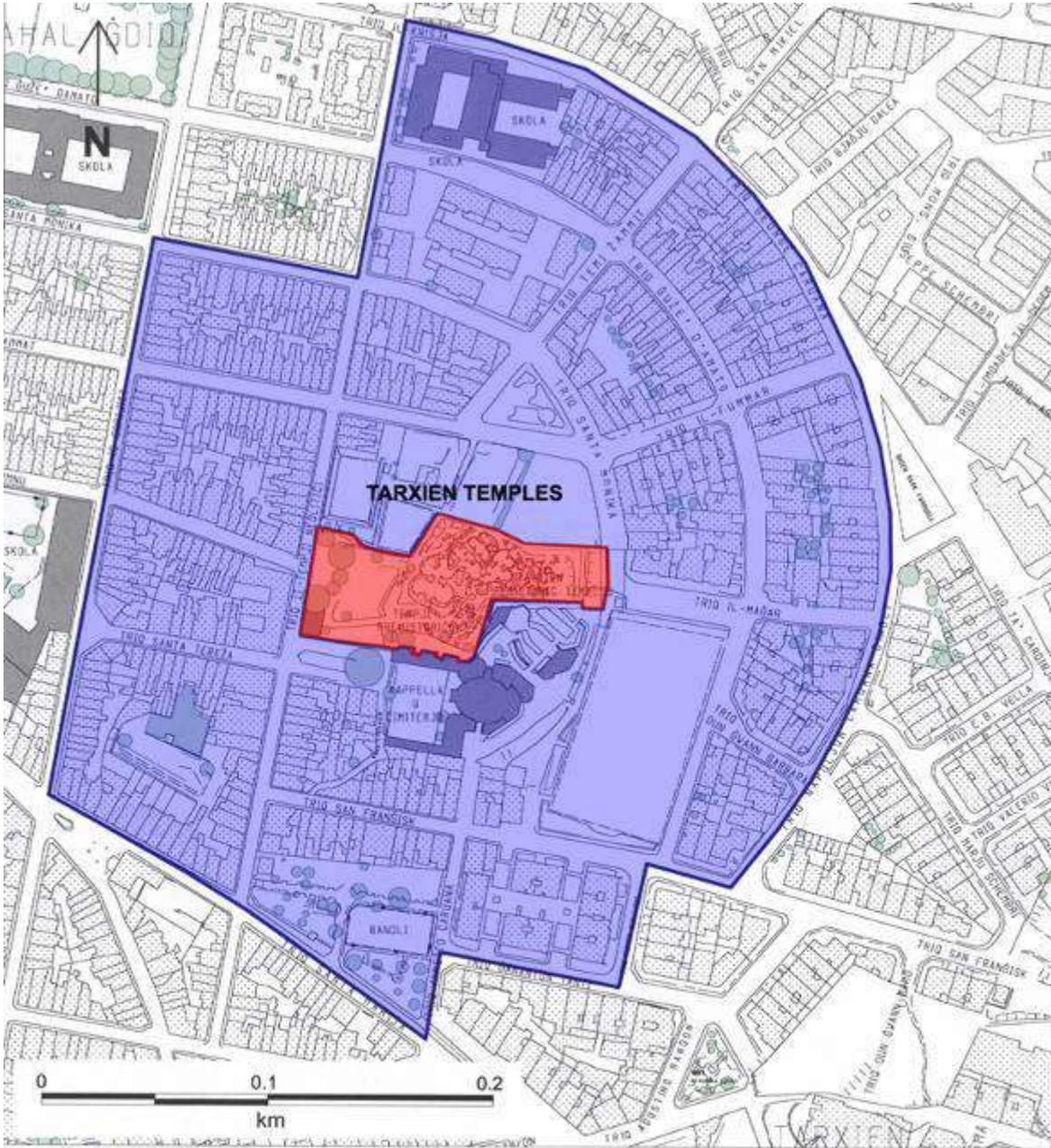


Figure 4. Buffer Zone around Hagar Qim and Mnajdra



<p><b>MALTA ENVIRONMENT &amp; PLANNING AUTHORITY</b> St. Francis Ravelin Floriana                  (c) Copyright MEPA. PO Box 200, Valletta                  Bounding Co-Ords of Map:- Min E55791, N69534 Max E532141, N699991 Tel:21240976 Fax:21224846</p>		
<p>Title :-  Tarxien Temples</p>	<p>Site scheduled as per GN. No. 829/98 published on 3rd November 1998</p>	<p> World Heritage Site   Buffer Zone</p>
<p>RefNo. :- 829/98</p>		

Figure 5. Buffer Zone around Tarxien

## Skylines

Development planning in Malta has a strong tradition of regulating land use, but is relatively weak in terms of mitigating visual impacts and protecting viewsheds. As a result, megalithic sites located close to buffer zones have often sustained a negative visual impact caused by building development in the vicinity. In order to prevent a further deterioration of the setting of these monuments, more rigorous control aimed specifically at mitigating visual impact is required.



Figure 6. New buildings may have an adverse impact on the setting of megalithic monuments located near residential areas

### 2.1.4 EU dimension

Since when Malta joined the European Union in 2004, Maltese legislation has to transpose and effect European legislation in all sectors, including the protection of the cultural heritage and the environment. Legal instruments and policies in this regard are becoming increasingly rigorous as a result.

## 2.2 Conservation and Access

### 2.2.1 Access and sustainability – Physical, economic, intellectual accessibility for local and global communities

The Megalithic Temples constitute an outstanding resource that should be enjoyed by local as well as global communities, in the future as well as in the present. In order to maximise this enjoyment, site management policies and practices must promote the physical, economic and intellectual accessibility of the sites, and must do so in a sustainable manner.

With respect to physical accessibility, all the six sites inscribed as part of the series are regularly opened to the public. Ġgantija, Ғaġar Qim, Mnajdra and Tarxien are open daily. Until 2005, ta' Ғaġrat and Skorba were only opened by appointment. Since May 2005, both sites have started being opened during a regular weekly slot, resulting in a six-fold increase in the number of visitors to both sites. Since 2010, both sites are open for visitors three times a week, with the Local Council managing the ticketing desk from their office close to the site. This is one case where the local community is directly involved in the day-to-day management of the site. A Limit of Acceptable Change (LAC) assessment has now been undertaken to ensure that visitor numbers are managed within sustainable limits on these two sites.

