

APPENDIX 3

Management Plan

THE ARCHAEOLOGICAL SITES OF THE ISLAND OF MEROE

MEROE (BEGRAWWEYA) – NAQA – MUSAWWARAT ES-SUFRA

MANAGEMENT PLAN FOR A PROPOSED WORLD HERITAGE SITE



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Meroe (Begraveya) – Naqa – Musawwarat es-Sufra
Management Plan of a Proposed World Heritage Site

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Partial extracts were also taken from the Official Submitted Nomination File for Archaeological Sites of the Island of Meroe, January 2009.

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Table of Contents

1. Context of the Management Plan
2. Objectives of the Management Plan
3. The Site and its Attributes
4. Statement of Significance of the Site and Justification of Outstanding Universal Value
5. State of Conservation and Factors Affecting the Property
6. Site Protection
7. Definition of site boundaries and site buffer zones
8. Management Plan
9. The Consultation Process
10. Key management issues pertaining to the serial-site
11. Proposed Management Structure
12. Management Plan Policies and Action Plans

Annex: Photographic Record of Rapid Condition Assessment:

- Mreoe (Begraweya).
- Musawwarat es-Sufra.
- Naqa.

1. Context of the Management Plan

This management plan document is drafted in conjunction with the preparation of the Nomination File for the proposed WHS of “The Archaeological Sites of the Island of Meroe, Begraweya – Naqa – Mussawarat es-Sufra. The plan was commissioned by the National Corporation for Antiquities and Museums of Sudan (NCAM) and overseen by the World Heritage Centre. The author of this report was asked to conduct the necessary field assessments, research and consultations to support the elaboration of this document; this is subsequent to the preparation of a management plan in 2007 for the World Heritage Site of Jebel Barkal and the Sites of the Napatan Region, nominated in 2003. The management plans of these two respective sites have much in common.

This management plan reflects the vision of the concerned stakeholders and the wish of the State Party to achieve the right level of management expected at a World Heritage Site. This relates of course to all aspects of management including the development and promotion of the site in fulfillment of the aspirations of people, the main stakeholders.

2. Objectives of the Management Plan

The main aim of this management plan is to fulfill the vision of the stakeholders of the site by attaining worldwide recognition of its outstanding universal value, protecting it, conserving it, managing and promoting it with sustainability into the future. The management plan aims as well at formulating and guiding activities to achieve the appropriate levels of management relative to a World Heritage Site. In order to do that, the plan has the following objectives:

- Establish the cultural significance of the site;
- Provide an assessment of the current situation of the site and the key management issues standing in the way of adequate management;
- Discuss these issues with the stakeholders of the site;
- Present the results of the stakeholder consultation process and discuss the aspirations and expectations of the stakeholders with relation to the site;
- Get the stakeholders to agree on a common vision/approach to managing and developing the site;
- Propose solutions to the identified key management issues of the site and integrate stakeholders perspectives on how to address them;
- Formulate policies to guide the future management of the site taking into consideration the perspectives of the stakeholders, the realities of the site and what needs to be achieved in order to address management issues;
- Formulate action plans that aim to achieve the policies of the site and propose a framework the implementation of the plan.

3. The Site and its Attributes

3.1 Nomenclature

This serial property comprises the sites of Meroe, Naqa and Musawwarat es-Sufra (Please refer to Appendices 4 and 5 of the Nomination File for visual and cartographic reference and well as for the Nomination File, Section 7 for bibliographical references). They are described collectively in this document as the Archaeological Sites of the Island of Meroe. Use of the term 'Island of Meroe' is long established.

The area so described is not literally an island but is demarcated by three rivers, the Nile to the north-west, the Atbara River to the north-east and the Blue Nile to the south-west. The territory thus partly enclosed extends for about 300km from north to south and from east to west. However, it is only the three sites of Meroe, Naqa and Musawwarat es-Sufra, together with their buffer zones, which are proposed as a World Heritage Site.

3.2 Geology and topography

The Island of Meroe lies in the savanna belt on the south side of the Sahara in an area which today receives approximately 100mm of rainfall annually. However, it is its proximity to the Nile which makes the region viable for sedentary human activity and this seems to have been the case throughout history. The western part of the area, the Keraba, is a dissected Nubian Sandstone plateau with wide wadis, in which seasonal cultivation is possible away from the river and where sheep, goats, camels and cattle can graze. To the east and south this gives way to the cotton-soil plains of the Butana, which are ideal grazing for some time during and after the rainy season. Kushite remains are confined to the western part of the Island which shows that the culture was very much associated with the Nile.

Naqa : The site lies on open ground on the east side of the Wadi Awateib, about 30km from where the wadi joins the Nile at Wadi ben Naqa. The Wadi Awateib has been farmed extensively in the recent past as it is today, although such activities are severely curtailed during periods of aridity such as pertained in the area in the 1980s and early 90s. The hill above the site is capped with ferruginous sandstone with signs of ancient quarrying; the settlement must have developed because of the opportunities offered for agriculture by the presence of the wadi with its large water catchment area; so far, very little is known in detail about the ancient climate history.

Musawwarat es-Sufra: The site is about 15km north-east of Naqa, at the head of the Wadi el-Banat and in a natural basin about 10km across which is surrounded by flat-topped sandstone hills. The site has been described as 'the most remarkable and dramatic in the Sudan' (Shinnie 1967, 92).

Meroe: The site at Meroe may have occupied an island in the Nile until about 300 BC, deep deposits of river silt having been found just to the east of the central area, whereas the Nile now runs to the west of the site. To the east is a plain where the

cemeteries were situated. It is overlooked by low hills occupied by pyramids which were the burial places of the rulers of Kush from the 3rd century BC onwards.

3.3 Modern communications

By road the sites are reached from the main highway between Khartoum to the south and Atbara to the north. Naqa and Musawwarat are signposted from the highway but the dirt tracks to the sites are not way-marked and can be difficult to follow. Naqa is about 35km east of the highway and the drive to the site takes about an hour.

Musawwarat is reached by a branch off the track to Naqa (marked by a signpost). The northern and southern royal cemeteries at Meroe are only a very short distance east of the highway while the elite western cemetery, a *hafir*, temples and the urban centre lie up to 3km to the west. All three sites can be reached on day excursions from Khartoum and Atbara. At Meroe and Musawwarat visitors can now purchase admission tickets at the sites, although formerly they had to be bought in advance at Khartoum or Atbara. At Naqa tickets can be purchased on the site if an inspector is present, but otherwise they have to be bought at Shendi. The nearest town to the Island of Meroe sites is Shendi, just to the west of the main highway between Khartoum and Atbara. Permits to visit the sites can apparently be obtained at Shendi (this possibility was proposed early in 2005). The town has a railway station, hotel, bank and bus pick-up points. The building of a highway into Sudan from Aswan and Abu Simbel, connecting with the existing highway north of Atbara, will much improve the accessibility of the sites from southern Egypt.

3.4 Archaeological information

Naqa: At Naqa (Meroitic *Tolkte*) at least five temples along with two kiosks are visible (Plate 1). Details of the temples are as follows: The Lion Temple (Temple A) was dedicated to the lion-god Apedemak and was built in the reign of Natakamani and Amanitore, perhaps in the mid 1st century AD. Their names appear in the reliefs on the walls, which also show them being legitimized by Apedemak and Amun (please refer to Nomination File, section 2: *Description* for a historical background on the sites).

The Temple of Amun (Temple D) is approached by a processional way lined by stone rams which have been re-erected on their pedestals. A kiosk ('Temple' C) lies in front of it and the whole complex was built at about the same time as the Lion Temple. There are at least two other temples which are in a very ruinous state.

Temple F lies to the east of the other temples. The niche behind the altar bears the name of Queen Shanakdakhete (c. 170-150 BC) in Meroitic hieroglyphs which represent the earliest dated example of the script.

The so-called Roman Kiosk ('Temple' B), which has been identified as a chapel of Hathor, may have been built to form part of the approach to the Lion Temple. It is perhaps the most famous example of Kushite architecture and is unique in its remarkable combination of Egyptian forms and motifs with those derived from the repertoire of Greek, Roman and Kushite architects.

Also to be noted are Temple 200, graves, quarries and two *hafirs* and a *hafir* temple. The site of the town covers an area of about two square kilometres and is littered with masonry, column fragments and red bricks.

Musawwarat es-Sufra: There are two large *hafirs* (and three smaller examples), as well as several isolated temples, the Great Enclosure and other buildings. Few remains of dwellings and cemeteries have been recorded; the graves located so far are of post- Meroitic and medieval date.

The Great Enclosure covers an area of 55,000m² and consists of three major buildings, traditionally identified as temples, which are surrounded by enclosures, corridors and small rooms. At the centre of the enclosure is a hall with a roof supported by four columns, which is surrounded by a colonnade and on three sides by several ranges of rooms. In front of and flanking the building are the bases of two tower like structures. At the northern end of the enclosure is a similar but smaller complex ('Temple' 200).

In a walled compound on the east side of the enclosure is an isolated structure, the identification of which as a temple is not in doubt (Temple 300). The other two 'temples' are perhaps more probably throne-rooms, the whole enclosure possibly representing a temple-palace complex. Another prominent feature of the enclosure is a series of large ramps. A graffito from the site shows an elephant ascending a ramp, and it has been thought that elephants might have featured in the religious ceremonies in the enclosure or even that the enclosure was at least in part for their training for use in ceremonies or warfare. The nearby Small Enclosure is a secular enclosure of mainly economic and domestic functions.

Lion Temple: large sections of the walls had collapsed outwards allowing the excavators to re-erect the walls following its excavation in the 1960s. The temple was built by Arnekhamani between c. 235 and 221 BC and lies within an oval temenos.

Temple IIA appears to have an oval temenos. Temple IIB, the 'North Temple'. Temple IID, the 'Statue Temple', is situated south-west of the Lion Temple. A number of sandstone quarries have been identified on the western and eastern edges of the settlement area (Becker 2000).

Meroe: The settlement at Meroe consists of the so-called Royal City, the Temple of Amun with its associated structures, and the town. About 3.5km to the east lie the two royal pyramid cemeteries, with other cemeteries and a *hafir* situated between the settlement and the pyramids. Near and within the settlement are ancient slag heaps connected with iron-working. The so-called Royal City contains a number of palatial buildings with central courtyards, temples and the so-called Royal Baths or water sanctuary. A wide thoroughfare lined with tree-pits, which was probably a processional way ran through the City. It was originally enclosed with a defensive wall with gates, but in the 1st and 2nd centuries AD buildings were being erected across its line.

In front of one of the temples (M.292) was a pit containing a bronze head of Augustus; there are some upstanding remains of this building. The so-called Royal Baths are situated on the western side of the Royal City. When excavated in 1912, this

structure was interpreted as a set of baths of Roman type, but the interpretation of the building complex still remains uncertain. At the centre of the building is a large pool with steps along its east side; its south side was decorated with lion- and ox-head spouts, faience roundels and panels and by statuary which includes musicians.

The whole structure was demolished and what is probably a magazine (M.191) was erected on its site before the end of the Kushite period.

The Temple of Amun (M. 260) lies immediately to the east of the Royal City. It is the second largest Amun temple in the kingdom of Kush. A number of other temples were arranged on either side of the avenue leading to the Amun temple, as well as a building (M.750) which is thought to have been a palace.

The Sun Temple lies on the gravel plain mid-way between the city and the royal pyramids. The temple stood on a podium reached by a sloping ramp and with a colonnade running around its edge. It was entered up a shallow flight of steps through a pylon and enclosed a free-standing sanctuary chamber. A relief on the rear wall of the podium shows the building as it appeared when standing. A house in the temenos of the temple might have been used by priests.

Lion Temple (M6): two rooms set on a podium, each room with two columns to support the roof. Temples lining the processional way to the Temple of Amun: KC.100: an entrance through a pylon gives access to a columnar room beyond which the sanctuary is flanked by a room to either side. M.720 has three narrow rooms across the width of the building, the rearmost being the sanctuary. KC.102 is a temple with paintings discovered in 1975-6. KC.104 is a double temple, the two elements being mirror images of each other. KC.101 is a single-roomed structure set on a podium reached by a ramp.

Temple of Isis identified by Garstang in 1909-10 (probable). It is situated *c.* 400m north of the Royal City. The town is represented by many mounds of redbrick fragments which remain largely unexcavated. At the western and southern limits of the town are large mounds of slag and other debris from iron smelting. A Shrine of Apis is situated about 2.5km south of the main site near the village of Hamadab. The older of the two royal Pyramid Cemeteries is the southern one, where there are at least 60 examples, and MP- 8 earlier non-royal burials which were not associated with pyramids.

The pyramids of the northern cemetery, which number at least forty-four, are better preserved. Offering chapels are a standard feature of the royal pyramids. Beg.N.11 is one of the best preserved and largest examples. The late chapel Beg.N.28 has a flight of steps leading up to it. The original chapel of Beg.N.16 is covered by the later pyramid Beg.N.36.

Other cemeteries include the Western Cemetery where there were many non-royal burials in rock-cut tombs, some of which were covered by pyramids. Quarries were tunnelled into the hill-sides around Meroe following beds of sandstone.

3.5 The landscape today

Naqa: Near the centre of the site, a well, which is 60m in depth and was dug by on the orders of the Governor General Sir Reginald Wingate in 1904, has attracted a local population and regular visits from nomads. Tourists on safari or expeditions visit the site to watch the watering of animals. There is no infrastructure for visitors to the site, and access is only along tracks for which four-wheel drive vehicles are advisable.

Modern features on the site are the German dig house, which is still in use but could become a site museum or interpretation centre, and wire fences around the Lion Temple, the Temple of Amun and the 'Roman Kiosk' which were put up to keep livestock out. It should be noted that the gates are in a poor condition.

There is also a hut for the *ghaffir* near the well and a small building by the main entrance to the site on its north side to house the tourist police. 'Monumental' gateways have been erected to the north and west where the tracks enter the site. The site is surrounded by scrub, bushes and small trees, and these areas have been used for the disposal of excavation spoil. Immediately to the north of the axis on which the Lion Temple and Amun Temple lie, the remains of the ancient town are marked by a number of pronounced mounds covering an area of some 25ha and extending all the way to the present entrance to the site. The ground is littered with brick and pottery fragments. In many cases plans of stone buildings can be made out on the ground.

This is the result of the recent survey by the German mission, which involved brushing to clear surface debris in order to produce their highly accurate plan which shows the walls currently visible. It is remarkable that the majority of buildings which have yielded plans do not appear to represent normal domestic housing; several are identifiable as small temples or chapels with peristyles.

Naqa is the most untouched of the three WHS candidate sites in the Island of Meroe. Its pristine state should be carefully preserved.

Musawwarat es-Sufra: The site incorporates a compound erected by the Sudan Civilization Institute which encloses a resthouse, mosque, living quarters, a two-storey building and an unsightly water-tank tower. It is situated about 200m from the Great Enclosure. A verbal undertaking has been received by NCAM to the effect that further expansion of this compound will be halted. Additionally steps will be taken to minimize the visual impact of the existing structures by painting them to merge into the landscape. Facilities for visitors will also be provided utilizing the pre-existing buildings. The projected electricity cable line, which was to have been carried to the compound on concrete poles, will now be routed below ground from a point before it becomes visible from the archaeological site. A similar undertaking has been received concerning any tarmac road which will likewise be halted well out of sight of the remains. By the Great *Hafir* is the German dig-house. The most recent activities on the site date back to 2007 and have been connected with the digging out of the Great *Hafir* with the intention of restoring it to its ancient use as a water reservoir. The project was undertaken by the Sudan Civilization Institute, beginning in 2003 and continued on a large-scale in 2005 down to 2007. Details of the project, together with the attempts to record the archaeological features revealed by the work, are described by Scheibner (2005). Lesser, but still significant, damage was caused by the digging

of trenches for a water pipe and telephone cable across the site. On the western side of the valley smallscale quarrying for sandstone is in progress. The programme of excavation and conservation carried out by the Humboldt University has involved the rebuilding of courtyard walls as wind breaks to stop erosion. In 2004 work was completed on a museum to store and display to visitors carved stonework and sculptures previously scattered around the site and vulnerable to damage from natural and human processes. The building is open on one side so that its contents are visible from the outside. For a description of this project, see Wenig 2004.

The Lion Temple is enclosed by a modern fence and its remains are protected by a shelter wall. There are no facilities for visitors on the site and no interpretation apart from the labeling of the objects in the *lapidarium* and one information panel at the Great Enclosure and another by the Lion Temple. Clearly-marked routes around the site are lacking.

Meroe: The settlement lies several hundred metres to the east of the Nile and is partly overlain, to the north and south, by the modern villages of Deraqab and Kigiek. The north and south royal cemeteries occupy low hills at the edge of the plain 4km to the east. In the plain are a number of temples, a *hafir* (reservoir), the western pyramid cemetery and cemeteries of the less wealthy inhabitants of the city. The Atbara to Khartoum railway cuts through the eastern edge of the settlement. Today the site is frequently referred to as Begraweya, the name of a nearby village. There is a main entrance to the site with a building from where the *ghaffir* and tourist police monitor entry. The antiquities zone is fenced, but the circuit is in disrepair and at the back of the site the fence is down in several places, allowing free ingress for the local inhabitants and for the goats which graze on the site.

By the entrance is a room developed as an interpretation centre, public toilets and a tap set up by the University of Khartoum and the Royal Ontario Museum, while close by is a large walled compound containing the dig-house, which incorporates a small museum. One of the dominant features of the site are the huge spoil heaps which have accumulated since excavations began in the early 1900s. Old excavation trenches are still open, particularly a huge sondage dug in the 1960s which penetrated to the earliest occupation levels on the site. Modern settlement and activities do not obtrude unduly on the visible monuments, although much litter seems to be blown in from the nearby villages. The railway and road are scarcely visible from the main site. The Nile is not visible, although its course is marked by a line of tall palm trees. The vista between the Royal City and the pyramids is interrupted by a pylon line coming from the Fourth Cataract down to Khartoum. Agreement has been reached between NCAM and the relevant ministry to have these pylons relocated behind the hills to the east of the Royal cemeteries. The timescale for this work is unclear.

In preparation for a geophysical survey by Grzymiski of the Royal Ontario Museum in 2002, the lower branches of the acacia trees and much of the scrub on the site were cut down. This deprived goats of much of their food and discouraged them from climbing on the walls where some of the scrub had been. Some of the spoil heaps left by previous excavators were also removed, which has helped to redirect the flow of water away from endangered structures. However there are still bushes growing on ruined walls or within rooms, which need to be cut down to prevent further damage from roots and from goats. The larger trees add to the attractiveness of the area and

there is no reason to remove them unless roots threaten to damage the monuments. Midway between the settlement and the royal cemeteries is a *hafir*, smaller than Musawwarat's and in good condition until 2005 when it was clipped by a pipeline, spoil from which has been dumped on its outer bank. This is disappointing, because twenty years ago another pipeline was deliberately diverted around the *hafir*. At the site of the royal pyramids is an unfinished resthouse and a little further away is a new museum building MP- 10 (the Wadi Tarabil museum), incomplete for lack of money.

Apart from the hills on which the pyramids are built the terrain is largely flat and bare, so any new building is problematical. In the distance is the new Italian-owned guesthouse which offers superb views of the pyramids. There is no continuous fencing around the cemeteries. The siting of an unfinished rest-house to the southwest of the Northern Cemetery adversely affects the setting of the pyramids. Its construction by the River Nile State was undertaken without proper consent from NCAM and work on it was halted, but what was built still needs to be demolished.

4. Statement of Significance of the Site and Justification of Outstanding Universal Value

4.1 Statement of Significance

The Island of Meroe is the heartland of the Kingdom of Kush, a major power in the ancient world from the 8th century BC into the 4th century AD. Meroe, always a major urban centre, became the principal residence of the ruler, and from the 3rd century BC onwards the site of most subsequent royal burials.

As well as being a royal centre it has an extensive religious and domestic quarter and considerable evidence for industrial activities particularly relating to iron-working. Naqa is the only major Kushite urban centre known away from the Nile. Its presence on the banks of the Wadi Awateib, approximately 34km to the southeast of the Nile, has important implications for our understanding of the palaeoclimate and hydrological regime pertaining in the area in the later centuries BC and the first few centuries AD. Among its extant buildings the so-called Roman kiosk is an outstanding example of the importance of influences from Egypt, Greece and Rome in this sub-Saharan kingdom.

Musawwarat es-Sufra is a unique religious complex, in location, plan and architectural elaboration. As with Naqa it again raises the question of how it functioned in what is today a very arid environment and, in this context, the massive water reservoirs, the hafirs, are particularly significant. Additional importance is also provided by the over 2000 graffiti carved on its walls, most dating from the Kushite period but others of medieval and later dates; pictorial representations as well as inscriptions in Meroitic, Latin, Greek, French, German and Arabic.

These three sites comprise the best preserved relics of the Kingdom of Kush, encompassing a wide range of architectural forms and occupying a range of environments. They testify to the wealth and power of the Kushite state and to its wide-ranging contacts with the Mediterranean and Middle Eastern worlds during a period of over one millennium. Their monuments, reliefs and sculptures also highlight

the sub-Saharan African roots of the civilization – this is the meeting place of the Pharaonic and Classical worlds and Sahelian Africa.

The civilization responsible for the sites in the Island of Meroe represents a direct continuation of the political system and cultural assemblage well represented in the region of Napata at the sites of Jebel Barkal, el-Kurru, Nuri and Sanam Abu Dom. The Napatan sites were inscribed on the World Heritage List in 2003, the first nomination from Sudan to be accepted by the World Heritage Centre.

4.2 Justification of Outstanding Universal Value

The pyramids at Meroe are outstanding examples of this highly distinctive Kushite funerary monument and their intimate associations with the well-preserved remains of the urban centre is noteworthy. The evidence for iron-working in the town is extensive with massive slag heaps surviving. It is hence of considerable importance for the study of metalworking. The pyramids at Meroe are outstanding examples of this highly distinctive Kushite funerary monument and their intimate associations with the well-preserved remains of the urban centre is noteworthy. The evidence for iron-working in the town is extensive with massive slag heaps surviving. It is hence of considerable importance for the study of metalworking technology in sub-Saharan Africa of which it is one of the earliest examples.

Naqa contains two extremely well-preserved buildings, the so-called Roman kiosk with its amazing juxtaposition of architectural and decorative elements drawn from the repertoire of Pharaonic Egypt, Greece and Rome as well as from Kush itself. The Lion Temple preserves superb reliefs of the Kushite gods and royalty displaying both distinctly Kushite and African influences alongside those from Pharaonic Egypt. Naqa is also outstanding for its well, dug during the Anglo- Egyptian Condominium in 1904. This is a major source of water and is frequented by large numbers of nomads with their camels, sheep and goats. It is a vivid illustration of a pastoral lifestyle still being practiced in Northern Sudan, which has changed little over the millennia and provides a graphic insight into man's adaptation to life in an arid environment.

Musawwarat is a unique architectural ensemble with temples, courtyards, domestic buildings and perhaps royal apartments. Additionally there are major installations connected with water management, quarries and industrial areas – very fine-quality pottery was produced on the site.

The Archaeological Sites of the Island of Meroe proposed serial property provides a detailed insight into the interchange of ideas between central Africa and the Mediterranean world over a very long period along what was the major corridor to and from Africa during the ancient world. The interaction of the local and foreign influences can be illustrated in the architectural forms and practices employed, in art, iconography religion and language. The desert sites of Naqa and Musawwarat also raise the question of the interaction of the Kushite state with its extensive nomadic and transhumant subjects occupying the same region.

