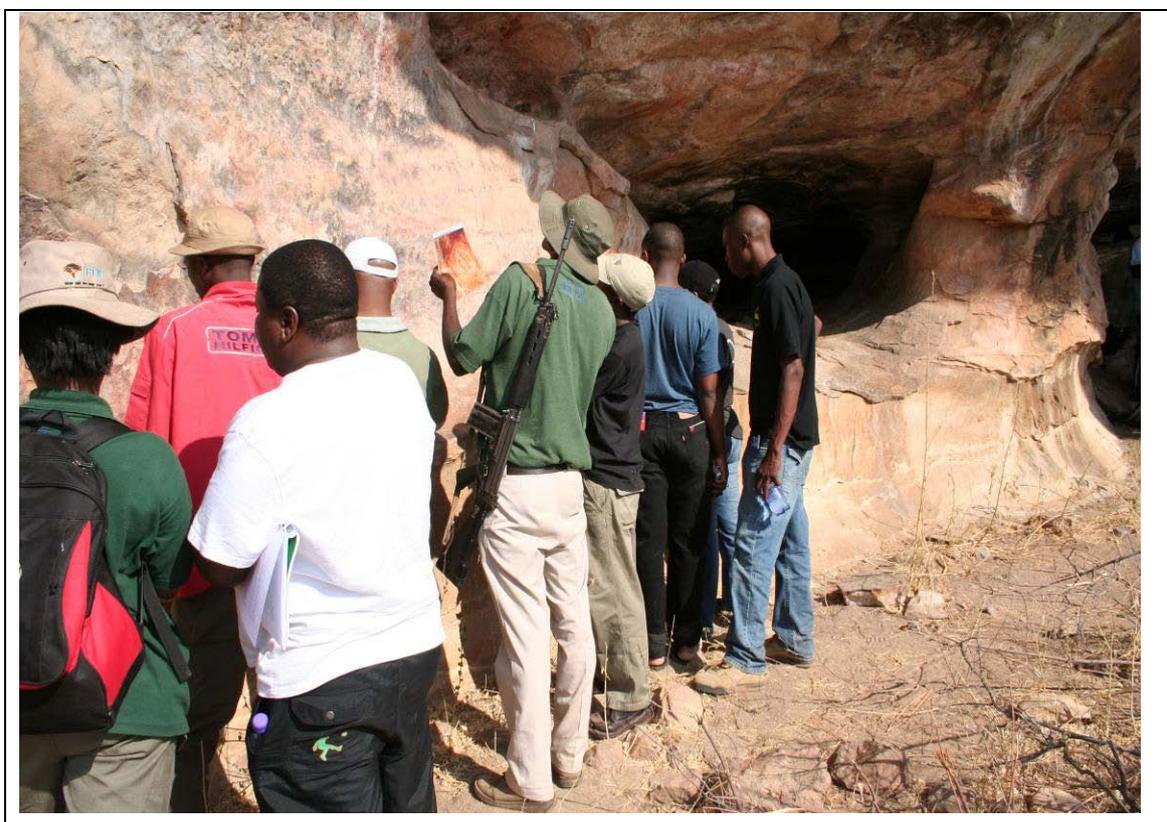


GENERIC ROCK ART MANAGEMENT PLAN MAPUNGUBWE NATIONAL PARK AND WORLD HERITAGE SITE AND THE LIMPOPO-SHASHE TRANS FRONTIER CONSERVATION AREA 2009-2014



COMPILED FOR
South African National Parks
In collaboration with the Getty Conservation Institute and the
Southern African Rock Art Project
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Cover photograph: *Participants in the 2008 Workshop making notes at Thudwa Shelter on Little Muck in the Mapungubwe National Park.*

1 INTRODUCTION

1.1 Background to the generic rock art management plan

This generic plan for the management of rock art sites in the Mapungubwe National Park and World Heritage Site (MNP) and the adjacent Limpopo-Shashe Trans Frontier Conservation Area (TFCA) (see list and maps in Appendix 1 and 2) is designed to be implemented by the MNP Park Manager in the period 2009-2014 as part of the broader integrated management plan for the Park. It is accompanied by site-specific management plans for Thudwa Shelter on the property Little Muck, for Tombo-la-Tholo and Alfred's Rock on Armenia and for Kaoxa's Shelter on Machete. These plans were developed in three distinct stages.

In **Stage 1**, a Generic Management Plan for Rock Art in the Mapungubwe Cultural Landscape (MCL) was developed as a chapter in the Integrated Management Plan for the Vhembe-Dongola National Park in preparation for the declaration of the MCL as a National Heritage Site and a World Heritage Site. In 2003 it was presented as an addendum to the nomination dossier submitted by the Department of Environmental Affairs and Tourism to the World Heritage Centre in 2002. The integrated management plan was requested by the World Heritage Centre in 2003 as a prerequisite for the inscription of the site on the world heritage list in July 2003. The management plans for archaeological sites, including rock art, were prepared by Dr Janette Deacon as a member of a team led by Dr Peter Norton who was appointed by the Department of Environmental Affairs and Tourism with funding from the Norwegian government agency NORAD. In the process, SANParks staff members were regularly consulted as major stakeholders. Advice on rock art was also given by members of the Archaeology Task Group appointed by SANParks, by the Rock Art Research Institute at the University of the Witwatersrand, and by Mr Ed Eastwood of Palaeo-Art Services.

In **Stage 2**, the Getty Conservation Institute (GCI), Los Angeles, through the initiative of Dr Neville Agnew, identified the Mapungubwe National Park in 2004 as a World Heritage Site with special needs for rock art site management and sustainable tourism opportunities and agreed to include it in a program for the Southern African Rock Art Project (SARAP). The mission was to create an opportunity for capacity building for rock art site management amongst staff members working at World Heritage Sites, and national and provincial parks where rock art occurs. Mr Johan Verhoef represented SANParks at a meeting in Los Angeles and was the contact person for arrangements made by Dr Janette Deacon, the program co-ordinator in South Africa. In 2005, 17 participants from SANParks staff, CapeNature, Amafa, Namibia, Botswana, Zimbabwe and Zambia, met for 2 weeks and used the Generic Management Plan for Rock Art in the MNP as the baseline for developing site-specific management plans at four rock art sites in the MNP (Thudwa, Tombo-la-Tholo and Alfred's Rock, Kaoxa Shelter and Balerno). Some revisions were made to the plans by David Myers and Trinidad Rico of the Getty Conservation Institute in 2006.

In **Stage 3**, the Park Manager, Tshimangadzo Nemaheni, identified the need for updated management plans ahead of the revision of the integrated management plan required by UNESCO for the 5-year review of the world heritage site. At about the same time, Johan Verhoef, now co-ordinator of the Trans Frontier Conservation Area

process, saw the need for management plans that would include rock art sites in Botswana and Zimbabwe. The GCI therefore agreed to arrange a further Workshop and management planning exercise over 18 days in August/September 2008 to revise the generic and site management plans.

The products of the 2008 workshop are presented here as a generic management plan for all rock art sites in the MNP and TFCA, and three site-specific management plans for Thudwa, Tombo-la-Tholo and Alfred's Rock, and Kaoxa Shelter. Balerno was not included as it was deemed to be unsuitable for tourist visitation.

1.2 Rock art as a vital attribute in the Mapungubwe National Park

The vital attributes of the Mapungubwe National Park (MNP) listed in the 2006 Management Plan for the Park acknowledge that the Mapungubwe Cultural Landscape (MCL) represents an important interchange of human values in an organically evolved landscape. It therefore represents a major opportunity for appreciation and learning with the ambience of both cultural and biodiversity attractions in a relatively remote setting where three countries meet at the confluence of the Limpopo and Shashe rivers.

These attributes are expressed in the 2006 Mission Statement for the Park as follows:

The Mapungubwe National Park and Mapungubwe Cultural Landscape will be developed by SANParks to maintain the faunal and floral assemblages, ecological processes, cultural resources and landscape characteristics representative of the area, to foster international cooperation for the establishment of a transfrontier conservation area, and offer long term benefit to the people of the area.

Rock art is integral to these vital attributes as it is a valuable account of the customs and beliefs of the people who made it, but who are no longer living in the area and practicing their culture. The paintings and engravings therefore contribute to knowledge about the social interaction of past societies as well as the biodiversity of the landscape during times for which there are no written records.

Rock paintings and rock engravings occur on most of the properties incorporated into the Mapungubwe National Park and World Heritage Site, as well as on properties in the Tuli Block in Botswana and at Sentinel and Nottingham ranches in Zimbabwe. In a survey of the Limpopo-Shashe Confluence Area by Palaeo-Art Field Services that was completed in the late 1990s, 150 rock art sites were recorded. These include 40 sites in Zimbabwe. A further 18 sites were recorded in the Tuli Block in 2007/8. There are more than 110 rock art sites in the Mapungubwe National Park (MNP) and on adjacent farms. The sample of 150 includes 139 painted sites and 56 engraving sites, with most of the engravings found at the same sites as paintings. There are several different traditions that can be correlated with the cosmology of San hunter-gatherers, Khoekhoe herders and Iron Age farmers. The Limpopo valley is one of the rare instances in the sub-continent where rock paintings and rock engravings occur at the same place.

The rock art, particularly that done in the San tradition, together with the archaeological evidence from Little Muck Shelter and two rock shelters on Balerno,

provides a valuable commentary by the indigenous people themselves on the historical process in the MNP in the first millennium AD. In general terms, the process culminated in the appropriation by herders and farmers of places that had been used exclusively by hunter-gatherer-foragers. It led to the disappearance (and/or assimilation) of the San and ultimately to the rise of social stratification and attendant cultural and economic development at Mapungubwe. More specifically, the covering of San art by the art of herders and farmers symbolically cut off the power of the older images of the spirit world and the religious beliefs that generated them. In this context, argue Hall & Smith (2000:43), San paintings of sheep “may represent a San attempt to neutralise or overcome the power of the herders; certainly they symbolise the extent to which the new herder population threatened San life.”

From the end of the first millennium AD, Iron Age people were occupying much the same landscape as the hunter-gatherers. The absence of San paintings of images that could be linked to the Mapungubwe period is evidence that the power and presence of the hunter-gatherers had been changed radically by early in the second millennium. Historical records, however, relate that people of mixed San and Sotho descent were living in the wider area in the nineteenth century and that they were engaged in rainmaking, a practice that was carried on by San people in many parts of Southern Africa. The assimilation of hunter-gatherers into the dominant economy of the farmers was therefore a long and complex process.

2 SITE DESCRIPTION

2.1 Site information

Farm names and numbers	See list of farms surveyed and rock art sites located in Appendix 1 and map in Appendix 2
Co-ordinates	Various
Altitude	Various
Owner	Republic of South Africa, Department of Environmental Affairs and Tourism, SANParks, and private owners with and without contractual agreements with SANParks
Contact person	Park Manager, Tsimangadzo Nemaheni, SANParks, Tel/fax 015 534 0102
Rock art data	Rock Art Research Institute, University of the Witwatersrand; and Palaeo-Art Services, Machado (Louis Trichardt) (Mrs C Eastwood)
Public access and visitation	Guided visits by appointment only; self-guided routes planned
SANParks zonation	Various
Grading status	Mapungubwe Cultural Landscape declared a National Heritage Site in July 2002 and a World Heritage Site in July 2003

2.2 Locality and description

Information on the location, distribution and content of rock art sites in the Park and surrounding areas (Map 2, Appendix 2), including Botswana and Zimbabwe, has been collected systematically since 1992 by Palaeo-Art Field Services, a non-governmental organisation led by Ed Eastwood from Machado (Louis Trichardt). He worked closely with the Rock Art Research Institute (RARI) at the University of the Witwatersrand until his untimely death in October 2008 and all his records are now at RARI. Digital copies of all his reports were made in 2006 for the Getty Conservation Institute’s rock art conservation programme at Mapungubwe and both digital and hard copies have been donated to the Mapungubwe National Park.

Three traditions of rock painting have been identified in the MNP, TFCA and surrounding Soutpansberg region.



Figure 1. *Most rock art sites are found in sandstone hills. The so-called Battiss sites on the property Armenia are close to this hill.*

1. The majority of the paintings are in the **earliest tradition** (Figure 2) of finely detailed images that reflect beliefs and cosmology common to the San diaspora of the past five thousand years or more. Most are in red ochre, with some in black and white. Eastwood's (2001:25) survey shows that human figures are more common than any other category (45.7%), followed by animals (42.3%), items of clothing such as loin cloths and aprons (8.8%), and lines, dots, nets, animal spoor and therianthropes (3.2%). The analysis of human figures in the rock paintings shows that those of uncertain gender were the most common (48%), followed by women (28%) and men (24%). This is unusual in the southern African context as images of men usually predominate. Another unusual feature in the rock art that is also related to gender, is the high incidence of paintings of women's leather aprons with smaller numbers of paintings that probably represent loin cloths worn by men. In the animal category, indeterminate animals were most common, followed by kudu, giraffe, elephant, impala, tsessebe, fish, eland, ostrich, locust, rhinoceros, fat-tailed sheep and other animals of lesser significance. The paintings of domesticated fat-tailed sheep can be dated because they were introduced by herders and immigrant farmers in the first millennium AD. As the sheep are in the same style as the more conventional San paintings, they were probably done by the hunter-gatherers rather than the herders.

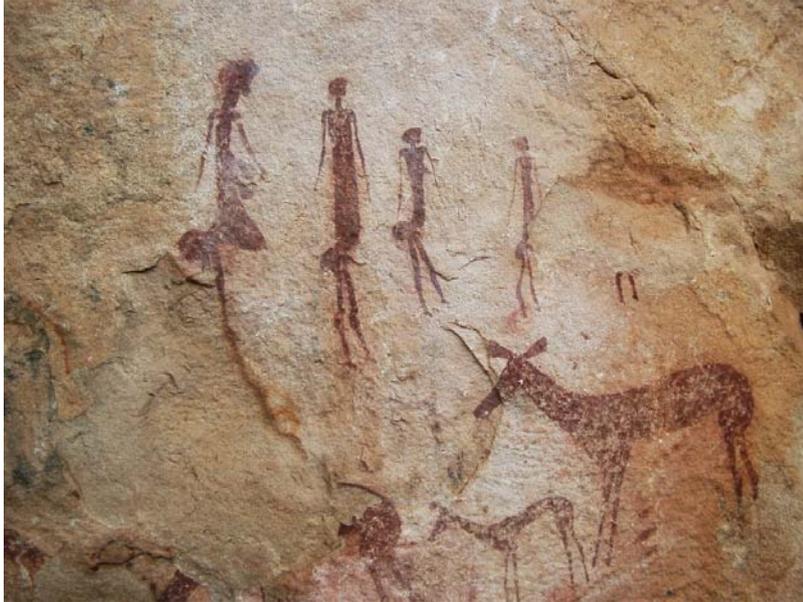


Figure 2. *Paintings like these are typical of the earliest tradition in the MNP and TFCA.*

2. Mostly overlying the San tradition images, but sometimes underlying them, are **geometric paintings** (Figure 3). The paint, in red, orange and white, was applied with a finger. Paintings in this tradition are less common than those of the San, but are distributed throughout the region. There is no clear evidence of who the artists were, but they are generally thought to have been herders with sheep who moved through the region briefly between the time of the first establishment of Iron Age agriculturist communities and about AD 900. Similar geometric paintings and engravings are found in other regions of Southern Africa as well. They may be the work of Khoe-speaking herders, related to the San, who acquired sheep and, later, cattle from Iron Age farmers. They moved southwards into the western half of what is now South Africa about 2000 years ago. Apart from the rock art there is as yet no other archaeological trace known of Khoekhoe presence in the MNP.



Figure 3. *Red geometric finger-paintings on Schroda.*

3. Overlying the earlier rock art traditions are what have been called '**late white paintings**'. They are typical of those done by Bantu-speaking people in east, central and southern Africa, and more specifically by ancestors of the modern Sotho-Tswana cultural group. They are considered to date to the period after 1300 AD (Hall & Smith 2000:39) and are further evidence for the appropriation of places that had previously been used by others.

Rock engravings include grooves, cupules, representations of animal tracks, geometric patterns (Figure 4) and depictions of animals.



Figure 4. *An engraved geometric pattern at the Balerno shelter.*

2.3 Physical environment

The distribution map of rock art sites correlates closely with the prominent outcrops of cave sandstone in the Clarens Formation in the MNP and TFCA, although paintings and engravings also occur in small isolated rock shelters away from the higher ridges. Eastwood has remarked that most sites with hunter-gatherer paintings were found at ground level in rock shelters with a flat floor. Larger sites were later used by Iron Age farmers who left stone structures, grain bins and other storage facilities. Some of these larger sites were also used by herders, but the Khoekhoe generally painted at sites with little floor space or sloping floors and low ceilings.

2.4 Previous and ongoing research

Five rock art sites have been excavated in the Soutpansberg and the Limpopo-Shashe Confluence Area and the deposits provide detailed information on the

sequence of events during the transition from the Stone Age to the Iron Age. The excavated sites are Thudwa (Little Muck) and Balerno Main and Balerno 3 shelters in the MNP, Tshisiku west of the MNP and Salt Pan Shelter about 100 km to the south in the Soutpansberg, outside of the MNP.