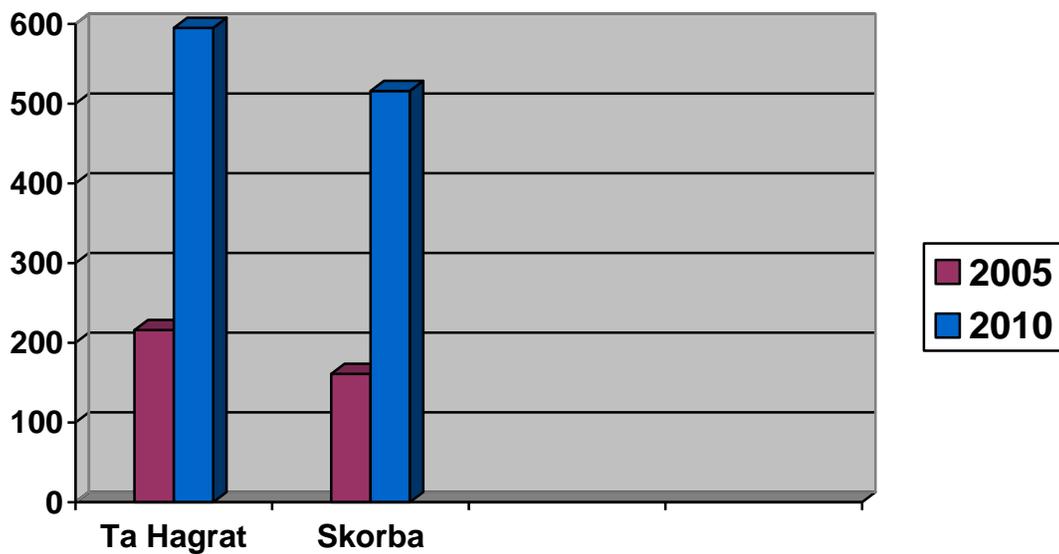


Figure 7. Increase in visitors resulting from regular opening of ta' Ғaġrat and Skorba

Several walkways have been installed in different temple sites since 1990. These not only protect the site from visitor impact, but also make the sites more universally accessible, particularly to people using pushchairs or wheelchairs. Nevertheless, the physical accessibility of the sites remains far from ideal. A concerted effort aimed at improving surfaces around the sites is required.

Mnajdra remains the most isolated of all the six temple sites, as it is located 700 m from the car park and projected visitor centre. Most visitors to the Ғaġar Qim and Mnajdra Archaeological Park venture no further than Ғaġar Qim (Figure 8). The different accessibility of the two sites presents an opportunity to meet the needs of different audiences. While Ғaġar Qim is accessible to day trippers with limited time, Mnajdra provides a rewarding alternative to the visitor prepared

to spend longer on site, in quieter surroundings that permit a more intimate encounter with the prehistoric remains.

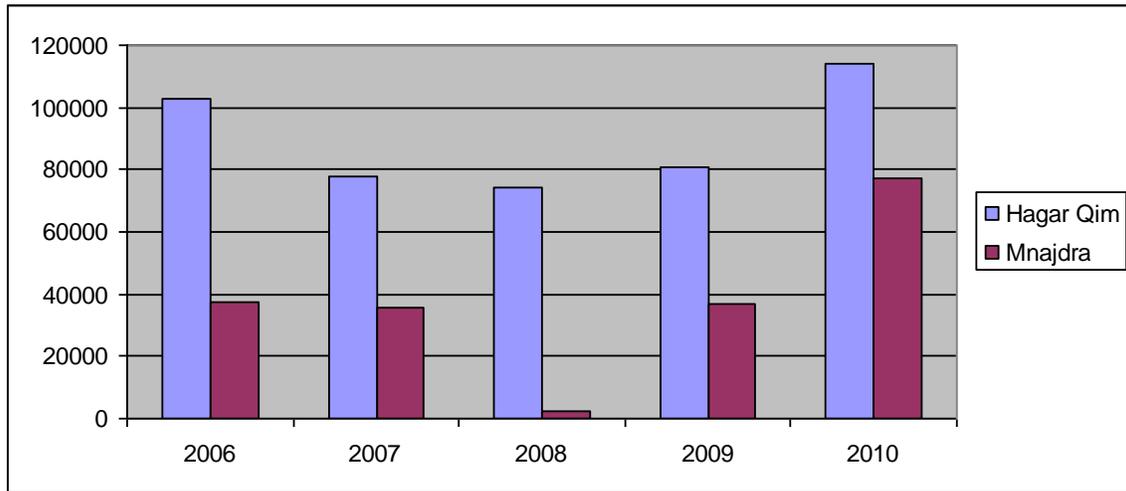


Figure 8. Total number of visitors to Hagar Qim and to Mnajdra (during 2007-2009 the sites were opened intermittently due to installation of protective shelters)

Management practices should seek to maintain this natural selection of different audiences with different needs. On the other hand, carefully designed measures to make Mnajdra more accessible to people with special needs are also required. Walkways and appropriate vehicle access, such as carefully regulated use of a battery-powered vehicle, are two solutions.

Apart from special needs related to mobility, a wide range of other special needs must also be met in order to guarantee the physical accessibility of the sites. To date, interpretation aids aimed at audiences with such special needs remain severely limited.

Economic accessibility is another area of concern. Current entrance ticket policy is to permit school groups free admission. Requests for free admission by specific economically underprivileged groups are each considered on their own merit, and bona fide requests are usually approved.

Intellectual accessibility is also receiving increasing attention. On-site interpretation has often been limited and academic. In recent years, efforts have been directed towards making the sites meaningful and relevant to wider audiences. A key pillar of this strategy is the creation of visitor centres to receive and prepare visitors for a more enriching encounter with the megalithic remains, without cluttering the sites themselves with an overburden of interpretation facilities. Any new facilities should be designed to have a low carbon footprint and efforts should be made so that materials used originate from renewable sources.

### 2.2.2 Site security

Various instances of vandalism have occurred on the World Heritage property during the past two decades. The most recent, and most grave, incident occurred at Mnajdra in April 2001, when over sixty megaliths were toppled over. This damage has since been restored, and security measures have been significantly increased. The best guarantee against ever having a repeat of such occurrences lies in education and awareness-building. Nevertheless, the physical security of sites forming part of the property is also essential. Protective measures such as fencing, floodlighting, or facilities for security personnel may often constitute a visual intrusion, contribute to light pollution, and generally detract from the values of the site. Security measures should be designed to minimise such impacts.

### 2.2.3 Events

Over the past decade, a significant increase has been registered in the level of public interest in the Megalithic Temples. As a result, there has also been a steep increase in the number of requests for a wide range of events to take place on and around the sites. Requests range from fashion shows and strong-man contests, to advertising shoots and meditation sessions, or corporate dinners and religious functions. In recent years, such requests have generally been dealt with on their own merits. The resulting experience has been accumulated into a body of practice that balances the need for different audiences to engage with the Megalithic Temples in a manner that is meaningful to them, against the need to ensure the sites themselves are safeguarded and respected at all times.



Figure 9. Religious function held at Hagar Qim to commemorate the 225<sup>th</sup> anniversary of the Qrendi Parish Church.