All aspects of Kushite civilisation were largely expunged by the arrival of Christianity on the Middle Nile in the 6th century AD. The Archaeological Sites of the Island of Meroe with their wide range of monument types, their well-preserved buildings, and

the potential they offer for future excavation and other avenues of research are an exceptional, and in the case of Musawwarat es-Sufra, a unique testimony to this, perhaps the greatest civilisation of sub-Saharan Africa. At Naqa is the earliest evidence we have for the writing of the indigenous language, known to archaeologists and linguists as Meroitic. Although probably spoken for millennia it appears to have been first written, in an alphabetic script, during the 2nd century BC. It has yet to be deciphered.

Musawwarat es-Sufra and Naqa, major centres of human activity far from the Nile, raise many questions as to their viability in what is today an arid zone devoid of permanent human settlement. They offer the possibility, through a detailed study of the palaeoclimate, flora and fauna, of understanding the interaction of the Kushites with their desert hinterland.

Meroe, sat on the banks of the Nile, occupies a different ecological niche but its development was to some extent governed by the proximity of the desert. It has already been suggested that, for example, the scale of its iron-working activities caused serious deforestation in its environs. Its relationship to the fluctuating level and course of the Nile and the changes these fluctuations made on the urban landscape and economic viability of the area can be documented on the site.

4.3 Statements of Integrity and Authenticity

The integrity and authenticity of the three sites (Meroe-Begraweya, Musawwarat es-Sufra, and Naqa) conform with the requirements of the World Heritage Committee. They have been subject to no inappropriate interventions of any significance since their abandonment and their places in the natural landscape have not been compromised or degraded. The treasure hunting of Ferlini in the 1830s (see 2.a.3 above) was very deleterious to some of the pyramids in the Meroe cemeteries, but the overall appearance of the ensembles has survived.

A certain amount of restoration has been carried out since the mid 20th century, most notably on a number of pyramids and a few buildings (eg the 'Royal Baths' and the Kiosk at Naqa). Whilst the materials and techniques employed do not in certain instances conform with current conservation principles and practice, which have made considerable advances since these works were carried out, the precepts of the Venice Charter (1954), the Nara Document (1995), and the concept of *anastylosis* have not been violated. Two or three small pyramids have been completely rebuilt, with a didactic purpose, to demonstrate how they would have appeared in antiquity. It is today very easy to identify and differentiate the old authentic fabric of the remains and modern-day interventions for the restoration and conservation of some features. The authenticity of the site is well preserved and the sites' integrity has not yet been compromised by modern development activities.

5. State of Conservation and Factors Affecting the Property

In general, the Archaeological Sites of the Island of Meroe suffer from slow-rate degradation and deterioration caused in the first place by exposure to the harsh effects of the natural environment. The on-going slow deterioration of the archaeological

remains is accentuated by erratic and in some instances ineffective regimes of maintenance which address only specific elements of the sites.

5.1 General Condition of Sites

Naqa

The so-called Roman Kiosk (Plate 5) is well-preserved and there are substantial remains of the Lion Temple, Temple of Amun and Temple F (Plate 6). The other remains are very ruinous. Some conservation work has been carried out to good effect: for example, the rams flanking the processional route to the Lion Temple have been reerected on their pedestals, preventing their erosion and reducing the risk of damage. Alternatively, a painted stone altar found in room 106 in the Temple of Amun was found decorated with paintings carried out in *secco* technique on lime plaster. Following its excavation, the paintings were cleaned and consolidated. Because the paintings are vulnerable to damage by visitors and from rain, the altar was documented and then protected by a covering of sand. The blocks from Temple 200 almost all of them decorated in fine, delicate relief, are at present kept next to the temple where they are covered in sand to protect them. These blocks are from the wall decoration of the temple and could be easily restored to their original positions following conservation.

Musawwarat es-Sufra

Great Enclosure: There has been damage to all architectural parts of the Great Enclosure through natural and anthropogenic processes: - intrusion of rain water into the walls and foundations, which are clay-bonded; mainly occurring in already damaged walls and walls without cover blocks - pre-existing factors such as inadequate foundations - physical processes, namely penetration of water-soluble salts (hydration and dehydration, solution and crystallisation), supported by accumulated sand dunes - wind and sand erosion, supported by accumulated sand dunes - domestic animals (sheep, goats) walking around in the courtyards - tourists climbing up or over the architectural remains or scratching graffiti into the walls.

Small Enclosure: Although the structures of the Small Enclosure were in quite good condition when excavated, they have suffered considerably because of their exposure to environmental forces and human interference.

Lion Temple: Damage to the Lion Temple has been caused by natural and anthropogenic processes: - wind and sand erosion, especially on the northern and eastern sides of the temple - physical processes of water-soluble salts (hydration and dehydration, solution and crystallisation), especially in the pedestal areas and on the northern side of the temple - damage to the reliefs from bird faeces and wasps' nests - decay of the plaster used for the restoration of the temple in the early 1970s - large cracks in the southern temple wall caused by the sinking of the pylon foundations - damage to the reliefs by tourists. Moreover, the monument is endangered because of deteriorations of the modern roof resulting from constructional defects in the 1970s.

The defective parts of the roof allow rain water to damage further the walls and interior reliefs of the temple.

Other standing monuments: The smaller monuments on the site of Musawwarat also suffer from wind and sand erosion, the run-off from annual rainfall and uncontrolled access by tourists.

Other archaeological structures: Many archaeological features not represented by standing walls, such as the workshop areas, cemeteries, habitation sites and the smaller *hafirs*, are constantly endangered by tourist cars and other vehicles moving around the valley at will and driving right over the sites. They cause damage not only to the remains above ground but also to features below ground level.

5.2 The history of preservation and conservation at the Serial Site

Musawwarat es-Sufra

If not otherwise stated all programmes of preservation and conservation were carried out by the Archaeological Mission of Humboldt University, Berlin.

Great Hafir: The interior of this most important feature has recently been partly dug out with the use of heavy earth-moving machinery in an attempt to restore its original function as a reservoir. At the time of writing, these works have stopped but the *hafir* is surrounded with spoil heaps which need to be removed and steps need to be taken in order to prevent the erosion of archaeological deposits now exposed in its interior.

Great Enclosure: Many walls of this structure had already collapsed, others were severely endangered. Where the cap stones were missing water could penetrate into the walls destroying them over time. From 1995 onwards, hundreds of metres of such walls were secured by a filling of a mixture of sand, earth and lime which prevents water from penetrating into the walls. Furthermore, because of weak foundations, other walls are falling apart. To stop this process, support constructions made of burnt bricks were added all over the Great Enclosure. A special problem is caused by wind-blown sand which erodes the surfaces of the buildings across the site. In front of the central temple of the Great Enclosure are several columns and column bases with reliefs. These are all more or less endangered. As a temporary measure these columns and column bases were enclosed within walls of burnt bricks. Several walls were about to collapse. In agreement with the National Corporation for Antiquities and Museums these walls were taken down and reconstructed. Where the original blocks were missing, they were replaced by burnt bricks to support the wall. The enclosure wall of the structure was consolidated and in parts reconstructed in order to regulate the access to the site, to hinder the movement of animals and to diminish the effects of the wind and sand erosion. Measures taken since 1993: - detailed survey of the state of preservation, samples taken for analysis at the ICCROM - detailed photogrammetric documentation of the standing building fabric - stabilisation and repair of broken wall fabric with brickwork - covering and repair of damaged wall tops with claymortar - clearing of several courtyards by the removal of stone fragments and excavation spoil of the 1960s - planting and maintenance of a shelter belt against wind and sand erosion - removal of large sand dunes (preventing rainwater runoff) from inside the courts and from the terraces of the Great Enclosure

as well as clearing of courtyards - building of dikes in order to prevent rainwater-runoff from the north-westerly *jebels* flooding the Great Enclosure - levelling of the colonnade surrounding the Central Temple (102/103) in order to conduct rain water away from the Central Temple and from its endangered walls and foundations - protection of seriously damaged and endangered columns on top of the central terrace with brickwork masonry filled with clean sand, to maintain a constant climate, in addition protecting these columns against sand erosion and damage by tourists - supporting endangered inner faces of doorways of the central terrace with specially made stone blocks - covering of endangered architectural blocks with sand - partial clearance and re-erection of the enclosure wall - establishment of a parking area south of the Great Enclosure - building of a small on-site museum in the Great Enclosure, where a number of architectural blocks are securely stored and displayed, and visitors receive information on the site.

Lion Temple - 1960: F. Hinkel "Studie zum Wiederaufbau des Löwentempels von Musawwarat es Sufra" - Feb. 1967: plans of the architects F. Hinkel and K. Stark - Dec. 1967-Jan. 1968: dismantlement of the temple and its complete archaeological investigation - Jan. 1969-Apr. 1970: re-erection of the temple: missing wall parts are built of burnt bricks, plastered and coloured. - chemical consolidation and hydrophobation of the temple's sandstone masonry - erection of a metal fence around the temple - Apr. 1970: official opening. Measures taken since 1993: - detailed survey of the state of preservation, samples taken for analysis at the ICCROM - survey of the state of the roof of the temple - provisional repair of the roof of the temple and preparation of a repair project - planting and maintenance of a shelter belt against wind and sand erosion (not successful, as constant watering could not be ensured) - repair of the fence around the temple - filling of depressions beside the pylons of the temple; these depressions accumulated rain water that weakened the ground below the pylon foundations - removing of dust from the interior reliefs and the floor of the temple - laying of a flooring of concrete to the north and south of the pylon of the temple in order to protect its foundations from rain water

Temple II A The small temple excavated in the 1960s had suffered severely from rain. It was protected by a roofed metal construction against rain and grazing goats. To diminish the damage from wind-blown sand, the walls of this protective structure were covered with reeds which are renewed periodically.

Building Complex III B: "Shrines" III B 1 and III B 2 Both buildings suffered severely from wind erosion and more dramatically from surface run off of the annual rains. Therefore, they were completely enclosed in the 2006 season. The cover consists of a casing of red bricks, erected around the structures without interference with the archaeological fabric above and below present ground level, and a sand fill. Measurement points indicate the position of the structures within the cover and eventually would allow its removal without damage to the archaeological structures.

Meroe

Work programme of the Royal Ontario Museum - University of Khartoum team While the royal pyramids located some 4 km east of the city were always a major tourist attraction and conservation work has been carried out there on and off for almost three decades, the Royal City escaped attention. The site is presently overgrown with

acacia trees, whose relative abundance owes much to the fence built around the protected antiquities area. This acacia forest itself is considered as a protected ecological zone. This combination of protected ecological and archaeological zones is unique in the Sudan and offers a pleasant ambience to the visitors. Because of the somewhat unsophisticated digging techniques of the early excavators who exposed large buildings without giving any consideration to the conservation and left huge spoil dumps right on site, Meroe City does not present as attractive an appearance as it could. It is for this reason that the Toronto - Khartoum team opted for a slow and careful study of the site beginning with (1) the surface survey, (2) the non-invasive exploration of unexposed structures by means of a geophysical survey, (3) mapping of the unexplored parts of the site (4) the study of certain previously excavated important buildings such as the Temple of Amun and Palace M 750. In consultation with the conservators from the Royal Ontario Museum and the Sudan National Museum one of the spoil dumps was also removed exposing the north pylon of the Temple of Amun. The pylon was partially rebuilt using the material recovered from the dump and by means of traditional building techniques still common in the Sudan. This reconstruction was undertaken not just for the beautification of the site but also as a testing ground that allows to observe the effects of the elements on the re-erected walls. In due course it is the intention to expand this reconstruction project. One cannot undertake any sensible conservation work without first fully understanding the occupation history of the settlement. Therefore, concurrently with the surface study and conservation, archaeological field research has also been carried out. The results are published regularly and a selection of finds will be displayed in the future site museum. Hand in hand with archaeological research goes the development programme for the site. It began by renovating the buildings of the permanent research station erected on the site by P. L. Shinnie. A power generator was installed there, but upon completion of the Merowe Dam and powerline, it will be possible to bring electricity to the entire area of Meroe.

Since 2005-06 clean water is freely available to the local users and visitors to the site. Sanitary facilities were erected for the benefit of the tourists next to but outside the antiquity areas, these need regular clean-ups and maintenance. Also, a new entrance to the site was constructed together with a small visitor centre where information about the site will be displayed; it currently requires some rehabilitation work.

Meroe, the so-called Royal Baths A shelter building was erected over the remains soon after the excavations at the beginning of the 20th century and was renewed some decades later, but damp from rain water falling from the roof is penetrating the south wall and damaging the plaster and paintings on its inner surface. Damage was also caused when three faience plaques were torn from this wall and stolen in 2000.

A new sealed and secure structure needs to be re-erected. Water evacuation and proper ventilation of the structure need to be integrated into the design of the new structure.

The pyramid fields: deterioration in the condition of the pyramids has been described by F. W. Hinkel (2000, 16), as follows: 'The comparison of air photos from 1966 with ones from 1978 shows alarming changes during those 12 years. Sand dunes have started to cover the ground and vegetation in the wadis as well as on the surface of the ferricrete sandstone crust in the northern pyramid field. During the last 20 to 30 years, one can observe many traces of erosion on exposed surfaces due to the action of strong wind and moving sand. Such a phenomenon might be connected with the

generally observed trend of desertification in the northern Sudan. There are a number of offering chapels which are not yet protected and are especially endangered by the increasing wind erosion of the last decades. An example of this irreparable damage can be seen on the walls of chapel BEG.N.6, of Queen Amanishakheto, where 90% of the wall reliefs were destroyed during 1989 and 1995 when protection work was stopped ...'. Since 1975 restoration and reconstruction has been in progress under the direction of F. W. Hinkel, as follows: Beg.N.19 has been restored to its original form and the new rear face of the pyramid has been given a rendered surface. Beg.N.11 and 32 have also been restored. Beg.W.18, the pyramid of Prince Taktidamani, was in danger of collapse. It was completely dismantled, provided with new foundations and re-erected. Beg.W.8 is a small pyramid for a queen. The original pyramid of coursed rubble was encased in a covering of blocks. The latter was dismantled and then re-assembled on new foundations. Up until 1999, fourteen chapels had been restored and roofed using the original blocks or prefabricated replacements.

Finds and collections from Meroe

Material from all the work at Meroe is to be found in the collections of the Sudan National Museum. The excavations of Garstang in the settlement, non-royal cemeteries and Sun Temple, were funded by a large number of institutions and individuals, many of which received a share of the finds at the end of the excavations. The bulk of the finds were donated to Liverpool where they remain in the World Museum Liverpool and in the School of Archaeology, Classics and Egyptology, University of Liverpool. Other collections are to be found in the British Museum, The Petrie Museum (UCL, London), The Ashmolean (Oxford), The Scottish National Museum (Edinburgh), The Royal Ontario Museum (Toronto, Canada), Ägyptisches Museum (Muenchen, Germany), Musées Royaux (Bruxelles, Belgium) and Ny Carlsberg Glyptotek (Copenhagen, Denmark). Some of the finds from the excavations directed by Shinnie are in the Department of Archaeology, University of Khartoum. Material from his later excavations, principally pottery, is now in Mount Royal College (Calgary, Canada). There is also a considerable amount of material stored in the courtyard of the dighouse at Meroe, particularly pottery from Shinnie's excavations, much of it unstudied. A small collection of objects is in the site museum which is MP- 15 not at present open to the public.

Of the material from the elite and royal cemeteries major collections are housed in the Museum of Fine Art Boston from Reisner's work. One wall from the inner room of the pyramid chapel of Queen Shanakdakhete is in the British Museum. Objects, mainly architectural stonework from Hinkel's activities, are stored in the NCAM resthouse behind the pyramids. Little of this material has been published in detail. Those finds housed in Liverpool were published by László Török (1997). The material from Reisner's excavations was published in the Royal Cemeteries of Kush volumes by Dows Dunham (1957; 1963) but the treatment there is rather summary. The finds from Shinnie's excavations have been published in Shinnie and Bradley 1984 and Shinnie and Anderson (eds) 2004. The publication of Hinkel's work is well advanced. Detailed studies and the publication of this vast corpus of material would do much to highlight the richness, aesthetic quality and technological expertise of Kushite material culture. It may also provide important data regarding chronology, trade and connections with Kush's neighbours particularly in Late Period Egypt and the Graeco-Roman World.

5.3 Inventory of conservation problems

The current management plan is expected to outline a regime of interventions which aim at counter-acting the processes of deterioration and instating a regular system of conservation, maintenance and monitoring at each component of the serial-site. This regime of interventions shall be further developed and structured into a full-fledged conservation plan encompassing the totality of the proposed World Heritage serial property.

Rapid assessment of the condition of the archaeological sites in question has determined a number of deterioration mechanisms as well identified external factors affecting the archaeological remains. They are presented and described in the table below:

Condition assessment	Description	Cause	Related site	Magnitude of the problem	Degree of complexity
Deterioration Mechanisms					
Structural deterioration of pyramid walls	Deterioration of pyramid core, leading to substantial stresses at pyramid corners, the formation of large cracks, bulging, coving, protrusion of core material at corners as well as in wall faces subsequently leading to large areas of collapse.	Exposure of core to rainwater action, percolation, formation of cavities and voids causing substantial structural instability and stresses.	Meroe – Northern, Southern and Western Cemeteries	High at Meroe Cemeteries	Challenging requiring special expertise, resources and set-up.
Structural instability of walls/collapse of archaeological features	Structural instability of walls, loss of wall integrity, formation of cracks and spreading of walls from the top, bulging and coving, deterioration of core integrity and mortar layers. This has led in many instances to collapse of masonry elements and of substantial sections of archaeological features.	Exposure of the core of the wall from the top, damage by water action and the loss of core integrity, formation of cavities, water channels, voids, etc. causing substantial instability, collapse and loss of historic materials.	Meroe – Sun Temple, Lion Temple, Royal City.	Medium at Meroe – Royal City;	Manageable but still requiring special expertise.
			Naqa – Amun Temple and Temple F.	High at Musawwarat	Challenging requiring special expertise, resources and set-up.
			Musawwarat – The Great Enclosure and temples.	Low at Naqa	Relatively limited intervention requiring expertise but no special provisions.
Degradation of stone/masonry elements	Degradation/disintegration of stone features/stone masonry/brick elements, powdering, pitting, flaking, loss of structural integrity,	Inherent weakness of the stone/brick, exposure to rain action, exposure to water damage caused by collecting stagnant water	Meroe – Northern, Southern and Western Cemeteries;	Low at Meroe Cemeteries	Limited, requiring expertise but perfectly manageable and time-constrained.

	erosion of the substrate, preferential erosion, striated weathering, etc.	in pools, salt crystallization, wind erosion/sand blasting, improper use of hard mortars in restoration, rising damp, formation of algae and moss on the surface.	Meroe – Sun Temple, Lion Temple, Royal City (particularly Amun Temple and Royal Baths); Naqa – Lion Temple B300, Kiosk, Amun Temple, Temple F; Musawwarat - Great Enclosure and temples.	High at Royal City Low at Naqa High at Musawwarat	Will be substantially addressed alongside previous problem type, challenging, requires special expertise and special provisions. Limited, requiring expertise but no special provisions. Time constrained. Challenging, requiring expertise and special provisions
Unsympathetic repair work/interventions	Degradation of stone masonry elements, visual deterioration of walls.	Incorrect use of hard cement mortar for pointing, repair/consolidation of problem areas, filling-in large areas with hard cement mortar.	Meroe – Few pyramids in the Northern and Southern Cemeteries. Naqa – Lion Temple B300, Amun Temple.	Low at Meroe – Naqa and Musawwarat	Easy to deal with, limited in scope.
Incoherent repair methods and poor craftsmanship	Use of differing repair methods on one element thus producing an incoherent and	Poor conservation and craftsmanship	Meroe – Northern Cemetery.	Low at Meroe – Naqa and Musawwarat	Easy to deal with, limited in scope.

	distracting visual effect.				
Failure of past repair work	Use of inappropriate conservation materials leading to rapid failure of repair work.	Use of hard cement mortar in repair plaster surface causing the surface to fail quickly and detach concealing more serious damage behind it.	Meroe – Northern, Southern and Western Cemeteries.	Medium at Meroe – Pyramids and Royal Bath.	Requires monitoring, special intervention wherever failure is advanced. Special expertise and set-up is required.
Exposure and deterioration of ancient plasters	Disintegration, staining, detachment, flaking, powdering, soiling, pitting and formation of cavities, exposure of base layers, salt crystallization, formation of algae and moss,	Exposure to the elements, absence of consolidation and sheltering.	Meroe – Northern and Southern Cemeteries, Sun Temple, Royal City; Naqa – Amun Temple, Temple F.	Low at Meroe and Naqa.	Easy to deal with but requires expertise. Time constrained.
Exposure and deterioration of ancient reliefs	Abrasion, flaking, erosion of carved motifs.	Exposure to the elements, absence of consolidation and sheltering.	Meroe – Northern Cemetery.	Low at Meroe.	Easy to deal with, require no special expertise.
Deterioration of Ancient Mud brick Walls	Erosion of surface and body of bricks, formation of runnels, cavities and voids within the masonry, loss of the structural integrity of the walls.	Exposure to rain, rising damp and wind erosion.	Naqa- Amun Temple.	Low at Naqa	Easy to deal with, requires no special expertise.
Salt crystallization	Efflorescence and crypto-efflorescence of stone and brick elements, blistering,	High tenure of ground table in salts. Large differences in temperature between night and day	Meroe – all sites, Naqa – all sites,	Low to Medium at Meroe	Limited intervention at sensitive areas carrying special decorations. Special

		and the migration of salts from the ground to the masonry. Quick drying effect due to strong sun and wind.	Musawwarat – all sites; with varying degrees of influence on the historic masonry.		Intervention at the Royal Bath.
				Medium at Naqa	Special intervention at the Lion Temple B300 and the Kiosk. Requiring constant monitoring and follow-up.
				High at Musawwarat	Challenging problem requiring special design interventions at large scale if salt crystallization is to halt completely. Difficult to deal with this problem.
Vegetation damage	Formation of small and large cracks in masonry, deterioration of wall tops, impregnation of masonry features in humid humus and soil layers, staining and soiling of masonry.	Vegetation growth in and around archaeological features. Formation of micro and macro cracks through root penetration and expansion, concentration of levels of humidity around historic structures, decay of roots	Meroe – Royal City, Amun Temple and adjoining structures, Royal Baths. Naqa – Lion Temple B300 and Kiosk,	High at Meroe-Royal City	Limited intervention in archaeologically sensitive areas. Requiring regular monitoring and intervention in order to check the expansion of vegetation cover.

		and formation of voids with expanding soil substrates, etc. Formation of algae and moss and the disintegration of historic surfaces.	Amun Temple. Temple F.	Low at Naqa	Intervention mainly inside Lion Temple B300, limited and easy to accomplish once drainage system is installed.
				Absent at Musawwarat	No intervention required.
Water damage	Formation of large pits and holes undermining the structural stability of archaeological features. Large scale erosion of archaeological features.	Burrowing of water collecting in holes creating pressures and stresses. Water channeling causing the erosion of masonry.	Meroe – All Cemeteries (Tops of Pyramids); Royal City Naqa – Amun Temple, Temple F	High at Meroe-pyramids and Royal City	Challenging but can be dealt with, requires special set-up and regular monitoring and intervention to prevent problems from accentuating.
				Low at Naqa	Limited, can be dealt with without the need for special provisions or set-ups.
Factors affecting the sites					
Visual impact	Unightly effect of small and large vehicles, small or large permanent or informal structures, high tension and other types of electric poles in the background of major monumental structures	Highway crossing site; High Tension and low tension poles crossing site; Tourism resthouses; Tourism Police Headquarters within the	Meroe, Naqa, Musawwarat.	Medium to low at Meroe	Challenging. It would be probably complex to re-route the highway and relocate high and low tension electric poles within the site. The treatment

		sites; Archaeological Field Houses at Meroe – the Royal City and at Naqa.			and relocation of the Dig House at the Royal City is however manageable on the longterm.
				Very low at Naqa	It is highly possible to re-locate the Dig House, Tourism Police headquarters as well as the Ghafeer’s house in the longterm.
				Medium to low at Musawwarat	Challenging. Resthouse and facility of the Sudanese Civilization Institute and adjoining gardens could be difficult to relocate and/or reduce their visual impact on the site.
Redundant visitor infrastructure	Dysfunctional Museum at Meroe; decaying and deteriorated site panels, Tourism Police Headquarters; toilets at the Norther Cemetery – Meroe, Superstructure of Royal Baths-Royal City, Ghafeer House-Naqa.	Incomplete construction, deteriorating; Infrastructure in need of replacement/maintenance; Inadequate building design and operation.	Meroe, Naqa.	Very low	Very easy to address via relocation, refurbishment and rebuilding.