Little Muck Shelter (Hall & Smith 2000), with occupation deposits about 1 m thick, provides the most complete sequence from which to gauge the nature and tempo of the process of change from foraging to agriculture in the MNP. Like Salt Pan Shelter further south in the Soutpansberg, the Balerno shelters and sites on the Botswana side of the Limpopo, the first occupation was in the period just prior to the introduction of pottery about 2000 years ago. Activity intensified thereafter because the foragers established an interactive relationship with their agriculturist neighbours at Leokwe Hill (in the case of Little Muck). At Tshisiku rock shelter, west of the MNP and the road to Pont Drift, although the Later Stone Age occupation sequence extends back to almost 6000 years, the site was occupied less and less often after the arrival in the area of agriculturists.

When compared with the pre-ceramic deposits at the base of the Little Muck sequence that are dated by inference to pre-250 AD, the deposits associated with the earliest Happy Rest/Bambata pottery have higher numbers of stone scrapers. These stone tools were used for preparation of hides. This suggests to Hall and Smith (2000:34) that the foragers were preparing hides for exchange with agriculturists. In the overlying deposit with Leokwe-Zhizo pottery that dates between 1000 and 1100 AD, this activity was further intensified. In contrast, in the uppermost layers associated with K2 and Mapungubwe pottery, dating between 1100 and 1300 AD, formal stone tools, worked bone, shell and ochre are either absent or occur in very small quantities.

The interpretation is that these uppermost layers that post-date 1050 AD, and include glass beads, iron artefacts and K2 and Mapungubwe period pottery, were the result of occupation of the shelter not by the Later Stone Age foragers, but by people from the agriculturist community that was established by that time at nearby Leokwe Hill. After that time, foragers became excluded from barter and craft exchanges and their sites were appropriated by farmers. This appropriation is further emphasised by the presence of fourteen gaming 'boards' that were carved into the sandstone in front of Thudwa (Little Muck) Shelter. These 'boards' are often found associated with Zhizo and Leopard's Kopje sites. In the recent past, they have been made and used exclusively by men in Shona, Venda, Shangaan and Tsonga-speaking communities. It is likely that this tradition has been a common practice for a long time. Schmidt (1995) makes reference to the fact that some Khoekhoe peoples believed that this "cloud game" or "African chess" was placed on the rock by their god, Heiseb, and was mystically linked to rain.

Although the rock paintings at Thudwa (Little Muck) Shelter cannot be directly dated, the absence of ochre in the uppermost deposits is strong circumstantial evidence that the paintings were done prior to about 1050 AD when the site was taken over by Iron Age farmers.

2.5 Potential threats to rock art sites

In order for the rock art sites in the MNP and TFCA to be managed effectively, they must first be identified and documented. As part of this process, potential threats are recorded and should be regularly monitored so that interventions can be made if they are necessary.

The ambience of rock art sites is easily disturbed by over-use and litter. To minimize threats to the integrity of rock art that might be adversely affected in the course of infrastructure development for tourism or other purposes, all developments and interventions at rock art sites, including the installation of boardwalks and notice boards, must be subject to an impact assessment process. A detailed record of all interventions must be kept. If signage is not carefully designed to blend in with the landscape, it can be intrusive and could spoil the visitor experience

Rock paintings are especially vulnerable to dust that may be generated by people visiting the site (Figure 5). The dust adheres to moist surface and is permanently fixed by salts precipitating on the rock face. Increased dust has a permanent adverse long-term effect on paintings.



Figure 5. *Flat stones have been laid on the floor of Kaoxa's Shelter at Machete to reduce the effects of dust and to protect the archaeological deposits.*

Rock engravings are vulnerable to people walking on them if they are placed on horizontal rock surfaces.

All rock art is vulnerable to touching as oil and moisture from hands adheres to the surface and cannot be removed.

Sites close to vehicle access points are most vulnerable to inappropriate visitor behaviour.

Clearing of vegetation to allow more people onto a site may change the micro-climate and adversely affect paintings.

Veld fires can cause paint to flake off if heat is generated by burning vegetation close to painted surfaces.

Domestic and wild animals tend to shelter in rock shelters with rock art and often rub against painted surfaces causing damage to paintings.



Figure 6. *Participants in the 2008 Workshop recommended that this information board en route to Kaoxa's Shelter be revised and moved closer to the shelter. Once the property is managed by SANParks, SAHRA should be consulted on the wording of the information boards.*

3 EXISTING SITE MANAGEMENT

There are three levels of management for the Park, namely as a World Heritage Site by SANParks, as a National Heritage Site by SAHRA and as a National Park by the Park Manager.

The park comprises a range of properties managed, monitored and funded within the framework applied to all national parks. The properties include:

- farms owned by the State and transferred to SANParks for the Mapungubwe National Park that was formally gazetted on 7 April 2000;
- farms owned by the Friends of Peace Parks and managed by SANParks according to a contractual agreement;
- farms that are privately owned and managed by SANParks according to a contractual agreement; and
- privately owned properties that SANParks is negotiating to acquire. This group includes Machete, the rock art site most often visited in the area (Figure 6).

The current ownership might change in future because there are land claims on many of the properties within the MNP, but SANParks management is working closely with the land claimants.

In terms of the South African World Heritage Convention Act a management authority must be appointed by the Department of Environmental Affairs and Tourism for each World Heritage Site. **SANParks** will be the management authority for the Mapungubwe Cultural Landscape World Heritage Site, although the agreement has not yet been finalised.

The Mapungubwe Cultural Landscape was gazetted as a National Heritage Site in July 2002 by the South African Heritage Resources Agency (SAHRA). In terms of the National Heritage Resources Act: (No. 25 of 1999), **SAHRA** is responsible for the protection of the site in the following ways:

- a conservation management plan must be submitted for the national heritage site and responsibility for implementing such a plan can be delegated to the owner of the property if a formal heritage agreement is drawn up, in this case between SAHRA and SANParks;
- no person may destroy, damage, deface, excavate, alter, disturb, remove from its original position, subdivide or change the planning status of the site or archaeological and palaeontological deposits within it, without a permit issued by SAHRA;
- conditions pertaining to these permits are monitored by SAHRA in collaboration with SANParks;
- SANParks is responsible for maintaining the site according to minimum standards and a procedure to be prescribed by SAHRA in consultation with SANParks;
- SAHRA may make regulations, with the consent of SANParks, to safeguard the site, to specify conditions of use and development, and to regulate the admission of the public, including fees;
- SAHRA may call for a heritage impact assessment report if certain activities are likely to impact on heritage resources;
- the contents of on-site interpretive material or programmes for presentation of a national heritage site to the public must be submitted to SAHRA for approval at least 60 days in advance.

SAHRA has approved the SANParks Integrated Management Plan for the Mapungubwe National Park, which includes conservation management plans for the cultural sites, but a formal heritage agreement has not yet been drawn up between SANParks and SAHRA to delegate responsibility to SANParks for implementing the plan.

The cultural heritage sites of the MNP are managed by the **Park Manager** who is responsible for:

- regular monitoring of the site;
- reporting threats or damage to heritage resources;
- preparedness for natural disasters;
- implementing legal requirements for environmental impact assessments in advance of development;
- ensuring that heritage impact assessments are done prior to any developments that may affect heritage resources;
- informing permanent staff and contract workers of the significance of the site;
- preparing sites for tourism access;
- allowing access only to visitors who have made prior arrangements; and
- ensuring that visitors may enter only with a guide approved by SANParks.

Management of the TFCA is currently under discussion, but includes both state-owned and private properties.

4 STAKEHOLDER CONSULTATION

Stakeholders have been consulted at all stages of the generic and site-specific management plans. SANParks staff members were regularly consulted as major stakeholders and took part in both GCI workshops. Advice on rock art was also given by members of the Archaeology Task Group appointed by SANParks, by the Rock Art Research Institute at the University of the Witwatersrand, and by Mr Ed Eastwood of Palaeo-Art Services.

In both 2005 and 2006, stakeholder meetings were held to identify issues for rock art management and tourism in the area of the MNP and these issues informed the management plans. The names of participants and stakeholders who attended the meetings are listed in Appendix 3.

Workshop participants in 2005, 2006 and 2008 brought a wealth of experience to the process. They came not only from SANParks and provincial parks and heritage agencies in South Africa, but also from other World Heritage Sites in Botswana, Namibia, Zimbabwe, Zambia, Tanzania and Mozambique.

In 2008, five local stakeholders from properties in the Tuli Block and the local community were interviewed at Mothabaneng in Botswana and four stakeholders who are lodge owners at Sentinel in Zimbabwe were also visited (see Appendix 3).

Throughout this process, visits to the workshops were paid by the Park Manager (Bernard van Lente in 2005 and Tshimangadzo Nemaheni from 2006-2008), by Edgar Neluvhalani from SANParks head office in Pretoria, and by Johan Verhoef as representative of the TFCA co-ordinating group.

As a result of stakeholder consultation and the input from Workshop participants and SANParks staff, the following major issues were identified for the management of rock art sites in the MNP and TFCA.

KEY ISSUES ESSENTIAL FOR THE MANAGEMENT OF ROCK ART SITES IN THE MNP AND TFCA

- integrated management of rock art as part of natural and cultural heritage resources;
- identification of rock art sites and zoning or demarcation of sensitive areas;
- appointment of permanent, professional archaeological staff;
- appointment and training of monitoring staff and rock art tourist guides
- access to existing site data and reports;
- creation of rock art site content and functionality in GIS database;
- development of base-line rock art documentation form and procedures, including condition and threats assessment;
- survey, documentation, monitoring and condition reporting of new and known sites
- development of ongoing site condition monitoring program that provides feedback on need for interventions;

- integrity and authenticity of site location in the landscape;
- integration of rock art with desired state objectives for biodiversity and sustainable tourism;
- identification of research and conservation priorities for rock art and surface artefacts;
- identification of sites for a pilgrimage and wilderness experience;
- visitor management, access routes and paths, information and signage; and
- disaster, fire and waste management.

ADDITIONAL ISSUES FOR ROCK ART SITE MANAGEMENT IN THE TFCA

- promote rock art as a vital attribute in the cultural heritage and biodiversity of the TFCA;
- develop a rock art use policy and guidelines for rock art sites open to the public in the TFCA;
- require impact assessments before any infrastructure developments;
- consult all TFCA partners before opening rock art sites to the public;
- identify research priorities;
- initiate surveys, recording and condition reporting in areas not yet surveyed;
- create a central database for all site records in the TFCA; and
- involve local communities in rock art conservation and tourism.

5 VALUES AND STATEMENT OF SIGNIFICANCE

The desired state of rock art conservation in the MNP and TFCA is to retain the integrity and significance of the art in its landscape setting. The following sub-sections first identify the values and vital attributes recognized in the rock art and then summarise them in a comprehensive statement of significance. The statement guides the identification of high and lower level objectives as well as strategies to maintain the significance.

5.1 Values and vital attributes

Value Category	Value Level (High/Medium / Low)	Justification
Spiritual/ Social	Medium	It is now widely accepted that San rock art is essentially a religious art from a society in which the religion was shamanistic. Like other religious arts it uses conventions and codes to depict subjects specific to San beliefs. Although there is no evidence that the rock art within the MNP and TFCA is held by current local communities to be sacred, or is utilized in traditional social practices, the San Council has indicated that they would like to be consulted when rock art is interpreted for the public.

Value Category	Value Level (High/Medium / Low)	Justification
Scientific/ Research	High	As shown by the significant amount of rock art research already done in the Limpopo / Shashe basin, many of the rock art sites within the MNP and TFCA have great research potential to enhance our understanding of the past lifestyles of the Stone Age San and Khoekhoe, and Iron Age farming communities who lived in this area, as well as the past biodiversity. In addition, substantial areas of the TFCA have not yet been surveyed for the identification of undocumented sites.
Historic	High	The rock art sites of the MNP and TFCA provide evidence of stories going back perhaps millennia about interactions in the landscape between people and the natural world, the past practices of social customs, and the succession of differing social groups.
Aesthetic/ Artistic	Medium	Although not as aesthetically dramatic and exquisite as rock art in some other areas of the Southern African region, the MNP and the broader TFCA includes distinctive and finely executed examples of both San and Khoekhoe rock art.
Educational	High	Rock art within the MNP and the broader TFCA offers the potential to teach both children and adults about the past biodiversity of the area, about the skills and profound belief systems of the San and Khoekhoe artists and their communities, and about the appropriation of the area by Iron Age farming communities.
Economic	Medium	Rock art sites that have been identified as appropriate for, and of interest to, guided tourist visitation offer potential employment for tourist guides and an additional attraction for visitors to the MNP.

5.2 Statement of Significance

The rock art of the Mapungubwe Cultural Landscape (MCL), and the proposed broader Trans Frontier Conservation Area (TFCA), is significant because it is a testimony to the past biodiversity of the area, and to the skills and profound belief systems of the artists and their communities hundreds and even thousands of years ago. It provides evidence for social changes, cultural beliefs and interactions in the landscape as reflected by a diversity of rock art traditions with rare and unusual features. As shown by the significant amount of rock art research already done, most of the sites have great research and educational potential to enhance our understanding of the past lifestyles of the Stone Age San and Khoekhoe, and Iron Age farming communities who lived in this area.

From social and historical perspectives, San hunter gatherers were the first to paint and engrave in rock shelters in the proposed TFCA, perhaps as early as five thousand years ago. Their art was added to with images made by immigrant Khoekhoe herders from about 2,000 years ago. From about 800 AD, Iron Age farmers settled there leaving engraved marks on the rocks. These different inhabitants of the area left significant amounts of cultural materials in the form of stone tools, beads, and pottery, among other evidence that can be of use in our

understanding of the past. The rock art and associated archaeology in the proposed TFCA therefore provides an almost continuous record of San, Khoekhoe, and Iron Age farmer habitation over more than 5,000 years. In the twentieth century emblems of the former South African defence forces were painted on rocks near the confluence of the Limpopo and Shashe rivers.

In aesthetic and artistic terms, features which make the San rock art in the TFCA unusual are the high percentage of women in the paintings, images of aprons and loincloths associated with male and female initiation rites, and the rainmaking significance of kudu, elephant, rhino, hippo, zebra and giraffe. The control of rain was an important element in the interaction between the San and early farmers who recognized the rainmaking powers of the hunter-gatherers. Paintings of locusts, and of two bird species, stork and kingfishers, the latter painted with blue-green copper oxide as pigment, have not yet been found elsewhere in southern Africa.

Rock paintings associated with the Khoekhoe herders were mostly geometric patterns with paint applied with a finger, and significantly include stylized aprons and loincloths continuing the hunter-gatherer tradition. The presence of herders in the landscape was recorded by the San in paintings of sheep in the Limpopo valley.

Although there are no rock paintings in the proposed TFCA that can be directly linked to the Iron Age farmers, they left engraved marks when polishing metal and ivory, grinding grain or medicine, or making game boards, known to some as *mafvuba*. These engravings are found at 44 of the 134 rock art sites in the proposed TFCA¹. Rainmaking practices at Mapungubwe Hill and related Iron Age sites suggest that the gold rhinos found with elite burials might have become a rainmaking symbol based on earlier beliefs of the rainmaking powers of rhino by the San.

5.3 Rock art sites for public visitation

The following sites have been suggested as suitable for opening to the public because they are not too small, they allow relatively unrestricted pedestrian flow, their vulnerability to damage is low, they have moderate to high potential interest, and they do not pose a threat to visitor safety.

Kaoxa's Shelter (MC/1) on Machete has been open to the public for several years. Information boards were installed in 1999. Although there is no visitors' book at the site, guides reported that over 500 people visited there in 2007. The nearby camp site has subsequently been closed. There are both Khoekhoe and San paintings at the site as well as an engraved *mafuvha* board. Of particular interest are 13 images of locusts – the only paintings of these insects known in Southern Africa.

Thudwa Shelter, Little Muck (LM/2) is a fairly large shelter with a range of easily visible paintings including polychrome giraffe, red elephant backs, loincloths and male and female dancing figures. It is accessible only by 4x4 vehicles because of thick sand which makes it ideal for enforcement of guided visits.

Alfred's Rock (AR/2) is a relatively small shelter but it has a high roof and several interesting paintings of female dancing figures, impala, and a rare painting of a woman with a child on her back or shoulders. As it is close to the current eco-route it

¹ These numbers exclude the Botswana area of the proposed TFCA, for which data is not available.

is recommended that the road be moved to reduce the amount of dust generated by passing vehicles.

Tombo la Tholo (AR/1) is a pleasant walk from Alfred's Rock. The paintings include a faded kudu, aprons, dancing women, elephants with red dorsal stripes and engravings. There are many stone tools and a buried pot on the floor that must be covered before visitors can be allowed to visit in any numbers. A smaller shelter alongside has a single painting of a person.

Battiss I Shelter (AR/7) would be suitable for public viewing – it is large and has natural shelf barriers. There are large paintings of a herd of five female and a male kudu. The female kudu exhibits the head-extended mating posture and they have red genitals. There are also paintings of wildebeest, giraffe, baboon, women, and a male loincloth.

Battiss II and III (AR/8 and AR/9) are very close to Battiss I and would be suitable for small groups. The surface at Battiss II is friable and should not be touched, but Battiss III has an interesting panel with an adult rhino and calf and a feline.

Jambila (AR/11) is a short distance from the Battiss sites and has an interesting range of loincloths, dancing women and a snake that appears to go in and out of the rock.

6 MANAGEMENT OBJECTIVES FOR ROCK ART SITES

The following high and lower level objectives are designed to retain the significance of all rock art in the MNP and TFCA. They fall under the heading of the Cultural Resource Management Programme within the Heritage and Biodiversity Conservation Objectives for the MNP.