#### 2.2.4 Special interest groups – local communities and children

Local communities are also showing increased interest in the Megalithic Temples. Some of the sites (ta' Hagarat, Skorba and Hagar Qim in particular) feature prominently in community initiatives and events. A schematic representation of the monumental doorway of ta' Hagarat is represented on the emblem of the Council, and is therefore considered as an important symbol for the community. Requests to include organized visits to the Megalithic Temples as part of community-wide initiatives are on the increase. Access to ta' Hagarat and Skorba has since September 2010 been jointly managed by Heritage Malta and the Local Council, in an effort to make the sites more accessible to the public. Maintaining the balance between engaging local communities to take a more active role in the management of the sites, while at the same time ensuring that the sites are managed effectively and safeguarded, remains important. Conducting Limits of Acceptable Change surveys for all the sites forming part of the property will help to identify more management solutions that allow for the active involvement of local communities in ways which are beneficial to the sites.

Children are a key stakeholder and require specific consideration, especially in the design of interpretation facilities. Malta's National Cultural Policy emphasizes this, and identifies the provision of stimulating interpretation within museums and heritage sites as a child's right. Recent efforts at improving interpretation facilities within the Megalithic Temples have this specific task in mind, making use of interactive and innovative facilities where possible. At some of the sites forming part of the property, educational programmes have been designed for both school children and children visiting with their families. The implementation of these programmes remains a challenge which requires better communication with education authorities within the Maltese islands, in order to empower educators to conduct these programmes.

Individuals with disabilities also require specific consideration, particularly in ensuring that the sites are fully accessible where possible. Where walkways are being installed to protect prehistoric surfaces within Megalithic Temples, efforts are being made to follow design guidelines issued by the National Commission for People with Disabilities, and to provide facilities which are accessible to all. Representatives from the same Commission are regularly invited to give their suggestions and feedback on any new facilities planned at design stage.

### 2.2.5 Conservation

The physical conservation of the Megalithic Temples is an area of paramount concern. The six sites that constitute the property were excavated during the course of the nineteenth and twentieth centuries, leaving them more exposed to erosion by natural and human agency. The sedimentary limestones that were used by the prehistoric builders are often very vulnerable to deterioration, resulting in an alarming loss of materials. Wetting and drying cycles, together with the flow of rainwater through the walls of the buildings, are also responsible for washing out the soil that constitutes much of the fill of the double walls. As a result, individual architectural elements, as well as the structures as a whole have been considerably weakened, and are more prone to collapse, particularly during heavy rains.



Figure 10. An example of severe erosion in the Central Temple, Mnajdra

Following an international meeting of experts held in Malta in 1999 to identify the way forward for the conservation of the Megalithic Temples, a Scientific Committee was formed. One of the key findings of this Committee is that protective shelters are presently the most prudent and effective means available to slow down the deterioration processes that are eroding the monuments, and thus safeguard the integrity of the sites. Protective sheltering has been adopted as an interim strategy to prolong the life of these buildings, while research continues in order to identify alternative strategies to preserve the buildings, without requiring the visual intrusion that is inevitable with a protective shelter. The first sites to be protected in this manner are Ħaġar Qim and Mnajdra, where shelters were completed in June 2009. A protective shelter is also planned for Tarxien. The shelters for these sites have a lifetime of around 25 years, during which research efforts will endeavour to identify viable alternatives.



Figure 11. View of the protective shelter over Ħaġar Qim (photo Daniel Cilia)

### 2.2.6 Conservation Plan

Another fundamental keypin in the conservation strategy for the Megalithic Temples is the Conservation Plan for the Megalithic Temples, which has been developed as a separate document, is complementary to this Management Plan and establishes general principles for the physical conservation of these sites.

The Conservation Plan determines a scientific methodology for routine maintenance and conservation interventions required to ensure the long-term preservation of the Megalithic Temples. This will facilitate decision-making and implementation of general maintenance measures as well as specific conservation interventions, whilst ensuring that they are carried out in a scientific and ethical manner.

The Conservation Plan:

- Establishes general principles, based on international Standards, Guidelines and Charters, to guide any conservation interventions on the Megalithic Temples.
- Outlines the conservation issues and vulnerability of the Megalithic Temples indicating the main causes of their deterioration and the risks these pose to the structural, as well as material, preservation of these sites.
- Establishes methodologies for the routine inspection, monitoring, documentation, maintenance and implementation of conservation interventions on the Megalithic Temples.

- Presents a five-year conservation strategy, which takes into consideration time-frames, as well as human and technical resources required for;
  - a. a condition assessment of the Megalithic Temples
  - b. drawing up method statements for conservation interventions required
  - c. the implementation of conservation interventions
  - d. routine inspection and maintenance of the sites
  - e. the periodic evaluation of the conservation methodologies being implemented
- Introduces a Research Agenda for the Conservation of the Megalithic Temples. It is apparent that our current technical knowledge in the conservation of these sites is not adequate to meet the challenges that we are facing in their conservation. This research agenda identifies the gaps in our current conservation knowledge and calls for study to be directed towards these lacunae.

### 2.2.7 Research

The Megalithic Temples pose a host of research challenges and opportunities across several disciplines, including archaeology, environment, conservation, site management and visitor enjoyment. Research agendas are being defined for these respective areas, in order to help, identify priorities and inform decisions about research funding. In order of priority, the most fundamental research goals are

- 1) to identify and document the cultural and natural resources within the World Heritage property
- 2) to safeguard and conserve resources within the property, and the Outstanding Universal Value of the property
- 3) to facilitate and increase the sustainable enjoyment of the property.

## 3 Objectives

### 3.1 Overall long-term objectives

- Action 1. Heritage Malta and other national and local bodies will promote actions that facilitate the sustainable enjoyment of the Megalithic Temples by broader audiences.

### 3.2 Statutory and policy objectives

- Action 2. The Malta Environment and Planning Authority, in consultation with The Superintendent of Cultural Heritage and Heritage Malta, will conduct viewshed studies around the sites forming part of the World Heritage property, and will make recommendations on how the visual impacts of building development within these viewsheds will be mitigated and regulated.
- Action 3. Heritage Malta, in collaboration with other national bodies, shall adopt a social inclusion policy so that the Megalithic Temples are enjoyed by and are of benefit to all.

### 3.3 Land-use objectives

- Action 4. Heritage Malta and the Government Property Division will actively seek to conclude all pending expropriation processes.
- Action 5. Heritage Malta and the Government Property Division shall seek to acquire the two unbuilt plots of land that lie immediate north of the Ta' Hagarat Temples, within the Development Zone.
- Action 6. Heritage Malta in collaboration with the Ministry responsible for rural affairs shall actively promote and support organic and traditional farming practices within the buffer zones of the World Heritage Property. The grounds around Ġgantija Temples will form the main focus for this action.

### 3.4 Sustainable tourism

- Action 7. Heritage Malta will conduct Limit of Acceptable Change assessments for all the sites forming part of the World Heritage property.