Ineffective physical protection measures	Redundant site fences.	Absence of maintenance and re-erection of damaged site fences or building of new fences.	Meroe, all sites.	Medium at Meroe Royal City (goats penetrate the site and tread on archaeological remains)	Very easy to address through the re-erection of a more solid fence.
				Low at Naqa and Musawwarat	Very easy to address. Existing fences need to be maintained and fixed where necessary.
Damaging on site activities	Excavation of the Great Hafir;	Individual initiative aiming at enlarging the catchment's area	Musawwarat	High	Manageable. Discussions with the individual conducting these activities and the State authorities should guarantee the cessation of damaging activities.
Noise pollution	Noise generated by large vehicles.	Proximity of highway and passing of large-sized vehicles.	Meroe.	Very low	Challenging: road needs to be diverted.
Graffiti	Graffiti both inscribed and engraved on ancient walls and structures.	Uncontrolled visitor behaviour.	Meroe, Naqa.	Very low	Manageable. Visitor behaviour should be monitored and controlled.
Public Safety Hazards	Threat of collapse of large masonry blocks.	Structural instability and absence of monitoring for	Meroe pyramids.	Low	Manageable. Risk areas should be

		public safety.			identified and consolidated.
Inappropriate / Inexistent site drainage	Formation of large pools that decant for long periods prior to drying-up thus causing salt damage on historic masonry, encouraging the colonization of plants and algae and exercising physical damage to structures.	Lack of proper drainage and collection of water in archaeological features due to surrounding high terrain created by tall excavation spoils. Archaeological features set in low excavated areas in relation to elevated surrounding terrain with no provision for proper drainage of rainwater.	Meroe – Royal City; Naqa – Lion Temple B300 and Kiosk, Amun Temple. Mussawarat – Great Enclosure.	Medium	Manageable. Would require special provisions for drainage design and execution but would not require extraordinary expertise to be brought in.
Inappropriate dumping of excavation spoils	Distracting heaps of archaeological spoils affect the overall settings of archaeological features.	Improper disposition of excavation spoils.	Meroe – Royal City.	Medium	Manageable. Would require funds and an infrastructure to relocate excavation spoils.
Informal lapidarium areas	Clutter of architectural masonry around excavated features.	Improper allocation of excavated remains.	Naqa – Kiosk, Amun Temple.	Very low	Limited. Requires relocation of lapidarium to areas where no visual cluttering will occur and conflict with the interpretation of the remains.
Informal and damaging	Unightly views of vehicular tracks in archaeological areas.	Uncontrolled access of vehicles into	Meroe, iron manufacture	Very low	Limited, vehicular access to sensitive

vehicular access		archaeological areas.	heaps.		areas should be banned and controlled.
Littering	Unsightly refuse in various areas of the site.	Uncontrolled dumping of garbage.	Meroe – Royal City.	Low	Challenging. Informal dumping areas should be substituted with formal areas set a distances away from the site.

In principle, after having assessed the state of conservation of the site and the factors affecting it, the main focus of NCAM's efforts for the future shall be on developing the necessary conservation infrastructure to be able to address these challenges as well as work in partnership with the University of Shendi, foreign archaeological missions and specialized conservation experts in order to design long-term conservation plans and methodologies and implement conservation projects.

5.4 Conservation measures in place

These measures pertain to the program of archaeological missions working on the sites of the Island of Meroe with many years of presence on these sites. An exhaustive list of measures to complement the program of these missions is presented in the *Action Plan* section of this document.

Naqa

Excavation of the small subsidiary Temple 200 has produced over 1200 relief fragments of highest quality. After complete clearance (2008) at least a part of the wall decoration will be reassembled for display in the site museum. The current focus of the Berlin team is the Roman Kiosk (Hathor chapel). A complete recording by 3D-scanner has been the first step for the conservation and consolidation of the ruin. After excavation loose blocks will be replaced: otherwise the chapel will be preserved as a ruin. The most fragile elements such as capitals will be replaced by replicas reproducing their actual appearance; the originals will be displayed in the site museum. The Berlin team consists of archaeologists, prehistorians, architects and restorers (who also work on the Berlin Museum Island which is on the UNESCO World Heritage List). Next on the agenda are Temple 400 and selected buildings in the city. A conservation campaign is planned which will involve the basic consolidation of Temple 300. However, the scope of the measures needed to effectively secure the structure exceeds the budget which can be raised by the mission alone. The mission here sees its role mainly in contributing the expertise and the means for conducting the works and developing a comprehensive site management plan.

Musawwarat

The continuation of protection, consolidation and restoration measures is planned for the Great Enclosure. Systematic conservation of the architectural remains on the basis of the existing results of the survey and the photogrammetric documentation: restoration of collapsing or otherwise endangered walls and strengthening of weak foundations; covering of open wall tops with original covering blocks or with special mortar - eventually, re-consolidation and rehydrophobation of the stone by chemical agents - partial reconstruction: namely of the Central Terrace with Temple 100 and the assemblage of Temple 300 - permanent preservation measures for doorways and thresholds and other parts of structures which undergo constant wear from tourists - eventually replacement of endangered architectural elements (columns, sculptures) by copies - enlargement of storage and display areas in order to save important endangered architectural objects - further clearing of courts and removing of invasive

sand dunes - providing means to conduct rain water out of the Great Enclosure - continuation of the re-erection of the enclosure wall - tourist management plan:

Lion Temple - repair of the modern roof of the temple - consolidation of the temple foundations if subsidence continues - removal of the water-soluble salts from the sandstone reliefs - eventually, re-consolidation and re-hydrophobation of the stone and the reliefs, especially on the outside of the building, by chemical agents - renewal of the plaster used to protect areas without reliefs - removal of dust from the roof timbering - removal of bird faeces and wasps' nests and establishment of means of preventing the nesting of birds inside the temple - renewal of the fence around the temple and the gate.

Small Enclosure - complete cleaning of the building - consolidation of the architectural structures - the installation of a visitor guiding system with protection for endangered parts. Other standing monuments - the programmes set out above for the large standing structures should also be applied to the smaller features - the smaller features need to be systematically surveyed to assess their condition and eventually they need to be protected from damage by natural and human causes.

Meroe

Specific recommendations for Meroe contributed by the Royal Ontario Museum – University of Khartoum team are as such: the first priority will be the completion of investigations and partial re-construction of walls and columns in the Amun Temple as well as the removal of spoil dumps left by Garstang and Shinnie. The soft material used in the construction is easily and negatively impacted by the strong seasonal rains and sandstorms. In terms of threats and challenges to the site one can identify the following as negatively impacting the site: the impact of the harsh environment on structures made of the relatively soft materials, the impact of the dramatic growth in the number of visitors to the site, the fact that part of the site remains outside the fenced area, especially within the village of Deragab and the construction of a police guard station within the Royal City immediately on top of the unexcavated portion of the site. The influx of tourists must be better controlled by providing designated car parking outside the fenced area and outlining visitors paths to prevent tourists from climbing on, and breaking the walls of, ancient palaces and temples. In addition the electricity pylons need to be removed (a programme to carry out this work has now been agreed).

6. Site Protection

Legal and regulatory protection of the proposed World Heritage Site “The Archaeological Sites of Meroe Island – Begraweya – Naqa – Musawwarat” is provided at three different levels:

- The international level: through the ratification of the relevant international conventions;
- The national (federal) level: through the competences and powers granted by the constitution of Sudan to the National Government in the field of cultural heritage protection as well as to the protection granted

by the provisions of the 1999 Ordinance for the Protection of Antiquities; and,

Through the Presidential Decision/Decree (no. 162 for the year 2003) for the *Confiscation of the Region of Naqa, Musawwarat and Begraweya and for the Creation and Register of a National Reserve within this Region and Managing it*.

- The state level: through the competences and powers granted by the constitution to the individual states in the field of legislating and executive powers over cultural matters of the state, as well as over state cultural and heritage sites;

At the international level, the Sudan ratified (in 1970) the *Convention for the Protection of Cultural Property in the Event of Armed Conflict*, known as the *Hague Convention of 1954*. Protection for Cultural Property (such as the nominated sites – since they fall under the definition of subject matter of the convention) threatened in the eventuality of an armed conflict is subject to the provisions of this convention⁶ (in legal terms of course).

Additionally, protection for the proposed sites will be extended in accordance with and subject to the nomination of the sites on the World Heritage List, as a result of the ratification of the 1972 UNESCO *Convention concerning the Protection of the World Cultural and Natural Heritage*⁷ (referred to as the *World Heritage Convention*). The convention was ratified by Sudan in 1974.

At the national level, the protection of the site is provided under *article 13 (5)* of the *Interim Constitution of the Republic of Sudan of 2005*⁸ which states the following:

“The State shall protect the Sudan’s cultural heritage such as monuments and places and objects of national, historic or religious importance, from destruction, desecration, unlawful removal or illicit export.”

The Constitution attributes to the National Government (Federal Level of Government, under which the National Corporation of Museums and Antiquities operates) exclusive legislative and executive powers in the area of national museums and national historic sites⁹. The States of the Sudan, individually, benefit from legislative and executive powers in cultural affairs pertaining to their States, as well as in state cultural and heritage sites state libraries, state museums, and other historical sites state archives, antiquities and monuments¹⁰. It is understood from this distribution of powers that a distinction exists between sites and monuments of a national character and sites and monuments pertaining to the individual States. The Constitution fails, however, to precise the nature and extents of the measures that could be adopted by the National Government and the States themselves; nor does it

⁶ <http://www.icomos.org/hague/hague.convention.html#contents>

⁷ <http://whc.unesco.org/en/conventiontext/>

⁸ This Interim Constitution is a transitory institution with the aim of regulating the affairs of the State for an intermediate period of 6 years until that time in 2009 when general elections will be held and a referendum on the autonomy of the Southern Sudan is held. It is expected for this Constitution to be revised after the elections/referendum have taken place.

⁹ *Schedule A, Article 31* of the Constitution.

¹⁰ *Schedule C, Articles 9, 33, 38* of the Constitution.

specify the criteria allowing the determination of the definition and extents of the national cultural heritage. It is expected that this area of unclarity will be elaborated in more detail after the referendum and the revision of the Interim Constitution. Nevertheless, given the fact that the sites subject to WH nomination have already been declared of national interest in the framework of the Presidential Decision of 2003 makes the National Government, represented in this case directly by the Ministry of Culture, Youth and Sports and subsequently, the National Corporation for Antiquities and Museums, directly responsible for the protection of the cultural sites located within the limits of the reserve. To that extent, the provisions of protection and management are stipulated in the 1999 Antiquities Ordinance, which was based on the 1998 Constitution of the Republic of Sudan, now replaced by the 2005 Interim Constitution. Accordingly, these provisions should be read and interpreted in conjunction with the competences attributed to the National Government (subsequently to NCAM) by the Interim Constitution of 2005.

The scope of the application of the 1999 Antiquities Ordinance is limited to antiquities, both movable and immovable and is defined as such:

“anything surviving from the ancient civilisations or past generations and has been discovered or excavated whether the object is fixed or mobile and is a hundred years or more old. The antiquities Corporation could for technical or historical reasons consider any premises or relics of archaeological value if there is any interest for the country in its preservation. Documents, prints, some human, animal or botanical remains are also considered as part of antiquities.”¹¹

The definition of archaeological site itself is given in the following clause:

“any site of archaeological interest defined by the Corporation for Antiquities and Museums”,

as for archaeological land it is given in the subsequent clause:

“the land which accommodates the site of archaeological interest, or a historical building. The limits of such land shall be defined by the National Corporation for antiquities and Museums.”¹²

This definition, albeit silent on the criteria that help define the limits of archaeological site or land, gives a large margin of flexibility to NCAM for establishing the limits of an archaeological site, and of an archaeological land. It is interesting to highlight here the distinction between the two definitions whereby the first pertains to a site where one would expect the archaeological remains to exist, while the second pertains to the land incorporating the site of archaeological interest and whose limits are left to the discretion of NCAM to determine. What is of more interest here is the flexibility given to NCAM to specify the modalities of land use within the limits of an archaeological land, this is clearly stipulated in the following clauses of the Ordinance¹³:

¹¹ Ordinance for the Protection of Antiquities 1999. *Chapter I, Article 3.*

¹² Ordinance for the Protection of Antiquities 1999. *Chapter I, Article 3.*

¹³ Ordinance for the Protection of Antiquities 1999. *Chapter II, Article 9.*

“Prohibition of the use of archaeological land for purposes part from those earmarked for its utilization

It is not permitted to build, or dig irrigation channels, or make a cemetery, or a water tower, or any other activity leading to the erosion of traces of antiquities on archaeological or historically registered land. Both the planting of trees and their cutting on such land is forbidden without prior permission from the National Corporation for Antiquities and Museums.”

Alternatively and under the section pertaining to archaeological sites:

“It is not allowed to build any sort of structures or roads at a distance that may affect buildings or archaeological [areas] without the prior approval of the National Corporation for Antiquities and Museums.

Developmental projects may be initiated after the completion of archaeological studies and surveys provided the benefiting parties bear the expenses incurred by the studies, surveys and salvage operations.¹⁴”

In the case of the proposed sites for World Heritage Nomination, the interpretation of the legal texts listed above allows for a flexible definition of site boundaries and limits of buffer zones by NCAM with reference to the definition of archaeological sites and archaeological lands under the 1999 Ordinance. The setting of these limits and boundaries is a task assigned to NCAM and the legal status of these limits is given by the 1999 Antiquities Ordinance as such:

“The National Corporation for Antiquities and Museums shall provide an authenticated and recognized map of all archaeological sites that are discovered, or are in the process of being so, or expected to yield antiquities findings.¹⁵”

The jurisdiction of NCAM over the definition and delimitation of archaeological site boundaries and related buffer zones is extended to it by the 1999 Ordinance. Restrictions applying to land use patterns and human activity within the buffer zones need to be set by NCAM and a mechanism established to make sure that these restrictions are carried into the legislative and institutional process at State level.

Apart from the competences in protection and management of the archaeological sites under NCAM’s mandate, the Presidential Decision/Decree (no. 162 for the year 2003) for the *Confiscation of the Region of Naqa, Musawwarat and Begraweya and for the Creation and Register of a National Reserve within this Region and Managing it* provides yet another umbrella of protection for the sites subject to the nomination: Bajrawiyya – Naqa – Musawwarat on a national level and establishes a committee sponsored by the President of the Republic with representatives from the following national ministries:

- The Ministry of Agriculture and Forestry;

¹⁴ Ordinance for the Protection of Antiquities 1999. *Chapter I, Article 10.*

¹⁵ Ordinance for the Protection of Antiquities 1999. *Chapter II, Article 13,2.*

- The Ministry of Interior;
- The Ministry of Irrigation and Water Resources;
- The Ministry of Culture;
- The Ministry of Environment and Urban Development;
- The Ministry of Tourism and National Heritage;
- The State Ministry of Agricultural and Animal Resources – River Nile State;
- The Sudan Civilization Institute (as Secretary of the Committee).

NCAM is represented in the Committee (currently) by the Ministry of Culture [Youth and Sports]. The limits of the National Reserve is specified in a table of coordinates (listed below) and refers as well to a list of archaeological and historic features from the nominated sites of Begraweya – Naqa and Musawwarat. These sites represent some of the main features of the archaeological sites being nominated but are not exhaustive. The boundaries of the National Reserve encompasses however all three nominated sites and their buffer zones.

National Reserve Boundaries for Mussawarat and Naqa		
Pt no.	Eastings	Northings
1	33°16.782	16°35.408
2	33°15.405	16°34.121
3	33°14.509	16°33.605
4	33°13.292	16°32.825
5	33°09.318	16°31.442
6	33°16.251	16°15.775
7	33°17.675	16°14.930
8	33°20.903	16°24.610
National Reserve Boundaries for Begraweya		
1	33°45.781	16°54.733
2	33°43.248	16°55.733
3	33°43.885	17°09.577
4	33°46.620	17°09.642

At the State level, legislative and executive powers are granted by the Interim Constitution of 2005 to cover cultural matters pertaining to the State itself (in our case, the State of the Rive Nile). This extends to *state cultural and heritage sites, state libraries, state museums, and other historical sites, in addition to state archives, antiquities and monuments*¹⁶. There is a clear segregation here between sites pertaining to the National State and sites pertaining to the State itself, and although it is most likely that the proposed sites fall under the jurisdiction of the National Government, by the token that these sites are located within the River Nile State, it imposes responsibilities on this State to legislate in favour of protecting the integrity and values of these sites. This is not only a natural consequence of the national significance of the sites themselves, but also an intention by the Government of the State of the Nile and the Ministry of Culture there to fulfill such responsibilities and reiterate the significance of these sites and the importance of safeguarding them from any likely threat that might occur through improper land use or major infrastructure or rural/urban development.

¹⁶ *Schedule C, Articles 9, 33, 38 of the Constitution.*

On the planning level, it is worth mentioning that the provisions of the Presidential Decision/Decree (no. 162 for the year 2003) with respect to fixing the limits of the National Reserve and extending the necessary planning protection for it are all respected and that the coordinates of the boundaries of the National Reserve have been safeguarded with the land office as well as with the Survey Department at Shendi (locality within the State of the River Nile where the proposed sites for nomination are situated) and produced on the official topographic maps of the State. On another level, the maps generated by NCAM as a result of the definition of the boundaries of the series sites and the respective buffer zones will be deposited with the land office and the Survey Department, in accordance with the jurisdiction of NCAM over the production of *authenticated* and recognized archaeological maps of all archaeological sites as stipulated by the Antiquities Ordinance of 1999¹⁷. The choice of the sites boundaries and site buffer zones in each case was made with the intension of including those areas and attributes which are a direct tangible expression of the “outstanding universal value” as well as areas which, in the light of future possibilities offer potential to contribute to and enhance such understanding.

The “outstanding universal value” (subject to nomination of course) of these proposed sites benefits from legislative and executive, legal and institutional as well as physical protection. Legal protection is provided by the competences and responsibilities attached to the National Government in the field of the protection of sites of national importance, the same applies to the individual States. Protection is endorsed by the designation of the area including the three series sites under discussion as a National Reserve. Institutionally, NCAM has the mandate and the responsibility to protect, manage, develop and promote sites of national significance under its jurisdiction (refer back to 1999 Antiquities Ordinance and to the administrative structure and functions of NCAM), this applies to the sites proposed for nomination. The mechanisms by which this responsibility will be exercised are specified in the section pertaining to Management further within this report, as well as in the respective action plan. NCAM is therefore of the view that adequate protection and appropriate management can be achieved via legislative, regulatory, institutional and management procedures and measures applied at the national, state and local levels to assure the survival of the property and its protection against development pressures and change that might negatively impact the outstanding universal value or the integrity and/or authenticity of the proposed property. These measures are laid out in the adjoining action plan and, the management structure/system proposed aims at assuring that these measures will be implemented.

Physical protection for the three proposed sites is a shared responsibility carried over by NCAM and the State and local authorities of the localities surrounding the archaeological sites. The specific structure that will coordinate the protection, management and promotion of the proposed series site is presented in the section on management structure below. It will include NCAM and representatives of the concerned stakeholders in the State. But the actual management of the site is NCAM’s responsibility and it would be worth explaining the situation and capacity of NCAM with regards to the delivery of adequate World Heritage Site level management.

¹⁷ Ordinance for the Protection of Antiquities 1999. *Chapter II, Article 13,2.*

The current organizational structure of NCAM incorporates the following administrative units:

- Board of Directors
- General Director
- Deputy General Director
- Department of Archaeological Inspection
 - Field Inspections
 - Archaeological Field Surveys
 - State Offices (regional offices)
- Department of Museums
 - National Museums
 - State Museums
- Department of Conservation and Laboratories
 - Conservation of Movable Archaeological Property
 - Conservation of Immovable Archaeological Property
 - Laboratories of Analysis
- Department of Financial and Administrative Affairs
 - Administrative Affairs
 - Financial Affairs
 - Public Relations
- Department of Architectural affairs
 - Architecture and Restoration
 - Services
- Library and Photography

The current structure is however under review following the issuance of the national corporations' law of 2003 which established the new institutional and financial framework for the operation of such corporations. An internal committee from NCAM was set-up by the Director General in December 2005 to review the structure of the corporation and propose one that enables NCAM to fulfill its mandate and responsibilities under the light of the latest political and economic changes taking place in Sudan.

The report of the internal committee was submitted in June 2006¹⁸, it proposed a new structure for NCAM, one which introduced the following main changes:

- The creation of a new Public Relations and Media Unit to replace the current Department of Public Relations, attached to the office of the General Director;
- The creation of a new Department of Planning, Information and Research, to include the Division of Research and Studies, the Division of Libraries and Documentation, the Photographic Unit and the Department of Human Resources and Administrative Development.

¹⁸ Report of the Committee for the Study of the Administrative and Employee Organizational Structure - NCAM. June 2006. Source: NCAM.

In summary, the mandate and responsibilities of the Public Relations and Media Unit are as follows:

- Reflect the activities of the Corporation in the different media channels;
- Focus and propagate the role and objectives of the Corporation in the Media;
- Prepare the conferences, seminars and workshops of the Corporation;
- Participate in conferences, seminars and talks relating to the field of expertise of the Corporation;
- Prepare programs and implement projects aiming at increasing and improving employee sense of belonging and faith in the corporation.

In addition to these responsibilities, the Unit was attributed the traditional responsibilities of support and protocol.

At first look, it appears that the new improved mandate of the Public Relations and Media Unit introduces advanced communication responsibilities making the task of promoting the role and objectives of the Corporation central to the mandate of the Unit. This will certainly reflect positively on the promotion of the protection and management of the sites proposed for World Heritage nomination. In fact, one of the challenges that could affect the long-term protection and preservation of the proposed World Heritage serial-site relates to limited awareness about the site's values and the current restricted contribution of the site to education and to the improvement of the socio-cultural and economic life of the inhabitants in the site areas. Such issues can only be addressed through intensive campaigning and advocacy work, which will constitute a substantial part of the portfolio of this Unit, once it is set-up.

The mandate and responsibilities of the Department of Planning, Information and Research on the other hand are as follows:

- Cater for all planning and development activities of the Corporation to include action plans and follow-up programs;
- Plan for research and studies in all aspects of the work of the Corporation;
- Assess the plans, programs and projects presented by the various departments of the Corporation, commission more studies according to scientific standards and establish the necessary priorities in the implementation of these projects and programs;
- Prepare the Corporation's performance reports, evaluate executed projects;
- Collect data, information and statistics, prepare technical studies on all subjects that might be requested by higher administration;
- Oversee human resources development;
- Oversee administrative development;
- Develop IT systems, studies and research.

The new responsibilities attached to the proposed Department of Planning, Information and Research cover strategic objectives which will help develop the capacities of the institution in terms of performance management, capacity building, prioritization of resources and financial planning. These improvements will certainly boost the capabilities of NCAM with respect to delivering the right level of management required for current as well as proposed World Heritage Sites. The activities of the proposed Department with relevance to the protection and

management of the proposed World Heritage serial-site shall be discussed in the section on management further down.

