World Heritage Scanned Nomination

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SITE NAME: **Matobo Hills**

DATE OF INSCRIPTION: 5th July 2003

STATE PARTY: ZIMBABWE

CRITERIA: C (iii)(v)(vi)

DECISION OF THE WORLD HERITAGE COMMITTEE:
Excerpt from the Report of the 27th Session of the World Heritage Committee

Criterion (iii): The Matobo Hills has one of the highest concentrations of rock art in Southern Africa. The rich evidence from archaeology and from the rock paintings at Matobo provide a very full picture of the lives of foraging societies in the Stone Age and the way agricultural societies came to replace them.

Criterion (v): The interaction between communities and the landscape, manifest in the rock art and also in the long standing religious traditions still associated with the rocks, are community responses to a landscape.

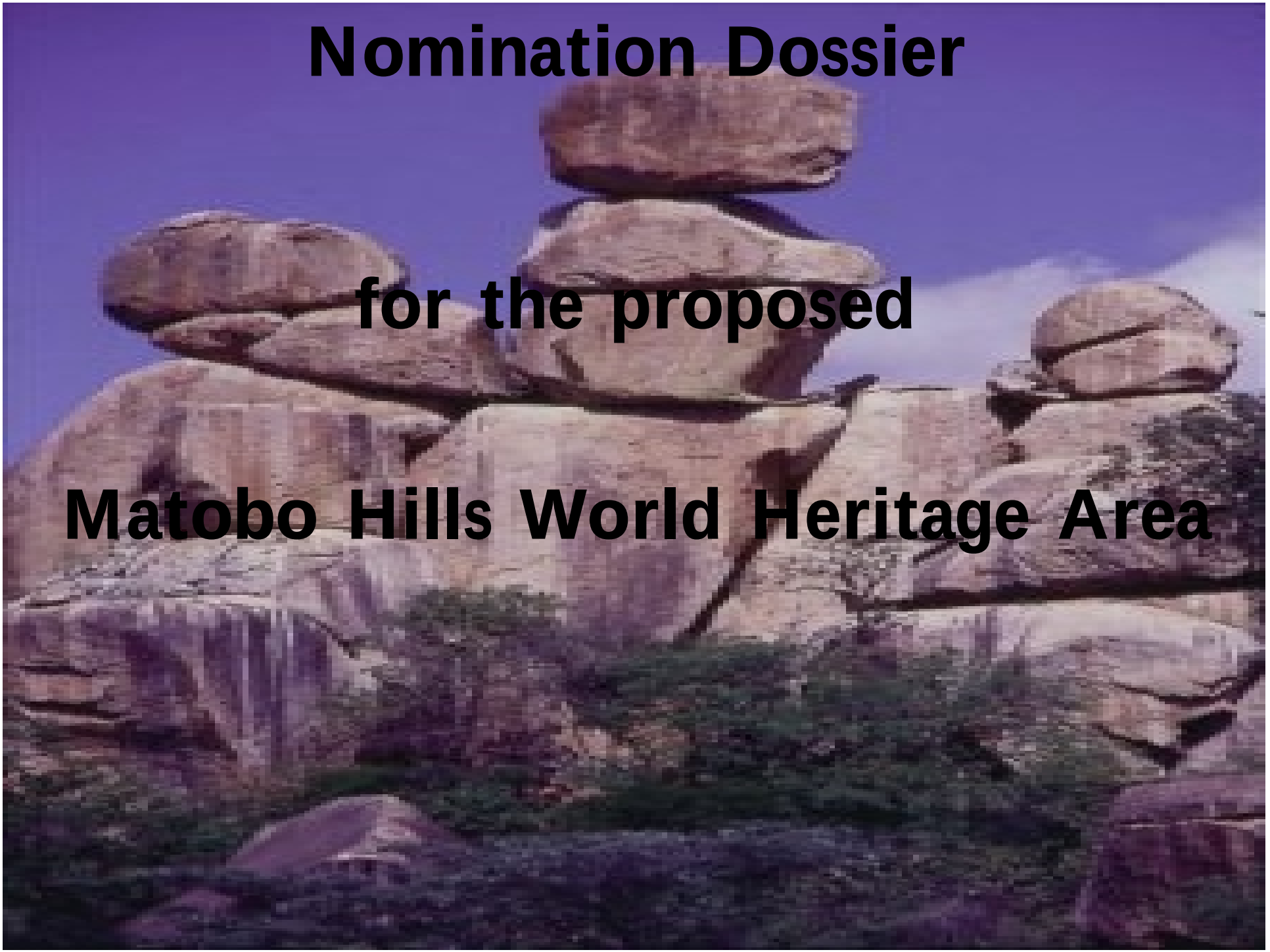
Criterion (vi): The Mwari religion, centred on Matoba, which may date back to the Iron Age, is the most powerful oracular tradition in southern Africa

BRIEF DESCRIPTIONS

The area exhibits a profusion of distinctive rock landforms rising above the granite shield that covers much of Zimbabwe. The large boulders provide abundant natural shelters and have been associated with human occupation from the early Stone Age right through to early historical times, and intermittently since. They also feature an outstanding collection of rock paintings. The Matobo Hills continue to provide a strong focus for the local community, which still uses shrines and sacred places closely linked to traditional, social and economic activities.