- Action 8. Heritage Malta and the Malta Tourism Authority shall use the results of the Limit of Acceptable Change assessments to inform the promotion of the sites forming part of the property.
- Action 9. Heritage Malta, the Malta Tourism Authority, and the bodies representing travel agents and tourist guides shall work together to achieve a more sustainable visitor flow to the sites forming part of the property.
- Action 10. Heritage Malta shall attract more active visitors to the sites through organised tours, events, activities and tailor-made packages.
- Action 11. Heritage Malta, shall develop and maintain a calendar of events at the Megalithic Temples, encouraging visits to the sites during the shoulder months of tourism in the Maltese islands.
- Action 12. Heritage Malta, the Malta Tourism Authority, and the bodies representing travel agents and tourist guides shall work together to ensure that tourist guides provide the latest accurate information on the Megalithic Temples.

### 3.5 Visitor management

- Action 13. Heritage Malta will develop three complementary Visitor Centres for the most visited of the sites forming part of the World Heritage property, at (1) ҒaҒar Qim / Mnajdra, (2) Tarxien (3) Ґgantija. These centres will include displays of finds discovered on and around the sites themselves, and will enable visitors to understand and appreciate the outstanding universal value of the sites within the World Heritage property. The centre at Ґgantija will house a comprehensive display of Gozo's prehistory. Efforts will be made so that these centres have a low carbon footprint and so that materials used originate from renewable sources.
- Action 14. Heritage Malta will ensure that the design, content and activities of the visitor centres in the previous action will meet the requirements of a range of audiences, paying particular attention to children and those with special needs.
- Action 15. Heritage Malta will maximize physical access to the sites through various measures, such as walkways, ensuring that safety standards are adhered to and impact on the sites is kept to a minimum.
- Action 16. Heritage Malta will continue to improve the quality of the visitor's experience through grant funding, public-private partnerships, and other sources of support.

- Action 17. Heritage Malta and the Ministry responsible for Transport will continue to improve access to the World Heritage Property through effective road signage and public transport.
- Action 18. Heritage Malta will entice and attract new and diverse audiences to the World Heritage property by disseminating knowledge through established and innovative systems and learning environments such as new technologies.

### 3.6 Management of leisure and sport activities

- Action 19. A representative selection of traditional hides and traps (*mnasab*) in the Park shall be identified in close consultation with the bird-trapping community and other ornithological experts, for purposes of preservation and presentation as part of the cultural landscape. Other bird-traps shall be dismantled or left unmaintained, and intrusive materials used in their construction will be removed from the Park.
- Action 20. Pathways, signage and bylaws within the Ħaġar Qim and Mnajdra Archaeological Park will be consolidated through a series of nature trails to facilitate the sustainable enjoyment of the landscape.

### 3.7 Impacts on local communities

- Action 21. National and local bodies will collaborate to better understand the dynamics of the relationship between the sites and surrounding local communities.
- Action 22. National and local bodies will collaborate to ensure that the sites are made more accessible and enjoyable to wider audiences, and particularly to local communities and educational institutions.
- Action 23. Heritage Malta shall encourage children to interact creatively with the Megalithic Temples through access features and interactive interpretation facilities and shall continue to develop educational programmes in collaboration with the Ministry responsible for education.
- Action 24. Heritage Malta will promote the engagement with cultural heritage by community members through awareness campaigns and activities such as open days, public lectures and seminars with adequate discussion time.

### 3.8 Conservation objectives

- Action 25. Heritage Malta shall carry out a comprehensive conservation survey of the sites forming part of the World Heritage property.
- Action 26. The Scientific Committee for the Conservation of the Megalithic Temples together with Heritage Malta, shall define a feasible five-year conservation programme to address the conservation needs of the World Heritage property.
- Action 27. Heritage Malta, under the guidance of the Scientific Committee for the Conservation of the Megalithic Temples, will implement the programme of works defined in the Conservation Plan.
- Action 28. Heritage Malta shall consolidate the maintenance team for the conservation of the Megalithic Temples to address any mismatch between the present setup and actual needs.
- Action 29. Heritage Malta, under the guidance of the Scientific Committee for the Conservation of the Megalithic Temples, shall implement an environmental monitoring programme and a protective shelter for the Tarxien Temples.
- Action 30. The University of Malta and Heritage Malta shall continue to strengthen the tertiary and vocational training required to develop the human resources required for the management and conservation of the Megalithic Temples.
- Action 31. Heritage Malta will ensure that appropriate light pollution control measures are taken in order to minimise the impact of lights used on those parts of the property where they may have a negative environmental impact.
- Action 32. Heritage Malta's interpretation of the Megalithic Temples to visitors will valorise and promote their natural setting, and will communicate the interdependence between the environment and human endeavour.
- Action 33. Heritage Malta shall develop and implement a strategy that ensures adequate security for the sites forming part of the World Heritage property.
- Action 34. Heritage Malta shall maintain a risk and disaster preparedness plan with specific measures to be taken within the diverse scenarios of the sites forming part of the World Heritage property including scenarios identified through Action 42 of this Plan.

### 3.9 Research and documentation objectives

- Action 35. Heritage Malta, together with the Superintendent of Cultural Heritage, the University of Malta and MEPA, shall develop comprehensive research agendas to guide research efforts across different disciplines.
- Action 36. Heritage Malta shall promote research initiatives on the World Heritage property, its management and contextual development.
- Action 37. Heritage Malta shall actively seek to increase the knowledge of the archaeological resource using remote sensing and other methods that do not disturb the archaeological resource.
- Action 38. Heritage Malta shall give priority to the documentation and publication of cultural and natural resources within the World Heritage property and its respective buffer zones.
- Action 39. Heritage Malta shall document and make available information on material discovered within sites in the World Heritage property.
- Action 40. Heritage Malta together with the Scientific Committee for the Conservation of the Megalithic Temples shall continue research in order to identify alternative ways to stabilize megalithic structures without resorting to sheltering.
- Action 41. Heritage Malta together with the Scientific Committee for the Conservation of the Megalithic Temples shall continue research and monitoring in order to define and quantify the benefits and side-effects of sheltering.
- Action 42. Heritage Malta shall conduct research in order to identify the risks posed to the World Heritage property by climate change and natural disasters.
- Action 43. Heritage Malta shall create mechanisms to facilitate public access to records and collections, including reserve collections.
- Action 44. Heritage Malta together with the Ministry responsible for Foreign Affairs shall participate in local and international fora and networks for cultural operators and educational institutions to share and disseminate best practices.
- Action 45. Heritage Malta shall conduct research and record local folklore, collective memory and oral history related to the sites forming part of the World Heritage property.
- Action 46. Heritage Malta shall conduct research on the viewsheds, vistas and landscape setting of sites forming part of the World Heritage property.

- Action 47. Heritage Malta shall continue to conduct a programme of environmental monitoring, including biological surveys within the sites forming part of the World Heritage property.
- Action 48. Heritage Malta, in collaboration with international and local research bodies shall focus research on the identification and study of settlements, landscape exploitation and domestic buildings during the Neolithic Period.

## 4 Implementation

The status of the actions listed in the table below is classified as follows:

- **completed:** actions that have been completed since the draft management plan was published for consultation in 2008;
- **ongoing:** actions that, due to the nature of these sites, require a continuous investment that goes beyond the lifetime of this plan;
- **in progress:** actions that have already commenced and shall be completed through the implementation of this plan;
- **pending:** actions resulting from the objectives of this plan that are still to be commenced.