7. Definition of site boundaries and site buffer zones

Concerning the physical protection of the sites, this starts with the definition of the core zones and buffer zones for each of the respective sites (please refer to the Nomination File for a list of geographical coordinates for the sites and their buffer zones). The table below shows the justification behind the definition of the limits of each zone per site. Physical protection along these limits is provided by NCAM staff, State police as well as the State's Tourism Police present at each site. It is also worth noting that traditional and popular interest in the sites and their cultural heritage provides yet another layer of protection; in many instances this layer is organized under popular committees or cultural clubs operating from the localities surrounding the sites such as at Shendi, Kabbushiyya, Begraweya, Ba Naqa and al-Awateib.

Site name	Justification of core zone (site boundaries) limits	Justification of buffer zone limits
Meroe - Begraweya	The core zone includes the ancient town, the non-royal and elite cemeteries, the Sun Temple, its associated Hafir and the western elite cemetery. It also includes the Northern and Southern royal cemeteries and the gallery quarry to the east. The modern village of Kigiek lies outside the core zone but Deraqab to the north is included as important archaeological remains lie within the village.	The buffer zone extends from the hills to the east of the Royal cemeteries to the Nile and includes areas to the north and south of the archaeological remains which are clearly visible from them. At present, the buffer zone is cut through by modern pipelines. The latter is to be redirected in the near future to the east of the buffer zone while the telegraph pole line is no longer in use and should be removed. Modern building development should be totally excluded from the buffer zone and the unfinished resthouse a little to the east of the Southern Cemetery should be demolished and the site landscaped.
Naqa	All archaeological features directly associated with the site are included within the core zone.	The buffer zone seeks to enclose most of the environs of Naqa visible from the site. It is anchored on the three prominent hills, Jebel hardan, Nasb es-Sami and Jebel Gerai, along with the promontory to the north of Naqa on the right bank of Wadi Awateib. It includes the Kushite remains at Jebel Matruga and at the foot of Jebel Hardan and Nasb es-Sami.
Musawwarat	The core zone encloses all the structural remains directly associated with the Kushite activities at Musawwarat as well as the cemeteries adjacent to the site. Several of the quarries are also included. Within the core zone lies the	The buffer zone extends far from the site enclosing most of the area visible from it, in an attempt to preserve the desert environment which, however, is already severely compromised by

	modern compound (Sudan Civilization Institute) with its trees, well, mosque and resthouse along with the dig-house of the German Archaeological mission.	the modern constructions noted previously.
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State Police should make sure that the boundaries of the sites and their respective buffer zones are respected in accordance with the legal framework explained above. Site and visitor security are mainly provided by the Tourism Police, both entities undertake monitoring and reporting on infringements and communicate well with NCAM.

7.1 Textual description of the boundaries of the proposed property

Meroe

The site of Meroe is over 3 km east–west and more than 1 km north–south. It is bordered by the Nile on the western side, where the town site is located, and by the sandstone plateau on the edges of the desert, where the pyramids dominate the landscape. The core zone has been defined to insure the integral preservation of the ancient remains. The buffer zone has been delimited by the desert plateau on the east, the river flood plain on the west, a vast plain on the south and mountains (natural barriers) on the northern side. The objective of this is to keep the natural semi desert landscape and the traditional architecture of the neighboring villages.

Musawwarat es-Sufra

The monuments of Musawwarat es-Sufra are located in a basin surrounded on almost four sides of the site by a chain of hills. The core zone has been defined to insure the integral preservation of the ancient remains. The buffer zone has been delimited by big mountains as very clear landmarks. The objective of this is to keep the natural semi desert landscape, the wadis and the traditional architecture of the semi-nomadic population living in the area.

Naqa

The ancient relics of Naqa are bordered by a chain of sandstone hills on the eastern side, while the areas to the north, south, and west consist of flat plains crossed by annual rain channels (wadis). As at Meroe and Musawwarat es-Sufra, the core zone has been defined to insure the integral preservation of the ancient remains. The buffer zone has been delimited by big mountains as very clear landmarks. The objective of this is to keep the natural semi desert landscape, the wadis and the traditional architecture of the semi-nomadic population living in the area.

8. Management Plan

The following management plan is guided by the aspirations of the stakeholders of the serial-site proposed for World Heritage Nomination. It addresses the needs of the site

and responds to the requirements of the World Heritage Convention as stated and explained in the Operational Guidelines for the Implementation of the World Heritage Convention (WHC. 08/01, January 2008) and other related texts. The management plan first explores the results of the consultation process conducted in the presence of the stakeholders, it presents the vision for the future of the site and then discusses the key issues relevant to the management of this site, in accordance with the provisions and standards of the World Heritage Convention, it then formulates a set of policies that guide the way towards the implementation of the solutions that address the key issues of the management plan and finally, presents the action plans that implement those policies.

9. The Consultation Process

The Consultation Process was undertaken with the following objectives in mind:

- g. Understand the concerns, needs and aspirations of the various stakeholders with respect to the future of the proposed World Heritage Site, the government of Sudan and of the River Nile State being only two of these stakeholders¹⁹;
- h. Inform the stakeholders about the cultural significance of the site, the outstanding universal value, the critical issues affecting the long term protection, management and sustainability of the site and the responsibilities resulting from the possible nomination of the site on the UNESCO World Heritage List;
- i. Get all stakeholders to agree on a common vision for the site, one that takes into consideration their needs and aspirations as well as responds to the implications and responsibilities of World Heritage nomination;
- j. Get all stakeholders to commit to the protection, management, development and sustainability of the site;
- k. Get all stakeholders to endorse the management plan under elaboration for the site and adopted as a working document, reviewed and amended every 3 years;
- l. Elaborate jointly an effective management structure that will be responsible for, take charge of and oversee the full implementation of this management plan and the attainment of the standards that govern the protection, management and sustainability of the World Heritage Site.

The stakeholders that were party to the Consultation Process were represented as follows: the Advisor to the President of Sudan, the Ministry of Culture, Youth and Sports, the Legislative Council of Khartoum, NCAM, the State Ministry of Culture in the River Nile State, the State Ministry of Education in the River Nile State, the Ministry of Culture and State Information in the River Nile State, the State Ministry of Finance, the Commissioner of Shendi, the University of Shendi, the University of the River Nile, the Popular Committee for the Development of Shendi, the Tourism Office in Shendi, the State Tourism Police, NCAM Office in Shendi, the Popular Committee of Begraweya North, the Popular Committee of Begrawiyya South, The Popular Committee of Awateib, the Presidency of the National Congress in the Ba Naqa Region, the Presidency of the National Congress in the Southern Sector, the Presidency of the National Congress in the Northern Sector, the District's Attorney's Office in Shendi, the Urban Water Resources Office, the State Land Survey

¹⁹ Refer to Annex B for a full list of stakeholders.

Department, the Land Office – Shendi, the Rural Water Resources Office, the State Ministry of Tourism in the River Nile State.

All of the objectives of the Consultation Process were met, and the stakeholders formally agreed to the following policies and measures:

- Provide full commitment to the management plan and to the respect and fulfillment of the provisions and requirements of the nomination;
- Provide full commitment to sort out any community or state issues in favour of protecting the outstanding universal value of the serial-site;
- Provide full commitment to the establishment of an advisory committee that will take charge of supporting the fulfillment of the management plan, overseeing it and monitoring it while providing the necessary help to the executive body in charge of enforcing protection and management;
- Provide full commitment to gathering budgets from the governmental as well as from the private sector with the aim of implementing the management plan;
- Share responsibilities in protecting, managing the site and lifting it to the required levels of management;
- Value the recognition of the international community's for the heritage of the serial-site and consider it an achievement in itself;
- Prevent and mitigate the impact of development and tourism on the site;
- Not to compromise the importance of serial-site in any way or form;
- Promote public ownership of the site and the sense of ownership by the community;
- Involve the community in the protection, management and promotion of the serial-site;
- Make sure the community benefits directly from the sympathetic and sensitive exploitation of the serial-site;
- Provide more coordination between the local community, the University of Shendi and local, State and national authorities;
- Promote the site in collaboration with the World Heritage Centre;
- Organize promotional campaigns with the support of the University of Shendi and NCAM;
- Help resolve the situation of some of the inhabitants affected by the delimitation of site boundaries and buffer zones;
- Increase the man-power of the Tourism Police;
- Provide the necessary legislative back-up in order to provide the protection and management required for the serial-site;
- Enhance the educational potential of the serial-site throughout Sudan.

The consensus of the stakeholders for doing whatever is needed to facilitate, enable and participate in the protection, management, promotion, enhancement, development and sustainability of the serial-site and its outstanding universal value is an entry point to defining adequate and realistic policies and action plans that fulfill the vision and expectations of all stakeholders. Such a vision could be expressed in the following way:

“To gain international recognition of the significance of the archaeological sites of the Island of Meroe, Begraweya – Naqa – Musawwarat through the nomination of the serial-site on the World Heritage List, while fulfilling the aspirations of the stakeholders and satisfying World Heritage Standards of protection, management, promotion and sustainability of its outstanding universal value making it accessible to local communities who would benefit from the enhancement of the site in the future, in ways that do not diminish its significance and outstanding universal value.”

10. Key management issues pertaining to the serial-site

10.1 Ownership structure and responsible bodies

The three sites are owned by the government and administered by the Sudanese National Corporation for Antiquities and Museums (NCAM). NCAM is one of the oldest services of the Sudan Government. The first body to look after the archaeological heritage of the country was created during the British Administration in 1903. Today, NCAM is attached to the Ministry of Culture, Youth and Sport. Although, its director is responsible to the Minister, yet NCAM has an independent budget and administration. The general policy of NCAM is set by a board of nine members on the suggestion by its director and approved by the Council of Ministers. Those members include the director himself, a representative of the employees and seven individuals representing other disciplines and functions related to the mandate of NCAM²⁰.

Having said that, the management structure proposed in the forthcoming section below refers to a shared structure of responsibility, one that was agreed upon between NCAM and the concerned stakeholders in order to share responsibilities, gather more support, involve the local stakeholders and allocate additional resources outside NCAM for the protection and management of the serial-site.

10.2 Formalization of site boundaries and buffer zones

Site boundaries and buffer zone limits have been deposited with the State’s Survey Department and with the Land Office at Shendi. According to the 1999 Antiquities Ordinance, NCAM has the responsibility and jurisdiction to produce authenticated and recognized maps showing the limits of archaeological sites. These maps should, in the case of the Archaeological Sites of the Island of Meroe, show the limits of site boundaries (core zones) and buffer zones. These maps are binding by definition, however, as a measure of additional support, the Governor of the River Nile State and the Commissioner of Shendi should issue the necessary directives, regulations to enforce the statute of these maps. This is envisaged as one of the measures in the adjoining action plan to this management plan and had already been discussed and agreed upon during the Consultation Process.

10.3 Restricted Conservation Infrastructure

²⁰ For additional details on the mandate and capabilities of NCAM, please refer to section relating to Protection above.

The assessment of the state of conservation of the site (see relevant section above) has shown that the main factors affecting its condition are:

- slow-rate deterioration due to natural phenomena accentuated by the lack of structured conservation systems, such as for example a regime for undertaking conservation work, regular maintenance and monitoring of the state of the remains;
- scarcity of qualified staff to conserve the site. The reasons behind this deficiency relate to the stagnant recruitment process, the limited numbers of uncommitted jobs within NCAM which makes it difficult to fill in new positions, the scarcity of training opportunities in the field of conservation, the lack of formal academic curricula and formation in the field of conservation in the country, and the lack of professional incentives at NCAM thus leading to the departure of previously trained staff;
- Limited site management personnel to look after the site, monitor visitor behaviour, monitor the condition of the remains as well as risk areas;
- Lack of funds to implement large scale maintenance and conservation work.

The main focus of NCAM's efforts for the future shall be on developing the necessary conservation infrastructure to be able to address these challenges as well as work in partnership with the University of Shendi, foreign archaeological missions and specialized conservation experts in order to design conservation plans and methodologies and implement conservation projects. The University of Shendi, a partner of NCAM in the implementation of this management plan has already geared up to responding to the needs of development within the State of the River Nile, in the areas of archaeology and tourism management. Resources significant in numbers are enrolling in the Department of Archaeology and will certainly look to be integrated in the mechanism of protecting, managing, promoting and developing the serial-site under discussion. NCAM and the University shall collaborate together in order to formulate short-term and long-term training agreements in the area of archaeological conservation. NCAM's conservation department staff have the necessary expertise to train University students (with the support of International Agencies such as UNESCO, ICCROM, WMF, GETTY, etc.) and integrate them into the conservation program designed to address the conservation problems of the site (see action plan for details).

On another note, foreign missions working across these sites have established short-term conservation programs, some in parallel with archaeological projects. They could easily integrate a student workforce in the planning and implementation of conservation works and help build a trained infrastructure for NCAM to tap into.

10.4 Risk assessment and management

Risk factors with varying degrees of impact have been identified. The table below describes them and provides approaches to averting/mitigating and managing their impact in case they occur.

Risk Factor	Likelihood of occurrence	Impact	Risk management strategy
Natural Factors			
Fire hazard	Medium – Only in Royal City	High	Clean-up Royal City site from organic debris, monitor visitor behaviour and make sure a fire control system is provided (see action plan)
Earthquake			Make sure risk areas of collapse and structural instability are dealt with first in the priority schedule of conservation program. Monitor the situation of repairs after each land movement and yearly in order to determine the need for additional conservation/repair.
River Flooding	High – Only in Royal City;	High	Design flood-diversion and water evacuation system which is low impact, localized and takes into account the sensitivity of above ground and below ground archaeological remains.
Rainstorm flooding and damage	Medium - Naqa	High	Re-evaluate and improve stormwater diversion ditch around the Amun Temple and design and carry out rainwater evacuation system at the Lion Temple and Kiosk site.
Sandstorm	High - Musawwarat	Medium	Continue to reconstruct enclosure walls and other internal walls as barriers against the effect of wind-born sandblasting.
Desertification	Medium - Begraweya	Medium	Conduct a thorough analysis of effects and impacts of desertification on the pyramids of Begrawiyya and provide practical solutions that can be implemented.

Human Factors			
Illicit excavation	All sites	Low	Increase awareness of local populations around serial site of the significance of their collective heritage and the importance of protecting it. Strengthen vigilance in and around the sites.
Vandalism	All sites	Low	Increase awareness of local populations around serial site of the significance of their collective heritage and the importance of protecting it. Strengthen vigilance on site and control visitor behavior through information and monitoring.
Disruption of central and state authority and civil unrest	All sites	Low	Increase awareness of local populations around serial site of the significance of their collective heritage and the importance of protecting it; people will become the first protectors of the site because they relate to it. Strengthen physical measures around site museums. Maintain strong relationships with community leaders in order to rally their support for local protection.
War	All sites	Low	Increase awareness of local populations around serial site of the significance of their collective heritage and the importance of protecting it; people will become the first protectors of the site because they relate to it. Strengthen physical measures around site museums. Maintain strong relationships with community leaders in order to rally their support for local protection.

10.5 Coordination and shared protection and management responsibilities

Conflicts of interest between the national level and the state level and the differing interpretations of constitutional and institutional mandate texts has led sometimes to situations of competition over the use of the cultural resources of the State and their exploitation. Revenues accruing from the visitation of the sites are now shared between the State Tourism Authorities and NCAM. NCAM's revenues go directly to the national treasury and are not normally invested in upgrading the conditions of archaeological sites.

In order to avoid such a situation, NCAM is now sharing responsibilities towards the protection and management of the serial site with the State Authorities and local communities. This coordination will be formalized through the creation of the Advisory Committee for the WHS (see management structure below) who will oversee and facilitate the implementation of this management plan and support the Executive Technical Team operating on the serial-site.

10.6 Protection of the site from unsympathetic development

The legal texts are clear on the question of protecting the integrity and surroundings of archaeological sites (so-called archaeological lands). See section on Protection above). These legal instruments will be further endorsed and confirmed by State level regulations aiming at protecting the serial site and enforcing restrictions on development and change within the designated buffer zones. The coordination and follow-up of this process will be provided by the management structure proposed by this management plan currently in the process of being formalized.

There might be instances whereby the provisions of legal texts are not enforced and the integrity of sites of cultural significance is compromised by overarching business interests. NCAM and the Advisory body forming the core of the management structure of the WHS will be responsible for voicing their concerns in the face of attempts to override national and state legislation for the protection of the serial site. Promotion and lobbying are two important tools that will help maintain the site on the priority of development plans and will certainly help the local communities – direct owners and beneficiaries of the cultural heritage of the serial site – take a non-compromising stand in favor of the protection of the site and its integrity.

10.7 Institutional strengthening

In order to strengthen the capabilities of NCAM in the field of cultural resource management and the implications of this on the management of the World Heritage Sites, it is necessary to focus on two core functions:

- Public relations and media, and,
- Strategic planning and research.

The NCAM committee charged with re-evaluating the structure of NCAM and its portfolio has identified both of these two core competences and proposed the re-

structuring of NCAM in order to introduce these two core functions (see section on Protection above).

In order to respond to the requirements of adequate management for the proposed World Heritage Site, it is important for the Public Relations and Media Unit to focus on the following activities:

- Promote NCAM's role as an agency looking after the cultural heritage of the country, while highlighting the challenges it faces and its achievements;
- Promote the integration of the local community, the private sector and the wider international community into the process of protecting, conserving, interpreting and presenting the cultural heritage of Sudan, including the World Heritage Site;
- Identify and engage potential partners for accomplishing the objectives mentioned above;
- Spread awareness through advocacy and outreach among government representatives, government institutions, state and local bodies, as well as local communities, about the significance of heritage and the World Heritage Site, the responsibilities of protection, conservation and management and the potential of heritage in improving the quality of life of communities;
- Look for and identify sponsors for supporting the activities of NCAM;
- Rally government and public support for its activities;
- Secure financial support from interested donors and from the private sector that wish to improve their image;
- Educate the community at large about the values of heritage, and in our case, the World Heritage Site.

In parallel, it is important for the Department of Planning, Information and Research to establish the overall strategic direction of NCAM and rally all resources in favor of achieving the following objectives:

- Undertake a critical assessment of the performance of NCAM with the aim of identifying deficiencies and incapacities in the ability to fulfill its mandate;
- Establish the short term and long term priorities of the Corporation, particularly in view of the current management plan;
- Make sure that all departments at NCAM are aligned with the overall strategy of the Corporation and that their activities respond to priorities identified by NCAM's strategy;
- Make sure sufficient human and financial resources are granted to NCAM by the government in order to provide support to its operations.

It is worth noting here that irrespective of the timeframe required to accomplish the institutional change mentioned above, NCAM can with its present structure form task teams to take charge of fulfilling the responsibilities of both units until that time when the new-proposed organizational structure of NCAM is approved and enacted.

10.8 Capacity building

It is now evident that NCAM's organizational and salary structure do not help maintain qualified personnel within the organization, nor recruit new staff. This is a

major issue confronting the growing needs of cultural resource management and the need to recruit and train new personnel to take charge of managing the growing repertoire of cultural resources. In fact, on-going excavations and rescue operations resulting from large development projects, such as the construction of the Meroe Dam, have substantially increased the responsibilities of NCAM.

While long-term proposals for addressing professional staff deficiencies were suggested above, short-term solutions should be adopted by NCAM in order to respond to most pressing issues of site protection, conservation and management. Joint cooperation with universities, foreign missions and volunteers from the community should be heavily thought after as a short-term solution. Projects funded by donors should always integrate students and include training components to help build technical expertise. In most cases, external support is largely available and willing to contribute to resolving shortcomings; however, the challenge lies in the capacity to manage this support while making sure that it remains strategic, responding to the critical issues of cultural resource management and fulfilling the objectives of NCAM.

In this respect, it is important for the Advisory Committee sponsoring and overseeing the implementation of this management plan to address the issues of capacity building by finding new sources of financial support for positions badly needed for the protection, management and promotion of the serial-site. The State as well as the Universities of Shendi and the River Nile can sponsor the education, training and employment under contract of technical staff that will work under the direction of NCAM and take charge of implementing some of the provisions of the management plan whether this is in the areas of site documentation, rescue and preventive excavations, enabling works for conservation, guiding, site interpretation and site monitoring, or other relevant areas.

10.9 Management capacities on site

On-Site capacities allocated for the management of the serial-site are at this stage quite meager. They consist of the following staff:

- An Antiquities Inspector resident at the town of Shendi, 40 km from Meroe and *c* 60 km from Musawwarat es-Sufra and Naqa;
- Four Technical Assistants;
- Over twenty permanent and temporary recruited Guards; and
- A significant Police Force on each of the sites.

The Antiquities Inspector is the main member of staff with responsibilities encompassing all aspects of management pertaining to the site. He however needs to divide his time between administrative responsibilities and coordinating the work of the foreign missions to the area, apart from looking after the needs of the serial-site and reporting regularly to the Central Office in Khartoum. The four Technical Assistants support him in his duties but are not necessarily of sufficient technical level to assess and resolve critical issues of management or conservation on site, while the Guards are busy looking after security on the various sites and controlling visitor behavior.

This set-up is insufficient and cannot cater for the needs of providing adequate management for the serial-site. A minimal acceptable structure is as follows:

- One Site Director for the entire property or serial-site;
- One Conservation Coordinator for the entire property or serial-site;
- Three Site Managers, one for each of the sites of the serial-site, i.e, for Meroe-Begraweya site, Naqa and Musawwarat;
- Six Assistant Managers, two per site;
- Six Technical Assistants, two per site
- Ticket Office Operator;
- Ten Guards per each site.