1.b State, Province or Region: Matebeleland, South Province

1.d Exact location: S20 30 00.0 E28 30 00.0



Nomination Dossier

for the proposed

Matobo Hills World Heritage Area

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- Zimbabwe National Commission for UNESCO
- National Museums and Monuments of Zimbabwe
- Department of National Parks and Wild Life Management
- Matobo Rural District Council
- Umzingwane Rural District Council
- Matobo Conservation Society
- Ministry of Home Affairs
- Ministry of Environment and Tourism
- Ministry of Local Government, Public Works and National Housing
- Ministry of Higher Education
- Biodiversity Foundation for Africa
- Osprey Productions
- UNESCO Regional and National Office
- The traditional leadership (Chief Masuku, Sub-chiefs Sithole and Moyo)

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1.0 IDENTIFICATION OF THE PROPERTY

1.1 Country

Republic of Zimbabwe

1.2 Province

Matebeleland South Province

1.3 Name of Property

Matobo Hills

Matobo derives from the Kalanga word “Matombo” meaning rocks. Early missionaries who could not pronounce Matobo later introduced the names Matopo Hills or Matopos. However, Matobo Hills is now more acceptable than Matopo or Matopos. The local people also refer to the area as Matojeni.

1.4 Location on map and indication of geographical co-ordinates

$28^0\ 00^1$ E to $29^0\ 00^1$ E; $20^0\ 25^1$ S to $20^0\ 45^1$ S

Regional Map, (Figure 1).

1.5 Maps and/or plans showing boundary of area proposed for inscription

The proposed World Heritage Site (WHS) boundary and buffer zone are presented in Figure 2 and 3.

In establishing the boundary of the proposed Matobo Hills World Heritage Site (Figure 2), it was initially agreed that the geological boundary of the Matobo granite be used as the definition. However, consideration was given to the administrative implications and practical nature of the proposed boundary. This is in view of the large extent of the Matobo granite landscape, which extends almost to the Botswana border in the west while to the east it merges with the Mbalabala granite pluton. In order to strike a balance a decision was made to use both natural and man-made features such as drainage, roads and administrative boundaries to demarcate the proposed area for nomination. As a result only two administrative districts, Matobo and Umzingwane were considered. Although the area west of the Shashani River is an extension of the Matobo granite and falls under the Bulilimamangwe District, it was excluded from the proposed site in order to limit administrative problems. However, the importance of this area was recognised by including it in the buffer zone. Thus the Shashani River marks the western boundary of the proposed WHS. The southern boundary coincides with the southern boundary of the Khumalo and Matobo Communal Lands, extending along the northern boundaries of three commercial properties. The eastern boundary follows the Matobo Communal Land boundary, the Lumane River, and an established road. In the north, the boundary makes use of Maleme and Ngezi rivers, the Bulawayo-Kezi road and some commercial farm boundaries.

The following list of properties are incorporated in the proposed Matobo World Heritage Site: Rhodes Matopo National Park (also known as the Matopo National Park) (Figure 3); the Lake Matopos Recreational Park; portions of the Rhodes Matopos Estate; Gulati Communal Lands (Matobo Rural District); Khumalo Communal Lands (Matobo RD);

Matobo Communal Lands (Matobo RD); small southern limit of the Mzinyatini Communal Lands (Umzingwane RD); small western portion of the Nswazi Communal Lands (Umzingwane RD) and some commercial farms all of which are located within the Matobo RD.

1.6 Area of property proposed for inscription (km^2)

The proposed nomination covers an area of about 2050 km^2 (Garson 1995) and the associated buffer zone is 1050 km^2 in extent, making a total of 3100 km^2.