Key to stakeholders:

CPD: Civil Protection Department

FATTA: Federated Association of Travel and Tourism Agents

GPD: Government Property Division

HM: Heritage Malta

ITS: Institute for Tourism Studies

KNPD: Kummissjoni Nazzjonali għal Persuni b'Diżabbiltà

LCs: Local Councils

MCCA: Malta Council for Culture and the Arts

MEEF: Ministry of Education Employment and the Family

MEPA: Malta Environment and Planning Authority

MFA: Ministry of Foreign Affairs

MFEI: Ministry of Finance the Economy and Investment

MGOZ: Ministry for Gozo

MHEC: Ministry for Health the Elderly and Community Care

MITC: Ministry for Infrastructure Transport and Communications

MJHA: Ministry of Justice and Home Affairs

MRRA: Ministry for Resources and Rural Affairs

MTA: Malta Tourism Authority

MUG: Malta Union of Guides

NGOs: Non-Governmental Organisations

SCCMT: Scientific Committee for the Conservation of the Megalithic Temples

SCH: Superintendence of Cultural Heritage

UoM: University of Malta

Action number	Description	Status	Target Implementation Date	Resources required	Action Leader	Stakeholders
<b>4.1 Overall long-term objectives</b>						
Action 1	Promote actions that facilitate the sustainable enjoyment of the Megalithic Temples by broader audiences	Ongoing	2012 - 2016	Financial, staff	HM	LCs, SCH, MEEF, KNPD, UoM, MTA
<b>4.2 Statutory and policy objectives</b>						
Action 2	Conduct viewshed studies around the WH property, and make recommendations on how visual impacts of building development within these viewsheds will be mitigated and regulated	Pending	2013 - 2015	Staff	MEPA	SCH, HM
Action 3	Adopt a social inclusion policy	Pending	2012	Staff	HM	KNPD, MEEF, MJHA, MHEC

4.3 Land-use objectives						
Action 4	Conclude all pending expropriation processes	In progress	2013 - 2015	Financial	HM	GPD, landowners, MFEI
Action 5	Acquiring two unbuilt plots of land that lie immediate north of Ta' Hagraat Temples, within the development zone	In progress	2012		HM	GPD
Action 6	Actively promote and support organic and traditional farming practices within the buffer zones of the WH property	Pending	2012 - 2013	Staff, financial	MRRA	HM, SCH, LCs, NGOs, KM
4.4 Sustainable tourism						
Action 7	Conduct Limits of Acceptable Change assessments for all sites forming the WH property	In progress	2012 - 2015	Staff	HM	MTA, SCH, LCs, MUG, KNPD, MEEF, SCCMT, FATTA

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Action 8	Use results of LoAC assessments to inform promotion of the sites forming part of the property and to ensure that visitor patterns are not detrimental to the WH property	In progress	2012 - 2016	Financial	HM	MTA
Action 9	Achieve a more sustainable visitor flow to the sites forming part of the property	In progress	2012 - 2016	Financial	HM	MUG, FATTA, MTA
Action 10	Attract more active visitors through organised tours, events, activities and tailor-made packages	Ongoing	2012 - 2016	Staff	HM	NGOs, LCs, MUG, FATTA, MEEF, MHRA
Action 11	Develop and maintain a calendar of events	In progress	2012 - 2016	Financial	HM	MCCA, LCs, MTA
Action 12	Ensure that tourist guides provide the latest accurate information on the Megalithic Temples	Pending	2013 - 2014	Staff, financial	MTA	HM, MUG, ITS, FATTA

4.5 Visitor management						
Action 13	Develop 3 visitor centres at Hagar Qim/Mnajdra, Tarxien, Ggantija, so as to enable visitors to understand and appreciate the outstanding universal value of the sites within the WH property. Efforts will be made so that these centres have a low carbon footprint and so that materials used originate from renewable sources.	In progress	2012 - 2016	Financial, staff	HM	MEPA, SCH, KNPD, MGOZ
Action 14	Ensure that design, content and activities of visitor centres meet the requirements of a range of audiences, especially children and those with special needs	In progress	2012 - 2016	staff	HM	MEEF, KNPD, MUG
Action 15	Heritage Malta will maximize physical access to the sites through various measures, such as walkways, ensuring that safety standards are adhered to and impact on the sites is kept to a minimum.	In progress	2012	Financial	HM	MEPA, SCH, KNPD

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Action 16	Improve the quality of the visitor experience through grant funding, PPPs and other sources of support	Ongoing	2012 - 2016	Financial, staff	HM	LCs, NGOs, PPCD, MEEF, MRRA, MCCA, MTA, UoM
Action 17	Improve access to the WH property through effective road signage and public transport	In progress	2012		HM	MITC, LCs
Action 18	Entice and attract diverse audiences by disseminating knowledge through established and innovative systems and learning environments such as new technologies	In progress	2012 - 2014	Financial, staff	HM	MITC

4.6 Management of leisure and sports activities						
Action 19	Bird trapping at Hagar Qim & Mnajdra to continue to be regulated according to the Laws of Malta. Should bird trapping no longer be permitted, a representative selection of hides and traps would be identified for the purposes of preservation and presentation as part of the cultural landscape. Other bird-traps would be dismantled or left unmaintained, and intrusive materials used in their construction removed from the park	Pending		Staff	HM	MEPA, SCH, NGOs
Action 20	Consolidate pathways, signage and bylaws within the Hagar Qim & Mnajdra Archaeological Park through a series of nature trails to facilitate sustainable enjoyment of the park	In progress	2012		HM	MEPA

4.7 Impacts on local communities						
Action 21	Understand better the dynamics of the relationship between the sites and local communities	In progress	2012 – 2015	Staff	HM	LCs, UoM
Action 22	Make sites more accessible and enjoyable to wider audiences, particularly to local communities and educational institutions	In progress	2012 – 2014	Staff	HM	LCs, KNPD, MEEF
Action 23	Install access features and interactive interpretation facilities which allow children to interact creatively with the WH property	In progress	2012 – 2014	Staff, financial	HM	MEEF, MCCA
Action 24	Promote engagement with cultural heritage and exchange of knowledge between site managers and community members through awareness campaigns and activities such as open days, public lectures and seminars with adequate discussion time	Ongoing	2012 – 2016	Staff	HM	HM, LCs, NGOs

4.8 Conservation objectives						
Action 25	Carry out a comprehensive conservation survey of the sites forming part of the WH property	completed			HM	SCCMT
Action 26	Define a feasible five-year conservation programme to address the conservation needs of the WH property	completed			SCCMT	HM
Action 27	Implementing the programme of works defined in the Conservation Plan	In progress	2012 – 2013	Staff	HM	SCCMT, SCH, MEPA
Action 28	Consolidate the maintenance team for the conservation of the Megalithic Temples to address any mismatch between the present setup and actual needs	In progress	2012	Staff	HM	SCCMT
Action 29	Develop a design brief and seek funding for a protective shelter for Tarxien Temples	Completed			SCCMT	HM, SCH, MEPA