The duties and responsibilities of the proposed serial-site management team are provided in the following table:

Title	Main Responsibilities	Areas of Expertise
Site Director	<ul style="list-style-type: none"> -Oversee the overall management of the serial-site in accordance with the provisions of the management plan and the standards of World Heritage Site management; -Oversee and elaborate the preparation of periodic reports on the state of implementation of the management plan, present and discuss the report with the Advisory Committee; -Plan and approve the allocation of financial and staff resources across the serial-site and coordinate the implementation of the various activities under the management plan; -Manage critical issues affecting the integrity of the site and its outstanding universal value and make sure the interest of the site are presented and taken into consideration in all third party dealings; -Focus and lead promotional efforts and awareness plans in accordance with the directives of the Media/PR office at NCAM; -Represent the interests of the site in significant and critical meetings, forums, planning sessions and other official and non-official gatherings; -Manage staff resources operating underneath him, issue out program directives and monitor performance on the implementation of the program in accordance with well established performance indicators; -Support staff in the fulfillment of their duties; -Oversee and elaborate the quarterly and yearly program of operations; 	Archaeology - Conservation

	<p>-Communicate, relay and coordinate with NCAM all matters pertaining to the site; Reports to: Director General of NCAM.</p>	
Conservation Coordinator	<p>-Oversee the implementation of all conservation activities on site in accordance with the provisions of the conservation plan and management plan and the standards of World Heritage Site management; -Oversee and elaborate the preparation of periodic reports on the state of implementation of the conservation plan, present and discuss the report with the Advisory Committee; -Coordinate all conservation activities within the serial-site, discuss and approve all proposed conservation approaches and methodologies with the Director of Conservation in accordance with the standards of the World Heritage Site Convention and international conservation charters. Prepare a master conservation plan and a master budget of expenses; -Monitor archaeological work at the serial site and give advise and directives regarding how to best preserve and protect exposed archaeological remains in conjunction with pre-approved interventions and with international standards; -Take charge of preparing the relevant sections on conservation in quarterly and yearly progress reports as well as in the WHS Periodic Reporting program; -Coordinate all conservation activities with the 3 Site Managers; -Provide advice and consultation in conservation approaches and preventive methodologies to Site Managers and Archaeological Missions. -Oversee and elaborate the quarterly and yearly program of conservation operations; -Communicate, relay and coordinate with NCAM all matters pertaining to the site; -Prepare the master budget for conservation operations at the Serial-site, discuss and defend this budget in front of Serial-site Director and Director of Conservation at NCAM. Reports to: Director of the Serial-site; Coordinates with: Director of Conservation at NCAM.</p>	Conservation
Site Manager	<p>-Manage the day to day issues of the site and implement the provisions of the management</p>	Archaeology – conservation

	<p>plan in accordance with the Standards of World Heritage Site management;</p> <ul style="list-style-type: none"> -Manage, supervise and follow-up on all activities pertaining to site protection, archaeological work, conservation work and site infrastructure development works on site; -Make sure the concerns of the site and its long-term preservation, and the enhancement and sustainability of the outstanding universal value of the site are the overarching guiding principles in management; -Coordinate the activities of archaeological excavations and conservation projects on site with the Site Director and the Conservation Coordinator; - Facilitate all programs designed to improve the quality of site interpretation and presentation with the relevant experts from NCAM while representing the overall interests of the site; -Manage staff under him facilitate their tasks; -Prepare regular weekly and monthly reports on progress of activities on site; -Prepare site program and budget and discuss with Site Director; -Interface with local community and stakeholders in matters of direct relevance to the management of the site; <p>Reports to: Site Director.</p>	
Assistant Manager Admin	<ul style="list-style-type: none"> -Assist Site Manager in managing day to day administrative issues pertaining to the site; -Relay with NCAM Khartoum for administrative matters; <p>Reports to: Site Manager.</p>	Archaeology – administration
Assistant Manager Technical	<ul style="list-style-type: none"> -Assist Site Manager in managing day to day technical issues pertaining to the site; -Look after and monitor site hygiene, infrastructure, visitor facilities, security, etc. and report to Site manager; -Coordinate with Conservation coordinators for conservation work that needs to occur on site; <p>Reports to: Site Manager.</p>	Archaeology – conservation
Technical Assistant	<ul style="list-style-type: none"> -The technical assistant is mainly a graduates of high secondary technical schools. He is trained in crafts relating to building, carpentry, etc. -Perform the skilled work of repair and maintenance of archaeological structures under the supervision of the Conservation 	<ul style="list-style-type: none"> -Vocational training in the building and construction trades. - Professional training in

	Coordinator; -Look after the movable collections on site or in site museums; Reports to: Assistant Manager Technical.	restoration -Collection management
Ticket Office Operator	-Man the Ticket Office at each site; -Provide the necessary basic information and handouts to visitors; -Indicate to visitors circuit and sources of additional information; -Open and close main visitor entrance to site; Reports to: Site Manager.	Visitor services
Guard	-Patrol the site, monitor visitor behavior, deter improper behavior on site; -Coordinate visitor security with Assitant Manager Admin and Tourism Police; -Man site entrances; -Monitor condition of security infrastructure and report to Assistant Manager Technical; Reports to: Assistant Manager Admin.	Security

10.10 Allocation of financial resources

NCAM's budget is allocated on a yearly basis by the Ministry of Finance. It is transferred to NCAM's account in monthly installments, except for the so-called "Development Projects", which are transferred according to each project's program. Under these "Development Projects" fall many initiatives submitted by NCAM for funding; such as project proposals for protecting, conserving and managing sites and collections (for example the rehabilitation of the conservation laboratories). Funding for such projects was not granted by the Ministry of Finance. There are currently no separate budgets for conservation projects; some small-scale conservation works are paid for from other items within the budget.

It appears that NCAM's wish to become financially independent in the future is largely due to the inability to fund priority projects and essential activities for the protection, conservation and management of archaeological sites and collections (among which, the serial-site under discussion). The reluctance of the Ministry of Finance to approve budgetary increases and funding requests for "Development Projects" is seriously affecting NCAM's performance and the ability to fulfill its mandate and plans.

In an attempt to address the financial deadlock which is seriously undermining NCAM's activities, and the ability to respond to urgent needs, a proposal was made to the government in order to transform the Corporation from a fully dependent government institution into a semi-governmental, semi-independent "Authority", after an incubation period of 5 to 10 years. During this period, NCAM would be supported by government subsidy until its independent financial capabilities and its funding model are fully developed. The Ministry of Finance rejected this proposal permitting only an immediate shift to semi-financial independency or maintaining the present status quo. An immediate shift will, needless to say, prove to be very risky for NCAM

if not precluded by an incubation period of initial support by the government. This is particularly true because of the current political situation in the country and the underdeveloped cultural industry.

In response to this situation, NCAM could re-elaborates its 5-10 year incubation model into a coherent and phased business plan made more appealing to the government; and in case the government rejects it, to attract funding from national and international donors, while moving towards institutional and financial independence within a period of 3 to 5 years.

The challenge herein resides in the need to have an extended mandate and organizational structure which enables NCAM to develop its financial capabilities by exploiting and marketing its cultural products so that revenue covers the operational budget and surplus is used to fund development projects, with support from donors. For such a structure to function optimally, its should seek quality rather than quantity by lifting the capacities of its staff, while adjusting salary scales so that incentives for well-trained and qualified personnel help keep staff in their jobs as well as provide opportunities for new specialized recruits.

While this proposal is a viable option, it is advisable to wait until the national elections have taken place in 2009 and the Constitution of Sudan is revised. This could bring about a new structure of government, which gives more flexibility to NCAM in developing its structure and financing its operations.

10.11 Visitor infrastructure

The three sites constituting the serial-site are easily accessible from Khartoum; visitors can visit them and return back to the capital in one day without being obliged to spend the night away from home. Nowadays, the region is much more visited by foreign and national tourists than any other region in the country. However, the statistics still show a low number of visitors in comparison with similar sites in some neighbouring countries, but the numbers are increasing rapidly: the three sites were visited by only 29 tourists in 1997; in 2005 the number had increased to more than 4,000 foreigners and about 2,500 national visitors. Several tourist companies are active in organizing trips to the region normally in the period from mid-October to the end of March. Two small hotels have been built in the neighbourhood of the pyramid fields of Meroe: one of them has been operational for over five years. This is in addition to a bigger (2 star) hotel in the town of Shendi, located less than 60km from the sites. A museum has already been inaugurated at ed-Damer in collaboration with the University of Wadi el-Neel and a site museum is being built near the pyramid fields of Meroe. This museum is built to the same plan as that of a Meroitic priest's house that has been excavated near the Sun Temple at the beginning of last century. This museum will be devoted to the history of the royal pyramids and the explanation of Kushite burial customs. A small museum has been opened, in collaboration with the University of Humboldt (Berlin), inside the northern courtyard of the Great Enclosure at Musawwarat es-Sufra. A project for a museum at Naqa is being considered in collaboration with the Archaeological Mission of the Ägyptisches Museum, Berlin.

Adequate visitor infrastructure consisting of a ticket office, an information centre, adequate and functioning WC's, interpretive panels and brochures, trained guides, established trails, etc. all lack. This minimizes visitor satisfaction and therefore, benefits accruing from the tourism will be minimal thus making NCAM's profit arrangement with the Tourism authorities of the State even more meager.

In order to live up to the expectations and standards of a World Heritage Site, a comprehensive master plan for establishing adequate visitor amenities on the three sites is essential. While NCAM and the State authorities (via the lobbying of the Advisory Committee can take charge of construction activities to create the visitor infrastructure required, the Department of Archaeology along with other departments of the University of Shendi can provide the soft interpretive materials under the supervision of NCAM.

10.12 Site promotion

The proposed serial-site is currently promoted via the federal and state tourism authorities. If the proposed serial-site receives World Heritage Site nomination, there will be need for a full-fledge promotional campaign to promote its outstanding universal value and significance. From developing a brand identity to designing a comprehensive PR campaign and an awareness programs for schools, universities and local communities, there will be need for NCAM to take charge of this activity and implement it in collaboration with the Advisory Committee and with the University of Shendi in particular. The Media section at NCAM has much experience in this kind of promotional work and can take the lead on it. Private sponsorship can be thought after in order to offset the cost of such a campaign.

10.13 Sustainable use of the property

It is already clear to the stakeholders that the cultural significance and outstanding universal value of the site is fragile and vulnerable to radical change and unsympathetic development. There is a commitment from the stakeholders not to jeopardize the integrity of the serial-site and its values by allowing the interests of unsympathetic non-sustainable development to the upper hand. It is the duty of the future Advisory Committee to abide by the guiding principles of World Heritage and make sure that there is sustainability in the use of the cultural resource and that the community is the main beneficiary form the balanced exploitation of the site.

10.14 Tourism development and tourism infrastructure

WH Site management should have the support of the State, but it is obvious that the current priority for the River Nile State is infrastructure and rural development. Site management and cultural resource management might not be considered as a priority, particularly, under the light of the local and regional situation. Tourism on the other hand is more appreciated as its financial benefits are readily recognized. While tourism should be considered an important resource and catalyst for the development of the River Nile State, a small percentage of the benefits accruing from the tourism industry ought to be diverted to funding conservation and infrastructure works at archaeological and cultural sites, among which, the serial-site under nomination.

The Federal Ministry of Investment with its central headquarters in Khartoum and regional offices in the States is encouraging tourism investment particularly in cultural heritage areas. It is important for NCAM to direct some of the revenue of investments in cultural heritage zones to its benefit with the aim of providing for site management and visitor infrastructure improvements. It is important for NCAM to be aware of tourism investment plans within areas close to the WHS and take advantage of the best potential for investment. In parallel, it is important for it to be aware of the potential effect of tourism development on its cultural heritage sites so as to ward off the negative impact of unsympathetic tourism development and be prepared for mitigation.

Given the current financial and institutional difficulties of NCAM, it is important that cultural tourism be promoted as an important element of national development and a generator of revenue. Despite the known side effects of unsympathetic tourism on the authenticity and integrity of archaeological sites, cultural tourism in the River Nile State must be promoted as an important state and national resource in order to attract financial and political support and occupy the right place on the government's agenda for development. Although cultural tourism is already being considered as the drive for economic development, the need to upgrade the quality of visitor experience and amenities, while embarking on a sensitive marketing and promotional program would certainly set the wheel in motion and channel some of the derived benefits of tourism to cultural resource management initiatives. In parallel, it is important for NCAM to develop site management skills and know-how to be able to mitigate any potential impact tourism may have on the cultural heritage sites.

11. Proposed Management Structure

It would be very difficult for NCAM to take charge of preserving, conserving, enhancing and promoting the serial-site without the support of stakeholders. It is important to streamline integrated management of the cultural heritage while identifying and segregating the different levels of responsibility and defining associated tasks in the framework of a comprehensive program for the management of the World Heritage Site.

In this respect, site management should incorporate all concerned stakeholders in a framework which achieves the following:

- Integrates stakeholder concerns and expectations into WHS management;
- Makes stakeholders aware of the challenges of the site and the constraints to WHS management, as outlined in this management plan;
- Provides the framework for discussing and resolving critical issues affecting the site;
- Adopts site management policies that are meant to regularize the management and exploitation of the site for the benefit of the community;
- Oversees the implementation of the management plan with its different project proposals;
- Supports NCAM in fulfilling its mandate and in implementing the management plan for the site.

The proposed framework for guaranteeing effective site management is envisaged at two levels:

- At the level of an Advisory Committee;
- At the level of an Executive WHS Management Team.

The Advisory Committee, consisting of representatives of the main stakeholders with influence on the site will be responsible for ratifying and adopting the management plan as the basis for its transactions and performance. It should agree to the principles intrinsic to the vision of the management plan, its objectives, policies and action plan. The Advisory Committee is to be guided by the principles of the World Heritage Convention and other international charters with respect to protecting and promoting the values of the site, its authenticity and integrity. The Committee is to oversee the implementation of the management plan and provide the support needed for the fulfillment of its provisions and the accomplishment of the tasks of the Technical Management Team. The Committee should oversee proper spending of funds coming from donors. Funds should be used for implementing the projects within the management plan and others that the Committee might propose for the benefit of the site. The Committee should consider and understand the critical issues and challenges affecting the site, discuss and find solutions for them. It is important to stress the top hierarchy of NCAM within this committee since it is the owner of the site and the body with direct responsibility for its management.

The Executive WHS Management Team, consisting of capable professional staff, is responsible for implementing the activities of the Management Plan. The principles of the plan, its policies and the principles and notions of the World Heritage Convention and other International Conventions of significance to the management of cultural heritage should guide the Executive Team in its day-to-day duties and responsibilities. The task of the Team is in the first stage to understand the management plan, develop it into a full operational document, upgrade it regularly, evaluate the site and its needs, identify constraints and propose solutions, policies and action plans, monitor and report progress. Periodic reporting to the Advisory Committee acting as the scientific advisor of the site falls also within the remit of the WHS Management Team.

The Team can draw on the resources of NCAM to fill in expertise and/or management gaps whenever required.

The Advisory Committee and the Technical WHS Management Team should meet periodically, at least once every three months (quarterly) as well as when summoned by either one of the two.

12. Management Plan Policies and Action Plans

Considering the complexity of the management environment at the proposed serial-site, a number of policies were drafted with the aim of aligning management interventions on the WHS with the vision and objectives of the management plan. The policies take into consideration constraints to site management, the issues affecting WHS management and what can realistically be achieved in order to fulfill the vision of the community and the stakeholders.

The action plans pertaining to each of the policies listed below are embedded in the attached table and divided into two main sections:

- Activities that are listed under policy statements, and focus mostly at regularizing the social, administrative, and institutional environments so as to limit, reduce or mitigate external impact on the WHS caused by institutional and social practices and habits;
- Activities that are listed under the policy statements and relate to the management of the WHS and its physical fabric, aim at facilitating effective management, preventing physical harm from occurring, improving the condition of the WHS and its remains and providing an adequate infrastructure for the operation of the site.

The starting date of implementation of the action plans is hypothetically set to the middle of 2009. This date can be updated according to the conditions that influence the performance of NCAM and the size and quality of the resources at its disposal. A yearly revision of the action plan schedule is encouraged.

The purpose of the Action Plans is to provide a comprehensive list of actions that are coherent (since they respond to policies) and that lead to the proper protection, conservation, management and promotion of the WHS. They are tools in the hand of NCAM allowing it to have a broad view over what needs to be accomplished at the WHS and, accordingly, plan its strategies and resources to accomplish these plans. Additionally, the Action Plans can be packaged and presented for funding under coherent sectors; the fact that they constitute parts of a comprehensive plan makes it easier for the donor to provide financial support knowing that the funds are contributing to the fulfillment of a complete solution for the site.

12.1 On the level of site protection

Code	<i>Policies and related action plans</i>	<i>Expected Results</i>	<i>Responsible Party</i>	<i>Partners in Implementation</i>	<i>Timeframe</i>	<i>Key Performance Indicator</i>
PP1	<i>Secure site boundaries and enforce planning restrictions in buffer zones, control access avoiding the segregation of local communities and the isolation of the site from its wider social context</i>		NCAM and Advisory Committee	Advisory Committee	<i>Year 1</i>	
	Main issues: site boundaries, community awareness, site accessibility by community, monitoring and security, vandalism					
	Required Actions					
	<ul style="list-style-type: none"> - Submit authenticated and recognized NCAM maps of the serial-site showing site boundaries and buffer zones to the State Survey Department as well as to the land office at Shendi; - Get the Advisory Committee to issue the necessary 	<ul style="list-style-type: none"> - Serial-site boundaries and buffer zones accredited by all relevant government institutions and legal, institutional and planning 				<ul style="list-style-type: none"> -Maps issued to relevant public bodies; -Statute of Maps officially recognized by all relevant public bodies; -Awareness

	<p>recommendations for the State authority to endorse the statute of these maps;</p> <ul style="list-style-type: none"> - Specify the modalities of land use within the buffer zone areas of the serial-site; - Increase official and community awareness about the values of the WHS and the importance of protecting its significance and physical integrity; - Improve site security through fencing and access control at all sites; - Control the development of the modern villages of Deraqab and Kigiek north and south of the Royal City and work with the State in order to facilitate relocation away from the site; - Erect World Heritage sign posts. 	<p>protection mechanisms established;</p> <ul style="list-style-type: none"> -Statute of the maps issued by NCAM respected by all relevant parties; -Government and communities more aware of values of the site and the importance of protecting and promoting its OUV; -Site integrity consolidated; -WHS recognition by all visitors. 				<p>activities and campaigns conducted at all levels;</p> <ul style="list-style-type: none"> -WHS signs erected at all sites of the serial-site.
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Code	<i>Policies and related action plans</i>	<i>Expected Results</i>	<i>Responsible Party</i>	<i>Partners in Implementation</i>	<i>Timeframe</i>	<i>Key Performance Indicator</i>
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PP2	<i>Safeguard the integrity of the site by establishing buffer zones where special planning regulations are enforced in order to protect the significance and setting of the WHS</i>		NCAM	Advisory Committee	<i>Year 1</i>	
	Main issues: buffer zones, planning regulations for buildings and activities within the buffer zones, protecting the visual integrity and setting of the site;					
	Associated activities:					
	<ul style="list-style-type: none"> ▪ Identify and describe damaging and intrusive activities affecting the site, its integrity, authenticity, setting and landscape values and share with stakeholders (use management plan assessments); ▪ Establish planning and development restrictions within the buffer zones around the WH sites making sure that development within these zones is sympathetic to the values of the site; ▪ Establish in coordination with the State's planning authorities 	<ul style="list-style-type: none"> -Stakeholders well informed about damaging activities to the site; -Development in buffer zones respects integrity of serial-site; -Clear planning regulations issued by relevant planning authorities to control change 				<ul style="list-style-type: none"> -Inventory of damaging activities put together, explained and shared with relevant stakeholders; -Planning regulations in buffer zones developed and agreed upon with planning authorities; -Wider regional

	<p>planning regulations to govern all development activities around the serial-site including building codes, socio-economic activities, street furniture and infrastructure, views and entry ways to the WHS, etc;</p> <ul style="list-style-type: none"> Improve the urban and natural setting around the WH site making sure that the relationship of the site with the Nile River and adjacent plantation area to the West as well as the desert to the east are not compromised. 	<p>occurring within buffer zones; -Urban and natural setting in buffer zones and beyond protected and enhanced;</p>				<p>master plan that takes into account site attributes and sensitivities;</p>
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12.2 On the level of site conservation

Code	<i>Policies and related action plans</i>	<i>Expected Results</i>	<i>Responsible Party</i>	<i>Partners in Implementation</i>	<i>Timeframe</i>	<i>Key Performance Indicator</i>
CP1	<i>Develop the necessary conservation tools to enable the prioritization and quantification of conservation work on site and the establishment of a site-wide conservation master plan with prioritized interventions</i>					
	Main issues: rapid assessment of					

	site conditions and conservation interventions, adhere to international standards in conservation work, development of conservation infrastructure.					
	Associated activities:					
	<ul style="list-style-type: none"> - Undertake the rapid assessment of the condition of the sites and identify areas of priority and rapid intervention; - Review and design methodologies for the consolidation of structural problems at pyramid sites; - Identify major conservation risk areas and develop detailed design schemes for repairing damage; - Develop design specifications for conservation work across the three sites and use as a basis for training conservation staff and for quantifying conservation work; - Invite conservation specialists to design solutions for the various conservation problems 	<ul style="list-style-type: none"> - Areas of priority intervention identified; -Methodologies for addressing structural problems at pyramid sites developed; -Risk preparedness achieved; -Specifications for conservation developed and used for quantification of resources required; -Special methodologies developed in accordance with international standards; -Ulterior conservation/restoration work re-evaluated and repaired; 	NCAM, University of Shendi, Foreign Missions active on site.	WHC and other international organizations.	Year 2	<ul style="list-style-type: none"> -Priority areas identified; -Methodologies developed; -Specifications developed; -Monitoring and regular maintenance program established; -MOU with Foreign Missions signed; -Conservation Master Plan completed;

	<p>of the site and conduct on-site training for the emerging conservation capacity;</p> <ul style="list-style-type: none"> - Monitor and re-evaluate ulterior conservation/restoration works with regards to their suitability and effectiveness and agree on a methodology to maintain/repair old restoration works; - Establish a system for regular monitoring and maintenance of site remains in order to limit the deterioration of the fabric; - Enforce provisions for implementing preventive conservation and the protection of exposed remains in accordance with the terms of the contract with archaeological missions; - Elaborate all of these issues in the framework of a conservation master plan with identified specialist and financial resources. 	<ul style="list-style-type: none"> -Regular monitoring and maintenance system established, site problems identified before they become accentuated; -Archaeological missions form part of the conservation plan delivery; -Comprehensive master conservation program guides interventions on site 				
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Code	<i>Policies and related action plans</i>	<i>Expected Results</i>	<i>Responsible Party</i>	<i>Partners in Implementation</i>	<i>Timeframe</i>	<i>Key Performance Indicator</i>
CP2	<i>Develop the conservation infrastructure on site by building new capacities and attracting funds for conservation initiatives</i>		NCAM	University of Shendi Foreign Missions	Year 3	
	Main issues: conservation aid and subsidy, training conservators and developing new expertise, establishing a suitable conservation infrastructure to respond to needs.					
	Associated activities:					
	<ul style="list-style-type: none"> - Seek government as well as private sector subsidy; - Adhere to international standards in conservation; - Train and develop qualified conservators and craftsmen; - Work closely with the University of Shendi and other universities to form conservation capacities and integrate those in NCAM activities on site; 	<ul style="list-style-type: none"> -Alternative funds allocated to support conservation activities on site; -All training and implementation of conservation works benchmark with international standards; -Conservation 	-	-	-	<ul style="list-style-type: none"> -Packaged conservation projects with detailed budget presented for external funding; -Benchmarking of conservation methodologies and standards set; -New jobs in conservation

	<ul style="list-style-type: none"> - Create jobs in the field of conservation, with adequate incentives, to cover the needs; - Exploit available international training opportunities adequately; - Work towards the establishment of a formal curriculum in conservation studies in the country; 	<p>workforce boosted;</p> <p>-Established partnerships that help address capacity shortages;</p> <p>-Long-term conservation capabilities being formed;</p>				<p>created;</p> <p>-Curriculum designed.</p>
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Code	<i>Policies and related action plans</i>	<i>Expected Results</i>	<i>Responsible Party</i>	<i>Partners in Implementation</i>	<i>Timeframe</i>	<i>Key Performance Indicator</i>
CP3	<i>Implement priority conservation activities in order to halt the degradation of the sites</i>		NCAM	University of Shendi, Foreign Missions	<i>Year 3</i>	
	Main issues: address flooding and site drainage issues					
	Associated activities:					
	<ul style="list-style-type: none"> - Re-assess the effectiveness of the drainage ditch around the Temple of Amun at Naqa and repair where necessary; - Design and build drainage 	<p>-Temple of Amun protected from torrential</p>				<p>-Drainage ditch around Temple of Amun rehabilitated;</p> <p>-Drainage system</p>

	<p>systems for the ruins in the Royal City as well as the monuments at Naqaa (Lion Temple and Kiosk) and the Great Enclosure at Musawwarat;</p> <ul style="list-style-type: none"> - Clean-up bird faeces and wasp nests causing the decay of the plaster used on the Lion Temple (Musawwarat); - Take immediate actions to document and consolidate/conservate ancient plaster traces surviving on various monuments across the serial-site; - Re-erect and shelter specific chapels at the pyramid sites at Meroe with the aim of protection ancient reliefs from further degradation; - Consolidate and provide a sacrificial coat to the fragile mud structures within the Temple of Amun at Naqa; - Consolidate pylon foundations of the Lion Temple (Musawwara) and halt water ingress from the roof; 	<p>flows;</p> <ul style="list-style-type: none"> -Long-term resolution of drainage issues; -Short-term conservation issues dealt with; -Most fragile and important elements on site protected and conserved; -Localized conservation problems on main monuments addressed; -Visual and physical impact of spil heaps resolved; -Vegetation 				<p>designed site-wide;</p> <ul style="list-style-type: none"> -Drainage system built; -Localized conservation problems resolved (see activities for breakdown);
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	<ul style="list-style-type: none"> - Remove and relocate to safe location the spoil heaps resulting from informal excavations of the Great Hafir at Musawwarat; - Check the expansion of the vegetation cover at the Royal City in Meroe by securing the fence and preventing goats from spreading tree-seed across the site; - Identify and extract vegetation growing within ancient structures and on archaeological walls in accordance with a well established methodology (Meroe-Royal City and Naqa – Lion Temple); - Respond locally to water damage created by gathering water and formation of pools and address the problem holistically via the implementation of well designed water drainage systems/solutions. 	<p>damage checked;</p> <p>-Localized water damaged prevented from becoming a major structural and conservation problem;</p>				
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12.3 On the level of site management

Code	<i>Policies and related action plans</i>	<i>Expected Results</i>	<i>Responsible Party</i>	<i>Partners in Implementation</i>	<i>Timeframe</i>	<i>Key Performance Indicator</i>
MPI	<i>Create and train the adequate management structure for looking after and managing the site.</i>		NCAM, Advisory Committee	<i>University of Shendi</i>	<i>Year 3</i>	
	Main issues: NCAM organizational structure, management staff and infrastructure at the WHS, training opportunities and specialization.					
	Associated activities:					
	<ul style="list-style-type: none"> - Re-assess the current organizational structure of NCAM with the aim of proposing new units concerned with site management, communication and the promotion of cultural heritage; - Develop a 5-year business plan for NCAM in order to use as a baseline for upgrading the level of service provided; - Identify new recruits from qualified graduates in the fields 	<ul style="list-style-type: none"> -Re-design of org. structure of NCAM to enable it to develop its cultural resource management capabilities; -Establish a benchmark from which to measure improvements; -Develop a motivated, young 				<ul style="list-style-type: none"> -New proposed structure analyzed; -Business plan completed; -New recruits identified; -Training programs designed and launched; -New workforce trained and

	of archaeology, and museology; - Make the most of training opportunities abroad in fields and specialties unavailable nationally, according to a plan guided by the priorities of the site.	and trained site management infrastructure; -Short-term solution to lack of dedicated programs in Sudan universities.					mobilized.
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Code	<i>Policies and related action plans</i>	<i>Expected Results</i>	<i>Responsible Party</i>	<i>Partners in Implementation</i>	<i>Timeframe</i>	<i>Key Performance Indicator</i>
MP2	<i>Manage interventions on the WH Site preventing negative impact from affecting its integrity and significance, while establishing the legal framework for managing the site and coordinating management with other stakeholders.</i>		NCAM, State Authorities	River Nile State	<i>Year 1</i>	
	Main issues: site protection, budget and attracting additional financial resources, legislative and management framework, coordination with other bodies and stakeholders affecting the management of the site, site infrastructure and visitor appreciation.					