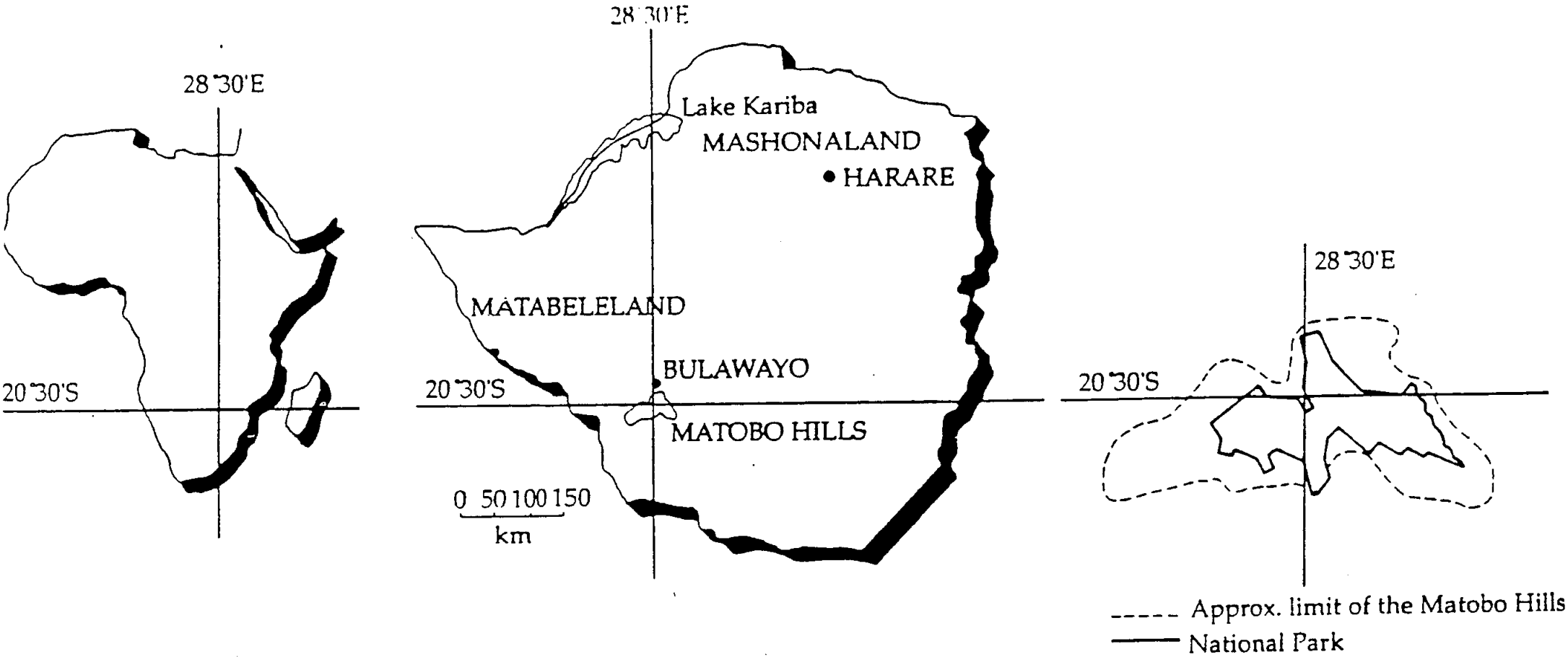


Fig. 1 Regional Map of the Matobo Hills area.

World Heritage Boundary and Buffer Zone

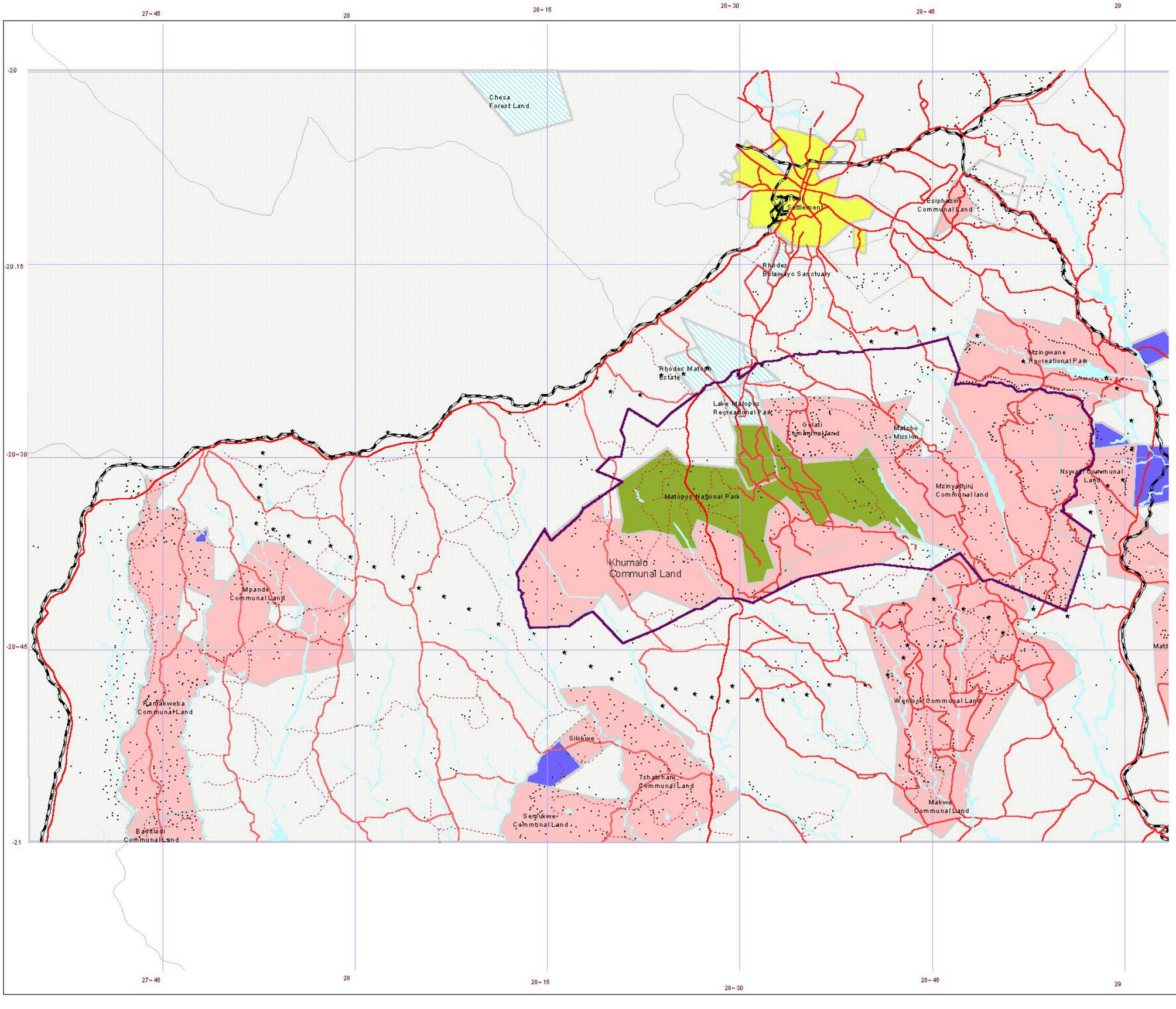
WH Buffer
World Heritage Boundary
Monuments