6.1 Identify, document, monitor and protect rock art sites in the MNP and TFCA

- 6.1.1 Appoint an experienced professional Archaeologist to permanent staff or appoint a consultant with relevant rock art management skills and experience.
- 6.1.2 Identify staff responsible for management tasks relevant to rock art in the Park and on properties within the TFCA.
- 6.1.3 Train staff to identify rock art and to understand the causes of negative impacts at significant rock art sites and the implications of possible interventions.
- 6.1.4 Create an archive of rock art site record sheets and baseline rock art condition reports with relevant reports and publications in the Park using the scanned and printed copies of reports prepared by Ed Eastwood and presented to the MNP by the GCI workshop in 2006.
- 6.1.5 Enter rock art data onto the MNP and TFCA GIS databases and collate all site information to coordinate site conservation and management activities.
- 6.1.6 Develop criteria for the grading of rock art sites in the MNP and TFCA.
- 6.1.7 Liaise with RARI for access to Palaeo-Art Services (Ed Eastwood) records to add details of rock art sites in the Tuli Block in Botswana to the TFCA database.

- 6.1.8 Closely monitor the state of individual sites in the MNP and TFCA against the condition report on an annual basis so that change can be measured and policies and strategies can be altered if they are not working.
- 6.1.9 Identify archaeological deposits associated with rock art sites that need protection and take necessary action.

6.2 Encourage rock art research

- 6.2.1 Identify research needs and priorities to encourage specialists and students to extract the maximum amount of information from the rock art and related archaeological sites about the societies who were responsible for creating the rock paintings and engravings.
- 6.2.2 Establish a comprehensive rock art resource library in the MNP interpretation centre that will make published papers, books and theses available both to staff and researchers.
- 6.2.3 Consult specialists to develop a rock art database management policy for access to the sites and database records for the MNP and TFCA by researchers.

6.3 Manage the landscape setting of rock art sites within the MNP and TFCA biodiversity programmes

- 6.3.1 Manage biodiversity and the natural environment to retain the significance of rock art sites within the cultural landscape.
- 6.3.2 Integrate rock art and environmental management to preserve the wilderness experience with a policy of minimal intervention.
- 6.3.3 Develop protocols and guidelines for private land owners to help them with the identification, care, control and management of rock art on their properties.
- 6.3.4 Ensure that environmental and heritage impact assessments are done before any development or intervention takes place at or near a rock art site, and before any additional sites are opened to the public.
- 6.3.5 Develop disaster planning and fire management policies and guidelines so that rock art sites are not at undue risk from excessive flooding or fire.
- 6.3.6 Ensure efficient waste management in the vicinity of rock art sites.

6.4 Manage rock art interpretation, tourism and visitation

- 6.4.1 Aim for world-class presentation of rock art in the MNP and TFCA.
- 6.4.2 Stimulate a sense of pilgrimage and a wilderness experience for visitors to rock art sites.
- 6.4.3 Develop signage that has low visual impact to blend with the landscape and offer accurate and interesting information.
- 6.4.4 Establish and maintain carrying capacity to retain the ambience of rock art sites in the MNP and TFCA.
- 6.4.5 Control access to sites with protocols and policies on who is allowed to take visitors to sites, what interventions will be necessary to protect deposits (see 6.1.9), and what charges will be made.

- 6.4.6 Design visitor information nodes and products to promote rock art as an attraction in the MNP and TFCA that adds value to the vital attributes of biodiversity conservation and sustainable tourism.
- 6.4.7 Establish emergency procedures for visitor accidents.
- 6.4.8 Install interactive displays on rock art sites in the interpretation centre for physically challenged visitors who are unable to walk to the sites, using the laser scan and panoramic photographs of Kaoxa's Shelter made in 2008.

6.5 *Promote rock art conservation and appreciation for schools and local communities*

- 6.5.1 Develop information on rock art that is relevant to the school curriculum for distribution to teachers and learners in the TFCA and surrounding areas, and to school groups who visit the MNP.
- 6.5.2 Develop a comprehensive programme for local communities to raise awareness about rock art in the TFCA.
- 6.5.3 Design appropriate visitor information leaflets that make a special effort to integrate information about rock art into descriptions of the natural and cultural aspects of the landscape.

7. POLICIES

Policies and guidelines are recommended at a generic level for the management of rock art sites in the MNP and TFCA. A comprehensive general guideline developed by the South African Heritage Resources Agency (SAHRA) is appended.

8. MANAGEMENT AND MONITORING TABLES

GENERIC MANAGEMENT AND MONITORING FOR ROCK ART SITES

<p>8.1 Identify, document, monitor, and protect rock art sites in the MNP and TFCA: Key issues: Integrated management of rock art as part of natural and cultural heritage resources; identification of rock art sites; zoning and demarcation of sensitive areas; appointment and training of monitors and professional archaeologist; access to existing site data and reports; creation of rock art site content and functionality in park GIS database; development of base-line rock art documentation form and procedures, including condition and threats assessment; development of ongoing site condition monitoring program that provides feedback on need for interventions</p>							
	OBJECTIVES	THREATS OR RISKS	ACTION / MANAGEMENT MEASURES	TIME FRAME	RESPONSIBILITY	MONITORING CRITERIA	MONITORING FREQUENCY
8.1.1	Appoint staff and identify management tasks relevant to rock art for efficient management, capacity building and training	If rock art management is not recognised as a responsibility, the management plan cannot be implemented	<ul style="list-style-type: none"> Appoint an Archaeologist with experience in rock art management to the MNP Park staff or identify a consultant to record and manage the rock art sites in the MNP and TFCA. Arrange regular training workshops for SANParks natural and cultural heritage staff and TFCA representatives, with rock art specialists. Identify areas of mutual concern and interaction to develop meaningful integrated management strategies that include rock art 	Before the end of 2009	SANParks, Park Manager, TFCA, Heritage Committee Working Group of the Park Forum, Staff Archaeologist or consultant	<ul style="list-style-type: none"> Appointment of specialist staff or consultant. Management tasks related to rock art identified and listed. Training workshop held after appointment of new staff or consultant. Annual Report on training and activities 	After appointment of specialist, assess management tasks and training needs annually in March
8.1.2	Collate all rock art site information to facilitate conservation	<ul style="list-style-type: none"> Potential for non-integration of natural and cultural 	<ul style="list-style-type: none"> Collate and make accessible all digital and hard copies of Palaeo-Art Services reports presented to the Park between 2005 and 2008 during GCI/SARAP Workshops. 	Before the end of 2009	SANParks, Park Manager Heritage Committee Working Group of the Park Forum,	<ul style="list-style-type: none"> List of all reports and databases with their location. Data on rock art 	Check functionality of GIS database against management

	OBJECTIVES	THREATS OR RISKS	ACTION / MANAGEMENT MEASURES	TIME FRAME	RESPONSIBILITY	MONITORING CRITERIA	MONITORING FREQUENCY
	and management activities and functionality within MNPark and TFCA.	<p>heritage management tasks and objectives because rock data are not integrated into the database.</p> <ul style="list-style-type: none"> ▪ Sites cannot be managed if staff do not know where they are. ▪ Sites may be damaged if staff are not alerted to presence. ▪ Significance established through grading helps to prioritise actions. 	<ul style="list-style-type: none"> • Design and implement content and functionality of rock art data on Park GIS based on assessment of user and regulatory requirements. • Incorporate rock art site data into databases in Botswana and Zimbabwe sections of TFCA. • Identify and record rock art in all TFCA areas not yet surveyed and enter data on GIS database, or appoint a consultant to do the work. • Define procedures for data verification and entry. • Develop policy for access to rock art database. • Develop criteria for grading of rock art sites and assign grading accordingly. • Include rock art sites in zoning and demarcation of sensitive areas in the Park and TFCA. 		TFCA, and designated staff member or consultant	<p>site locations entered into Park GIS database according to procedures.</p> <ul style="list-style-type: none"> ▪ Rock art recorded on properties not surveyed by Palaeo-Art Services. ▪ Sites in Botswana and Zimbabwe added to database. ▪ Access policy for GIS database approved ▪ Sites graded according to criteria. ▪ Sites included in zoning. 	tasks and objectives annually in February and adjust as required by August

	OBJECTIVES	THREATS OR RISKS	ACTION / MANAGEMENT MEASURES	TIME FRAME	RESPONSIBILITY	MONITORING CRITERIA	MONITORING FREQUENCY
8.1.3	Record the condition of rock art sites and monitor regularly	<ul style="list-style-type: none"> • Cannot monitor rock art without knowledge of previous condition. • Sensitive sites might be damaged if they are not identified. • Cannot assess impact of opening sites to the public without condition reporting and monitoring. 	<ul style="list-style-type: none"> ▪ Obtain digital scans from RARI and SARADA of Palae-Art Services photographic documentation on rock art sites in MNP and TFCA to serve as baseline documentation and to demonstrate changing site conditions; budget accordingly for this activity. ▪ Use baseline documentation form (see Appendix 5) with written procedures to record the condition of all rock art sites according to a schedule. ▪ Record the schedule and results in the Park and TFCA GIS databases. ▪ Prioritise sites for baseline recording based upon public access, relative significance and vulnerability. ▪ Establish photo monitoring points for ease of comparison. ▪ Appoint specialists to assess the need to intervene to stabilize painted or engraved surfaces. ▪ Specialists identify sites where interventions may be required. ▪ Enter verified data into park GIS database. ▪ Check maps and GIS database before planning any intervention. ▪ Devise a means of demarcating sensitive areas before any work commences in vicinity. 	Begin as soon as specialist staff or contractor is appointed and set a schedule for condition reporting of all sites.	SANParks / TFCA specialist contractor; inspection by SAHRA	<ul style="list-style-type: none"> ▪ Budget for baseline documentation approved. ▪ Quality of data and digital scan input into system is verified. ▪ Digital scans from SARADA are included in MNP and TFCA databases. ▪ MNPark Manager and TFCA partners have up-to-date maps and GIS databases. ▪ Schedule for rock art site condition reporting and monitoring is in place. ▪ Maps and GIS databases are consulted before work begins on or near to rock art sites. ▪ Appropriate steps are taken to protect sites where interventions are undertaken. 	<p>Daily or weekly (as required) during initial database population; monthly thereafter.</p> <p>Progress assessed annually in December</p>

	OBJECTIVES	THREATS OR RISKS	ACTION / MANAGEMENT MEASURES	TIME FRAME	RESPONSIBILITY	MONITORING CRITERIA	MONITORING FREQUENCY
8.1.4	Protect <i>in situ</i> archaeological deposits associated with rock art sites if they are open to the public.	Deposits may be damaged if unprotected	<ul style="list-style-type: none"> ▪ Determine presence of archaeological deposits in area of rock art sites; if so, prepare plan for their protection. ▪ Use flat stones to protect floors rather than wooden boardwalks. ▪ Consider use of boardwalks to protect engraved game boards. ▪ Budget for and implement protective interventions. ▪ Cover rock paintings with appropriate sheeting if interventions will generate dust. ▪ Monitor effectiveness of interventions 	As required before sites are visited by the public.	SANParks and TFCA	<ul style="list-style-type: none"> • List of sites with deposits. • Plan for protection prepared and priorities set for. • Permit for protective intervention obtained from SAHRA and plan implemented and monitored. 	Monitor effectiveness of intervention annually
8.1.5	Understand causes of negative impacts at significant rock art sites and implications of possible interventions	Rock art is damaged and deteriorating	<ul style="list-style-type: none"> ▪ Park and TFCA to appoint a professional with expertise in rock art and conservation to assess negative impacts to significant rock art sites within the park, particularly water-related deterioration, but also including wind-related deterioration, vegetation impacts, dust accumulation, visitor-induced erosion, and animal impacts. ▪ Examine different conservation intervention options for mitigating water impacts and determine their appropriateness. ▪ Carry out pilot studies on impacts and interventions at a few sites. ▪ Monitor effectiveness of interventions 	Before the end of 2010	SANParks and TFCA	<ul style="list-style-type: none"> • Consultant contracted to carry out study on sites prioritized in 8.1.3.. • Study completed, including pilot studies on impacts and interventions. • Interventions completed and monitored. 	Monitor effectiveness of interventions annually

8.2 Encourage rock art research: Key issues: *Research policy and priorities; database management policy for access by researchers.*

	OBJECTIVES	THREATS OR RISKS	ACTION / MANAGEMENT MEASURES	TIME FRAME	RESPONSIBILITY	MONITORING CRITERIA	MONITORING FREQUENCY
8.2.1	Identify research needs and priorities to obtain reliable information for visitors to the Park and TFCA	Key information from rock art may not be fully integrated into the history of the landscape without dedicated research	<ul style="list-style-type: none"> ▪ Develop a research policy and priorities in consultation with a consultant and all stakeholders. ▪ Draft a 5-year plan. ▪ Identify possible researchers and assist them to undertake projects. ▪ Ensure publication of results of survey and research. ▪ Include results in information for the public. 	Initiate before the end of 2010	SANParks, TFCA, Park Forum and RARI	<ul style="list-style-type: none"> ▪ Deliver policy and priorities before end 2010. ▪ Assess research applications on merit. ▪ Check information is included in publications. 	Annual, and every 3 and 6 years for mid-term and National and World Heritage Site review process
8.2.2	Establish a comprehensive rock art resource library in the Park	Ignorance of research that has been done can lead to duplication and loss of information	<ul style="list-style-type: none"> ▪ Obtain copies of all relevant publications and reports on rock art in the Park. ▪ Keep an inventory of publications for easy reference. 	Before the end of 2009	SANParks, TFCA, Archaeologist	<ul style="list-style-type: none"> ▪ Check that publications are received and catalogued 	Budget annually Assess impact of research and publications every three years
8.2.3	Develop a rock art database management policy for access to sites and records in the MNP and TFCA	Some site data is confidential and should only be shared with legitimate researchers	<ul style="list-style-type: none"> ▪ Draft a database policy for researchers for access to sensitive site data from park GIS database in consultation with specialists at RARI.² ▪ Circulate draft for comment. ▪ Revise and confirm policy. 	Before the end of 2009	SANParks, SAHRA, TFCA, PC and RARI	<ul style="list-style-type: none"> ▪ Check delivery of policy 	Review policy every 3 years

² See objective 8.1.2 regarding the Park GIS database.

8.3 Manage the landscape setting: Key issues: Integrity and authenticity of natural features at sites and in the surrounding landscape; restoring and retaining views and vistas to preserve wilderness experience; development of protocols for private land owners; integration of rock art site management with wildlife and environmental management; procedures for management of disasters, fire and waste

	OBJECTIVES	THREATS OR RISKS	ACTION / MANAGEMENT MEASURES	TIME FRAME	RESPONSIBILITY	MONITORING CRITERIA	MONITORING FREQUENCY
8.3.1	Manage biodiversity and the natural environment to retain significance of rock art sites within the natural and cultural landscape	Lack of integrity and authenticity diminishes visitor experience and significance of sites	<ul style="list-style-type: none"> ▪ List significant structures, landscape features, views and vistas noted during surveys and condition reporting. ▪ Identify interventions if required to retain or restore significance and follow procedure outlined in 8.1.3. ▪ Budget and raise funds required. 	Before rock art sites are opened to the public	SANParks, TFCA, SAHRA, PC	<ul style="list-style-type: none"> ▪ Check that list is prepared ▪ Check that priorities are identified ▪ Check permit is obtained from SAHRA ▪ Check budget is appropriate 	Annually
8.3.2	Integrate rock art and environmental management to preserve the wilderness experience with a policy of minimal intervention	Insensitive intervention can destroy integrity and authenticity.	<ul style="list-style-type: none"> ▪ Develop a policy and procedure for interventions at rock art sites. ▪ Do as little as possible and as much as is necessary to retain the significance of sites. ▪ Ensure that interventions are reversible and that they are recorded in detail. ▪ Draw up specifications for materials that blend with the landscape for paths, steps, signage, boardwalks and on-site exhibits. ▪ Do not erect structures that require foundations in the vicinity of rock art sites. 	Before rock art sites are opened to the public	SANParks, TFCA, SAHRA, PC	<ul style="list-style-type: none"> ▪ Policy and procedure is developed. ▪ Methods and materials to be used are approved by SAHRA. ▪ Reports are received 	As required before, during and after interventions are made
8.3.3	Develop protocols and guidelines for private land	Owners of properties may not fully understand the need for	<ul style="list-style-type: none"> ▪ Arrange meetings collectively or individually with property owners to identify key issues and strategies ▪ Draft protocol, discuss and refine. 	Before end of 2010	SANParks, TFCA, Joint Management Committee and PC	<ul style="list-style-type: none"> ▪ Check that process has been planned and initiated 	Quarterly until protocol is agreed, and then Annually

	OBJECTIVES	THREATS OR RISKS	ACTION / MANAGEMENT MEASURES	TIME FRAME	RESPONSIBILITY	MONITORING CRITERIA	MONITORING FREQUENCY
	owners regarding rock art sites in TFCA	identification and conservation of rock art sites	<ul style="list-style-type: none"> ▪ Draw up Memorandum of Agreement (MOA) if required. ▪ Implement MOA and revise as necessary. 			<ul style="list-style-type: none"> ▪ Check park and owners are complying 	
8.3.4	Environmental and heritage impact assessments are done before any development or intervention takes place at or near a rock art site	<ul style="list-style-type: none"> ▪ Developments may be undertaken without consultation ▪ Lack of co-ordination with cultural resources management leads to misunderstandings 	<ul style="list-style-type: none"> ▪ Include this matter in the development of protocols and in contractual agreements with property owners. ▪ Integrate environmental and rock art conservation management. 	Ongoing	SANParks and PC, TFCA	<p>Check that property owners are complying with protocol and agreement</p> <p>Check that plans dovetail</p>	Annually
8.3.5	Develop disaster planning and fire management policies and guidelines for rock art sites	Lack of planning can add to damage caused by disasters	<ul style="list-style-type: none"> • Identify high risk areas such as rock art in proximity to thick vegetation and horizontal engraved surfaces vulnerable to flooding • Draw up remediation plans. • Implement remediation plans. 	By end of 2009	SANParks staff, TFCA, Archaeologist	Check that plans have been drawn up, reviewed, and implemented	Annually
8.3.6	Ensure efficient waste management in the vicinity of rock art sites	Litter detracts from significance of site	<ul style="list-style-type: none"> ▪ Warn all visitors against littering ▪ Remove all litter from the site 	Ongoing	SANParks staff	Check for litter and remove	Daily and weekly