	Associated activities:					
	<ul style="list-style-type: none"> - Establish the management structure proposed by this management plan consisting of an Advisory Committee with leverage across the civic and civil landscape in order to further the objectives of the management plan; as well as a Technical Management Team to take charge of implementing the provisions of the management plan looking after the site in accordance with World Heritage standards; - Inform authorities of the importance of the cultural resource and its inherent scientific, historic and economic value; - Clarify and set NCAM's jurisdiction over all issues relating to the internal management and exploitation of the site so as to prevent conflict resulting from its use; 	<ul style="list-style-type: none"> -Advisory Committee and Technical Management Team formed and activated; -Authorities aware of site values and potential; -NCAM's role, responsibilities and jurisdiction well understood by all; 				<ul style="list-style-type: none"> -Management structure established; -Management structure takes charge of the management plan; -Awareness activities designed and delivered; -NCAM's role, responsibilities and jurisdiction accepted by all relevant stakeholders.

Code	<i>Policies and related action plans</i>	<i>Expected Results</i>	<i>Responsible Party</i>	<i>Partners in Implementation</i>	<i>Timeframe</i>	<i>Key Performance Indicator</i>
MP3	<i>Implement short and long-term site improvements with the aims of reducing the impact of negative activities on site</i>		NCAM, Advisory Committee, Foreign Missions	State and Tourism Police; Sudan Civilization Institute; Visitors to the sites	<i>Year 2</i>	
	Main issues: site protection, budget and attracting additional financial resources, legislative and management framework, coordination with other bodies and stakeholders affecting the management of the site, site infrastructure and visitor appreciation.					
	Associated activities:					
	<ul style="list-style-type: none"> - Improve the visual character of the dig house in the Royal City at Meroe and halt additional expansion attempts; - Work for the removal of the redundant telegraph poles within the site of Meroe; - Pursue previous plans to 	<ul style="list-style-type: none"> -Visual quality of Royal City site improved; -Setting and panoramas uncompromised; -Site integrity secured; 				<ul style="list-style-type: none"> -Village expansions within the boundaries of the site are checked; -Telegraph poles removed; -High tension

	<p>relocate the High Tension pylons to the east of the site of Meroe;</p> <ul style="list-style-type: none"> - Secure the fence at the Royal City and make sure goats and other herds are not allowed into the site; - Make sure that the unsympathetic impact of the construction of the Sudan Civilization Institute compound is formally contained and halted; - Make sure the visual impact of the Sudan Civilization Institute Compound is mitigated by using a more suitable paint color for the constructions and by removing the unsightly water tank; - Make sure the highway crossing the site of Meroe is diverted in the long-term to the east of the site; - Make sure the high tension pylons that traverse the site of Meroe are also diverted to the east of the site; - Remove the redundant and 	<ul style="list-style-type: none"> -Integrity of Musawwarat site protected; Visual quality and setting of Mussawarat improved; -Integrity of Meroe protected; -Setting of Northern and Southern Cemeteries improved; -Visitor impact on site reduced; -Vehicular impact on the landscape reduced; -Site facilities improved; -Risk preparedness achieved. 				<ul style="list-style-type: none"> pylons redirected; -Highway redirected; -Fence at Royal City repaired; -Sudan Civilization Institute compound reformed; -Resthouse west of Northern and Southern Cemeteries demolished and removed; -Visitor control measures implemented; -Vehicular control measures implemented; -Infrastructure at sites improved; -Risk preparedness activities (listed in management plan) accomplished.
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	<p>visually imposing unfinished resthouse to the west of the northern and southern cemeteries at Naqa;</p> <ul style="list-style-type: none"> - Control visitor behavior at all sites and deter misconduct; - Control vehicular access in the vicinity of Musawwarat and prevent from inflicting damage to shallow and unexcavated, barely visible, archaeological remains; - Re-evaluate the location and architectural quality of modern buildings erected on site for its operation or security; - Identify risk areas and develop program for managing risk in accordance with the findings highlighted in the section Risk Management in this report; 					
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12.4 On the level of archaeological work and enhancing archaeological research

Code	<i>Policies and related action plans</i>	<i>Expected Results</i>	<i>Responsible Party</i>	<i>Partners in Implementation</i>	<i>Timeframe</i>	<i>Key Performance Indicator</i>
AP1	<i>Increase awareness about the importance of the World Heritage Site and the results of past and on-going excavations among decision makers and the community at large.</i>		NCAM, Advisory Committee, University of Shendi.	local and state schools	<i>Year 2</i>	
	Main issues: WHS and the media, WHS and the school curriculum;					
	Associated activities:					
	<ul style="list-style-type: none"> - Spread awareness about the cultural significance of the site in the media and among the community at large; - Introduce subjects relating to archaeological discoveries and the importance of the WHS in the schools extra-curricular programs; - Enter into agreements with the University of Shendi as well as other universities in order to design and implement a program of public archaeology based on 	<ul style="list-style-type: none"> -Community conscious about the values of the proposed WHS; -Community supportive of WHS management; -University active in delivering the awareness campaign to students and community at 				<ul style="list-style-type: none"> -PR campaign designed; -PR campaign implemented; -WHS site significance addressed in school curricula; -Public archaeology programs developed.

	the WHS.	large.				
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Code	<i>Policies and related action plans</i>	<i>Expected Results</i>	<i>Responsible Party</i>	<i>Partners in Implementation</i>	<i>Timeframe</i>	<i>Key Performance Indicator</i>
AP2	<i>Adopt a pre-emptive archaeological policy particularly in areas that could be designated for development in the future.</i>		NCAM, Advisory Committee	Local Communities; University of Shendi; Foreign Missions	<i>Year 5</i>	
	Main issues: emergency archaeology;					
	Associated activities:					
	- Undertake survey and pre-emptive archaeological works in the advent of development projects and in order to check residential and agricultural developments adjacent to the site;	-Archaeological evidence safeguarded.				-Pre-emptive archaeology program established.

Code	<i>Policies and related action plans</i>	<i>Expected Results</i>	<i>Responsible Party</i>	<i>Partners in Implementation</i>	<i>Timeframe</i>	<i>Key Performance Indicator</i>
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AP3	<i>Regulate archaeological work in such a way that it serves the management strategy of the WHS.</i>		NCAM	Foreign Missions; University of Shendi	<i>Year 3</i>	
	Main issues: the work of archaeological missions, storage and conservation of archaeological finds and monitoring visitor behaviour within the site;					
	Associated activities:					
	<ul style="list-style-type: none"> - Produce a comprehensive and accurate archaeological map of all sites within the serial-site assemblage; - Realign archaeological expeditions and missions' agendas with the pressing priorities of the WHS; - Integrate the University of Shendi in the process of studying and publishing archaeological materials from the excavations sitting in storage for a number of years now; - Encourage the publication of decent archaeological studies on the site and its material culture; 	<ul style="list-style-type: none"> -All known archaeological remains are located and risk map produced to protect them; -Foreign Missions agendas gear-up to addressing the site's most urgent needs; -University of Shendi partnering in managing archaeological work; -Cultural 				<ul style="list-style-type: none"> -Archaeological Map with risk areas produced; -MOU with Foreign Missions; -University of Shendi presents its program for the WHS; -Publications issued.

		significance of site widely disseminated.				
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12.5 On the level of managing cultural tourism development

Code	<i>Policies and related action plans</i>	<i>Expected Results</i>	<i>Responsible Party</i>	<i>Partners in Implementation</i>	<i>Timeframe</i>	<i>Key Performance Indicator</i>
MT1	<i>Establish a clear framework for organizing tourism investment and activity in relation with the WHS while protecting the resource</i>		NCAM, Advisory Committee	Federal and State Tourism authorities	<i>Year 3</i>	
	Main issues: address conflicting institutional mandates and agendas, establish tourism development guidelines and plans, protecting the way of life of local communities					
	Associated activities:					
	- Clearly define mandates governing the exploitation of the site within the framework of the law and address the confusion created by overlapping federal and local	-Conflicting mandates over the exploitation of the sites resolved; -Tourism				-Document clarifying mandates presented and agreed upon; -Tourism plan

	<p>laws;</p> <ul style="list-style-type: none"> - Establish tourism development guidelines in areas adjacent to the site or affecting the site taking into consideration the importance of providing increased accessibility and amenities while making sure development does not affect site values; - Layout a detailed investment plan for the locality with economic and physical development briefs that take into consideration the sustainability of the site; - Tourism development should be constrained by the wish to protect the local way of life of the inhabitants, respecting customs, traditions, beliefs, values and the environment, while making sure that benefits from tourism are shared with the local communities. 	<p>development more sympathetic to the significance and integrity of the site;</p> <ul style="list-style-type: none"> -Returns from Tourism and Development plans partially channeled back to site sustainability; -Intangible heritage, traditions and customs of inhabitants protected and sustained. 				<p>produced and discussed;</p> <ul style="list-style-type: none"> -Revenue sharing arrangements made.
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Code	<i>Policies and related action plans</i>	<i>Expected Results</i>	<i>Responsible Party</i>	<i>Partners in Implementation</i>	<i>Timeframe</i>	<i>Key Performance Indicator</i>
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MT2	<i>Promote the WH Site using different media channels.</i>		NCAM, Advisory Committee	<i>University of Shendi, Federal and State Authorities, Private Sector</i>	<i>Year 4</i>	
	Main issues: WHS promotional campaign, focused media programs.					
	Associated activities:					
	<ul style="list-style-type: none"> - Launch a promotional campaign for the WHS making use of all available promotional channels locally and nationally; - Create informative and entertaining media programs that focus on promoting the WH site and on increasing awareness about its values. 	<ul style="list-style-type: none"> -WHS significance, OUV and concerns widely disseminated and promoted; -Awareness in WHS increased. 				<ul style="list-style-type: none"> -Promotional campaign designed; -Promotional campaign delivered; -Media programs designed and produced.

Code	<i>Policies and related action plans</i>	<i>Expected Results</i>	<i>Responsible Party</i>	<i>Partners in Implementation</i>	<i>Timeframe</i>	<i>Key Performance Indicator</i>
MT3	<i>Upgrade the level of accessibility and the quality of visitor amenities within the WH Site and its surroundings for better</i>					

	<i>appreciation by visitors</i>					
	Main issues: site infrastructure and amenities, sensitive design within the site and its fringes, interpretive materials, site museum;					
	Associated activities:					
	<ul style="list-style-type: none"> - Establish a ticket office at Naqa and make sure all other sites have operating and manned ticket offices; - Establish suitable WC's interpretive materials and a shelter for visitors to Naqaa and make sure all other sites are equally well equipped; - Indicate informal but easy to follow visitor tracks on all sites but in particular Musawwarat es-Sufra and produce the necessary printed material support; - Rehabilitate visitor entrance at Meroe- Royal City site; - Develop sensitive design for tourism projects in and adjacent to the WH site in such a way 	<ul style="list-style-type: none"> -Basic site infrastructure established and operational; -Visitor interpretation and access facilitated on site; -Quality of basis site infrastructure improved; -Interpretive offer extended. 				<ul style="list-style-type: none"> -Ticket office at Naqa operational; -Basic infrastructure on site established an operational; -Basic infrastructure design improved and approved by Advisory Committee and WHC; -Interpretive materials developed and produced.

	<p>that they respect the setting and aesthetic values of the site and its buffer zone;</p> <ul style="list-style-type: none">- Develop the necessary interpretive materials and combine site visits with the upgraded museum experience.					
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APPENDIX 3

Management Plan

Annex

Photographic Record of Rapid Condition Assessment

(photos: Sami el-Masri)



DSCN3694.JPG, Visual Impact, Northern Cemetery



DSCN3695.JPG, Visual Impact, Northern Cemetery



DSCN3698.JPG, Redundant/Inappropriate Visitor Infrastructure, Northern Cemetery



DSCN3697.JPG, Visual Impact, Northern Cemetery



DSCN3698.JPG, Visual Impact, Northern Cemetery



DSCN3700.JPG, Visual Impact, Northern Cemetery



DSCN3701.JPG, Visual Impact, Northern Cemetery



DSCN3703.JPG, Redundant/Inappropriate Visitor Infrastructure, Northern Cemetery



DSCN3704.JPG, Signage, Northern Cemetery



DSCN3705.JPG, Ineffective Physical Protection Measures, Northern Cemetery



DSCN3706.JPG, Redundant/Inappropriate Visitor Infrastructure, Northern Cemetery



DSCN3707.JPG, Northern Cemetery



DSCN3708.JPG, Northern Cemetery



DSCN3709.JPG, Northern Cemetery



DSCN3710.JPG, Structural Deterioration of Pyramids, Northern Cemetery



DSCN3711.JPG, Structural Deterioration of Pyramids, Northern Cemetery



DSCN3712.JPG, Degradation of Stone/Masonry Elements, Northern Cemetery



DSCN3713.JPG, Visual Impact, Northern Cemetery



DSCN3714.JPG, Noise Pollution, Northern Cemetery



DSCN3715.JPG, Graffiti, Northern Cemetery



DSCN3716.JPG, Graffiti, Northern Cemetery



DSCN3717.JPG, Unsympathetic Repair Work/Interventions, Northern Cemetery



DSCN3718.JPG, Failure of Past Repair Work, Northern Cemetery



DSCN3719.JPG, Graffiti, Northern Cemetery



DSCN3720.JPG, Graffiti, Northern Cemetery



DSCN3721.JPG, Henkel Restoration, Northern Cemetery



DSCN3722.JPG, Northern Cemetery



DSCN3723.JPG, Northern Cemetery



DSCN3724.JPG, Northern Cemetery



DSCN3725.JPG, Henkel Restoration, Northern Cemetery



DSCN3726.JPG, Degradation of Stone/Masonry Elements, Northern Cemetery



DSCN3727.JPG, Structural Deterioration of Pyramids, Northern Cemetery



DSCN3728.JPG, Structural Deterioration of Pyramids, Northern Cemetery



DSCN3729.JPG, Structural Deterioration of Pyramids, Northern Cemetery



DSCN3730.JPG, Structural Deterioration of Pyramids, Northern Cemetery



DSCN3731.JPG, Structural Deterioration of Pyramids, Northern Cemetery



DSCN3732.JPG, Structural Deterioration of Pyramids, Northern Cemetery



DSCN3733.JPG, Structural Deterioration of Pyramids, Northern Cemetery



DSCN3734.JPG, Site Wide View, Northern Cemetery



DSCN3735.JPG, Site Wide View, Northern Cemetery



DSCN3736.JPG, Visual Impact, Northern Cemetery



DSCN3737.JPG, Exposure and Deterioration of Ancient Plasters, Northern Cemetery



DSCN3738.JPG, Structural Deterioration of Pyramids, Northern Cemetery



DSCN3739.JPG, Structural Deterioration of Pyramids, Northern Cemetery



DSCN3740.JPG, Structural Deterioration of Pyramids, Northern Cemetery



DSCN3741.JPG, Structural Deterioration of Pyramids, Northern Cemetery



DSCN3742.JPG, Structural Deterioration of Pyramids, Northern Cemetery



DSCN3743.JPG, Graffiti, Northern Cemetery



DSCN3744.JPG, Site Wide View, Northern Cemetery



DSCN3745.JPG, Site Wide View, Northern Cemetery



DSCN3746.JPG, Public Safety Hazard, Northern Cemetery



DSCN3747.JPG, Structural Deterioration of Pyramids, Northern Cemetery



DSCN3748.JPG, Site Wide View, Southern Cemetery



DSCN3749.JPG, Redundant/inappropriate Visitor Infrastructure



DSCN3750.JPG, Degradation of Stone/Masonry Elements, Northern Cemetery



DSCN3751.JPG, Site Wide View, Northern Cemetery



DSCN3752.JPG, Failure of Past Repair Work, Northern Cemetery



DSCN3753.JPG, Structural Deterioration of Pyramids, Northern Cemetery



DSCN3754.JPG, Northern Cemetery



DSCN3755.JPG, Public Safety Hazard, Northern Cemetery



DSCN3756.JPG, Structural Deterioration of Pyramids, Northern Cemetery



DSCN3757.JPG, Public Safety Hazard, Structural Deterioration of Pyramids, Northern Cemetery



DSCN3758.JPG, Public Safety Hazard, Structural Deterioration of Pyramids, Northern Cemetery



DSCN3759.JPG, Graffiti, Northern Cemetery



DSCN3760.JPG, Site Wide View, Structural Deterioration of Pyramids, Northern Cemetery



DSCN3761.JPG, Henkel Restoration, Northern Cemetery



DSCN3762.JPG, Site Wide View, Structural Deterioration of Pyramids, Northern Cemetery



DSCN3763.JPG, Incoherent Repair Methods and Poor Craftsmanship, Northern Cemetery



DSCN3764.JPG, Structural Deterioration of Pyramids, Northern Cemetery



DSCN3765.JPG, Structural Deterioration of Pyramids, Northern Cemetery



DSCN3766.JPG, Visual Impact, Northern Cemetery



DSCN3767.JPG, Structural Deterioration of Pyramids, Northern Cemetery



DSCN3768.JPG, Site Wide View, Henkel Restoration, Northern Cemetery



DSCN3769.JPG, Structural Deterioration of Pyramids, Northern Cemetery



DSCN3770.JPG, Structural Deterioration of Pyramids, Northern Cemetery



DSCN3771.JPG, Public Safety Hazard, Northern Cemetery



DSCN3772.JPG, Northern Cemetery



DSCN3773.JPG, Exposure and Deterioration of Ancient Reliefs, Northern Cemetery



DSCN3774.JPG, Structural Deterioration of Pyramids, Public Safety Hazard, Northern Cemetery



DSCN3775.JPG, Signage, Northern Cemetery



DSCN3776.JPG, Visual Impact, Northern Cemetery



DSCN3777.JPG, Site Wide View, Northern Cemetery



DSCN3778.JPG, Structural Deterioration of Pyramids, Northern Cemetery



DSCN3779.JPG, Failure of Past Repair Work, Henkel Restoration, Salt Crystallization, Northern Cemetery



DSCN3780.JPG, Structural Deterioration of Pyramids, Northern Cemetery



DSCN3781.JPG, Site Wide View, Northern Cemetery



DSCN3782.JPG, Site Wide View, Salt Crystallization, Northern Cemetery



DSCN3783.JPG, Site Wide View, Northern Cemetery



DSCN3784.JPG, Site Wide View, Salt Crystallization, Northern Cemetery



DSCN3785.JPG, Site Wide View, Southern Cemetery



DSCN3786.JPG, Site Wide View, Northern Cemetery



DSCN3787.JPG, Site Wide View, Northern Cemetery



DSCN3788.JPG, Site Wide View, Northern Cemetery



DSCN3789.JPG, Site Wide View, Northern Cemetery



DSCN3790.JPG, Site Wide View, Northern Cemetery



DSCN3791.JPG, Site Wide View, Southern Cemetery, Northern Cemetery



DSCN3792.JPG, Site Wide View, Northern Cemetery



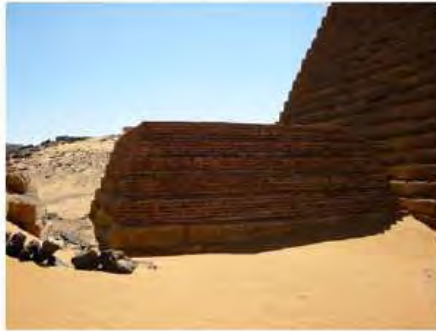
DSCN3793.JPG, Site Wide View, Northern Cemetery



DSCN3794.JPG, Site Wide View, Southern Cemetery



DSCN3795.JPG, Structural Deterioration of Pyramids, Southern Cemetery



DSCN3796.JPG, Henkel Restoration, Southern Cemetery



DSCN3797.JPG, Henkel Restoration, Southern Cemetery



DSCN3798.JPG, Failure of Past Repair Work, Southern Cemetery



DSCN3799.JPG, Southern Cemetery



DSCN3800.JPG, Henkel Restoration, Southern Cemetery



DSCN3801.JPG, Henkel Restoration, Southern Cemetery



DSCN3802.JPG, Structural Deterioration of Pyramids, Southern Cemetery



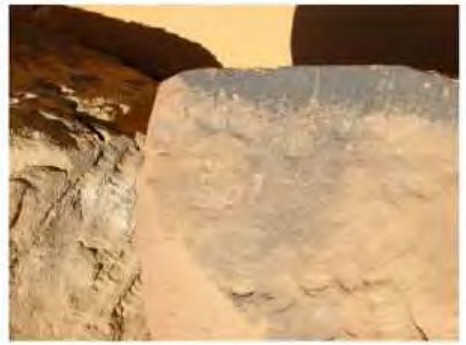
DSCN3803.JPG, Structural Deterioration of Pyramids, Southern Cemetery