N

5 0 5 10 Km

Produced By Richard Nyatoti
For World Heritage

Proposed Matobo World Heritage Area



World Heritage Boundary
Rivers
Provincial Boundary
Major Roads
Tracks
Railway Line
WH Buffer
Settlement
Cadastral Boundary

Commercial Farms
Communal Land
Matopos National Park
Monument
State Land
Town and Settlement

N

5 0 5 10 15 Kilometers

Produced By Richard Nyatoti
For World Heritage

2.0 JUSTIFICATION FOR INSCRIPTION.

The Matobo Hills landscape contains both cultural and natural attributes of exceptional aesthetic, scientific and educational significance. The diverse cultural heritage in the area spans a period of more than five hundred thousand years, with continual settlement over at least one hundred thousand years from Early Iron Age to the present. There are numerous rock art sites, rock shelters with Stone Age and Iron Age deposits, religious sites, burial sites and historical buildings. The cultural time-depth and variety of the cultural landscape is not represented anywhere else in the country and possibly in the region. The natural landscape comprises scenic geological formations and diverse biological assemblages. The area possesses a great variety and large population density of predator species, especially raptors and leopards. It is regarded as the most important sanctuary for birds of prey, and includes the largest population of Black Eagle *Aquila verreauxii,* to be found anywhere in the world. The hills also possess one of the largest populations of Leopard *Panthera pardus*, and are an important sanctuary and research centre for two endangered Rhino species *Ceratotherium simum* and *Diceros bicornis*. The more than 210 tree species and 17 species of wild orchid give the area a botanical significance.

2.1 Statement of significance

2.1.1 Natural property

The Matobo Hills area is a cultural landscape with natural attributes of exceptional significance. The natural landscape comprises geological formations providing a wide diversity of niches supporting a variety of flora and fauna. The geomorphology of the Matobo Hills gives rise to microclimates and soil conditions that change markedly over short distances. The ecological processes of Matobo Hills are determined largely by the landscape, which underpins ecosystem structure and function. Thus, the geomorphology of Matobo Hills in itself is of outstanding universal value. The complex geomorphology of Matobo Hills supports a unique landscape comprising extensive open grasslands with groups of kopjes (rock outcrops) interspersed with wetlands (marshes and streams). The huge whalebacks (dwalas) and numerous caves contribute to the high diversity of habitats in Matobo Hills. The combination of physical and climatic factors has resulted in the creation of special habitats such that in spite of their situation in dry semi-arid savannah, the Matobo Hills represent a western extension of the ranges of many species characteristic of the higher rainfall areas in eastern Zimbabwe and parts of Mozambique (Grobler & Wilson 1972). The ecological complexity of this landscape is expressed in the unusual density and diversity of predators. The result is a combination and diversity of flora and fauna worthy of special attention and preservation.

2.1.1.1 Geomorphology

Matobo Granite, 2.65 billion years old, extends for about 2050 km^2 and occupies most of the area to be nominated. The batholith is an irregular oval body with the maximum east-west and north-south dimensions of about 100 km and 30 km respectively. Other rock pockets include augen gneisses, older granites and granodiorities.

The resistant rocks of the granitic shield form an imposing relief of varied landforms including caves, inselbergs, whalebacks, dwalas and castellated hills (commonly termed

kopjes). Nowhere else on the granitic shield of Zimbabwe, if not the world, can one find so profuse an expression of granitic landforms in so limited an area. The singular ecological feature is the diversity of habitats available to organisms such as patches of bare rock, broken rock, wooded slopes, forest stands, grasslands, granitic sponges and rivers. The unusually high density and diversity of predators is a result of the ecological complexity of the landscape. The presence of a mosaic of highly varied habitats in the Matobo Hills area has also given rise to the establishment of a self-sustaining cultural landscape.

2.1.1.2 Habitat and Vegetation Diversity

The Matobo lies in the savannah biome under a climate generally too dry for miombo woodland. It is placed in the broad Zambezian phytochorion under undifferentiated woodland, although it also contains some Afromontane elements. The soils are derived from granite rocks and hence are generally coarse and sandy with only pockets of clay soil. In vleis and on some uplands there are local patches of organic soils and peat.

Although the diversity of parent material, hence soil types, is low, there is a great range of vegetation formations and types. Thus, vegetation diversity ranges from almost desert-like aridity and extreme temperatures on the rock domes to mesic dense woodland. This reflects a response to geomorphology and climate and (to a lesser extent) the effects of human activities over the centuries.

Within the southern African region, it would appear that the Matobo area is one of the most concentrated manifestations of the diversity of vegetation and plants associated with granite landforms. This is due to (a) its fairly extensive area compared to other, more isolated, occurrences, (b) the marked impact of winter moisture (guti) in the eastern parts, and (c) the mosaic nature of the impact of human activity compared to similar communal land situations e.g. in Mutoko in northeastern Zimbabwe.

2.1.1.3 Endemic Species and Outlying Populations

There are at least five plant species endemic to the Matobo area and the surrounding granite area. These include *Lobelia lobata* (herb), *Cyphostermma milleri* (climbing herb), *Maytenus heterophylla puberula* (spiny shrub), *Triaspis dumeticola* (shrub), and *Turrea fischeri eylesii* (shrub). In addition the Matobo Hills support a major and significant portion of a further nine plant species.

2.1.1.4 Predator-prey interactions

The interaction between the main prey species (the rock daisy and the yellow-spotted hyrax) and their predators (the raptors, leopards and snakes) demonstrate an important ecological process. Behavioural avoidance is the most significant survival strategy for the dassies rather than reproductive adaptation, as they have a gestation period of seven months.