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Action 30	Strengthen tertiary and vocational training required to develop the human resources required for the management and conservation of the Megalithic Temples	Ongoing	2012 – 2016	Financial	UoM	HM, MEEF
Action 31	Ensure that appropriate light pollution measures are taken in order to minimize the impact of lights used on the property where they have a negative environmental impact	In progress	2012 – 2013	Financial	HM	MEPA, NGOs
Action 32	Provide interpretation to visitors to valorise and promote the sites' natural setting, and to communicate interdependence between environment and human endeavour	In progress	2012 – 2014	Financial	HM	MEPA, NGOs
Action 33	Develop and implement a strategy that ensures adequate security for the WH property	Pending	2012 – 2016	Staff, financial	HM	SCH?
Action 34	Maintain a risk and disaster preparedness plan with specific measures to be taken within the diverse scenarios of the sites forming part of the WH property	Pending	2013 – 2016	Staff, financial	HM	SCH, CPD

4.9 Research and documentation objectives						
Action 35	Develop comprehensive research agendas to guide research efforts across different disciplines	In progress	2012	Staff	HM	SCCMT, UoM, SCH
Action 36	Promote research initiatives on the WH property, its management and contextual development	Ongoing	2012 – 2016	Financial	HM	SCCMT, UoM, SCH
Action 37	Increase knowledge of the archaeological resource using remote sensing and other methods that do not disturb the archaeological resource	Ongoing	2012 – 2016	Financial	HM	SCH, UoM
Action 38	Document and publish the cultural and natural resources within the WH property and its buffer zones	Ongoing	2012 – 2016	Staff, financial	HM	HM, UoM, SCH, MEPA
Action 39	Document and make available information on material discovered within sites in the WH property	In progress	2012 – 2014	Staff	HM	SCH

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Action 40	Continue research in order to identify alternative ways to stabilize megalithic structures without resorting to sheltering	Ongoing	2012 – 2016	Staff, financial	SCCMT	HM, SCH, MEPA, UoM
Action 41	Continue research and monitoring in order to define and quantify the benefits and side-effects of sheltering	Ongoing	2012 – 2016	Staff	SCCMT	HM, SCH
Action 42	Conduct research in order to identify the risks posed to the WH property by climate change and natural disasters	In progress	2012 – 2013	Staff	HM	SCCMT, SCH, MEPA, CPD
Action 43	Create mechanisms to facilitate public access to records and collections including reserve collections	Pending	2012	Financial, staff	HM	SCH, MITC
Action 44	Participate in local and international fora and networks for cultural operators and educational institutions to share and disseminate best practices	Ongoing	2012 – 2016	Financial, staff	HM	UoM, SCCMT, SCH, MFA
Action 45	Conduct research on local folklore, collective memory and oral history related to the sites forming part of the WH property	In progress	2014 – 2016	Staff	HM	UoM, LCs

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Action 46	Conduct research on inter-visibility between, and lines of sight within, sites forming part of the WH property	In progress	2014 – 2016	Staff	MEPA/HM	SCH, UoM
Action 47	Continue to conduct the programme of environmental monitoring, including biological surveys within the sites forming part of the WH property	Ongoing	2012 – 2016	Staff, financial	HM	SCCMT
Action 48	Conduct research on the identification and study of settlements and domestic buildings during the Neolithic Period	In progress	2012 – 2014	Staff, financial	UoM	HM, SCH

## 5 Select Bibliography

- Ashby, T. 1924. Supplementary excavations at Hal-Tarxien, Malta, in 1921. *Antiquaries Journal* **4**, 93-100.
- Ashby, T., Bradley, R.N., Peet, T.E. & Tagliaferro, N. 1913. Excavations in 1908-1911 in various megalithic buildings in Malta and Gozo. *Papers of the British School at Rome* **6**, 1-126.
- Bonanno, A., Gouder, T., Malone, C. & Stoddart, S.K.F. 1990. Monuments in an island society - The Maltese context. *World Archaeology* **22**, 190-205.
- Bonello, G. 1996. The Gozo megalithic sites: Early visitors and artists. In: *Maltese Prehistoric Art 5000-2500 BC* (Ed. by A.Pace), pp. 19-29. Valletta, Patrimonju Publishing.
- Caruana, A.A. 1882. *Report on the Phoenician and Roman Antiquities in the Group of the Islands of Malta*. Malta: Government Printing Office.
- Caruana, A.A. 1896a. Further megalithic discoveries and explorations in the islands of Malta during 1892 and 1893, under the governorship of Sir Henry A. Smyth KCMG. *The Archaeological Journal* **53**, 26-45.
- Ceschi, C. 1939. *Architettura Dei Templi Megalitici Di Malta*. Roma: Palombi.
- Clark, J.D. 2004. Building logistics. In: *Malta Before History* (Ed. by D.Cilia), pp. 367-377. Malta, Miranda.
- Cottinelli, L. 1988. Analisi funzionali dei templi megalitici Maltesi. In: *Missione a Malta* (Ed. by A.Fradkin Anati & E.Anati), pp. 113-124. Milan, Jaca Book.
- Cutajar, D. 1986. Two relief-carvings of Chalcolithic Malta. In: *Archaeology and Fertility Cult in the Ancient Mediterranean* (Ed. by A.Bonanno), pp. 163-167. Malta, University of Malta.
- Di Salvo, M. 1988. Sulla topografia delle strutture polilobate maltesi; nota preliminare. In: *Missione a Malta* (Ed. by A.Fradkin Anati & E.Anati), pp. 91-99. Milan, Jaca Book.
- Evans, J.D. 1953. The prehistoric culture-sequence in the Maltese archipelago. *Proceedings of the Prehistoric Society* **19**, 41-94.
- Evans, J.D. 1959. *Malta*. London: Thames and Hudson.
- Evans, J.D. 1961. C<sup>14</sup> date for the Maltese early neolithic. *Antiquity* **35**, 143-144.
- Evans, J.D. 1971. *The Prehistoric Antiquities of the Maltese Islands: A Survey*. London: Athlone Press.
- Evans, J.D. 1977. Island archaeology in the Mediterranean: Problems and opportunities. *World Archaeology* **9**, 12-26.

Evans, J.D. 1996. What went on in a Maltese megalithic 'temple'? In: *Maltese Prehistoric Art 5000-2500 BC* (Ed. by A.Pace), pp. 39-44. Valletta, Patrimonju Publishing.

Fodera` Serio, G., Hoskin, M. & Ventura, F. 1992. The orientations of the temples of Malta. *Journal for the History of Astronomy* **23**, 107-119.

Gouder, T. 1996. The progressive unveiling of Maltese prehistory. In: *Maltese Prehistoric Art 5000-2500 BC* (Ed. by A.Pace), pp. 13-18. Valletta, Patrimonju Publishing.