8.4 Manage rock art interpretation, tourism and visitation: Key issues: Presentation of rock art sites to visitors as part of a pilgrimage and wilderness experience; signage; establish carrying capacity of each site and control access; access routes and paths; information nodes for visitors

	OBJECTIVES	THREATS OR RISKS	ACTION / MANAGEMENT MEASURES	TIME FRAME	RESPONSIBILITY	MONITORING CRITERIA	MONITORING FREQUENCY
8.4.1	World-class presentation of rock art to visitors in the MNP and TFCA	Lack of a common vision, poor integration of rock art with other cultural and natural resources, and incorrect information can lead to bad visitor experience	<ul style="list-style-type: none"> ▪ Workshop a common vision based on the World Heritage and national heritage nominations, rock art and other cultural heritage site surveys, natural heritage resources and tourism plan. ▪ Prepare and print generic information leaflets on rock art in the Park. ▪ Submit text to SAHRA to check printed information. ▪ Distribute information to organisations responsible for guide training. ▪ Train SANParks guides. ▪ Inform all SANParks staff, land owners, tourist guides and tour operators of the common vision. 	Before rock art sites are opened to the public	SANParks, TFCA, SAHRA, PC	<ul style="list-style-type: none"> ▪ Conduct workshop ▪ Check presentations by tourist guides ▪ Check content of publications and information boards ▪ Publish and distribute leaflets 	Quarterly
8.4.2	Stimulate a sense of pilgrimage and a wilderness experience for visitors	Guides and visitors may respond to different stimuli	<ul style="list-style-type: none"> ▪ Agree on the principles to be included in a pilgrimage and wilderness experience. ▪ Design several routes to meet the needs of the public. ▪ Recommend only guided visits to rock art sites. ▪ Make the concept known to all guides and tour operators. 	Before rock art sites are opened to the public	SANParks, TFCA, SAHRA, PC	<ul style="list-style-type: none"> ▪ Check process is being followed ▪ Check all relevant stakeholders are involved and informed 	Quarterly
8.4.3	Develop signage that has low visual impact to blend with the landscape and	Poorly worded or decaying signage detracts from visitor experience	<ul style="list-style-type: none"> ▪ Assess whether signage would be appropriate and desirable for the site; If so, design of information boards and displays to be done by a tourism expert in collaboration with SANParks and SAHRA. 	Before rock art sites are opened to the public	SANParks, TFCA, SAHRA, PC	<ul style="list-style-type: none"> ▪ Park Forum to approve materials ▪ SAHRA to approve wording 60 days before production 	Monthly

	OBJECTIVES	THREATS OR RISKS	ACTION / MANAGEMENT MEASURES	TIME FRAME	RESPONSIBILITY	MONITORING CRITERIA	MONITORING FREQUENCY
	offers accurate and interesting information		<ul style="list-style-type: none"> ▪ National Heritage Resources Act requires that SAHRA check the wording of all signage at national heritage sites ▪ Use low maintenance natural materials that blend with the environment. ▪ Place signage in unobtrusive places. ▪ Use wording that contributes to the common vision for the site. 				
8.4.4	Establish and maintain carrying capacity to retain the ambience of rock art sites in the MNP and TFCA	Over-use can lead to erosion, litter and loss of fabric and integrity	<ul style="list-style-type: none"> ▪ Set initial upper limits to number of vehicles per day, group numbers and the number of groups per month. ▪ Keep daily records of numbers of visitors to individual sites through entrance ticket or permit system. ▪ Rotate sites for visitation to lessen impact. ▪ Assess impact in annual review. ▪ Review limits annually. 	Before rock art sites are opened to the public	SANParks, TFCA, PC	<ul style="list-style-type: none"> ▪ Do not exceed limits ▪ Spot-check numbers ▪ Check paths, slopes, walling, artefacts and litter for change ▪ Review carrying capacity according to impact 	Monthly and annually
8.4.5	Control access to sites	Over-use will damage original fabric and <i>in situ</i> deposits	<ul style="list-style-type: none"> ▪ Limit size of visiting parties ▪ Design suitable access roads and paths; ensure that paths direct visitors so that they do not cause impacts to rock art or archaeological deposits. ▪ Inform guides and tour operators that visitors must stay on designated paths. ▪ Establish a path maintenance plan. ▪ Monitor paths after heavy rains ▪ Consider using boardwalks or stone floor coverings to protect deposits. ▪ Assess current provision of water, sanitation, and waste disposal near sites that will receive more than 1200 visitors a year and produce a report making any necessary recommendations. ▪ Obtain permits from SAHRA for all interventions. 	Before rock art sites are opened to the public	SANParks, TFCA, SAHRA	<ul style="list-style-type: none"> ▪ Check for signs of over-use such as damage to paintings, engravings, <i>in situ</i> deposits and graffiti and litter ▪ Check path surrounds for signs of non-compliance ▪ Check state of path surfaces. ▪ Implement recommendations in reports. 	Annually

	OBJECTIVES	THREATS OR RISKS	ACTION / MANAGEMENT MEASURES	TIME FRAME	RESPONSIBILITY	MONITORING CRITERIA	MONITORING FREQUENCY
8.4.6	Establish protocols regarding who is allowed to take visitors to sites and what charges will be made	Visitor numbers may not be properly recorded and controlled	<ul style="list-style-type: none"> ▪ Archaeologists and other contractors and specialists may only take visitors to sites with permission from the Park's Cultural Resources Manager. ▪ All visits and visitor numbers must be logged to indicate where they have been given permission to go. ▪ Fees or free access for specialist visits to be reviewed annually by Park Manager according to level of use. 	Before rock art sites are opened to the public	SANParks, TFCA, PC JMC	<ul style="list-style-type: none"> ▪ Spot checks on visitor groups ▪ Analyse information in Park Manager's log book 	Annually
8.4.7	Design suitable visitor information nodes and products	Visitors will not receive required information about rock	<ul style="list-style-type: none"> ▪ Grade rock art sites according to information needs and significance. ▪ Establish priorities and procedures for each grade. ▪ Design generic notice board and leaflet information for each grade. ▪ Focus most information at the visitor interpretation centre near the main gate. ▪ Where required, design on-site information boards and displays with low visual impact on the views and vistas. 	Before rock art sites are opened to the public	SANParks, TFCA, SAHRA, PC	<ul style="list-style-type: none"> ▪ Check that sites are graded ▪ Check that priorities and procedures are agreed ▪ Check that designs are appropriate ▪ Check that SAHRA has been consulted 	Quarterly
8.4.8	Establish emergency procedure for visitor accidents	Park may be liable for damages if emergency procedure is not in place.	<ul style="list-style-type: none"> ▪ Draw up written instructions for all tour leaders, specialists, contractors and other individuals and organisations responsible for visitor safety. ▪ Investigate indemnity forms, verbal warnings, signage and other forms of visitor safety information. ▪ Make all staff aware of emergency procedures by testing the system regularly. 	Before rock art sites are opened to the public	SANParks, JMC, PC	<ul style="list-style-type: none"> ▪ Check that all relevant people and organisations have copies of emergency procedure. ▪ Check warning signage regularly ▪ Practise procedure annually 	Annually
8.4.9	Provide activities for physically challenged	Inability of physically challenged to visit	<ul style="list-style-type: none"> ▪ Determine whether there is a rock art site that could be suitable to develop for visits by physically challenged persons. 		SANParks, JMC, PC	<ul style="list-style-type: none"> ▪ 	

	OBJECTIVES	THREATS OR RISKS	ACTION / MANAGEMENT MEASURES	TIME FRAME	RESPONSIBILITY	MONITORING CRITERIA	MONITORING FREQUENCY
	challenged visitors	sites	<ul style="list-style-type: none"> ▪ Install interactive rock art display at the interpretation centre based on laser scan of Kaoxa's Shelter and panoramic photographs. 				

8.5 Promote rock art conservation and appreciation for schools and local communities: Key Issues:

Comprehensive programme and infrastructure planning for large groups; appropriate educational materials to stimulate an awareness of rock art; involvement of local communities and land claimants

	OBJECTIVES	THREATS OR RISKS	ACTION / MANAGEMENT MEASURES	TIME FRAME	RESPONSIBILITY	MONITORING CRITERIA	MONITORING FREQUENCY
8.5.1	Develop information on rock art that is relevant to the school curriculum for distribution to educators and learners in the TFCA and to school groups who visit the MNP	Lack of information leads to disrespect and vandalism	<ul style="list-style-type: none"> • Identify needs of the target markets. • Link information sheets specifically to the school curriculum. • Provide relevant information for educators and learners in all local languages about the existence, meaning and conservation of rock art. • Visit schools in the TFCA to encourage them to visit the Park and the interpretation centre. • Arrange site visits only for groups with prior knowledge and only to sites with the capacity to take the relevant group size. 	Commence in 2010	Heritage Manager, Archaeologist or Contractor; TFCA	<ul style="list-style-type: none"> • Needs of target market are identified. • Information sheets for educators and learners are completed. • Translations are completed. • A list of schools visiting the interpretation centre to see rock art displays is kept. 	Annually

	OBJECTIVES	THREATS OR RISKS	ACTION / MANAGEMENT MEASURES	TIME FRAME	RESPONSIBILITY	MONITORING CRITERIA	MONITORING FREQUENCY
8.5.2	Develop a comprehensive programme for local communities to raise awareness about rock art in the TFCA, especially amongst land claimants	Communities and land claimants might not be aware of the existence and value of rock art.	<ul style="list-style-type: none"> • Develop an information programme on the significance of rock art in the MNP and TFCA. • Translate and print an information leaflet in all local languages. • Distribute leaflet at public meetings with local stakeholders and land claimants and explain its significance as a record of local history in the remote past. • Assist local communities in the TFCA outside the MNP to benefit from rock art tourism. 	Commence in 2010	Park Manager, Heritage Manager, Archaeologist or Contractor; TFCA	<ul style="list-style-type: none"> • Leaflet is written. • Translations are completed. • Leaflet is printed in all languages. • TFCA communities benefit from rock art tourism. 	Annually

APPENDICES

APPENDIX 1: ROCK ART SITES IN THE MNP AND TFCA

Reference number and Property	Site/shelter Name	No. of Engravings	No. of Herder (Khoekhoe) paintings	No. of hunter-gatherer (San) paintings
SOUTH AFRICA				
AR/1 Armenia	Tombo-la-Tholo	16		66
AR/2	Alfred's Rock			47
AR/3	Tholo Mbili			2
AR/4	Three Y			3
AR/5	Lookout	14		
AR/6	Jackal			3
AR/7	Battiss 1	10		46
AR/8	Battiss 2	15		5
AR/9	Battiss 3			10
AR/10	Giraffe and Apron	1		2
AR/11	Jambila			37
AR/12	Aardvark Rock	2		31
AR/13	Beehive	45		2
AT/1	Witte Vloed			7
AT/2 Athens		41	5	5
BL/1 Balerno	Apron	180		63
BL/2	Centre			2
BL/3	Warthog	3	1	44
BL/4	Petroglyph	37		
BL/5	Arch rock	18		2
BL/6	Slashmark	67		
BL/7	Schoonraad			68
BL/8	Rhinoceros	30		1
BL/9	Water Trough			2
BL/10	Gemsbok petroglyph	4		
BL/11	Cow		1	8
DS/1 Den Staat		9		2
DS/2		139		
DS/3	Den Staat Petroglyphs	6		
GW/1 Greefswald	Pager	1		7
GW/2	Elephant	12		4
GW/3	Venus			36
GW/4				1
GW/5	Eland			13
GW/6	Mongoose	50		44
GW/7	Symbols		10	13
GW/8	Clan	18		17
GW/9		19		
GW/10	Vantage	116		5
HK/1 Hackthorne		12		9
HK/2				32
HK/3				2
HK/4				9
HK/5			1	
LM/1 Little Muck	Boulder			19
LM/2	Thudwa	44		147
LM/3	Red Dune			81
LM/4	Kolope Hill		36	
MC/1 Machete	Kaoxa	32	9	173
MC/2	Mabala Boulder			3
MC/3	Machete Kop			7

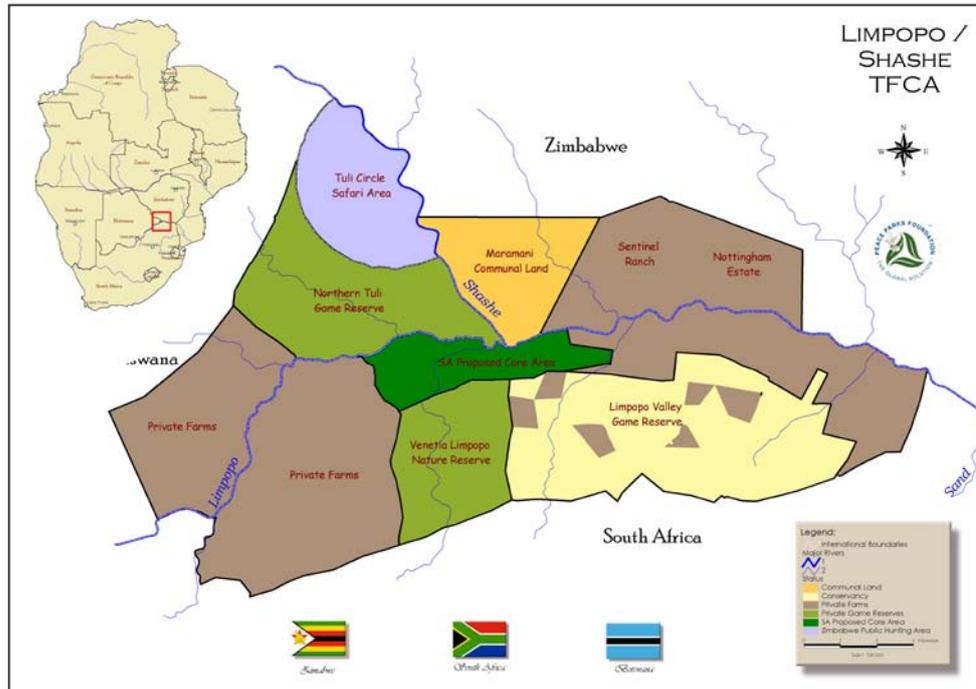
Generic Rock Art Management Plan for Mapungubwe National Park and World Heritage Site and TFCA, 2009-2014

Reference number and Property	Site/shelter Name	No. of Engravings	No. of Herder (Khoekhoe) paintings	No. of hunter-gatherer (San) paintings
MC/4	Machete Boulder			6
MD/1 Modena	Kaross	78	84	99
MD/2	Ngoma			138
MD/3	Giraffe Cave		3	13
MD/4	Antelope			1
MD/5	Dam			3
MD/6	Kopje	3		
MN/1 Mona	Zebra	1	1	5
MN/2	Apron Rock			1
MN/3	Sweetheart	3		4
MN/4	Antelope Rock			7
MN/5	Bird	66		1
MN/6	Early White			8
PA/1 Parma	Mulambo Boulder		220	10
PA/2	Tombo-la-Thudwa	20		19
PD/1 Pont Drift	Mussel	5		
PD/2	Tshisiku	16		1
PD/3	Poort	23		
PD/4	Two Rivers	15		
PD/5	Zebra			1
RD/1 Reidel	Main	13		86
RD/2				2
RD/3				23
SA/1 Samaria		16		15
SA/2		16		
SC/1 Schroda	River	25		22
SC/2	Beacon 1		48	
SC/3	Beacon 2		12	
SC/4	Beacon 3	83	107	
SC/5	Game Scout			19
SC/6	Amphitheatre	3		7
SC/7	Vhembe Road			21
SC/8	Boundary	7		
SC/9	Tampan Cave		2	
SC/10	Spur Boulders 1			6
SC/11	Spur Boulders 2			4
SC/12	Phoku			3
SC/13	Mosadi			8
SC/14	Y			5
SC/15	Giraffe & Zebra			9
SC/16	Shedo-ya-Musadzi			23
WL/1 Welton				4
WL/2	Tunnel	450	21	9
WL/3				1
WL/4				7
WL/5				5
WL/6				8
ZIMBABWE				
S/1	Mpato 1			116
S/2	Sizhi	47		28
S/3	Stockade		2 late whites	
S/4	Hui Hui I			17
S/5	Hui Hui II			1
S/6			1 late white	
S/7	Mandiego			12
S/8	Phimwa I Elephant Shelter	126		74
S/9	Sikomashini I			11
S/10	Sikomashini II			4
S/11	Sikomashini III			3
S/12	Tshobwane		18	74