2.1.1.5 Type specimens

The Matobo Hills have been comparatively well collected by botanists. Some of the species with type specimens from the area include: *Strychnos matopensis*, *Eriocaulon*

matopense, *Maytenus heterophylla puberula*, *Lobelia dentate*, *Triaspis dumeticola*, *Turrea fischeri eyelsii*, *Streptocarpus eylesii eylesii*, *Abutilon matopense*, *Cyphostermma milleri*, and *Elaedendrom matabelicum*.

2.1.2 *Cultural property*

The presence of a mosaic of highly varied habitats in the Matobo Hills area, including caves, whalebacks, patches of bare rock, broken rock, wooded slopes, forest stands, grasslands, granitic sponges, rivers and aquatic vegetation has given rise to the establishment of a self-sustaining cultural landscape.

The diversity of the cultural patrimony in the Matobo Hills area bears testimony to the intertwined relationship between man and the natural environment. There is evidence of a long sequence of human occupation in the Matobo Hills area, with breaks during the coldest and driest periods (Walker 1995). The long history of occupation (from Stone Age to Historical period); the rich biodiversity, the awe-inspiring geological landscape and the extant living traditions define the Matobo Hills area as one of the most important cultural landscapes in Zimbabwe and the sub-region. A symbiotic relationship still exists between the indigenous people (local communities) and the hills.

2.1.2.1 Living traditions and the Intangible Heritage

In the Matobo Hills area the indigenous traditional religious beliefs and practices (intangible heritage) were and still are instrumental in the preservation of the tangible heritage through a system of taboos and cultural norms that prohibit desecration. The most important examples of intangible heritage sites in the Matobo Hills area include such shrines as Njelele, Dula, Zhilo, Manyangwa and Wirirani/Wililani; all of them centres of the Mwari/Mwali religion, an indigenous religion that has been practiced for many centuries. The voice of Mwari is believed to be heard from the rocks. Mwari of the Matojeni, as Matobo area is also known, has attracted the attention of politicians, lay persons, missionaries and scholars in both the past and the present. It is believed that the ancestral spirits reside in forests, mountains, caves, hollowed trees and pools. In other words, the intangible heritage makes use of the tangible heritage as its home. The adherents of the traditional Mwari and the ancestral spirits therefore attach great respect to the environment because they argue, by despoiling it; they will be depriving their god and the spirits of a home to live in.

The Matobo Hills area has always played a very important role in lives of past and contemporary communities. According to Ranger (1999) people of the Matobo “value their special relationship to a unique environment, their ownership of shrines, their very particular form of agriculture”; all these associated with the Matobo Hills area. It is these intangible values that have helped to maintain close links between the indigenous communities and the Matobo Hills area. People converge on these places to pray for rainfall or ask for good health. The tutelary functions of Mwari and the ancestral spirits are believed to be enhanced through such gatherings where individuals or their priests and priestesses commune with them.

Njelele is the most important shrine in the Matobo Hills area and people from as far as

South Africa, Namibia, Botswana and Lesotho join their Zimbabwean counterparts there to pray for rains, good harvests, good health, peace and guidance in many national and regional issues. Thus, it is a regional shrine.

Given the belief that the spirits reside in forests, mountains, caves, hollowed trees and pools the adherents of the traditional Mwari and the ancestral spirits therefore attach great respect to the environment because they argue that, despoiling it, deprives their god and the spirits of a home to live in.

2.1.2.2 History of Human Habitation

The rock shelters of the Matobo Hills area date from the latter part of the middle Pleistocene (700 000 to 125 000 BP) through the Late Pleistocene (125 000 to 12 000 BP) to the end of the Holocene (12 000 to the present) (Walker 1995). Some of these rock shelters were important settlement sites with evidence of Early, Middle, Later Stone Age, Iron Age and the Historical Period activities in the form of stone tools, rock paintings, iron implements and historical remains, respectively. Special mention should be made of some historical icons that relate to the use of the Matobo Hills area as refuge for the ancestors of the present Ndebele and Shona ethnic groups during the first Ndebele and Shona Wars of Liberation (Umvukela and Chindunduma respectively) uprisings against colonial settlers. Some of the icons of the succeeding colonial era include the important graves of King Mzilikazi and Cecil John Rhodes, shrines commemorating fallen heroes of the 2nd World War and many indaba sites (sites associated with peace talks).

2.1.2.2.1 Stone Age Sites (Middle Pleistocene to Holocene)

There is an abundance of sites representing the Stone Age identified on the basis of such evidence as stone tools, bones, ash and rock art. Some of the most spectacular hemispherical caves such as Bambata, Nswatugi, Pomongwe and Inanke, have yielded invaluable archaeological information that has contributed immensely to the understanding of past lifestyles. Excavations at Bambata Cave, for example, have revealed the oldest decorated piece of stone in Zimbabwe and Bambata pottery is one of the riddles in Zimbabwean archaeology regarding its dates and traditional associations. No less can be said of Nswatugi Cave which yielded the oldest human skeleton in Zimbabwe and evidence of Middle Stone Age dating to circa 42 000 years BP. Pomongwe Cave is the only site in Zimbabwe where Early, Middle and Late Stone Age deposits have been found in the same stratigraphy with a wide range of stone tools and implements, bone tools and other related domestic paraphernalia. The same caves and many others are associated with some of the most outstanding rock paintings in Southern Africa. The multichrome galloping giraffe at Inanke cave is the finest known naturalistic painting in Zimbabwe.