Grima, R. 1998. Ritual spaces, contested places: The case of the Maltese prehistoric temple sites. *Journal of Mediterranean Studies* **8**, 33-45.

Grima, R. 2001. An iconography of insularity: a cosmological interpretation of some images and spaces in the Late Neolithic Temples of Malta. *Papers from the Institute of Archaeology* **12**, 48-65.

Grima, R. 2002. Archaeology as encounter. *Archaeological Dialogues* **9**, 83-89.

Grima, R. 2003. Image, order and place in Late Neolithic Malta. In: *Inhabiting Symbols. Symbol and Image in the Ancient Mediterranean* (Ed. by J.B.Wilkins & E.Herring), pp. 29-41. London, Accordia Research Institute.

Grima, R. 2004. *The Archaeological Illustrations of Charles Frederick De Brocktorff*. Malta: Midsea

Hayden, C. 1998. *Interaction and Development: The Late Neolithic and Copper Age Archaeology of Western Mediterranean Islands*. Unpublished PhD dissertation.

Heritage Malta. 2010. *Strategic Plan 2011 – 2013*. Malta: unpublished document

Malone, C., Bonanno, A., Gouder, T., Stoddart, S.K.F. & Trump, D.H. 1993. The death cults of prehistoric Malta. *Scientific American* **269**, 76.

Malone, C. & Stoddart, S.K.F. 1996. Representations of Death - Discoveries at the Xaghra stone circle, Gozo. In: *Maltese Prehistoric Art 5000-2500 BC* (Ed. by A.Pace), pp. 45-51. Valletta, Patrimonju Publishing.

Malone, C., Stoddart, S.K.F. & Trump, D.H. 1988. A house for the temple builders: Recent investigations on Gozo, Malta. *Antiquity* **62**, 297-301.

Malone, C. 1998. God or goddess: the temple art of ancient Malta. In: *Ancient Goddesses: the Myths and the Evidence* (Ed. by L.Goodison & C.Morris), pp. 148-163. London, British Museum Press.

Malone, C. & Stoddart, S.K.F. 1998. The conditions of creativity for prehistoric Maltese art. In: *Creativity in Human Evolution and Prehistory* (Ed. by S.Mithen), pp. 241-259. London, Routledge.

Malone, C. & Stoddart, S.K.F. 2004. Towards an island of mind? In: *Explaining Social Change: Studies in Honour of Colin Renfrew* (Ed. by J.F.Cherry, C.Scarre & S.Shennan), pp. 93-102. Cambridge, McDonald Institute for Archaeological Research.

Malone,C., Stoddart,S.K.F., Bonanno,A., Gouder,T. & Trump,D.H. 1995a. Mortuary ritual of 4th millennium BC Malta: the Zebbug period chambered tomb from the Brochtorff Circle at Xaghra (Gozo). *Proceedings of the Prehistoric Society* **61**, 303-345.

Malone,C., Stoddart,S.K.F. & Townsend,A.P.J. 1995b. The landscape of the island goddess? A Maltese perspective of the central Mediterranean. In: *Caeculus II: The Landscape of the Goddess: Papers on Mediterranean Archaeology* (Ed. by M.Maaskant-Kleibrink), pp. 1-16. Groningen, Archaeological Institute, Groningen University.

Mayr,A. 1908. *The Prehistoric Remains of Malta. Translated From the German by the Marchioness of Milford Haven*. Printed for private circulation.

McGrail,S. 1987. *Ancient Boats in N.W. Europe: The Archaeology of Water Transport to A.D. 1500*. London: Longman.

Ministry for Tourism and Culture. 2006. *National Strategy for Cultural Heritage*. Malta

Pace,A. 1992. *The Development of Megalithic Structures, Mortuary Facilities and Site Location Patterning During the Maltese Late Neolithic and Early Bronze Age. Some Reconsiderations*. Unpublished M.Phil thesis: University of Cambridge.

Pace,A. 1996. The artistic legacy of small island communities. In: *Maltese Prehistoric Art 5000-2500 BC* (Ed. by A.Pace), pp. 1-12. Valletta, Patrimonju Publishing.

Pace,A. 2000. The prehistoric Hypogeum at Hal Saflieni. In: *The Hal Saflieni Hypogeum 4000 BC - 2000 AD* (Ed. by A.Pace), pp. 5-21. Malta, National Museum of Archaeology.

Parliamentary Secretariat for Tourism, the Environment and Culture. 2011. *National Cultural Policy; Malta 2011*. Malta: Office of the Prime Minister

Renfrew,C. 1973. *Before Civilization: The Radiocarbon Revolution and Prehistoric Europe*. London: Jonathan Cape.

Ridley,M. 1971. *Corpus of the Megalithic Art of the Maltese Islands*. Christchurch: Dolphin Press.

Ridley,M. 1976. *The Megalithic Art of the Maltese Islands*. 2nd edn. Poole: Dolphin Press.

Robb,J. 2001. Island identities: Ritual, travel and the creation of difference in Neolithic Malta. *European Journal of Archaeology* **4**, 175-202.

Rountree,K. 1999. Goddesses and monsters: contesting approaches to Malta's neolithic past. *Journal of Mediterranean Studies* **9**, 204-231.

Rountree,K. 2002. Goddess pilgrims as tourists: Inscribing the body through sacred travel. *Sociology of religion* **63**, 475-496.

Stoddart,S.K.F. 2002. Monuments in the pre-historic landscape of the Maltese Islands: ritual and domestic transformations. In: *Inscribed Landscapes: Marking and Making Place* (Ed. by B.David & M.Wilson), pp. 176-186. Honolulu, University of Hawai'i Press.

Stoddart,S.K.F., Bonanno,A., Gouder,T., Malone,C. & Trump,D.H. 1993. Cult in an island society: Prehistoric Malta in the Tarxien Period. *Cambridge Archaeological Journal* **3**, 3-19.

Stoddart,S.K.F. & Malone,C. 1996. In: *Maltese Prehistoric Art 5000-2500 BC* (Ed. by A.Pace) Valletta, Patrimonju Publishing.

Stroud,K. 2003. *The Conservation of the Temples of Hagar Qim and Mnajdra*. Unpublished M.A. dissertation, University of Malta.

Tampone,G., Vannucci,S. & Cassar,J. 1987. Nuove ipotesi sull'architettura del tempio megalitico di Gigantija a Gozo. *Bollettino ingegneri* **3**, 3-21.

Tampone,G., Vannucci,S. & Cassar,J. 1991. Aspetti architettonici e costruttivi dei templi megalitici preistorici maltesi e criteri di restauro. In: *La Prehistoria De Les Illes De La Mediterrania Occidental. X Jornades D'Estudis Historics Locals*, pp. 243-276. Palma de Majorca.

Tilley,C. 2004. From honey to ochre. Maltese temples, stones, substances and the structuring of experience. In: *The Materiality of Stone. Explorations in Landscape Phenomenology: I*, pp. 87-145. Oxford, Berg.