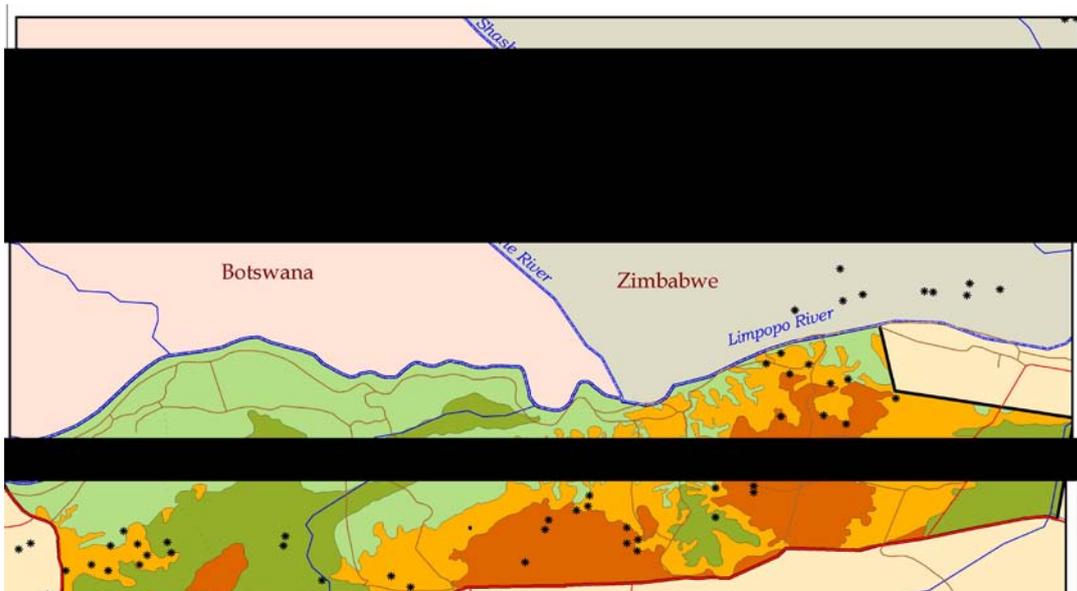
Generic Rock Art Management Plan for Mapungubwe National Park and World Heritage Site and TFCA, 2009-2014

Reference number and Property	Site/shelter Name	No. of Engravings	No. of Herder (Khoekhoe) paintings	No. of hunter-gatherer (San) paintings
S/13	Tswainne I Buffalo Shelter	153		45
S/14	Tswainne II			3
S/15	Tswainne III	6		9
S/16	Phimwa II			2
S/17	Tswainne IV Eland			5
S/18	Phai I	19		33
S/19	Phai II	+75		44
S/20	Mpato II			20
S/22	Tshianda Tsha Muthu			6
N/1	Homba Boulders I		11 late whites	18
N/2	Homba Bloulders II			2
N/3	Homba Hills	67		17
N/4	TDK			249
N/5	Giraffe Shelter			4
N/6	Nyamazan I Rhino Shelter			11
N/7	Nyamazan II	40		15
N/8	Nyamazan III			1
N/9	Baboon Shelter			4
N/10	White Rhino Shelter			5
N/11				2
N/12		17		4
N/13				2
N/14	Maze Shelter	24	12 late whites	21
N/15	Sable Shelter			17
BOTSWANA				
TB/1 – TB/18 Tuli Block	No details available			
MT/1-7 Motabaneng	Mothabaneng – no details available			

APPENDIX 2: MAPS



Map 1 Mapungubwe National Park and World Heritage Site (dark green) in relation to the buffer zone and Trans Frontier Conservation Area.



Map 2: Location of rock art sites in the Mapungubwe National Park and World Heritage Site and neighbouring properties. Note that not all sites listed in Appendix 1 are marked on this map as some are in close proximity to each other, and those in Botswana have not been added.

APPENDIX 3: STAKEHOLDERS CONSULTED 2005-2008

MAPUNGUBWE ROCK ART STAKEHOLDERS' MEETING, DONGOLA RANCH

31 AUGUST 2005

NAME	REPRESENTING	ADDRESS / CONTACT NUMBERS
D Lampert	Tourism	P O Box 1318 Musina
C Leach	Regional tourism	P O Box 143, Makhado
Warwick Mostert	Venetia De Beers	P O Box 192, Musina
Priscilla and Melonie Eva	Tourism	Eva Safaris, P O Box 1696, Musina, 0900
Morris Mabada	Limpopo Tourism and Parks	P O Box 331, Makhado
Prof Edwin Hanisch	University of Venda	Private Bag X5500, Thohoyandou
Dr Elbe Coetsee,	Mogalakwena Craft Aft Development Foundation	Mogalakwena River Lodge, elbe21@iafrica.com
Isabella Coetsee	Mogalakwena Craft Aft Development Foundation	Mogalakwena River Lodge, mogalakwena@mweb.co.za
Dieter Slabbert	Tourism	P O Box 86, Alldays

MAPUNGUBWE ROCK ART WORKSHOP PARTICIPANTS 2005

NAME	ADDRESS	PHONE/FAX	DETAILS
ADAMS Romeo 1	P O Box 726 Kakamas 8870	054 431 0945 w 054 431 0506 f 073 561 8719 h	Grade 11 Tourism Secretary Riemvasmaak Community Development Trust
BALOYI Moses 2	Mapungubwe National Park P O Box 383 Musina 0900	015 534 2014 w + f 072(?) 648 4278	Site guide Basic PC Skills Diploma
DAGADA	Gladstone	058 255 0941 w	Golden Gate

NAME	ADDRESS	PHONE/FAX	DETAILS
3 Samuel	Golden Gate Highlands National Park Private Bag X3 Clarens 9707	058 255 0022 f 084 861 1000 h ggstudents@sanparks.org	Environmental Education and Interpretation In- Service Trainee. Grade 12. Currently completing Diploma in Nature Conservation
4 DINGALO Sarah	P O Box 80302 Gaborone BOTSWANA	09267 355 5051 w 09267 355 5098 f 09267 7 213 9657 h smdingalo@yahoo.com.au	MA Univ Botswana; PhD candidate Univ Edinburgh; Lecturer Univ Botswana
5 DOESES Rianna Julieth	National Monuments Council Private Bag 12043 Aussanplatz Windhoek 9000 NAMIBIA	09264 61 24 4375 w 09264 61 24 6872 f 09264 81 285 2253 h 09264 81 141 0801	Site Supervisor Twyfelfontein and Petrified Forest Grade 12
6 DU PLESSIS Rika	P O Box 356 Clanwilliam 8135	027 482 2403 w 027 482 2406 f rika@xsinet.co.za	CWA Conserv Manager B Tech Nature Conservation
7 ENGELBRECHT Bianca	Mapungubwe National Park P O Box 383 Musina 0900	015 575 1370 w 015 534 2014 f stefancilliers@absamail.co.za	Field Ranger Nat. Dip. Tourism N. Dip. Nature Conservation (student)
8 HATTY Paul	Mopane Bush Lodge		
9 LISHIKO Billiard	NHCC Southwest P O Box 60124 Livingstone ZAMBIA	09260 3 32 3662 w 09260 3 32 3653 f 09260 97 61 9999 h blishiko@yahoo.com	Conservation Officer (Archaeology) MA Public and Visual History / Museums and Heritage Studies
10 LISHIKO Nandipa	Dept Sport, Arts & Culture 5 Eales St King Williamstown 5600	043 604 4086 w 043 642 2058 f 083 624 5715 nadan@email.com	Assistant Manager / Heritage Practitioner Grade 12
11 MADZHUTA Thanyani Daniel	P O Box 22 Skukuza 1350	013 735 4417 w 013 735 4121 f 072 470 5625 h Thanyanim@sanparks.org	Asst. Cultural Officer KNP BA Hons Cultural Heritage
MATLAPENG	Private Bag 007	09267	Museum Site

NAME	ADDRESS	PHONE/FAX	DETAILS
Geoffrey 12	Shakawe BOTSWANA	687 8025 W 71 69 5675 H 390 2797 F gimatlapeng@yahoo.com	Manager BA Archaeology Dipl Education
MOSTERT Warwick 13	Manager Venetia-Limpopo Nature Reserve		
MTHATHI Khasamula Howard 14	P O Box 1872 Musina 0900	015 534 2379 w 015 534 2014 f 083 974 2133 h howardm@limpopo.co.za	
NEHRUVHALENI Edgar 15	Cultural Resources SANParks Pretoria		
SETHLAKO Mpho Cedric 16	P O Box 1469 Musina 0900	015 534 2014 w + f 083 581 0153 h	Heritage Site Guide Travel & Tourism N4 Lemana College
STEENKAMP Henry 17	P O Box 117 Kamieskroon 8241	027 672 1948 w 027 672 1015 f 027 672 1985 h henrys@sanparks.org	Natural Resource Management Dipl. SANParks Environmental Educator
TALJAARD Sandra 18	Gladstone Golden Gate Highlands National Park Private Bag X3 Clarens 9707	058 255 0941 w 058 255 0022 f 058 255 0942 h sandrat@sanparks.org	Senior People and Conservation Officer BSc Zoology, Certificate in IKS, Certificate in Environmental Interpretation and Education
TLOUYAMMA Joseph 19	P O Box 1417 Senwabarwana 0790	082 425 8718	Grade 12 First Year BSC Volunteer in Makgabeng
TURNER Robin 20			
VAN DEVENTER Collette 21	Anysberg Nature Reserve PO Box 117 Ladismith 6655	023 551 1922 w ? 557 1922 ? 023 55 7 1924 h anysberg@mweb.co.za	Cape Nature Conservation Manager, Anysberg Reserve B Tech Saasveld
VAN LENTE Elanza	Mapungubwe National Park P O Box 383 Musina	015 534 2072 w 015 534 2014 f 015 533 1414 h elanzavl@sanparks.org	Tourism and Marketing Officer /Tour Guide THETA Specialist

NAME	ADDRESS	PHONE/FAX	DETAILS
22	0900	org	Guide; Dipl. Hotel Management
WINTJES Justine Marie 23	Amafa P O Box 2685 Pietermaritzburg 3200	033 394 6543 w 033 342 6097 f 031 261 7494 h 072 737 2867 c juwin@ananzi.co.za amafa.pmb@mweb.co.za	Senior Heritage Officer (Rock Art) MA Fine Art, and MA Archaeological Science

STAFF

NAME	ADDRESS	PHONE/FAX	DETAILS
AGNEW Neville 24	Getty Conservation Institute Los Angeles		
CROSSLAND Wayne 25	Mapungubwe National Park		
DEACON Janette 26	49 Van Riebeeck St Stellenbosch 7600	021 887 1540 (t+f) 082 491 5067 hjdeacon@iafrica.com	Course co- ordinator
SALAMON Andrew 27	Rock Art Research Institute Univ Witwatersrand P Bag 3 Wits 2050		Rock Art conservation
TARUVINGA Pascall 28	Museum of Human Sciences, National Museums and Monuments of Zimbabwe-NMMZ, BOX CY 33 Causeway Harare, Zimbabwe	Tel: +263-4751797/8 or +263-4- 752876/774208 Fax: +263-4- 753085 or +263-4-774207 Mobile: +263-91-206 637 natmus@utande.co.zw nmmz@mweb.co.zw tpascall@hotmail.com	Rock art conservation, Head of Archaeology and Monuments Department, NMMZ Zimbabwe
VAN LENTE Bernard 29	Manager Mapungubwe National Park		BSc Hons Wildlife Management Univ Port Elizabeth
VERHOEF Johan 30	SANParks Pretoria		Natural and Cultural Resources

MAPUNGUBWE STAKEHOLDER MEETING

ROCK ART QUESTIONNAIRE

31 AUGUST 2005

PERSONAL	COMMENT
Who do you represent?	
What expectations do you have from this workshop?	
Have you ever visited any of the rock art sites in Mapungubwe? Which site was it and what can you remember from the visit?	
What importance does the rock art of MNP have for you? Would you like to be exposed to, or involved in, the conservation and promotion of rock art in the MNP?	
How do you think they might be important / significant to others?	
Do you think rock art sites should be opened to the public in the MNP? If so, to whom should they be accessible? How?	
Do you think you could benefit from this?	
Any other issues that need to be addressed?	
ROCK ART AND ACCESS	
Will opening to the public affect the authenticity/ambience of the rock art site through signage, paths, boardwalks, etc.?	
Is it important to interpret the history of the hunter-gatherers at Mapungubwe? If so, can it be done only through the rock art sites?	
How in your opinion can damage through vandalism be avoided at rock art sites?	
How can we stop visitors from removing artefacts from rock art and other archaeological sites?	
Do you know about any spiritual or medicinal importance attached to the rock art sites of the area?	
Who should speak for the hunter-gatherer/San people at Mapungubwe?	
What are the critical issues you can identify with regard to preservation and interpretation of the rock art at Mapungubwe	
TOURISM	
SANParks is breaking new ground by promoting cultural tourism in the MNPark. What level of interest might there be amongst tourists for the Mapungubwe history and rock art – needed for marketing. Especially necessary with TFCA – culture, wildlife and living culture	
What negative or positive conservation impacts,	

either human or natural, have you seen at rock art sites after they were opened to the public?	
When planning rock art tours, would you recommend Guided or unguided tours; long or short walks; non-4x4 roads; circular routes; signage at rock art sites; fees to visit rock art sites; long or short tours; large, medium or small groups; board walks or stone paving.	
Should honorary rangers be involved in tour guiding?	
Should outside guides be allowed to operate in the Park after training and registration? Would they be able to do visitor control? How can the Park control the quality of information that they give?	
Should a rock art tour be included in the gate fee to encourage awareness of this aspect of the prehistory of the Park?	
Can rock art be combined with existing routes, or does it need to be for specialist tour groups?	
What in your experience are common expectations of visitors to rock art sites?	
Planning of the interpretive centre is proceeding and displays will follow a story line within a fully integrated landscape approach. Can you suggest how rock art can be included in the interpretive centre?	
Is there a need for supportive publications at different levels of detail from site-specific brochures to regional history?	
What time might be allocated to the centre by tour groups? Heat can be a factor in summer and might encourage visitors to spend more time in the centre than in the winter.	
MANAGEMENT	
How would you like to be involved in the management of rock art sites? What role do you see yourself playing? Are there any specific ways in which you would like to be involved, e.g. risk management, site monitoring etc?	
How can we coordinate the information on rock art that is put out to the public and to schools?	
Is there a need for a rock art awareness campaign in the Limpopo Valley area – what is the role of the Park?	

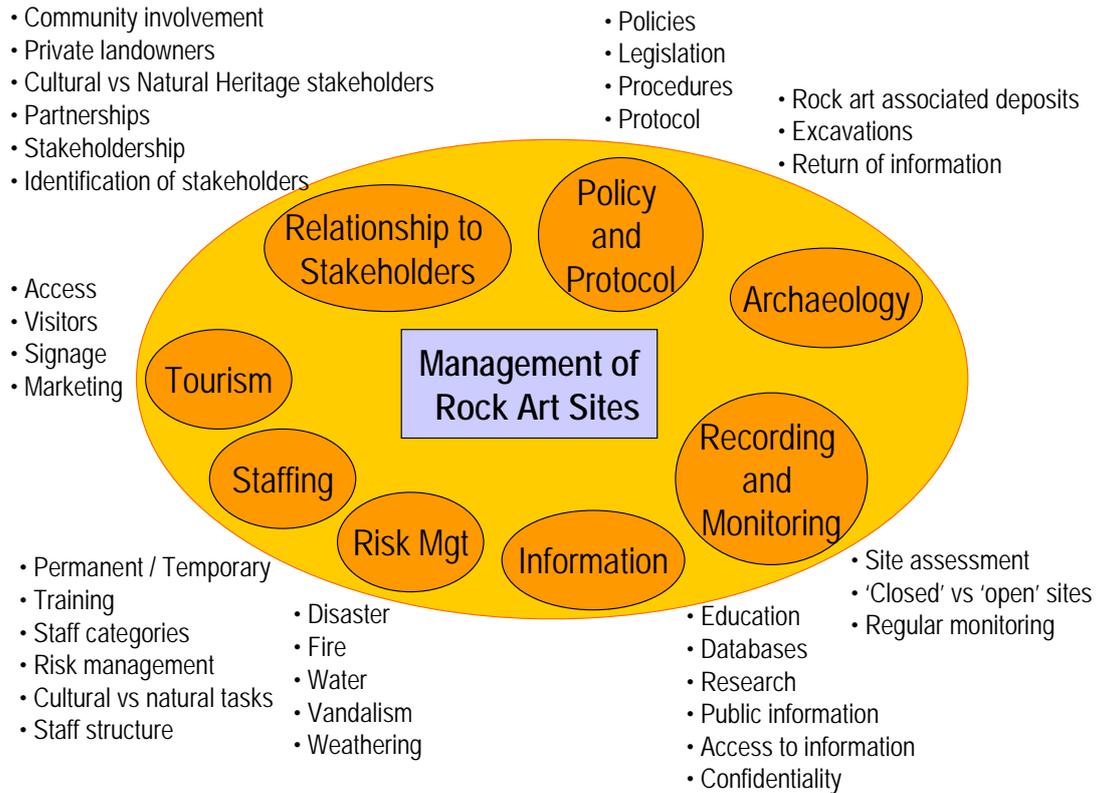


Diagram identifying issues for the management of rock art sites developed by participants and stakeholders at the Mapungubwe stakeholder meeting in 2005.