2.1.2.2.2 Iron Age Sites (from the 5th Century AD to 19th Century AD)

There are several Iron Age sites in the Matobo Hills area most of which overlie Stone Age deposits in the rock shelters such as Ntswatugi, Inanke and Bambata. This period is characterised by communities using iron tools and weapons, which practised agriculture and established permanent settlements. Also attributable to this period is the occurrence of dry-stone walled enclosures of the Khami-phase of the Zimbabwe Tradition.

2.1.2.2.3 Historical Sites

The Matobo Hills area possesses some of the most significant sites that depict important events in the history of Zimbabwe. These include burial sites of King Mzilikazi, founder of the Ndebele nation and Cecil John Rhodes after whom the country came to be known as Rhodesia (renamed Zimbabwe after it attained independence in 1980). Other sites include Rhodes Indaba site, the MOTH Shrine, Mzilikazi's Wagon Cave, Rhodes' Summer House and Stables, and Matobo Railway Terminus.

Also, the Matobo Hills area provided refuge, firstly to the Karanga ethnic groups from the Ndebele invasions of the 1830s and secondly, to both the Karanga and Ndebele from the white colonialists in 1893 and 1896. The most prevalent evidence of this period is intact granaries that are found in some rock shelters.

2.1.2.2.4 Rock Art

The Matobo Hills area is part of the "distinctive art region" of the well-known prehistoric art of Southern Africa, which stretches from South Africa to Tanzania (Walker 1996). According to the records in the National Museums and Monuments of Zimbabwe national database, there are no less than 3 500-rock art sites in the area. The paintings of the Matobo explore diverse aspects of hunter-gatherer society and its ideology. Thus, the paintings have "richer symbolic resources and are not susceptible to simple readings" (Garlake 1995). The paintings are password to the deeper meaning of the socio-religious beliefs of the hunter-gatherer communities.

Most researchers view the paintings as a "response to an innate range" at the same time painting for enjoyment and decoration (Walker 1996). The new scope of interpretation pointed out that the art is "symbolic" in nature and is closely linked to Shamanism and potency theories, and other related rituals. Some rock art studies in Southern Africa suggest that the nature of the designs and character of subjects are due to the fact that the paintings were executed when the artists were in a trance. This religious concept is referred to as Shamanism. According to Garlake (1995) the significance of the paintings is that they "are archetypes, revealing the essence of the human condition, the basic roles of their society, the parents, the family band and community. They are visual generalizations, idealised constraints of the fundamental realities of the artists' society". For the Matobo Hills area the paintings reveal important interactions between man and his environment. They also chronicle the changes that have taken place in the environment from as far back as the Late Stone Age.

Within the context of Shamanism the rock paintings in Matobo Hills area represent the only historical record of the intangible beliefs and ideas of the original inhabitants of the area. As a history, rock art therefore "predates written records by Arab and European visitors to the continent, and retain authenticity unaffected by foreign observers" (Deacon 2000).

The paintings are inseparable from the granites of the Matobo Hills area. The "distinctiveness, age and magico-religious symbolic character of the art in the Matobo

makes it unique" and therefore significant in its own way (Walker 1995).

2.2 Comparison with other sites

2.2.1 Natural property

2.2.1.1 Comparison with areas within Zimbabwe

One of the World Heritage Sites with comparable natural attributes to Matobo Hills is the Victoria Falls. The Victoria Falls was listed in 1989 on the basis of those values and attributes that demonstrate the ecological and biological processes, evidence of ecosystem evolution, and aesthetic values of the landscape. According to Fagan (1964) the Victoria Falls, like Matobo, illustrates the influence of geological formations on the distribution of vegetation. The river flows over red-brown basalt, with beds of overlying Kalahari Sand, which form the greater portion of the area. The basalt soils are generally shallow and stony and the dominant tree type is Mopane, *Colophospermum mopane*. The Kalahari Sands on the other hand, are deeper and support taller trees like *Baikiaea plurijuga*, *Guibourtia coleosperma* and *Burkea africana*. In addition to these two main types of vegetation is the distinct fringing vegetation consisting of riverine forest, which due to the effects of the continuous spray from the Victoria Falls has resulted in the formation of the "rain forest". The rain forest is a pristine environment for floral integrity. However, the decision to fence off the rain forest from the rest of the Kalahari veld to exclude large game animals from the tourist area created a false boundary of natural ecosystems, in particular with regard to faunal species (Kumirai *et. al*. 2000). Thus, the large animals can only be viewed outside the Victoria Falls World Heritage area, the main attraction being the waterfalls themselves. In comparison to the Victoria Falls the Matobo Hills provide a wide diversity of large and small animal species within a large continuous landscape with a wide range of micro-habitats. Thus, the Victoria Falls is limited in extent as well as in diversity of faunal and floral species.

Mana Pools National Park together with adjacent Sapi and Chewore Safari Areas were placed on the World Heritage List in 1984. The area spans 676 000ha and comprises mainly sandy alluvial plains with *Fandherbia albida* as well as cliffs and escarpments bordered in the south by granite with very thin soils. Vegetation mainly comprises woodlands (Acacia, mopane, Jesse bush) and grassland dotted with *Brachystegia* shrubs. Like most savannah landscapes the greatest activity occurs during the rainy season when plant material is in abundance and wild life spreads out in search of food. In the dry season the animals are restricted to the surviving grasslands along the riverbanks. Management of the Mana Pools system is therefore complicated by the need to maintain the delicate balance between seasonal movements of animals and the availability of resources, especially water. Thus, although it is an important site for large mammals, particularly elephant, Mana Pools is surpassed by Matobo both in spatial and temporal distribution of ecological resources mainly due to the availability of a large diversity of microhabitats attributable to the latter's geomorphology.