DSCN3804.JPG, Structural Deterioration of Pyramids, Southern Cemetery



DSCN3805.JPG, Henkel Restoration, Southern Cemetery



DSCN3806.JPG, Henkel Restoration, Southern Cemetery



DSCN3807.JPG, Henkel Restoration, Southern Cemetery



DSCN3808.JPG, Structural Deterioration of Pyramids, Southern Cemetery



DSCN3809.JPG, Site Wide View, Southern Cemetery



DSCN3810.JPG, Visitor Pathways, Southern Cemetery



DSCN3811.JPG, Site Wide View, Southern Cemetery



DSCN3812.JPG, Redundant/Inappropriate Visitor Infrastructure, Southern Cemetery



DSCN3813.JPG, Site Wide View, Southern Cemetery



DSCN3814.JPG, Site Wide View, Northern Cemetery



DSCN3815.JPG, Redundant/Inappropriate Visitor Infrastructure



DSCN3816.JPG, Redundant/Inappropriate Visitor Infrastructure



DSCN3817.JPG, Redundant/Inappropriate Visitor Infrastructure



DSCN3818.JPG, Redundant/Inappropriate Visitor Infrastructure



DSCN3819.JPG, Redundant/Inappropriate Visitor Infrastructure



DSCN3820.JPG, Redundant/Inappropriate Visitor Infrastructure



DSCN3821.JPG, Site Wide View, Southern Cemetery



DSCN3824.JPG, Ineffective Physical Protection Measures, Southern Cemetery



DSCN3825.JPG, Site Wide View, Southern Cemetery



DSCN3826.JPG, Structural Deterioration of Pyramids, Southern Cemetery



DSCN3827.JPG, Failure of Past Repair Work, Southern Cemetery



DSCN3828.JPG, Failure of Past Repair Work, Southern Cemetery



DSCN3829.JPG, Failure of Past Repair Work, Southern Cemetery



DSCN3830.JPG, Failure of Past Repair Work, Southern Cemetery



DSCN3831.JPG, Failure of Past Repair Work, Southern Cemetery



DSCN3832.JPG, Unsympathetic Repair Work/Interventions, Southern Cemetery



DSCN3833.JPG, Failure of Past Repair Work, Southern Cemetery



DSCN3834.JPG, Water Damage, Southern Cemetery



DSCN3835.JPG, Water Damage, Southern Cemetery



DSCN3836.JPG, Structural Deterioration of Pyramids, Failure of Past Repair Work, Southern Cemetery



DSCN3837.JPG, Failure of Past Repair Work, Southern Cemetery



DSCN3838.JPG, Structural Deterioration of Pyramids, Water Damage, Southern Cemetery



DSCN3839.JPG, Structural Deterioration of Pyramids, Southern Cemetery



DSCN3840.JPG, Structural Deterioration of Pyramids, Southern Cemetery



DSCN3841.JPG, Structural Deterioration of Pyramids, Southern Cemetery



DSCN3842.JPG, Structural Deterioration of Pyramids, Southern Cemetery



DSCN3843.JPG, Structural Deterioration of Pyramids, Southern Cemetery



DSCN3844.JPG, Structural Deterioration of Pyramids, Southern Cemetery



DSCN3845.JPG, Structural Deterioration of Pyramids, Southern Cemetery



DSCN3846.JPG, Structural Deterioration of Pyramids, Southern Cemetery



DSCN3847.JPG, Structural Deterioration of Pyramids, Southern Cemetery



DSCN3848.JPG, Site Wide View, Southern Cemetery



DSCN3849.JPG, Structural Deterioration of Pyramids, Southern Cemetery



DSCN3850.JPG, Structural Deterioration of Pyramids, Southern Cemetery



DSCN3851.JPG, Structural Deterioration of Pyramids, Southern Cemetery



DSCN3852.JPG, Structural Deterioration of Pyramids, Southern Cemetery



DSCN3853.JPG, Structural Deterioration of Pyramids, Southern Cemetery



DSCN3854.JPG, Structural Deterioration of Pyramids, Southern Cemetery



DSCN3855.JPG, Structural Deterioration of Pyramids, Southern Cemetery



DSCN3856.JPG, Structural Deterioration of Pyramids, Southern Cemetery



DSCN3857.JPG, Structural Deterioration of Pyramids, Southern Cemetery



DSCN3858.JPG, Structural Deterioration of Pyramids, Southern Cemetery



DSCN3859.JPG, Structural Deterioration of Pyramids, Southern Cemetery



DSCN3860.JPG, Structural Deterioration of Pyramids, Southern Cemetery



DSCN3862.JPG, Structural Deterioration of Pyramids, Southern Cemetery



DSCN3863.JPG, Structural Deterioration of Pyramids, Southern Cemetery



DSCN3864.JPG, Structural Deterioration of Pyramids, Southern Cemetery



DSCN3865.JPG, Structural Deterioration of Pyramids, Southern Cemetery



DSCN3886.JPG, Structural Deterioration of Pyramids, Southern Cemetery



DSCN3929.JPG, Inappropriate Dumping of Excavation Spoils, Inappropriate/Inexistent Site Drainage, Royal City



DSCN3930.JPG, Inappropriate/Inexistent Site Drainage, Degradation of Stone/Masonry Elements, Structural Instability of Walls/Collapse of Archaeological Features, Vegetation Damage, Royal City



DSCN3931.JPG, Structural Instability of Walls/Collapse of Archaeological Features, Degradation of Stone/Masonry Elements, Inappropriate/Inexistent Site Drainage, Vegetation Damage, Royal City



DSCN3932.JPG, Graffiti, Royal City



DSCN3933.JPG, Degradation of Stone/Masonry Elements, Structural Instability of Walls/Collapse of Archaeological Features, Royal City



DSCN3934.JPG, Degradation of Stone/Masonry Elements, Structural Instability of Walls/Collapse of Archaeological Features, Inappropriate/Inexistent Site Drainage, Vegetation Damage, Royal City



DSCN3935.JPG, Degradation of Stone/Masonry Elements, Structural Instability of Walls/Collapse of Archaeological Features, Inappropriate/Inexistent Site Drainage, Vegetation Damage, Royal City



DSCN3936.JPG, Degradation of Stone/Masonry Elements, Structural Instability of Walls/Collapse of Archaeological Features, Royal City



DSCN3937.JPG, Vegetation Damage, Royal City



DSCN3938.JPG, Vegetation Damage, Royal City



DSCN3939.JPG, Vegetation Damage, Structural Instability of Walls/Collapse of Archaeological Features, Royal City



DSCN3940.JPG, Vegetation Damage, Structural Instability of Walls/Collapse of Archaeological Features, Royal City



DSCN3941.JPG, Vegetation Damage, Structural Instability of Walls/Collapse of Archaeological Features, Royal City



DSCN3942.JPG, Inappropriate/Inexistent Site Drainage, Vegetation Damage, Structural Instability of Walls/Collapse of Archaeological Features, Royal City



DSCN3943.JPG, Degradation of Stone/Masonry Elements, Royal City



DSCN3944.JPG, Structural Instability of Walls/Collapse of Archaeological Features, Vegetation Damage, Royal City



DSCN3945.JPG, Vegetation Damage, Royal City



DSCN3946.JPG, Degradation of Stone/Masonry Elements, Structural Instability of Walls/Collapse of Archaeological Features, Royal City



DSCN3947.JPG, Structural Instability of Walls/Collapse of Archaeological Features, Degradation of Stone/Masonry Elements, Royal City



DSCN3948.JPG, Structural Instability of Walls/Collapse of Archaeological Features, Degradation of Stone/Masonry Elements, Royal City



DSCN3949.JPG, Structural Instability of Walls/Collapse of Archaeological Features, Royal City



DSCN3950.JPG, Structural Instability of Walls/Collapse of Archaeological Features, Degradation of Stone/Masonry Elements, Vegetation Damage, Royal City



DSCN3951.JPG, Vegetation Damage, Inappropriate/Inexistent Site Drainage, Inappropriate Dumping of Excavation Spoils, Royal City



DSCN3952.JPG, Inappropriate/Inexistent Site Drainage, Inappropriate Dumping of Excavation Spoils, Vegetation Damage, Royal City



DSCN3953.JPG, Inappropriate/Inexistent Site Drainage, Inappropriate Dumping of Excavation Spoils, Royal City



DSCN3954.JPG, Degradation of Stone/Masonry Elements, Structural Instability of Walls/Collapse of Archaeological Features, Inappropriate/Inexistent Site Drainage, Royal City



DSCN3955.JPG, Inappropriate Dumping of Excavation Spoils, Inappropriate/Inexistent Site Drainage, Royal City



DSCN3956.JPG, Degradation of Stone/Masonry Elements, Structural Instability of Walls/Collapse of Archaeological Features, Royal City



DSCN3957.JPG, Degradation of Stone/Masonry Elements, Structural Instability of Walls/Collapse of Archaeological Features, Royal City



DSCN3958.JPG, Degradation of Stone/Masonry Elements, Structural Instability of Walls/Collapse of Archaeological Features, Royal City



DSCN3959.JPG, Inappropriate Dumping of Excavation Spoils, Inappropriate/Inexistent Site Drainage, Royal City



DSCN3960.JPG, Degradation of Stone/Masonry Elements, Structural Instability of Walls/Collapse of Archaeological Features, Inappropriate/Inexistent Site Drainage, Royal City



DSCN3961.JPG, Inappropriate/Inexistent Site Drainage, Royal City



DSCN3962.JPG, Degradation of Stone/Masonry Elements, Structural Instability of Walls/Collapse of Archaeological Features, Inappropriate/Inexistent Site Drainage, Royal City



DSCN3963.JPG, Inappropriate Dumping of Excavation Spoils, Structural Instability of Walls/Collapse of Archaeological Features, Degradation of Stone/Masonry Elements, Inappropriate/Inexistent Site Drainage, Royal City



DSCN3964.JPG, Structural Instability of Walls/Collapse of Archaeological Features, Degradation of Stone/Masonry Elements, Inappropriate/Inexistent Site Drainage, Inappropriate Dumping of Excavation Spoils, Royal City



DSCN3965.JPG, Inappropriate Dumping of Excavation Spoils, Exposure and Deterioration of Ancient Plasters, Degradation of Stone/Masonry Elements, Structural Instability of Walls/Collapse of Archaeological Features, Royal City



DSCN3966.JPG, Inappropriate Dumping of Excavation Spoils, Inappropriate/Inexistent Site Drainage, Structural Instability of Walls/ Collapse of Archaeological Features, Royal City



DSCN3967.JPG, Structural Instability of Walls/Collapse of Archaeological Features, Inappropriate Dumping of Excavation Spoils, Inappropriate/Inexistent Site Drainage, Royal City



DSCN3968.JPG, Structural Instability of Walls/Collapse of Archaeological Features, Inappropriate Dumping of Excavation Spoils, Inappropriate/Inexistent Site Drainage, Royal City



DSCN3969.JPG, Degradation of Stone/Masonry Elements, Structural Instability of Walls/Collapse of Archaeological Features, Inappropriate Dumping of Excavation Spoils, Royal City



DSCN3970.JPG, Structural Instability of Walls/Collapse of Archaeological Features, Degradation of Stone/Masonry Elements, Royal City



DSCN3971.JPG, Structural Instability of Walls/Collapse of Archaeological Features, Degradation of Stone/Masonry Elements, Royal City



DSCN3972.JPG, Structural Instability of Walls/Collapse of Archaeological Features, Royal City



DSCN3973.JPG, Inappropriate Dumping of Excavation Spoils, Inappropriate/Inexistent Site Drainage, Royal City



DSCN3974.JPG, Structural Instability of Walls/Collapse of Archaeological Features, Inappropriate Dumping of Excavation Spoils, Degradation of Stone/Masonry Elements, Royal City



DSCN3975.JPG, Inappropriate Dumping of Excavation Spoils, Inappropriate/Inexistent Site Drainage, Structural Instability of Walls/ Collapse of Archaeological Features, Degradation of Stone/Masonry Elements, Royal City



DSCN3976.JPG, Degradation of Stone/Masonry Elements, Structural Instability of Walls/Collapse of Archaeological Features, Inappropriate Dumping of Excavation Spoils, Inappropriate/Inexistent Site Drainage, Royal City



DSCN3977.JPG, Structural Instability of Walls/Collapse of Archaeological Features, Degradation of Stone/Masonry Elements, Inappropriate/Inexistent Site Drainage, Inappropriate Dumping of Excavation Spoils, Royal City



DSCN3978.JPG, Structural Instability of Walls/Collapse of Archaeological Features, Degradation of Stone/Masonry Elements, Inappropriate Dumping of Excavation Spoils, Inappropriate/Inexistent Site Drainage, Royal City



DSCN3979.JPG, Inappropriate Dumping of Excavation Spoils, Structural Instability of Walls/Collapse of Archaeological Features, Royal City



DSCN3980.JPG, Structural Instability of Walls/Collapse of Archaeological Features, Inappropriate Dumping of Excavation Spoils, Inappropriate/Inexistent Site Drainage, Royal City



DSCN3981.JPG, Structural Instability of Walls/Collapse of Archaeological Features, Inappropriate Dumping of Excavation Spoils, Inappropriate/Inexistent Site Drainage, Royal City



DSCN3982.JPG, Structural Instability of Walls/Collapse of Archaeological Features, Inappropriate Dumping of Excavation Spoils, Inappropriate/Inexistent Site Drainage, Royal City



DSCN3983.JPG, Structural Instability of Walls/Collapse of Archaeological Features, Inappropriate Dumping of Excavation Spoils, Inappropriate/Inexistent Site Drainage, Royal City



DSCN3984.JPG, Structural Instability of Walls/Collapse of Archaeological Features, Inappropriate Dumping of Excavation Spoils, Inappropriate/Inexistent Site Drainage, Royal City



DSCN3985.JPG, Inappropriate Dumping of Excavation Spoils, Royal City



DSCN3986.JPG, Inappropriate Dumping of Excavation Spoils, Inappropriate/Inexistent Site Drainage, Royal City



DSCN3987.JPG, Structural Instability of Walls/Collapse of Archaeological Features, Royal City



DSCN3988.JPG, Structural Instability of Walls/Collapse of Archaeological Features, Royal City



DSCN3989.JPG, Structural Instability of Walls/Collapse of Archaeological Features, Royal City



DSCN3991.JPG, Structural Instability of Walls/Collapse of Archaeological Features, Inappropriate Dumping of Excavation Spoils, Inappropriate/Inexistent Site Drainage, Royal City



DSCN3993.JPG, Structural Instability of Walls/Collapse of Archaeological Features, Inappropriate/Inexistent Site Drainage, Inappropriate Dumping of Excavation Spoils, Royal City



DSC06243.JPG, Visual Impact, Littering, Royal City



DSC06245.JPG, Inappropriate/Inexistent Site Drainage, Degradation of Stone/Masonry Elements, Royal City



DSC06246.JPG, Inappropriate/Inexistent Site Drainage, Degradation of Stone/Masonry Elements, Royal City



DSC06247.JPG, Inappropriate/Inexistent Site Drainage, Degradation of Stone/Masonry Elements, Royal City



DSC06248.JPG, Inappropriate/Inexistent Site Drainage, Degradation of Stone/Masonry Elements, Royal City



DSC06249.JPG, Inappropriate/Inexistent Site Drainage, Degradation of Stone/Masonry Elements, Royal City



DSC06252.JPG, Inappropriate/Inexistent Site Drainage, Degradation of Stone/Masonry Elements, Royal City



DSC06253.JPG, Inappropriate/Inexistent Site Drainage, Degradation of Stone/Masonry Elements, Royal City



DSC06254.JPG, Exposure and Deterioration of Ancient Plasters, Degradation of Stone/Masonry Elements, Inappropriate/Inexistent Site Drainage, Royal City



DSC06255.JPG, Degradation of Stone/Masonry Elements, Royal City



DSC06256.JPG, Degradation of Stone/Masonry Elements, Inappropriate/Inexistent Site Drainage, Royal City



DSC06257.JPG, Inappropriate/Inexistent Site Drainage, Royal City



DSC06258.JPG, Inappropriate/Inexistent Site Drainage, Royal City



DSC06259.JPG, Inappropriate/Inexistent Site Drainage, Royal City



DSC06261.JPG, Redundant/Inappropriate Visitor Infrastructure, Royal City



DSC06262.JPG, Redundant/Inappropriate Visitor Infrastructure, Royal City



DSC06263.JPG, Redundant/Inappropriate Visitor Infrastructure, Royal City



DSC06264.JPG, Redundant/Inappropriate Visitor Infrastructure, Royal City



DSC06265.JPG, Redundant/Inappropriate Visitor Infrastructure, Royal City



DSC06266.JPG, Redundant/Inappropriate Visitor Infrastructure, Royal City



DSC06267.JPG, Degradation of Stone/Masonry Elements, Exposure and Deterioration of Ancient Plasters, Royal City



DSC06268.JPG, Exposure and Deterioration of Ancient Plasters, Degradation of Stone/Masonry Elements, Inappropriate/Inexistent Site Drainage, Royal City



DSC06269.JPG, Inappropriate/Inexistent Site Drainage, Degradation of Stone/Masonry Elements, Exposure and Deterioration of Ancient Plasters, Royal City



DSC06274.JPG, Inappropriate Dumping of Excavation Spoils, Structural Instability of Walls/Collapse of Archaeological Feature Royal City



DSC06275.JPG, Inappropriate Dumping of Excavation Spoils, Inappropriate/Inexistent Site Drainage, Royal City

MUSAWWARAT ES-SUFRA



DSC06166.JPG, Musawwarat - Great Enclosure, Structural Instability of Walls/Collapse of Archaeological Features



DSC06170.JPG, Musawwarat - Great Enclosure, Site Wide View



DSC06173.JPG, Musawwarat - Great Enclosure



DSC06174.JPG, Musawwarat - Great Enclosure, Structural Instability of Walls/Collapse of Archaeological Features, Structural Instability of Walls/Collapse of Archaeological Features



DSC06175.JPG, Musawwarat - Great Enclosure, Restoration Works



DSC06176.JPG, Musawwarat - Great Enclosure



DSC06179.JPG, Musawwarat - Great Enclosure, Restoration Works



DSC06180.JPG, Musawwarat - Great Enclosure, Restoration Works



DSC06181.JPG, Musawwarat - Great Enclosure, Structural Instability of Walls/Collapse of Archaeological Features, Structural Instability of Walls/Collapse of Archaeological Features



DSC06182.JPG, Musawwarat - Great Enclosure, Structural Instability of Walls/Collapse of Archaeological Features, Structural Instability of Walls/Collapse of Archaeological Features



DSC06183.JPG, Musawwarat - Great Enclosure, Structural Instability of Walls/Collapse of Archaeological Features, Structural Instability of Walls/Collapse of Archaeological Features



DSC06188.JPG, Musawwarat - Great Enclosure, Structural Instability of Walls/Collapse of Archaeological Features, Structural Instability of Walls/Collapse of Archaeological Features



DSC06189.JPG, Musawwarat - Great Enclosure



DSC06190.JPG, Musawwarat - Great Enclosure, Structural Instability of Walls/Collapse of Archaeological Features, Structural Instability of Walls/Collapse of Archaeological Features



DSC06191.JPG, Musawwarat - Great Enclosure, Restoration Works



DSC06192.JPG, Musawwarat - Great Enclosure



DSC06193.JPG, Musawwarat - Great Enclosure



DSC06194.JPG, Musawwarat - Great Enclosure, Structural Instability of Walls/Collapse of Archaeological Features, Structural Instability of Walls/Collapse of Archaeological Features



DSC06195.JPG, Musawwarat - Great Enclosure, Structural Instability of Walls/Collapse of Archaeological Features, Structural Instability of Walls/Collapse of Archaeological Features



DSC06196.JPG, Musawwarat - Great Enclosure, Restoration Works



DSC06197.JPG, Musawwarat - Great Enclosure, Restoration Works



DSC06198.JPG, Musawwarat - Great Enclosure, Restoration Works, Structural Instability of Walls/Collapse of Archaeological Features



DSC06199.JPG, Musawwarat - Great Enclosure, Restoration Works



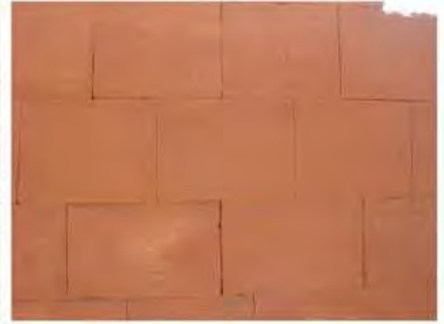
DSC06200.JPG, Musawwarat - Great Enclosure, Restoration Works



DSC06201.JPG, Musawwarat - Great Enclosure



DSC06202.JPG, Musawwarat - Great Enclosure, Degradation of Stone/Masonry Elements, Salt Crystallization



DSC06203.JPG, Musawwarat - Great Enclosure, Historic Graffiti



DSC06204.JPG, Musawwarat - Great Enclosure, Historic Graffiti



DSC06205.JPG, Musawwarat - Great Enclosure, Structural Instability of Walls/Collapse of Archaeological Features, Structural Instability of Walls/Collapse of Archaeological Features



DSC06206.JPG, Musawwarat - Great Enclosure, Structural Instability of Walls/Collapse of Archaeological Features, Structural Instability of Walls/Collapse of Archaeological Features



DSC06207.JPG, Musawwarat - Great Enclosure, Structural Instability of Walls/Collapse of Archaeological Features, Structural Instability of Walls/Collapse of Archaeological Features



DSC06208.JPG, Musawwarat - Great Enclosure, Restoration Works



DSC06209.JPG, Musawwarat - Great Enclosure, Restoration Works



DSC06210.JPG, Musawwarat - Great Enclosure, Restoration Works



DSC06211.JPG, Musawwarat - Great Enclosure



DSC06212.JPG, Musawwarat - Great Enclosure, Structural Instability of Walls/Collapse of Archaeological Features, Restoration Works



DSC06213.JPG, Musawwarat - Great Enclosure, Structural Instability of Walls/Collapse of Archaeological Features



DSC06214.JPG, Musawwarat - Great Enclosure, Site Wide View



DSCN4163.JPG, Musawwarat - Great Enclosure, Redundant/Inappropriate Visitor Infrastructure, Visual Impact



DSCN4164.JPG, Musawwarat - Great Enclosure, Redundant/Inappropriate Visitor Infrastructure, Visual Impact



DSCN4165.JPG, Musawwarat - Great Enclosure, Redundant/Inappropriate Visitor Infrastructure, Visual Impact



DSCN4166.JPG, Musawwarat - Great Enclosure, Structural Instability of Walls/Collapse of Archaeological Features



DSCN4167.JPG, Musawwarat - Great Enclosure, Structural Instability of Walls/Collapse of Archaeological Features



DSCN4168.JPG, Musawwarat - Great Enclosure, Degradation of Stone/Masonry Elements, Structural Instability of Walls/Collapse of Archaeological Features, Salt Crystallization



DSCN4169.JPG, Musawwarat - Great Enclosure, Structural Instability of Walls/Collapse of Archaeological Features, Degradation of Stone/Masonry Elements, Structural Instability of Walls/Collapse of Archaeological Features, Salt Crystallization



DSCN4170.JPG, Musawwarat - Great Enclosure, Degradation of Stone/Masonry Elements, Salt Crystallization



DSCN4171.JPG, Musawwarat - Great Enclosure, Degradation of Stone/Masonry Elements, Structural Instability of Walls/Collapse of Archaeological Features, Structural Instability of Walls/Collapse of Archaeological Features, Salt Crystallization



DSCN4172.JPG, Musawwarat - Great Enclosure, Degradation of Stone/Masonry Elements, Structural Instability of Walls/Collapse of Archaeological Features, Structural Instability of Walls/Collapse of Archaeological Features, Salt Crystallization



DSCN4173.JPG, Musawwarat - Great Enclosure, Structural Instability of Walls/Collapse of Archaeological Features, Structural Instability of Walls/Collapse of Archaeological Features