ANNEXURE

DE BOUWES
VENGTIA LIMPOPO
NATIONAL MUSEUMS

**MAPUNGUBWE STAKEHOLDER MEETING ROCK ART QUESTIONNAIRE
31 AUGUST 2005**

PERSONAL	
Who do you represent?	WILDEWICK SERVICES - MUSEUMS
What expectations do you have from this workshop?	DE BOUWES VENGTIA LIMPOPO NATIONAL MUSEUMS INFORMATION, MANAGING SITES MORE ACCESSIBLE TO TOURISTS, MANAGEMENT PATNS DE.
Have you ever visited any of the rock art sites in Mapungubwe? Which site was it and what can you remember from the visit?	SCHRODA SITES & VARIOUS SITES IN AND AROUND MAPUNGUBWE
What importance does the rock art of MNP have for you? Would you like to be exposed to, or involved in, the conservation and promotion of rock art in the MNP?	EDUCATIONAL SIGNIFICANT & HUGE IMPLICATIONS FOR SUSTAINABILITY IN TOURISM & BIO DIVERSITY MARKET.
How do you think they might be important / significant to others?	PROVIDE INFO, SET THE STANDARD
Do you think rock art sites should be opened to the public in the MNP? If so, to whom should they be accessible? How?	STRICT CONTROL, GUIDED ACCESS ONLY, LOCAL ROCK-ART GUIDES TRAINED
Do you think you could benefit from this?	VERY POSITIVE
Any other issues that need to be addressed?	TRAINING & SKILLS ACQUISITION OF GUIDES, INFRASTRUCTURE

**MAPUNGUBWE STAKEHOLDER MEETING ROCK ART QUESTIONNAIRE
31 AUGUST 2005**

MANAGEMENT	
How would you like to be involved in the management of rock art sites? What role do you see yourself playing? Are there any specific ways in which you would like to be involved, e.g. risk management, site monitoring etc?	WE MUST STRIVE TO NOT ONLY PRESERVE OUR ROCK-ART BUT MAKE IT MORE ACCESSIBLE - INFORMATION IS VITAL. NO ROLES SHOULD CONTINUE TO BE INVOLVED
How can we coordinate the information on rock art that is put out to the public and to schools?	SUBMIT THROUGH OUR BOO IF POSSIBLE.
Is there a need for a rock art awareness campaign in the Limpopo Valley area - what is the role of the Park?	MAKE IT AVAILABLE TO TOURISM OPERATORS - LET THEM INCLUDE THE PROMOTION THROUGH INTEGRATED LOCAL & OVERSEAS TOURISM.
	THE PARK IS TRUSTED TO MANAGE & SHOULD BE INVOLVED IN THIS PROCESS.

THOSE PEOPLE

Suggestions made by stakeholders at the meeting in August 2005

MAPUNGUBWE ROCK ART TOURIST GUIDING COURSE

STAKEHOLDERS MEETING 24 AUGUST 2006

Members of the Park Committee, Staff of the Mapungubwe National Park, Municipal and Provincial officials, and owners of lodges adjacent to the Park were invited to attend a stakeholders meeting at Tshugulu Lodge on 24 August 2006. The meeting was held as part of the Rock Art Tourist Guiding Course arranged by the South African Rock Art Initiative, a program of the Getty Conservation Institute. The purpose was to make stakeholder groups aware of the potential for responsible rock art tourism in the area, to inform them of the aims and objectives of the Getty program and to raise awareness amongst the course participants of the important role that stakeholders play in establishing sustainable tourism initiatives.

Invitations were e-mailed by the Cultural Resources Manager at the Park, Ms Paballo Mohafa, to stakeholders on a list of about 35 people regularly contacted by the Park for such meetings. Nine stakeholders attended (see list attached). The Park Manager, Mr Tshimangadzo Israel Nemaheni did not attend and there was a generally disappointing turnout of Park staff. The 20 course participants, three staff members and three representatives from the GCI collectively represented Tanzania, Mozambique, Zimbabwe, Botswana, South Africa and the USA.

The meeting began with a short introduction by the co-ordinator of the course, Dr Janette Deacon, and a presentation by Dr Neville Agnew who explained the role of the GCI and its strategy for training those responsible for the conservation and management of rock art sites in World Heritage sites in the southern African region. This was followed by an illustrated talk on the significance of rock art sites in Africa with a summary of the places on the World Heritage List in Libya, Algeria, Niger, Tanzania, Malawi, Botswana, Zimbabwe and South Africa.

In the discussion that ensued, the following issues were raised with respect to rock art in the Mapungubwe National Park:

- Rock paintings are deteriorating
- Graffiti are a potential threat
- Many sites have white salt encrustations that damage the rock art
- Rain-making sites used by the San more than 1000 years ago were subsequently used by Iron Age people
- The University of Venda plans to start a program to monitor all archaeological sites in the Limpopo Province and could play a role in monitoring rock art sites in the Park
- The performance of rituals in rock art sites can lead to damage of the art when samples of the paint are removed for medicinal purposes
- Re-painting of ancient art sites is not encouraged
- Physically challenged people are currently unable to visit rock art sites
- Several properties in the Park have not yet been surveyed for rock art and other cultural heritage sites and they should be identified and prioritized
- The University of Zimbabwe is already planning a systematic survey in the area across the border that will form part of the Trans-Frontier Conservation Area that is in the process of development between South Africa, Botswana and Zimbabwe.

- There is great potential for rock art tourism in the Park and in the neighbouring properties in South Africa, Zimbabwe and Botswana.
- Lodge owners in the vicinity of the Park need an agreement with the Park that will facilitate access for their trained guides to take visitors to rock art sites in the Park.
- Strategies and procedures for the protection of rock art sites in areas such as the Magabeng and Soutpansberg to the south of the Park are also required.
- Minimum standards for the opening of rock art sites to the public are available from the South African Heritage Resources Agency (SAHRA).
- Local custodians could be appointed to monitor rock art sites outside the Park.
- Indigenous names for individual rock art sites are recommended.
- Access to sites within the Park should be regulated by the Park.
- A partnership between the Park and neighbouring tourist lodges and trained guides is a priority.

The stakeholders and course participants were then divided into three discussion groups to address Conservation, Tourism Management and Socio-Economic issues.

GAPS IN SURVEY AND DATABASE

ISSUE	OBJECTIVE	ACTIONS
The survey of rock art sites in the MNP is incomplete	Survey the properties that have not been surveyed before	Nominate an appropriate institution to undertake the survey
Potential for rock art tourism	Develop a management plan for tourism and marketing with local stakeholders	Market collectively with public-private partnership that ensures access for all partners
		Appoint staff to meet the demand and source funding if necessary
Meet the needs of physically challenged people	Develop one rock art site for physically challenged visitors	Liaise with appropriate organizations to identify what is needed and install a design to suit potential visitors

MANAGEMENT

ISSUE	OBJECTIVE	ACTIONS
Presentation and interpretation of sites	Develop site specific management plans for all sites open to the public	Implement site management plans and regular monitoring
		Allow visits with accredited guides only
Access policy	Develop an access policy for the Park	Guide training and capacity-building of staff
		Monitor sites regularly
		Implement legislation

CONSERVATION

ISSUE	OBJECTIVE	ACTIONS
Deterioration of rock paintings	Determine the causes of weathering	Do a local and environmental condition assessment
		Determine the carrying capacity of sites
		Develop a monitoring system
		Use suitable preventative measures
Vandalism	Identify types and frequency	Limit and control access to sites
		Public education and law enforcement
Access to sites for ritual purposes	Identify potential sites at risk	Initiate open dialogue with group/s wishing to use sites
		Education programme for all concerned to reach consensus
		All visitors must be accompanied by a trained guide

In summarizing the results of the meeting, it was agreed that stakeholders should be given a forum to articulate their needs so that constructive solutions can be found.

FEEDBACK FROM COURSE PARTICIPANTS

The day after the meeting, course participants discussed the outcomes and offered the following opinions and insights:

- Park management should engage with the wider community around the Park so that all residents are included, not only property owners.
- Partnerships and contracts for general and specific rock art management issues should be considered.
- A larger stakeholder meeting should be convened to develop a common vision for rock art tourism in the area.
- More commitment from the Vhembe and Musina Municipalities is required to develop a sense of ownership of the Park and what it has to offer. Residents elect Council members and should therefore have some leverage to improve the situation and ensure that the municipalities are represented at meetings.
- Stakeholders do not fully appreciate the values of the Park and the extent to which SANParks decisions will affect them.
- People and Conservation officers in SANParks are responsible for stakeholder co-ordination and should be given encouragement to deliver on their mandate.
- Questionnaires might be useful to test the levels of confidence in the Park and its activities and to measure success in implementation.
- The vision of SANParks needs to be fully implemented and integrated in regional planning with local government and business.
- Staff shortages in the Park are a major problem.

- Representatives from business, community and the Park could be invited to work in each other's jobs for a week to fully understand the challenges and build confidence in the tourism industry.

LIST OF MAPUNGUBWE STAKEHOLDERS ATTENDING THE MEETING ON 24 AUGUST 2006

NAME	ORGANISATION	E-MAIL	TEL.	CELL
Warwick DAVIES-MOSTERT	De Beers, Venetia	Warwick.mostert@debeersgroup.com	015 534 2986	083 235 2849
J M Gottfreid DEDEREN	University of Venda	dederenJ@univen.ac.za		083 376 3429
Rosemary HATTY	Mopane Bush Lodge	mopanebushlodge@limpopo.co.za		083 244 9200
Jethro MOYO	Mopane Bush Lodge	mopanebushlodge@limpopo.co.za		083 244 9200
Josephinah MALULEKE	Mapungubwe National Park	josephinahm@sanparks.org	015 534 2072	083 841 9228
Victor NETSHIAVHA	SAHRA Limpopo			
Norman MUDAU	Mapungubwe National Park	normanm@sanparks.org	015 534 2014	083 627 1482
Gerhard DE BEER	Balerno Bgush Lodge		015 575 1074	072 744 5212
Edwin HANISCH	University of Venda	hanische@univen.ac.za		

PARTICIPANTS IN THE ROCK ART TOURIST GUIDING COURSE, MAPUNGUBWE NATIONAL PARK

11 August-1 September 2006

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NAME	ADDRESS	TEL/FAX/EMAIL	DETAILS
			Guiding
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MADZHUTA Thanyani	Kruger NP Box 22 Skukuza 1350	t. 013 735 4191 f. 013 735 4121 082 806 8826 thanyanim@sanparks.org	Cultural Heritage Officer BA in Heritage and Anthropology
MAPAZO Lesiba Charles	Marakele National Park P O Box 800 Thabazimbi 0380	t. 014 777 1745 f. 014 777 1866 076 671 3161 mutobvun@sanparks.org	Field Ranger. Grade 12 NQF Level 2 Drum Beat Tourist Guide. NQF Level 4 Waterberg Guided Walks
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MNIKATHI Sicelo Raphael	Kamberg Rock Art Centre P O Box 2685 Pietermaritzburg 3200	t. 033 394 6521 f. 033 342 6097 amafa.pmb@mweb.co.za	Manager Kamberg Rock Art Centre. Business Computing Diploma. Amafa Cultural & Natural Heritage Conservation and site

NAME	ADDRESS	TEL/FAX/EMAIL	DETAILS
			guiding
MOHAFA Paballo	Mapungubwe NP P O Box 383 Musina 0900	t. 015 534 2072 f. 015 534 2014 072 941 5341 paballom@sanparks.org	Cultural Heritage Manager. BA Heritage & Cultural Sciences and Tourism (Registered for Hons.) Basic tourist guiding
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NEMERAI James	Great Zimbabwe National Monument P O Box 1060 Masvingo ZIMBABWE	t. 09263 39 262 080 h 09263 39 252 653 f 09263 4 753 085 natmus@utande.co.zw	Senior Heritage Education Officer (Research & Development). MSc in Tourism & Hospitality Management
OTTO Herbert	P O Box 1763 Hoedspruit 1380	t. 015 795 5068 f. 015 795 5068 072 310 2492 herbertotto@hotmail.com	Tour guide in training. Former teacher. BSc and Teaching Diploma
RAMHAGO Ronald	Botswana National Museum P O Box 23 Manyana Gaborone BOTSWANA	t. 09267 397 4616 f. 09267 390 2797	Field Guide and Site Custodian. Cambridge Overseas School Certificate. Conservation Management Workshop 2002
ROSSOUW Celeste	Amafa P O Box 2685 Pietermaritzburg 3200	t. 033 394 6521 f. 033 342 6097 h. 033 396 9682 amafa.pmb@mweb.co.za	Senior Rock Art Officer. BA Hons Archaeology, Post-Grad

Generic Rock Art Management Plan for Mapungubwe National Park and World Heritage Site and TFCA, 2009-2014

NAME	ADDRESS	TEL/FAX/EMAIL	DETAILS
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SELAMOLELA Richard Matome	De Beers Venetia Limpopo Nature Reserve P O Box 192 Musina 0900	t. 015 534 2986 f. 015 534 0971 warwick.mostert@debeersgroup.com	Game Scout. Grade 12 Studying for Nature Conservation Diploma (UNISA)
SETHLAKO Cedric Mpho	Mapungubwe NP P O Box 383 Musina 0900	t. 015 534 2014 f. 015 534 2014 082 707 5187 guide2-mapnp@sanparks.org	Nature & Cultural Guide. National Diploma in Tourism - Level 2 - Nature & Cultural Guiding
TLOUAMMA Jonas			

**PARTICIPANTS IN THE WORKSHOP ON
ROCK ART MANAGEMENT PLANS**
Mapungubwe National Park and World Heritage Site
18 August – 4 September 2008

NAME	ADDRESS	PHONE AND EMAIL	POSITION AND QUALIFICATIONS
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Paballo MOHAFA	Mapungubwe National Park P O Box 383 Musina 0900	015 534 2014 (w) 072 941 5341 paballom@sanparks.org	Cultural Heritage Manager; BA and Post- Graduate Diploma: Heritage and Museum Sciences
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			Culture and Nature Guiding Certificates
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Robert SICHONE	National Heritage Conservation Commission P O Box 410339 Kasama ZAMBIA	+260 4 221 221 (w) +260 97 848 6901 bobsichone@yahoo.co.uk	Conservation Assistant Mwela Rock Art; Post-Graduate Diploma in Museum and Heritage Studies
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STAFF

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**STAKEHOLDERS IN TFCA CONSULTED DURING
ROCK ART MANAGEMENT PLAN WORKSHOP AT
MAPUNGUBWE NATIONAL PARK AND
WORLD HERITAGE SITE
18 August - 4 September 2008**

At Mothabaneng, Botswana, 22 August 2008

Shane Pinchen, Tuli Block
Two village Councillors at Mothabaneng
Two village chiefs at Mothabaneng kgotla

At Sentinel Ranch, Zimbabwe, 23 August 2008

Vanessa Bristow
Digby Bristow

Mr Pinchen manages one of five lodges in the Tuli Block, the land in Botswana that has been identified for inclusion in the TFCA. Because of time constraints, we were able to visit only two rock art sites near the village but took the opportunity to record them. Although neither of the sites will fall within the TFCA, it was clear that the rock painting tradition is very similar to that across the border in the MNP. After Mr Pinchen left us, we talked with two of the village Councillors and two Chiefs at the Kgotla. They confirmed that they were aware of plans for the TFCA and had no objections to the proposal. They were not knowledgeable about rock paintings, but were keen to learn their significance and meaning. About 60% of the inhabitants of Mothabaneng work directly or indirectly at lodges in the Tuli Block and the lodges contribute to the village schools and services. The main issue that was raised during these discussions was the desire to learn more about rock art so that villagers could benefit directly from any tourism initiatives involving rock art sites on their doorstep.

A visit to Sentinel Ranch in Zimbabwe took place on 23 August. Unfortunately, most of the day was spent negotiating emigration and immigration queues at the very busy border posts, but we had three hours with our hosts, Vanessa and Digby Bristow, and with two of their neighbours who kindly answered questions and took us to a rock art site on their property that included unusual paintings of kingfishers and fish with green paint made from copper oxide. They currently take fewer than 100 visitors a year to several rock art sites in the vicinity. It was their opinion that local communities were not interested in rock art and seldom visit the sites, but they were cautiously optimistic about the establishment of a TFCA.

In general, the impression we received was that tourism potential for rock art in the TFCA is high, but is not yet fully exploited. If it is to be used, local communities would like to be directly involved so that they can receive benefits. The perceived values are therefore economic rather than spiritual, aesthetic, scientific or historical.

APPENDIX 4: SAHRA MINIMUM STANDARDS

SAHRA MINIMUM STANDARDS FOR ARCHAEOLOGICAL SITE MUSEUMS AND ROCK ART SITES OPEN TO THE PUBLIC

The archaeological heritage of South Africa is unique and it is non-renewable. Archaeological sites, including those with rock paintings or rock engravings, are especially vulnerable to damage caused by visitors. All such sites are protected by the National Heritage Resources Act (Act No. 25 of 1999). Anyone opening a site to the public, either as a formal site museum or simply as a place of interest, must take basic precautions to ensure the safety of the site and its contents.

Expert advice should be sought from the South African Heritage Resources Agency (SAHRA) or other heritage resources agency and/or from one of the museums or university departments listed below. Interventions should be reversible and the integrity of the site should be maintained as far as possible. No site should be opened to the public without a prior professional investigation that includes a conservation management plan approved by the appropriate heritage agency and, for rock art sites, complete documentation in case of later damage.

You are requested to notify SAHRA or, in KwaZulu Natal, AMAFA, of sites open to the public so that the site may be listed on a national database. Remember that a permit is required for ANY disturbance at an archaeological site and this includes erecting noticeboards, boardwalks, fences, etc. Liaison with the local publicity office and regional services council is recommended.