Hwange National Park in western Zimbabwe is the biggest National Park spanning 1462000ha and is renowned for its big game. Hwange experiences a harsh climate with a hot, dry season and a cold frost-prone winter. The harsh climate coupled with the generally poor and infertile soils on Kalahari sand results in a typical dry savannah

deficient in plant food. The predominant vegetation types are Colophospermum mopane on basalt soils in the north interspersed with Kalahari woodlands of teak (*Baikiaea plurijuga*). The fauna is also typical of dry savannah with browsing and grazing animals and their predators. Over 100 mammalian and 400 bird species occur in Hwange in an area about four times that of Matobo. Thus the densities of animal life supported by Matobo far exceed Hwange presumably due to the wider variety of microhabitats in the former.

2.2.1.2 Comparison with areas outside Zimbabwe

The Matobo Hills area is one of the most concentrated manifestations of the diversity of vegetation associated with granite landforms. This is due to (a) its fairly extensive area compared to other, more isolated, occurrences, (b) the wide range of microclimates and the equally large diversity of microhabitats as well as (c) the mosaic nature of human activity compared to similar landscapes.

The ecology of the Matobo landscape rivals that of the Serengeti-Masai Mara ecosystem in East Africa. Compared to the Matobo Hills, the latter landscape (predominantly savannah grassland) is remarkably uniform. Hyrax population densities are comparable to those of Serengeti (Barry & Mundy 1998). In general, leopards tend to be opportunists. While this is true in the Serengeti, leopards in the Matobo Hills prefer mammalian prey and this is supported by the presence of a large mammalian food base provided especially by the hyrax populations (Barry & Mundy 1998). Vertebrate species such as the black mamba *Dendroaspis polylepis*, the leopard *Panthera pardus*, and the black eagle *Aquila verreauxii*, occur at exceptionally high densities in the Matobo Hills that are unmatched throughout their ranges elsewhere in Africa.

The Matobo Hills closely resembles Kakadu National Park of Australia. The latter covers an area about six times that of Matobo Hills (19 804km^2 compared to 3100km^2) but both include a wide variety of land use systems within the designated World Heritage areas. In spite of their location in African savannah and Australian tropical savannah respectively, both sites have large habitat diversity and manifest comparable juxtaposition of wide ranges of ecosystems. Large populations of herbivores provide the food base for large predators. While the Kakadu boasts the largest diversity of mammals, especially bat species in Australia; the Matobo Hills support some of the largest hyrax populations in Zimbabwe. About 300 bird species and 64 mammal species occur in Kakadu in an area more than six times that of Matobo Hills which boasts about 400 bird species and 120 mammal species.

2.2.2 Cultural Property

2.2.2.1 Comparison with areas within Zimbabwe

The Matobo Hills area possesses one of the largest concentrations of rock art, archaeological, historical sites and traditional shrines in Zimbabwe. While there is a number of isolated rock art sites in Manicaland (Diana's Vow), Mashonaland East (Ruchera and Makwe), Masvingo (Dengeni) and Mashonaland Central (Domboshava and Chikupo) there is an unparalleled concentration of world famous rock art caves in the Matobo landscape. These include Nswatugi, Gulubahwe, Bambata, Silozwane,

Pomongwe, Amadzimba, Tshangula and Inanke. However, the styles and techniques used in executing the paintings are similar with slight variations in the motifs. Walker (1995) estimated that there is an average of 6–10 paintings per site within the National Park. There are probably 20 000–35 000 paintings in the Matobo National Park alone. Thus the total number of individual paintings in the Matobo Hills area proposed for nomination is in the region of a million, higher than any other area in Zimbabwe and Southern Africa.

Archaeological researches at Pomongwe (Cooke 1963a), Bambata (Arnold and Jones 1919), Nswatugi (Jones, 1933) and Tshangula (Cooke 1963a) have contributed immensely to the understanding of the Stone Age archaeology of Zimbabwe and Southern Africa. Some of these sites have religious significance and are important shrines for rainmaking and propitiation ceremonies. These include Njelele, Silozwane, Dula, Zhilo, Inanke and Amadzimba. The Matobo Hills area possesses some of the most significant historical sites in Zimbabwe. Most of these, including the burial places of King Mzilikazi and Cecil John Rhodes, Rhodes' Indaba Site, Rhodes' Summer House, Rhodes' Stable and the Allan Wilson Memorial depict important events in the national history.

Generally, archaeological, historical and traditional sites in the Matobo Hills area are better preserved than anywhere else in Zimbabwe. The first two categories are protected by the National Museums and Monuments Act (Cap. 25:11) while the last category is under traditional protection. The sacredness of the Matobo Hills area has ensured maintenance of the authenticity and integrity of the cultural and natural patrimony found in the area. Many other sites in areas that are not similarly regarded have been subjected to one form or another of vandalism.