DSCN4174.JPG, Musawwarat - Great Enclosure, Structural Instability of Walls/Collapse of Archaeological Features, Structural Instability of Walls/Collapse of Archaeological Features



DSCN4175.JPG, Musawwarat - Great Enclosure, Restoration Works, Degradation of Stone/Masonry Elements, Salt Crystallization



DSCN4176.JPG, Musawwarat - Great Enclosure, Degradation of Stone/Masonry Elements, Salt Crystallization



DSCN4177.JPG, Musawwarat - Great Enclosure, Structural Instability of Walls/Collapse of Archaeological Features, Structural Instability of Walls/Collapse of Archaeological Features



DSCN4178.JPG, Musawwarat - Great Enclosure, Structural Instability of Walls/Collapse of Archaeological Features, Structural Instability of Walls/Collapse of Archaeological Features, Restoration Works



DSCN4179.JPG, Musawwarat - Great Enclosure



DSCN4180.JPG, Musawwarat - Great Enclosure, Restoration Works



DSC06215.JPG, Musawwarat - Re-erected Lion Temple, Restoration Works



DSC06216.JPG, Musawwarat - Re-erected Lion Temple, Restoration Works



DSC06218.JPG, Musawwarat - Re-erected Lion Temple



DSC06219.JPG, Musawwarat - Re-erected Lion Temple, Degradation of Stone/Masonry Elements, Salt Crystallization



DSC06220.JPG, Musawwarat - Re-erected Lion Temple, Restoration Works



DSC06222.JPG, Musawwarat - Re-erected Lion Temple



DSC06223.JPG, Musawwarat - Re-erected Lion Temple



DSC06224.JPG, Musawwarat - Re-erected Lion Temple



DSC06226.JPG, Musawwarat - Re-erected Lion Temple



DSC06227.JPG, Musawwarat - Re-erected Lion Temple



DSC06228.JPG, Musawwarat - Re-erected Lion Temple



DSC06229.JPG, Musawwarat - Re-erected Lion Temple



DSC06231.JPG, Musawwarat - Re-erected Lion Temple



DSC06232.JPG, Musawwarat - Re-erected Lion Temple



DSC06233.JPG, Musawwarat - Re-erected Lion Temple



DSC06234.JPG, Musawwarat - Re-erected Lion Temple



DSC06235.JPG, Musawwarat - Re-erected Lion Temple



DSC06236.JPG, Musawwarat - Re-erected Lion Temple



DSC06237.JPG, Musawwarat - Re-erected Lion Temple



09112008252, Musawwarat, Site Wide View



09112008253, Musawwarat, Site Wide View



DSC06240.JPG, Redundant/Inappropriate Visitor Infrastructure



09112008256, Musawwarat - Hafir, Site Wide View, Damaging On Site Activities



09112008257, Musawwarat - Hafir, Site Wide View, Damaging On Site Activities

NAQA



DSCN4021.JPG, Lion Temple B300 - Naqaa, Naqaa



DSCN4022.JPG, Lion Temple B300 - Naqaa, Naqaa



DSCN4032.JPG, Lion Temple B300 - Naqaa, Naqaa



DSCN4033.JPG, Lion Temple B300 - Naqaa, Naqaa



DSCN4034.JPG, Lion Temple B300 - Naqaa, Naqaa



DSCN4035.JPG, Lion Temple B300 - Naqaa, Naqaa



DSCN4037.JPG, Lion Temple B300 - Naqaa, Naqaa



DSCN4038.JPG, Lion Temple B300 - Naqaa, Naqaa



DSCN4039.JPG, Lion Temple B300 - Naqaa, Naqaa



DSCN4040.JPG, Lion Temple B300 - Naqaa, Naqaa



DSCN4041.JPG, Lion Temple B300 - Naqaa, Naqaa



DSCN4058.JPG, Naqaa, Amun Temple



DSCN4080.JPG, Naqaa, Amun Temple



DSCN4067.JPG, Naqaa, Amun Temple



DSCN4089.JPG, Naqaa, Amun Temple



DSCN4070.JPG, Naqaa, Amun Temple



DSCN4072.JPG, Naqaa, Amun Temple



DSCN4074.JPG, Naqaa, Amun Temple



DSCN4077.JPG, Naqaa, Amun Temple



DSCN4104.JPG, Naqaa, Amun Temple



DSCN4105.JPG, Naqaa, Amun Temple



DSCN4108.JPG, Naqaa, Amun Temple



DSCN4012.JPG, Naqaa, Inappropriate/Inexistent Site Drainage



DSCN4053.JPG, Naqaa, Mission Photos - Various



DSCN4056.JPG, Naqaa, Site Wide View



DSCN4058.JPG, Naqaa, Site Wide View



09112008252, Naqaa, Site Wide View



09112008263, Naqaa, Site Wide View



DSCN4068.JPG, Naqaa, Temple B200



DSCN4050.JPG, Naqaa, Water Basins



DSCN4051.JPG, Naqaa, Water Basins



DSCN4052.JPG, Naqaa, Water Basins



DSCN4054.JPG, Naqaa, Water Basins



DSCN4055.JPG, Naqaa, Water Basins



DSCN4019.JPG, Lion Temple B300 - Naqaa, Naqaa, Inappropriate/
Inexistent Site Drainage



DSCN4020.JPG, Lion Temple B300 - Naqaa, Naqaa, Inaproprate/ Inexistent Site Drainage



DSCN4047.JPG, Lion Temple B300 - Naqaa, Naqaa, Inaproprate/ Inexistent Site Drainage



DSCN4048.JPG, Lion Temple B300 - Naqaa, Naqaa, Site Wide View



DSCN4031.JPG, Lion Temple B300 - Naqaa, Naqaa, Structural Instability of Walls/Collapse of Archaeological Features



DSCN4036.JPG, Lion Temple B300 - Naqaa, Naqaa, Unsympathetic Repair Work/Interventions



DSCN4087.JPG, Naqaa, Amun Temple, Degradation of Stone/ Masonry Elements



DSCN4125.JPG, Naqaa, Amun Temple, Degradation of Stone/ Masonry Elements



DSCN4132.JPG, Naqaa, Amun Temple, Degradation of Stone/ Masonry Elements



09112008247, Naqaa, Amun Temple, Deterioration of Ancient Mud Structures



DSCN4102.JPG, Naqaa, Amun Temple, Deterioration of Ancient Mud Structures



DSCN4103.JPG, Naqaa, Amun Temple, Deterioration of Ancient Mud Structures



DSCN4107.JPG, Naqaa, Amun Temple, Deterioration of Ancient Mud Structures



DSCN4109.JPG, Naqaa, Amun Temple, Deterioration of Ancient Mud Structures



DSCN4110.JPG, Naqaa, Amun Temple, Deterioration of Ancient Mud Structures



DSCN4111.JPG, Naqaa, Amun Temple, Deterioration of Ancient Mud Structures



DSCN4071.JPG, Naqaa, Amun Temple, Exposure and Deterioration of Ancient Plasters



DSCN4073.JPG, Naqaa, Amun Temple, Exposure and Deterioration of Ancient Plasters



DSCN4075.JPG, Naqaa, Amun Temple, Exposure and Deterioration of Ancient Plasters



DSCN4076.JPG, Naqaa, Amun Temple, Exposure and Deterioration of Ancient Plasters



DSCN4078.JPG, Naqaa, Amun Temple, Exposure and Deterioration of Ancient Plasters



DSCN4079.JPG, Naqaa, Amun Temple, Exposure and Deterioration of Ancient Plasters



DSCN4081.JPG, Naqaa, Amun Temple, Exposure and Deterioration of Ancient Plasters



DSCN4082.JPG, Naqaa, Amun Temple, Exposure and Deterioration of Ancient Plasters



DSCN4085.JPG, Naqaa, Amun Temple, Exposure and Deterioration of Ancient Plasters



DSCN4088.JPG, Naqaa, Amun Temple, Exposure and Deterioration of Ancient Plasters



DSCN4113.JPG, Naqaa, Amun Temple, Exposure and Deterioration of Ancient Plasters



DSCN4114.JPG, Naqaa, Amun Temple, Exposure and Deterioration of Ancient Plasters



DSCN4115.JPG, Naqaa, Amun Temple, Exposure and Deterioration of Ancient Plasters



DSCN4133.JPG, Naqaa, Amun Temple, Exposure and Deterioration of Ancient Plasters



DSCN4116.JPG, Naqaa, Amun Temple, Inappropriate/Inexistent Site Drainage



DSCN4130.JPG, Naqaa, Amun Temple, Informal Lapidarium



DSCN4134.JPG, Naqaa, Amun Temple, Site Wide View



DSCN4135.JPG, Naqaa, Amun Temple, Site Wide View



DSCN4136.JPG, Naqaa, Amun Temple, Site Wide View



DSCN4160.JPG, Naqaa, Amun Temple, Site Wide View



DSCN4161.JPG, Naqaa, Amun Temple, Site Wide View



DSCN4162.JPG, Naqaa, Amun Temple, Site Wide View



09112008249, Naqaa, Amun Temple, Structural Instability of Walls/ Collapse of Archaeological Features



DSCN4118.JPG, Naqaa, Amun Temple, Structural Instability of Walls/Collapse of Archaeological Features



DSCN3994.JPG, Naqaa, Lion Temple B300 - Naqaa, Site Wide View



DSCN4057.JPG, Naqaa, Site Wide View, Redundant/Inappropriate Visitor Infrastructure



DSCN4065.JPG, Naqaa, Temple B200, Degradation of Stone/ Masonry Elements



DSCN4066.JPG, Naqaa, Temple B200, Degradation of Stone/ Masonry Elements



DSCN4144.JPG, Naqaa, Temple F, Graffiti



DSCN4141.JPG, Naqaa, Temple F, Signage



DSCN4146.JPG, Naqaa, Temple F, Site Wide View



DSCN4138.JPG, Naqaa, Temple F, Structural Instability of Walls/ Collapse of Archaeological Features



DSCN4140.JPG, Naqaa, Temple F, Visual Impact



DSCN4148.JPG, Naqaa, Temple F, Visual Impact



DSCN4011.JPG, The Kiosk - Naqaa, Naqaa, Graffiti



DSCN3996.JPG, The Kiosk - Naqaa, Naqaa, Inappropriate/Inexistent Site Drainage



DSCN4013.JPG, The Kiosk - Naqaa, Naqaa, Inappropriate/Inexistent Site Drainage



DSCN4006.JPG, The Kiosk - Naqaa, Naqaa, Structural Instability of Walls/Collapse of Archaeological Features



DSCN4016.JPG, The Kiosk - Naqaa, Naqaa, Structural Instability of Walls/Collapse of Archaeological Features



DSCN4017.JPG, The Kiosk - Naqaa, Naqaa, Structural Instability of Walls/Collapse of Archaeological Features



DSCN4029.JPG, Lion Temple B300 - Naqaa, Naqaa, Degradation of Stone/Masonry Elements, Inappropriate/Inexistent Site Drainage



DSCN4030.JPG, Lion Temple B300 - Naqaa, Naqaa, Degradation of Stone/Masonry Elements, Inappropriate/Inexistent Site Drainage



DSCN4028.JPG, Lion Temple B300 - Naqaa, Naqaa, Inappropriate/Inexistent Site Drainage, Vegetation Damage



DSCN4094.JPG, Naqaa, Amun Temple, Degradation of Stone/Masonry Elements, Exposure and Deterioration of Ancient Plasters



DSCN4099.JPG, Naqaa, Amun Temple, Degradation of Stone/Masonry Elements, Exposure and Deterioration of Ancient Plasters



DSCN4090.JPG, Naqaa, Amun Temple, Degradation of Stone/Masonry Elements, Structural Instability of Walls/Collapse of Archaeological Features



DSCN4096.JPG, Naqaa, Amun Temple, Degradation of Stone/Masonry Elements, Structural Instability of Walls/Collapse of Archaeological Features



DSCN4131.JPG, Naqaa, Amun Temple, Degradation of Stone/Masonry Elements, Structural Instability of Walls/Collapse of Archaeological Features



DSCN4084.JPG, Naqaa, Amun Temple, Exposure and Deterioration of Ancient Plasters, Degradation of Stone/Masonry Elements



DSCN4087.JPG, Naqaa, Amun Temple, Exposure and Deterioration of Ancient Plasters, Degradation of Stone/Masonry Elements



DSCN4092.JPG, Naqaa, Amun Temple, Exposure and Deterioration of Ancient Plasters, Degradation of Stone/Masonry Elements



DSCN4093.JPG, Naqaa, Amun Temple, Exposure and Deterioration of Ancient Plasters, Degradation of Stone/Masonry Elements



DSCN4098.JPG, Naqaa, Amun Temple, Exposure and Deterioration of Ancient Plasters, Degradation of Stone/Masonry Elements



DSCN4121.JPG, Naqaa, Amun Temple, Exposure and Deterioration of Ancient Plasters, Degradation of Stone/Masonry Elements



DSCN4117.JPG, Naqaa, Amun Temple, Exposure and Deterioration of Ancient Plasters, Deterioration of Ancient Mud Structures



DSCN4112.JPG, Naqaa, Amun Temple, Exposure and Deterioration of Ancient Plasters, Inappropriate/Inexistent Site Drainage



DSCN4119.JPG, Naqaa, Amun Temple, Exposure and Deterioration of Ancient Plasters, Inappropriate/Inexistent Site Drainage



DSCN4120.JPG, Naqaa, Amun Temple, Exposure and Deterioration of Ancient Plasters, Inappropriate/Inexistent Site Drainage



DSCN4123.JPG, Naqaa, Amun Temple, Exposure and Deterioration of Ancient Plasters, Inappropriate/Inexistent Site Drainage



DSCN4129.JPG, Naqaa, Amun Temple, Exposure and Deterioration of Ancient Plasters, Inappropriate/Inexistent Site Drainage



DSCN4080.JPG, Naqaa, Amun Temple, Exposure and Deterioration of Ancient Plasters, Structural Instability of Walls/ Collapse of Archaeological Features



DSCN4086.JPG, Naqaa, Amun Temple, Exposure and Deterioration of Ancient Plasters, Structural Instability of Walls/Collapse of Archaeological Features



DSCN4108.JPG, Naqaa, Amun Temple, Exposure and Deterioration of Ancient Plasters, Structural Instability of Walls/ Collapse of Archaeological Features



DSCN4100.JPG, Naqaa, Amun Temple, Inappropriate/Inexistent Site Drainage, Vegetation Damage



DSCN4091.JPG, Naqaa, Amun Temple, Structural Instability of Walls/Collapse of Archaeological Features, Degradation of Stone/ Masonry Elements



DSCN4101.JPG, Naqaa, Amun Temple, Structural Instability of Walls/Collapse of Archaeological Features, Degradation of Stone/ Masonry Elements



DSCN4089.JPG, Naqaa, Amun Temple, Structural Instability of Walls/Collapse of Archaeological Features, Exposure and Deterioration of Ancient Plasters



DSCN4128.JPG, Naqaa, Amun Temple, Unsympathetic Repair Work/Interventions, Degradation of Stone/Masonry Elements



DSCN4126.JPG, Naqaa, Amun Temple, Water Damage, Inappropriate/Inexistent Site Drainage



DSCN4061.JPG, Naqaa, Temple B200, Structural Instability of Walls/Collapse of Archaeological Features, Degradation of Stone/Masonry Elements



DSCN4064.JPG, Naqaa, Temple B200, Structural Instability of Walls/Collapse of Archaeological Features, Degradation of Stone/Masonry Elements



DSCN4153.JPG, Naqaa, Temple F, Exposure and Deterioration of Ancient Plasters, Water Damage



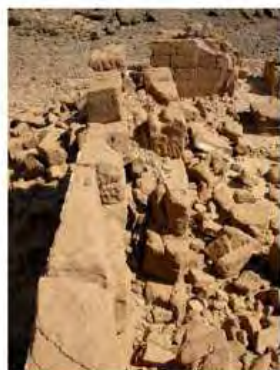
DSCN4145.JPG, Naqaa, Temple F, Inappropriate/Inexistent Site Drainage, Water Damage



DSCN4137.JPG, Naqaa, Temple F, Site Wide View, Structural Instability of Walls/Collapse of Archaeological Features



DSCN4147.JPG, Naqaa, Temple F, Structural Instability of Walls/Collapse of Archaeological Features, Structural Instability of Walls/Collapse of Archaeological Features



DSCN4155.JPG, Naqaa, Temple F, Structural Instability of Walls/Collapse of Archaeological Features, Structural Instability of Walls/Collapse of Archaeological Features



DSCN4139.JPG, Naqaa, Temple F, Structural Instability of Walls/Collapse of Archaeological Features, Structural Instability of Walls/Collapse of Archaeological Features



DSCN4154.JPG, Naqaa, Temple F, Structural Instability of Walls/Collapse of Archaeological Features, Structural Instability of Walls/Collapse of Archaeological Features



DSCN4156.JPG, Naqaa, Temple F, Structural Instability of Walls/Collapse of Archaeological Features, Structural Instability of Walls/Collapse of Archaeological Features



DSCN4157.JPG, Naqaa, Temple F, Structural Instability of Walls/Collapse of Archaeological Features, Structural Instability of Walls/Collapse of Archaeological Features



DSCN4158.JPG, Naqaa, Temple F, Structural Instability of Walls/Collapse of Archaeological Features, Structural Instability of Walls/Collapse of Archaeological Features



DSCN4159.JPG, Naqaa, Temple F, Structural Instability of Walls/ Collapse of Archaeological Features, Structural Instability of Walls/ Collapse of Archaeological Features



DSCN3997.JPG, The Kiosk - Naqaa, Naqaa, Degradation of Stone/ Masonry Elements, Inappropriate/Inexistent Site Drainage



DSCN3998.JPG, The Kiosk - Naqaa, Naqaa, Degradation of Stone/ Masonry Elements, Inappropriate/Inexistent Site Drainage



DSCN3999.JPG, The Kiosk - Naqaa, Naqaa, Degradation of Stone/ Masonry Elements, Inappropriate/Inexistent Site Drainage



DSCN4000.JPG, The Kiosk - Naqaa, Naqaa, Degradation of Stone/ Masonry Elements, Inappropriate/Inexistent Site Drainage



DSCN4001.JPG, The Kiosk - Naqaa, Naqaa, Degradation of Stone/ Masonry Elements, Inappropriate/Inexistent Site Drainage



DSCN4002.JPG, The Kiosk - Naqaa, Naqaa, Degradation of Stone/ Masonry Elements, Inappropriate/Inexistent Site Drainage



DSCN4003.JPG, The Kiosk - Naqaa, Naqaa, Degradation of Stone/ Masonry Elements, Inappropriate/Inexistent Site Drainage



DSCN4004.JPG, The Kiosk - Naqaa, Naqaa, Degradation of Stone/ Masonry Elements, Inappropriate/Inexistent Site Drainage



DSCN4005.JPG, The Kiosk - Naqaa, Naqaa, Degradation of Stone/ Masonry Elements, Inappropriate/Inexistent Site Drainage



DSCN4007.JPG, The Kiosk - Naqaa, Naqaa, Degradation of Stone/ Masonry Elements, Inappropriate/Inexistent Site Drainage



DSCN4008.JPG, The Kiosk - Naqaa, Naqaa, Degradation of Stone/ Masonry Elements, Inappropriate/Inexistent Site Drainage



DSCN4009.JPG, The Kiosk - Naqaa, Naqaa, Degradation of Stone/ Masonry Elements, Inappropriate/Inexistent Site Drainage



DSCN4010.JPG, The Kiosk - Naqaa, Naqaa, Degradation of Stone/ Masonry Elements, Inappropriate/Inexistent Site Drainage



DSCN4014.JPG, The Kiosk - Naqaa, Naqaa, Degradation of Stone/ Masonry Elements, Inappropriate/Inexistent Site Drainage



DSCN4015.JPG, The Kiosk - Naqaa, Naqaa, Degradation of Stone/ Masonry Elements, Inappropriate/Inexistent Site Drainage



DSCN4018.JPG, The Kiosk - Naqaa, Naqaa, Degradation of Stone/ Masonry Elements, Inappropriate/Inexistent Site Drainage



DSCN4043.JPG, The Kiosk - Naqaa, Naqaa, Inappropriate/ Inexistent Site Drainage, Degradation of Stone/Masonry Elements



DSCN4024.JPG, Lion Temple B300 - Naqaa, Naqaa, Degradation of Stone/Masonry Elements, Inappropriate/Inexistent Site Drainage, Vegetation Damage



DSCN4025.JPG, Lion Temple B300 - Naqaa, Naqaa, Degradation of Stone/Masonry Elements, Inappropriate/Inexistent Site Drainage, Vegetation Damage



DSCN4023.JPG, Lion Temple B300 - Naqaa, Naqaa, Inappropriate/ Inexistent Site Drainage, Degradation of Stone/Masonry Elements, Vegetation Damage



DSCN4026.JPG, Lion Temple B300 - Naqaa, Naqaa, Vegetation Damage, Degradation of Stone/Masonry Elements, Inappropriate/ Inexistent Site Drainage



DSCN4027.JPG, Lion Temple B300 - Naqaa, Naqaa, Vegetation Damage, Degradation of Stone/Masonry Elements, Inappropriate/ Inexistent Site Drainage



DSCN4124.JPG, Naqaa, Amun Temple, Exposure and Deterioration of Ancient Plasters, Inappropriate/Inexistent Site Drainage, Deterioration of Ancient Mud Structures



DSCN4127.JPG, Naqaa, Amun Temple, Inappropriate/Inexistent Site Drainage, Water Damage, Degradation of Stone/Masonry Elements



DSCN4083.JPG, Naqaa, Amun Temple, Structural Instability of Walls/Collapse of Archaeological Features, Inappropriate/Inexistent Site Drainage, Degradation of Stone/Masonry Elements



DSCN4095.JPG, Naqaa, Amun Temple, Structural Instability of Walls/Collapse of Archaeological Features, Exposure and Deterioration of Ancient Plasters, Degradation of Stone/Masonry Elements



DSCN4062.JPG, Naqaa, Temple B200, Degradation of Stone/Masonry Elements, Structural Instability of Walls/Collapse of Archaeological Features, Vegetation Damage



DSCN4083.JPG, Naqaa, Temple B200, Structural Instability of Walls/Collapse of Archaeological Features, Degradation of Stone/Masonry Elements, Inappropriate/Inexistent Site Drainage



DSCN4143.JPG, Naqaa, Temple F, Exposure and Deterioration of Ancient Plasters, Structural Instability of Walls/Collapse of Archaeological Features, Structural Instability of Walls/Collapse of Archaeological Features



DSCN4151.JPG, Naqaa, Temple F, Exposure and Deterioration of Ancient Plasters, Structural Instability of Walls/Collapse of Archaeological Features, Structural Instability of Walls/Collapse of Archaeological Features



DSCN4152.JPG, Naqaa, Temple F, Structural Instability of Walls/Collapse of Archaeological Features, Exposure and Deterioration of Ancient Plasters, Structural Instability of Walls/Collapse of Archaeological Features



DSCN4142.JPG, Naqaa, Temple F, Structural Instability of Walls/Collapse of Archaeological Features, Structural Instability of Walls/Collapse of Archaeological Features, Exposure and Deterioration of Ancient Plasters



DSCN4150.JPG, Naqaa, Temple F, Structural Instability of Walls/Collapse of Archaeological Features, Structural Instability of Walls/Collapse of Archaeological Features, Exposure and Deterioration of Ancient Plasters



DSCN3995.JPG, The Kicek - Naqaa, Naqaa, Degradation of Stone/Masonry Elements, Inappropriate/Inexistent Site Drainage, Site Wide View



DSCN4122.JPG, Naqaa, Amun Temple, Vegetation Damage, Inappropriate/Inexistent Site Drainage, Degradation of Stone/Masonry Elements, Deterioration of Ancient Mud Structures