THE FOLLOWING MINIMUM STANDARDS MUST FORM PART OF THE MANAGEMENT PLAN:

- 1. Notify SAHRA (or AMAFA) of intention to open site**
- 2. Engage a professional with specialist knowledge to document the site, draw up a conservation management plan and advise on interpretation of the site.**
- 3. Approach to the Site**
 - 3.1 *Arrangements for visiting*
 - * if the site is open at all times, there should be adequate signposting;
 - * if the site is kept locked, there should be clear arrangements for the collection and return of a key;
 - * if it is open only by appointment, there should be a specialist guide or a specially trained local guide who has had clear instructions on what to do and say.

3.2 *Provision for vehicles*

- * there should be an adequate and well-maintained road, preferably paved to limit dust, with off-road parking;
- * the parking should not encroach on the site: vehicles should not park closer than about 100 m from the edge of the site;
- * the parking area should be marked by a barrier between it and the start of the path.

3.3 *Facilities*

- * there should be a litter bin at the parking lot and it should be emptied regularly;
- * consider the need for toilets and the supply of refreshments and other facilities such as a shop, public telephone, rest room, etc., depending on the number of visitors expected;
- * consider the need to establish an interpretive centre *separate* from the site, where people can see displays and where you may be able to store material, provide accommodation, etc. Remember that a permit from SAHRA is required to collect any archaeological material and so displays are best done in collaboration with a professional or institution.

3.4 *Design of the path*

- * make sure that the path to the site is distinct;
- * the path should follow the contours to avoid unnecessary erosion of any hill slope;
- * make sure there are discreet signs to indicate direction where the path crosses a rocky area;
- * the path should not enter the site at a position where the deposits or the rock art can be damaged;
- * the introductory notice board should be displayed at the end of the path and the beginning of the site, where it will not interfere with good photographic views.

4. **Provision of Information**

- * at least an introductory notice board explaining that the site is protected by law;
- * where appropriate, a display with more detailed information on what can be seen at the site and what it means;
- * a visitors' book in a container to protect it from the weather, or at the farmhouse or other convenient place (copies of these can be sent to SAHRA for record purposes);
- * a leaflet or pamphlet explaining visitor etiquette.
- * an explanatory leaflet or pamphlet that is specific to the site.

5. **Guides**

- * specialist guides or specially trained local guides ensure that the meaning of the rock art or, in the case of archaeological sites, the story of the people who used the site is interpreted and so enhance the experience for the visitor. They also teach appropriate visitor etiquette and contribute to the safety of the site.

6 **Protection of the Site**

- * measures used to protect archaeological deposits should be effective, reversible and recognisable, yet harmonious. It is important that visitors appreciate that the site is being well looked after, so it should be clean

and as natural as possible. Remember that a permit is required for any disturbance or intervention at a site.

7. Protection of the Art

- * a psychological or physical barrier should be set up between the visitor and the rock art, or display area, in the form of anything from a low wooden railing to a fence that encloses the entire site, depending on the vulnerability of the site or precautions necessary for the safety of the visitor;
- * boardwalks are recommended and may include railings. They must be of treated wood or non-flammable material,
- * every effort should be made to remove graffiti from the site, as it attracts more graffiti. A permit is required to remove graffiti at a rock art site.

8. Protection of the Surface and Deposits

- * an effective cover should be put on the floor of the site to prevent dust being kicked up and damaging rock art and to stop people picking up material on the surface. Cover can be provided by a boardwalk, geotextile, or medium to large slabs of natural rock from the surrounds of the site.
- * excavated sections should be backfilled, in consultation with SAHRA

9. Regular Maintenance

- * arrangements should be made with the appropriate heritage agency or museum for a monitoring programme.
- * provision should be made for regular visits to the site by the manager or property owner to check on litter, damage, graffiti, etc., which should be reported to the heritage agency.
- * there should be regular monitoring of vegetation around the site so that, if necessary:
 - o measures can be taken to protect it against trampling,
 - o potentially dangerous plants such as those with thorns can be controlled,
 - o dead wood can be removed so that damage by veld fires can be avoided,
 - o firebreaks can be maintained.

10. The following should be avoided:

- * a litter bin on site should be avoided unless very large groups are catered for;
- * braai or picnic places should not be situated on the site or right next to it;
- * camping places should not be placed within 500 m (or preferably 1 km) of an archaeological site;
- * plastic sheeting or plastic bags protecting archaeological excavations should not be exposed to view unless there is no other option;
- * concrete barriers or surfaces should be avoided;
- * metal poles or wire must not be placed in contact with rock shelter or cave walls as they rust and stain the rock;
- * a sandy surface on the outer side of a fence should be avoided as this will be eroded by people walking there and the fence will be under-cut.

For further information apply to:

The Archaeologist, Heritage Western Cape, Private Bag X9067, Cape Town, 8000
Tel. 021 483 9687 Fax 021 483 9842; e-mail ajerardi@pgwc.gov.za

The Archaeologist, South African Heritage Resources Agency, PO Box 4637, Cape Town 8000,
Tel 021 462 4502; Fax: 021 462 4509; e-mail mleslie@sahra.org.za

Rock Art Officer, Amafa, P O Box 2685, Pietermaritzburg, 3200
Tel: 033 394 6543, Fax 033 342 6097; e-mail amafa.pmb@mweb.co.za

Archaeology Department, University of Cape Town
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Rock Art Research Institute, University of the Witwatersrand, Johannesburg
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APPENDIX 5: BASELINE RECORDING FORMS

**MAPUNGUBWE NATIONAL PARK AND
WORLD HERITAGE SITE**

**Getty Conservation Institute Assessment
Report**

**SYSTEM FOR BASELINE RECORDING AND CONDITION MONITORING OF
ROCK ART SITES WITH:**

- Baseline Recording Form for Rock Art Site Condition Monitoring, and
- Condition Monitoring Form for Rock Art Sites

Developed by David Myers and Trinidad Rico, 2006.

MAPUNGUBWE NATIONAL PARK AND WORLD HERITAGE SITE SYSTEM FOR BASELINE RECORDING AND CONDITION MONITORING OF ROCK ART SITES

Introduction

This document explains a system for baseline recording and ongoing condition monitoring for rock art sites within Mapungubwe National Park and World Heritage Sites. The purpose of monitoring within this system is to measure change in the condition of rock art sites. It requires the repeated collection of specific and standardized information about rock art sites over time and analyzing the results to detect the changes that are occurring. The system should be carried out following a schedule that prioritizes sites based upon their relative significance and vulnerability. For example, a highly significant site that is open to visitation and thus is vulnerable to visitor impact should be monitored more frequently than a site of moderate significance that is located in an isolated area. Gathering this data aids in the recognition of recurrent problems or vulnerabilities. The problem areas, once identified, can be monitored more intensively and, where appropriate, management interventions taken.

The base-line visit or survey involves the collection of detailed information. If detailed records already exist for particular sites, base-line recording provides a snapshot of the current condition of the site to use as a basis for future comparison. Important tasks of the baseline survey include providing an idea about the vulnerability of the site and creating appropriate photopoints. This system utilizes to the greatest extent possible a standard terminology for recording condition and vulnerability. An additional important product of the baseline visit is a suggested timeframe for regular monitoring visits, subject to review after each visit.

The baseline recording and ongoing monitoring system uses comparison of photographs as the primary basis for observing changes in conditions over time. As mentioned above, the system incorporates the establishment of photo points as a key feature. A photo point is a camera position where photos of rock art can be taken for comparison over time. Without comparing photos over time, one does not know how much the condition of rock art has changed in recent history or will continue to change. Photographs should also be taken at a relatively high resolution to insure that they may meet monitoring needs. It is recommended that digital photos have a minimum resolution of 300 pixels per inch.

Two forms and a brief guide to their use follow. The “Baseline Recording Form for Rock Art Site Condition Monitoring” is intended for the collection of detailed site information on the first site visit. The second form is the “Monitoring Form for Rock Art Sites,” which is intended for followup monitoring visits according to a specified schedule.

Instructions

Baseline Recording Form for Rock Art Site Condition Monitoring

Use the baseline form for the first visit to the site for a detailed site description, including condition information. Photopoints will be established for the base-line form, and photographs will be taken from these same points as part of the scheduled periodical monitoring visits to enable visual comparison of the surfaces over time and keep a record of these. Refer to "Photopoints" below. Further to this, some information on the base-line form may require research into the history and uses of a site. The baseline form includes a "Photo Log" to record all relevant photographic information as well as a "Monitoring Report Log" to summarize monitoring activities at a particular site.

Monitoring Form for Rock Art Sites

Use monitoring form for each followup visit to record site conditions. Make sure to take the base-line form and previous monitoring forms and photographs to the site in order to compare any observed damage against previously documented conditions. Refer to 'Site Kit' below. The monitoring form also includes a "Photo Log."

Photopoints

It is important to make sure that sufficient photopoints are taken to cover all features of each panel or rock outcrop. To set up Photopoints, on the first site visit, use the base-line PHOTO LOG form to record information regarding the equipment used and information that helps re-locate this same photopoint. It may not be possible to physically mark the location of photopoints on the surface of the site, so photopoints should be indicated on the site sketch plan as accurately as possible, using any surrounding reference points. Together with the information on the PHOTO LOG, this is key to making sure that the same photo frame is taken on following visits. Select views that provides useful monitoring information for each photograph. Some photopoints should be overall shots, and others to record details of condition. The following principles should be followed in taking photos during the baseline and subsequent visits:

- Photograph at same time of day if possible;
- Use same camera format, lens type, and film type if possible; and
- Bracket exposures by $\frac{1}{2}$ aperture stop.

Place a color scale and a sign board in a convenient position on the frame to show the panel number, site name and reference number, photopoint number, date and time the photograph was taken. This information can also be recorded on the prints themselves and in the "Photo Log".

Reusing photopoints should be simple when the location of each photopoint is recorded in sufficient detail, particularly on the site sketch plan. Photographs taken on scheduled monitoring visits should also include a color scale and information as described above, and this information should be entered in the "Photo Log" of the Monitoring Form.

Site Kit

The completed base-line form and previously completed monitoring forms are necessary to have at the site each time monitoring is carried out, as well as all the images and sketches taken from that site. In addition to this, the site kit should include:

- Hand held reflector (if available)
- Camera and film
- Color scale
- Tripod
- Tape measure or distance meter
- Sign board

It is also recommended that an assistant take part in baseline and followup monitoring activities to help with setting up equipment, holding the sign board if necessary, etc.

Evaluating and Storing Information

Information collected through monitoring needs to be interpreted and results presented in a concise manner in order to assess whether more detailed or more frequent monitoring is necessary or whether management actions are required.

The level of impact can be assessed to some extent by summing the impacts of deterioration in the second column from the left on p. 12. For example, the higher the number of indicators, the greater the frequency of monitoring required.

The person responsible for monitoring should store and process forms and photographs together for each site in a safe place, as well as enter information collected in a database (if possible). Digital photographs should also be properly organized and stored.

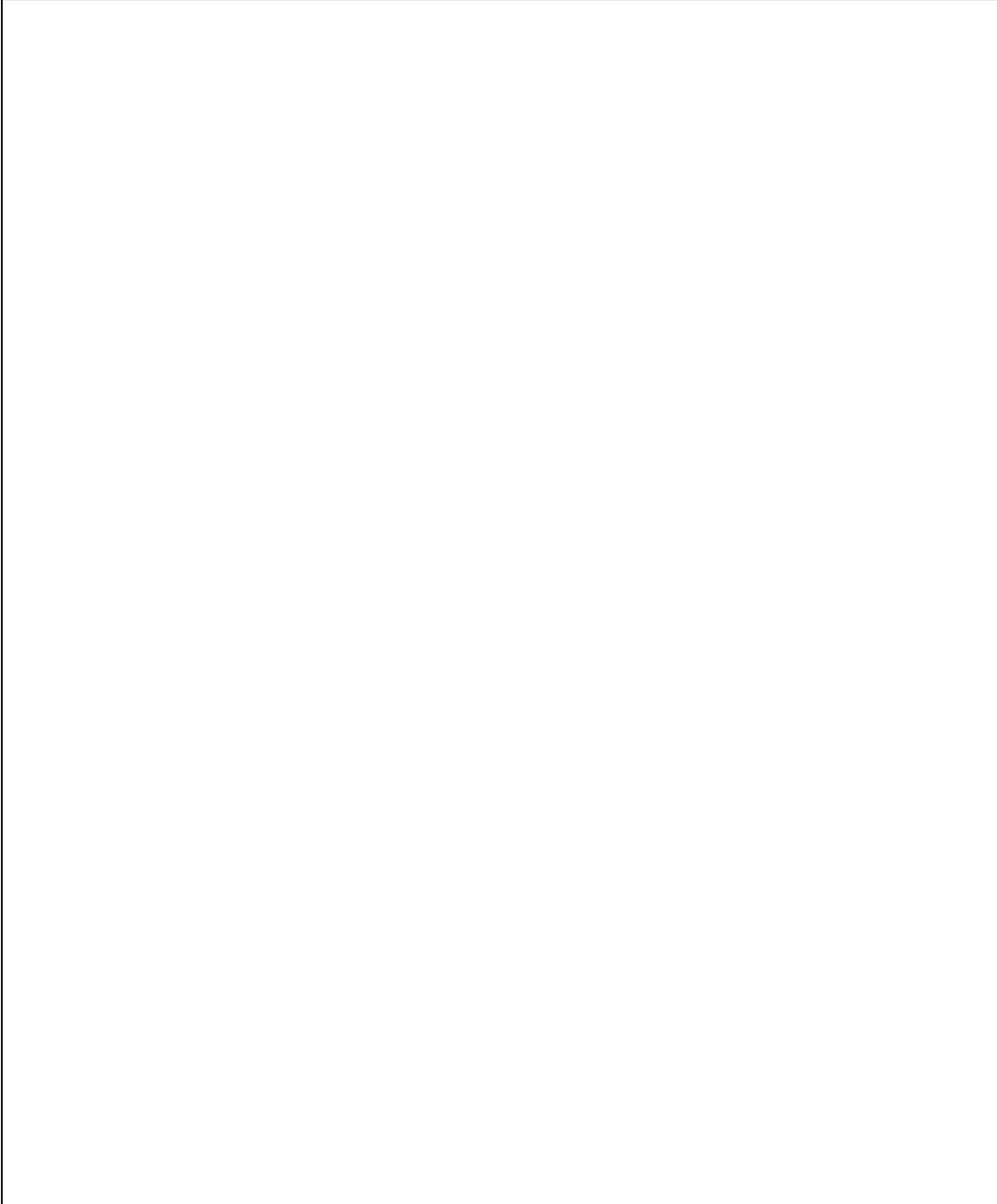
The monitoring programme should generate a substantial body of archival material including filled forms, condition reports, and photographs. It is important that this information is accessible for use by those responsible for the management and conservation of sites.

<h2 style="margin: 0;">MAPUNGUBWE NATIONAL PARK</h2> <h3 style="margin: 0;">BASE-LINE RECORDING FORM FOR ROCK ART SITE MONITORING</h3>		
USE THIS FORM FOR BASE-LINE RECORDING *Refer to baseline form guide when completing form		
Name of site:	Reference Number:	
Property (or farm name):	1:50,000 Map sheet number:	
Site Type: <input type="checkbox"/> Shelter <input type="checkbox"/> Boulder <input type="checkbox"/> Other:	GPS Coordinates: Lat _____ S ; Long _____ E	
Aspect:	Directions to site:	
Altitude:		
Proximity to private or public access ways (m or km):		
Date:	Name of Fieldworker(s) and Affiliation:	
Site Context		
Local Authority:	Property legal and regulatory status:	
Current land use of site: (select all that apply)	<input type="checkbox"/> National Park <input type="checkbox"/> Contractual Park <input type="checkbox"/> Private farm <input type="checkbox"/> Tourist Lodge <input type="checkbox"/> Walking trail <input type="checkbox"/> 4x4 Eco-route <input type="checkbox"/> Guided tour <input type="checkbox"/> Other:	Known routes or activities that include this site Relevant contact names and details
If property is privately owned, indicate current land use of surrounding land: (select all that apply)	<input type="checkbox"/> National Park <input type="checkbox"/> Contractual Park <input type="checkbox"/> Private farm <input type="checkbox"/> Tourist Lodge <input type="checkbox"/> Walking trail <input type="checkbox"/> 4x4 Eco-route <input type="checkbox"/> Guided tour <input type="checkbox"/> Other:	Known routes or activities that include this area Relevant contact names and details
Type of vegetation covering or surrounding the area	<input type="checkbox"/> Grass <input type="checkbox"/> Bushes/ Tress <input type="checkbox"/> Forest <input type="checkbox"/> No vegetation <input type="checkbox"/> Other	
Projects		
Type	Time period/ Dates	Researchers/ Institutions
Bibliography		

Site Description		
Approximate length and width of shelter or site floor:		
Approximate area (with dimensions) containing rock art:	Number of Panels (see sketch of plan and elevation):	
Type and Number of Paintings: <input type="checkbox"/> San <input type="checkbox"/> Finger paintings <input type="checkbox"/> Late Reds <input type="checkbox"/> Other <input type="checkbox"/> Unknown	Techniques: <input type="checkbox"/> Monochrome <input type="checkbox"/> Bichrome <input type="checkbox"/> Polychrome <input type="checkbox"/> Superimposition <input type="checkbox"/> Shading <input type="checkbox"/> Outline <input type="checkbox"/> Filled outline <input type="checkbox"/> Other:	Pigment Colours: <input type="checkbox"/> Red <input type="checkbox"/> Maroon <input type="checkbox"/> Brown <input type="checkbox"/> Black <input type="checkbox"/> White <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Other:
Type and Number of Engravings:	Techniques of engravings: <input type="checkbox"/> Incision <input type="checkbox"/> Rubbing	
Floor deposit associated with rock art site: (select all that apply) <input type="checkbox"/> Sandy <input type="checkbox"/> Compacted <input type="checkbox"/> Very substantial <input type="checkbox"/> Ashy <input type="checkbox"/> Loose <input type="checkbox"/> Substantial <input type="checkbox"/> Gravelly <input type="checkbox"/> Disturbed <input type="checkbox"/> Small area <input type="checkbox"/> None <input type="checkbox"/> Undisturbed <input type="checkbox"/> Shallow <input type="checkbox"/> <input type="checkbox"/> Other:	Surface Artefacts:	
Special features of site:		
Geology Rock type Joints and fractures: (spacing, structural cracks, % of surface area that is jointed) Structural stability:		

Site Sketch Plan and elevation.