Torpiano,A. 2004. The construction of the megalithic temples. In: *Malta Before History* (Ed. by D.Cilia), pp. 347-365. Malta, Miranda.

Trump,D.H. 1966. *Skorba*. Oxford: Society of Antiquaries.

Trump,D.H. 1972. *Malta, an Archaeological Guide*. London: Faber.

Trump,D.H. 1976. The collapse of the Maltese temples. In: *Problems in Economic and Social Archaeology* (Ed. by G.d.G.Sieveking, I.H.Longworth & K.E.Wilson), pp. 605-610. London, Duckworth.

Trump,D.H. 1983. Megalithic architecture in Malta. In: *The Megalithic Monuments of Western Europe* (Ed. by C.Renfrew), pp. 64-76. London, Thames and Hudson.

Trump,D.H. 2002. *Malta. Prehistory and Temples*. Malta: Midsea.

Trump,D.H. 2004. Dating Malta's prehistory. In: *Malta Before History* (Ed. by D.Cilia), pp. 230-241. Malta, Miranda.

Turnbull,D. 2002. Performance and narrative, bodies and movement in the construction of places and objects, spaces and knowledges: the case of the Maltese megaliths. *Theory, Culture and Society* **19**, 125-143.

- Vance, J.G. 1842. Description of an ancient temple near Crendi, Malta. *Archaeologia* **XXIX**,
- Vella, N.C. 1999. Trunkless legs of stone: debating ritual continuity at tas-Silg, Malta. In: *Facets of Maltese Prehistory* (Ed. by A.Mifsud & C.Savona Ventura), pp. 225-239. Prehistoric Society of Malta.
- Vella, N.C. & Gilkes, O. 2001. The lure of the antique: Nationalism, politics and archaeology in British Malta (1880-1964). *Papers of the British School at Rome* **LXIX**, 353-384.
- Ventura, F. 2004. Temple orientations. In: *Malta Before History* (Ed. by D.Cilia), pp. 307-325. Malta, Miranda.
- Ventura, F. & Agius, G. 1980. Investigations into the possible astronomical alignments of the Copper Age temples in Malta. *Archaeoastronomy. The Bulletin of the Center for Archaeoastronomy* **IV**, 10-21.
- Woolner, D. 1957. Graffiti of ships at Tarxien, Malta. *Antiquity* **31(122)**, 60-67.
- Xuereb, K. 1999. *Structural System of a Maltese Megalithic Temple With Particular Reference to Mnajdra*. Unpublished B.E.&A.(Hons) thesis. University of Malta.
- Zammit, T. 1916. The Hal-Tarxien Neolithic Temple, Malta. *Archaeologia* **67**, 127-144.
- Zammit, T. 1917. Second report on the Hal-Tarxien excavations, Malta. *Archaeologia* **68**, 263-284.
- Zammit, T. 1920. Third report on the Hal-Tarxien excavations, Malta. *Archaeologia* **70**, 179-200.
- Zammit, T. 1925. *The Hal Saflieni Hypogeum, Casal Paola, Malta. A Short Description With Plan and Illustrations*. Malta.
- Zammit, T. 1929. Ta' Hajrat Megalithic ruins at Mjar, Malta. *Bullettin of the Museum* **1**, 5-25.
- Zammit, T. 1930. *Prehistoric Malta: The Tarxien Temples*. London: Oxford University Press.
- Zammit, T. & Singer, C. 1924. Neolithic representations of the human form from the islands of Malta and Gozo. *Journal of the Royal Anthropological Institute* **54**, 67-100.

## Appendix 1: Scheduled sites in WHS Buffer Zones

Site			Coordinates		MEPA Scheduling			AML
Name	Period	Type	E	N	Category	Status	Date	No
<b>Ggantija Buffer Zone</b>								
Ggantija	Prehistory	Temple	3421	8963	Archaeology	Approved	28/10/1998	yes
	Prehistory	Megaliths	3404	8967	Archaeology	Approved	28/10/1998	yes
Għar ta' Ghejzu	Prehistory	Cave	3392	8966	Archaeology	Approved	28/10/1998	yes
Xagħra Stone Circle	Prehistory	Burial site	3384	8954	Archaeology	Approved	28/10/1998	no
Ggantija	Prehistory	North Cave	3422	8968	Archaeology	Approved	17/08/2010	
Xagħra (Ta' Kola)	Early modern	Windmill	3401	8991	Architecture	Approved	17/08/2010	
<b>Ta' Haġrat/Skorba BZ</b>								
Skorba	Prehistory	Temples	4392	7555	Archaeology	Approved	8/10/1998	yes
		Ancient Quarries	4384	7547	Archaeology	Approved	8/10/1998	no
		Tombs	4380	7546	Archaeology	Approved	8/10/1998	no
		Cave Dwellings	4377	7545	Archaeology	Approved	8/10/1998	yes
Searchlight & Radar	WWII	Military	4377	7556	Architecture	Approved	8/10/1998	yes
Searchlight & Radar	WWII	Military	4375	7560	Architecture	Approved	8/10/1998	yes
		Ancient Quarries	4387	7561	Archaeology	Approved	8/10/1998	no
		Tombs	4324	7549	Archaeology	Approved	8/10/1998	no
Ta Haġrat	Prehistory	Temples	4308	7529	Archaeology	Approved	8/10/1998	yes
		Tombs	4330	7569	Archaeology	Approved	8/10/1998	no
		Tombs	4332	7572	Archaeology	Approved	8/10/1998	no
		Ancient Quarries	4335	7571	Archaeology	Approved	8/10/1998	no
		Cave dwellings	4333	7568	Archaeology	Approved	8/10/1998	no
		Tombs	4338	7568	Archaeology	Approved	8/10/1998	no
		Cistern	4335	7566	Archaeology	Approved	8/10/1998	no
		Tombs	4411	7558	Archaeology	Approved	8/10/1998	no
		Tombs	4404	7567	Archaeology	Approved	8/10/1998	no
		Tombs	4409	7560	Archaeology	Approved	8/10/1998	no
		Tombs	4405	7558	Archaeology	Approved	8/10/1998	no
		Ancient Quarries	4410	7567	Archaeology	Approved	8/10/1998	no
<b>Tarxien Buffer Zone</b>								
Tarxien Temples	Prehistory	Temple	5598	6974	Archaeology	Approved	3/11/1998	yes
Tal-Erwieh Church		Church	5599	6969	Architecture	Approved	3/11/1998	no
<b>Haġar Qim/Mnajdra BZ</b>								
Haġar Qim	Prehistory	Temple	4966	6519	Archaeology	Approved	14/11/1997	yes
Congreve Memorial		Monument	4927	6485	Archaeology	Approved	14/11/1997	yes
Misqa Tanks	Prehistory	cistern	4905	6533	Archaeology	Approved	14/11/1997	no
Mnajdra	Prehistory	temple	4914	6507	Archaeology	Approved	14/11/1997	yes