Plan: Include outer limits of rock outcrop with rock art at ground level, outer limits of rock overhanging rock art, location of dripline, location of other significant rock features near rock art, extent of each rock art panel with each panel numbered (using Eastwood's numbering if exists), location of significant vegetation, location of other archaeological features (such as Mafuvha boards, grinding hollows, and lithics); also include north arrows and scale. Add photopoint location and reference points, direction of photo, GPS point location. Elevation: Each panel should be numbered using Eastwood's numbering if exists. See example of sketch plan and elevation in guide to baseline monitoring form.



Panel Condition Assessment	Panel Number:	Site Name:
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Indicator	Assessment	Type	Notes
Condition of rock surface	<input type="checkbox"/> No or very few deterioration or damage signs <input type="checkbox"/> Small areas of damage or deterioration <input type="checkbox"/> Large but localized areas of damage or deterioration <input type="checkbox"/> Large and widespread areas of damage or deterioration	<input type="checkbox"/> Algae/ Lichens <input type="checkbox"/> Animal excreta <input type="checkbox"/> Cracking <input type="checkbox"/> Crumbling <input type="checkbox"/> Exfoliation <input type="checkbox"/> Fire damage <input type="checkbox"/> Graffiti <input type="checkbox"/> Honeycombing <input type="checkbox"/> Insect nests <input type="checkbox"/> Mineral deposit <input type="checkbox"/> Plant damage <input type="checkbox"/> Rock detachment <input type="checkbox"/> Rock spalling <input type="checkbox"/> Soot <input type="checkbox"/> Water runoff	
Condition of paintings or engravings	<input type="checkbox"/> No or very few deterioration or damage signs <input type="checkbox"/> Small areas of damage or deterioration <input type="checkbox"/> Large but localized areas of damage or deterioration <input type="checkbox"/> Large and widespread areas of damage or deterioration	<input type="checkbox"/> Abrasion <input type="checkbox"/> Algae/ Lichens <input type="checkbox"/> Animal excreta <input type="checkbox"/> Cracking <input type="checkbox"/> Crumbling <input type="checkbox"/> Dust deposition <input type="checkbox"/> Evidence of touching <input type="checkbox"/> Exfoliation <input type="checkbox"/> Faded painting <input type="checkbox"/> Fire damage <input type="checkbox"/> Graffiti <input type="checkbox"/> Honeycombing <input type="checkbox"/> Insect nests <input type="checkbox"/> Mineral deposit <input type="checkbox"/> Paint flaking <input type="checkbox"/> Paint leaching <input type="checkbox"/> Plant damage <input type="checkbox"/> Removal of art <input type="checkbox"/> Rock detachment <input type="checkbox"/> Rock spalling <input type="checkbox"/> Soot <input type="checkbox"/> Water runoff <input type="checkbox"/> Vandalism	

Conservation and other interventions: <input type="checkbox"/> Drip Line <input type="checkbox"/> Attempt of protective coatings <input type="checkbox"/> Cleaning	<input type="checkbox"/> Other:
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Additional Notes:

MAPUNGUBWE NATIONAL PARK

ROCK ART SITE MONITORING FORM

USE THIS FORM FOR PERIODIC CONDITION MONITORING

*Use baseline form and guide, and previous visit form for reference

Name of site:	Reference Number:
Property (or farm name):	1:50,000 Map sheet number:
Site Type <input type="checkbox"/> Shelter <input type="checkbox"/> Boulder <input type="checkbox"/> Other:	GPS Coordinates: Lat S ; Long E
Date:	Name of Fieldworker(s) and Affiliation:
Date of previous visit:	
Time of day	Weather conditions

General site threats and impacts

Indicator		Assessment	Type	Descriptive notes
Extent of vegetation within 5 m of the dripline	1	<input type="checkbox"/> Absent	<input type="checkbox"/> Grass <input type="checkbox"/> Bushes <input type="checkbox"/> Trees <input type="checkbox"/> Forest	
	2	<input type="checkbox"/> Scattered		
	3	<input type="checkbox"/> Localized		
	4	<input type="checkbox"/> Widespread		
Evidence of Erosion on site floor	1	<input type="checkbox"/> No signs	<input type="checkbox"/> Water <input type="checkbox"/> Wind <input type="checkbox"/> Visitation <input type="checkbox"/> Animals	
	2	<input type="checkbox"/> Localized signs		
	3	<input type="checkbox"/> Widespread signs		
Evidence of weathering or instability of rock surface	1	<input type="checkbox"/> No signs	<input type="checkbox"/> Dust deposition <input type="checkbox"/> Rock detachment <input type="checkbox"/> Spalling <input type="checkbox"/> Rising damp <input type="checkbox"/> Water splashing <input type="checkbox"/> Water runoff <input type="checkbox"/> Mineral deposit <input type="checkbox"/> Salts	
	2	<input type="checkbox"/> Localized signs		
	3	<input type="checkbox"/> Widespread signs		
Evidence of animal presence	1	<input type="checkbox"/> No signs	<input type="checkbox"/> Old signs <input type="checkbox"/> Fresh signs	
	2	<input type="checkbox"/> Localized signs		
	3	<input type="checkbox"/> Widespread signs		

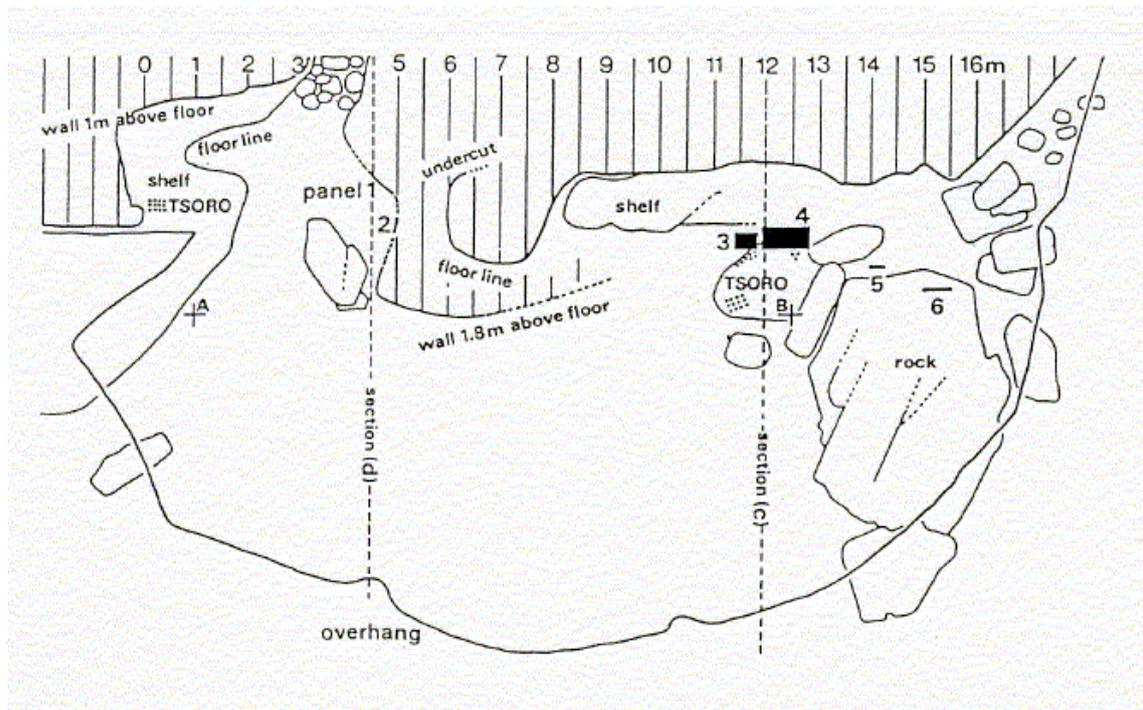
Indicator		Assessment	Type	Descriptive notes
Effects of disaster	1	<input type="checkbox"/> No signs	<input type="checkbox"/> Fire <input type="checkbox"/> Landslide <input type="checkbox"/> Flood <input type="checkbox"/> Other	
	2	<input type="checkbox"/> Adjacent disaster, but no site damage		
	3	<input type="checkbox"/> Limited or localized site damage		
	4	<input type="checkbox"/> Severe or widespread site damage		
Presence of development	1	<input type="checkbox"/> No signs	<input type="checkbox"/> Construction <input type="checkbox"/> Roothing <input type="checkbox"/> Agriculture <input type="checkbox"/> Other	
	2	<input type="checkbox"/> Localized signs		
	3	<input type="checkbox"/> Widespread signs		
Effects of visitors/ human impact	1	<input type="checkbox"/> No signs	<input type="checkbox"/> Trampled floor <input type="checkbox"/> Off road vehicular use <input type="checkbox"/> Rubbish <input type="checkbox"/> Looting/ Vandalism <input type="checkbox"/> Other	
	2	<input type="checkbox"/> Localized signs		
	3	<input type="checkbox"/> Widespread signs		
TOTAL =		Sum of impacts or deterioration		

Overall assessment of rock art condition since last visit	1	<input type="checkbox"/> No or very few signs of change to rock art since last visit.
	2	<input type="checkbox"/> Small areas of change to rock art since last visit.
	3	<input type="checkbox"/> Rock art almost completely or completely changed since last visit.
Notes. Specify general areas and types of change or damage since last visit:		

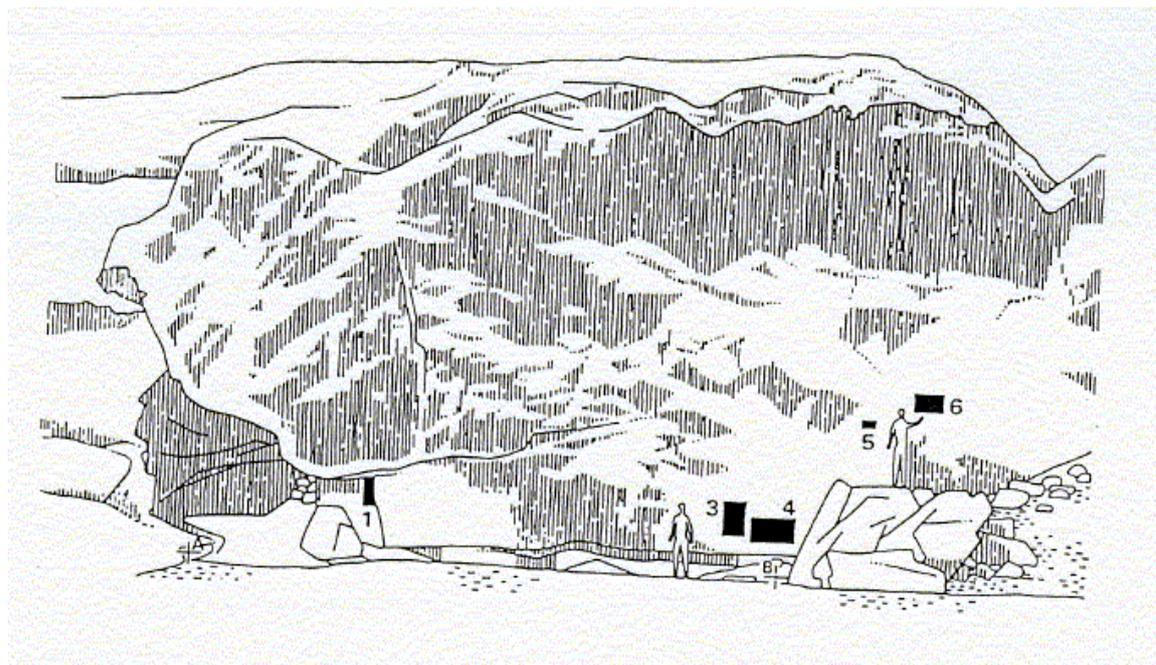
Recommended Management Actions	By Whom	By When
Date of next visit:		

Panel Condition Assessment		Panel Number:	Site Name:
Indicator	Assessment	Type	Notes
Condition of rock surface	<input type="checkbox"/> No or very few deterioration or damage signs <input type="checkbox"/> Small areas of damage or deterioration <input type="checkbox"/> Large but localized areas of damage or deterioration <input type="checkbox"/> Large and widespread areas of damage or deterioration	<input type="checkbox"/> Algae/ Lichens <input type="checkbox"/> Animal excreta <input type="checkbox"/> Cracking <input type="checkbox"/> Crumbling <input type="checkbox"/> Exfoliation <input type="checkbox"/> Fire damage <input type="checkbox"/> Graffiti <input type="checkbox"/> Honeycombing <input type="checkbox"/> Insect nests <input type="checkbox"/> Mineral deposit <input type="checkbox"/> Plant damage <input type="checkbox"/> Rock detachment <input type="checkbox"/> Rock spalling <input type="checkbox"/> Soot <input type="checkbox"/> Water runoff	
Condition of paintings	<input type="checkbox"/> No or very few deterioration or damage signs <input type="checkbox"/> Small areas of damage or deterioration <input type="checkbox"/> Large but localized areas of damage or deterioration <input type="checkbox"/> Large and widespread areas of damage or deterioration	<input type="checkbox"/> Abrasion <input type="checkbox"/> Algae/ Lichens <input type="checkbox"/> Animal excreta <input type="checkbox"/> Cracking <input type="checkbox"/> Crumbling <input type="checkbox"/> Dust deposition <input type="checkbox"/> Evidence of touching <input type="checkbox"/> Exfoliation <input type="checkbox"/> Faded painting <input type="checkbox"/> Fire damage <input type="checkbox"/> Graffiti <input type="checkbox"/> Honeycombing <input type="checkbox"/> Insect nests <input type="checkbox"/> Mineral deposit <input type="checkbox"/> Paint flaking <input type="checkbox"/> Paint leaching <input type="checkbox"/> Plant damage <input type="checkbox"/> Removal of art <input type="checkbox"/> Rock detachment <input type="checkbox"/> Rock spalling <input type="checkbox"/> Soot <input type="checkbox"/> Water runoff <input type="checkbox"/> Vandalism	
Condition of engravings	<input type="checkbox"/> No or very few deterioration or damage signs <input type="checkbox"/> Small areas of damage or deterioration <input type="checkbox"/> Large but localized areas of damage or deterioration <input type="checkbox"/> Large and widespread areas of damage or deterioration	<input type="checkbox"/> Abrasion <input type="checkbox"/> Algae/ Lichens <input type="checkbox"/> Animal excreta <input type="checkbox"/> Animal trampling <input type="checkbox"/> Cracking <input type="checkbox"/> Crumbling <input type="checkbox"/> Dust deposition <input type="checkbox"/> Evidence of touching <input type="checkbox"/> Exfoliation <input type="checkbox"/> Fire damage <input type="checkbox"/> Graffiti <input type="checkbox"/> Honeycombing <input type="checkbox"/> Insect nests <input type="checkbox"/> Mineral deposit <input type="checkbox"/> Plant damage <input type="checkbox"/> Removal of art <input type="checkbox"/> Rock detachment <input type="checkbox"/> Rock spalling <input type="checkbox"/> Soot <input type="checkbox"/> Water erosion <input type="checkbox"/> Vandalism	
Additional notes			

Example of Site Sketch Plan



Example of Sketch Elevation



From Pager, H. 1997. *Rock Paintings in Mongoose Shelter, on the farm Greefswald, northern Transvaal*. South African Archaeological Bulletin 32: 158-164

APPENDIX 6: BASIC ROCK ART SITE RECORDING FORM

Information for MAPUNGUBWE NATIONAL PARK. Use reverse for notes, sketches of paintings and diagrams to enable the site to be re-located and positively identified.

District and 1:50 000 Map Sheet No.	
GPS latitude and longitude	
Farm name + site name or number	
Recorder's name	
Recorder's address / telephone	
Date of visit	
Type of site (rock shelter, boulder, cave)	
Cave mouth faces north/south/west/east	
Approximate size of rock shelter floor	
Approximate area of wall covered with paintings (separate painted areas can be listed separately, left to right)	
Natural damage to paintings (water, lichen)	
Have the paintings or rock shelter walls been damaged by graffiti? Over what area?	
Approximate number of paintings:	Red: Black White: Yellow: Bichrome: Polychrome:
Number of human figures	Male Female Indeterminate
Number of animals	Indeterminate antelope Eland Elephant Sheep Zebra Kudu Other:
Number of hand prints	Plain Patterned
Number of non-representational patterns	Dots Lines Grids U-shapes Smears Zigzags Finger paintings Y-shapes
Describe unusual images	
Are there stone tools or potsherds on the floor?	
Is cave floor rocky, sandy or ashy?	
Location of site (on top of mountain, in stream bed, half way up cliff, etc)	
Records made (photos/slides/tracings)	