2.2.2.2 Comparison with areas outside Zimbabwe

In terms of living traditions, the Matobo Hills area compares well with such outstanding cultural landscapes like Tsodilo in Botswana, Sukur in Nigeria, Drakensberg in South Africa, Kakadu and Uluru-Kata Tjuta both in Australia. In all these cases the people derive inspiration, fertility, good health from their ancestral spirits. As in the other cultural landscapes, some natural features in the Matobo Hills area have acquired spiritual significance thus creating a link between the people and the environment. The long history of occupation as demonstrated by the rich archaeological deposits and historical sites in the Matobo Hills area compares well with that of Tsodilo and Sukur. Archaeological occurrences in Matobo Hills area are associated with rock shelters and the identification of shelters with working and living places is a distinctive trait of the landscape when compared with most other Later Stone Age land-use systems in Southern Africa.

Examination of Table 1 below demonstrates the relatively higher density of rock art in the Matobo Hills area compared to among others, Tsodilo, Kondoa and Kakadu.

Table 1: Comparison of Matobo and other areas.

Name	**Area** km^2	**Number of rock art sites**	**Estimated number of individual paintings.**
Matobo Hills (Zimbabwe)	3100	3 500	1 000 000
Brandberg (Namibia)	450	1 045	43 000
Kondoa (Tanzania)		450	20 000
Tsodilo (Botswana)	704	400	4 500
Drakensberg (South Africa)		600	35 000
Kakadu (Australia)	19804	15 000	±1 000 000

2.3 Authenticity and integrity

The issues of authenticity and integrity in the Matobo Hills area are intertwined. This is because the nature and diversity of the natural environment directly influence human activities in the area.

2.3.1 Geomorphology

The imposing geomorphology of the Matobo Hills is expressed in the granitic shield, which covers at least 70% of the country. The resistant rocks of the granitic shield form an imposing relief of varied landforms. One finds a profuse expression of granitic landforms in so limited an area, expressed in the unique and complex ecology of a landscape structured by the underlying granitic rocks. More than 2.6 billion years of weathering and erosion of the Matobo Hills rocks has generated a distinct system of landforms in the resultant drainage and relief. These include river valleys and a contiguous granitic mass of whalebacks, bornhardts and castle kopjes. These account for the uniqueness of the Matobo ecosystems in providing a plethora of habitats for organisms. The ecological complexity of this landscape is expressed in the unusual density and diversity of predators.

2.3.2 Flora and fauna: issues of integrity

The Matobo Hills complex supports an ecosystem with a high diversity of habitats ranging from open grasslands and wetlands to kopjes and numerous caves, in an area of 3 $100km^2$. The combination of physical and climatic factors in the Matobo has resulted in extensions of ranges of species characteristic of the high rainfall, high altitude areas in eastern Zimbabwe and Mozambique, which is not characteristic of the geoclimatic zone in which the Matobo Hills area is located. The habitat diversity of the Matobo cannot be matched where other granitic landscapes occur in Zimbabwe as for example in Mutoko and Chivi districts (Lightfoot 1981).

There are at least five plant species endemic to the Matobo Hills area: *Cyphostemma milleri, Lobelia lobata, Triaspis dumeticola, Maytenus heterophylla puberula* and *Turrea fischeri eylesii*. The first three have only been recorded once or twice, but may prove to be more widespread in the Matobo Hills. In addition, the Matobo Hills is a western outlier of the tree fern, *Cyathea dregei* (J. Timberlake pers. com.).

With over 70 pairs nesting in an area of 100km by 30km, the Matobo Hills area boasts the highest known density of Black Eagles in Africa. They owe this high density to the large food base provided by two hyrax species, *Procavia capensis* and *Heterohyrax brucei*, which comprise 98% of their prey and 69% of the leopard's diet. As a result Matobo Hills has become a globally important source habitat for raptors in southern Africa, supporting one of the highest densities of Black Eagles.

However, due to the history of human settlement in the area, certain exotic species such as eucalyptus and *Lantana camara* were introduced for various reasons. While the former plays a conservation role, the latter has become a problem. In its Management Plan, Rhodes Matopo National Park has targeted *Lantana camara* for eradication. The Rural District Councils and their communities are complementing its efforts. Due to the nature of the landscape, human activities within the Matobo Hills area such as horticulture, crop and livestock production are limited to the valley areas. The scale of operations therefore, is not high. Thus, the level of degradation due to human activities is equally low.

2.3.3 Authenticity of living traditions and the intangible heritage

Traditional religious beliefs and practices (intangible heritage) were and still are instrumental in the preservation of the tangible heritage through a system of taboos and cultural norms that prohibit desecration. The most important examples of intangible heritage sites in the Matobo Hills area include such shrines as Njelele, Dula, Zhilo, Manyangwa and Wirirani/Wililani; all of them centres of the Mwari/Mwali religion, an indigenous religion that has been practiced for many centuries. The voice of Mwari is believed to be heard from the rocks. The adherents of the traditional Mwari and the ancestral spirits therefore attach great respect to the environment because they argue, by despoiling it; they will be depriving their god and the spirits of a home to live in. Even Christianity realised the importance of the word "Mwari" as applied by the local people by adopting it to refer to their Christian God. In Zimbabwe today the western (Christian) God is known as Mwari.

Since the beginning of Mwari/Mwali worship in Matobo approximately 300-400 years ago, the practice has changed very little. From that early beginning the ritual paraphernalia has largely been maintained and Matobo Hills area has remained the only recognised arena for all associated traditional practices and beliefs. The point to note is that Matobo Hills area has always been considered sacred and as a result important shrines are located on the landscape. Njelele is the most important shrine in the area and people from as far as South Africa, Namibia, Botswana and Lesotho join their Zimbabwean counterparts there to pray for rains, good harvests, good health, peace and guidance in many national and regional issues. In Southern Africa, even rock art studies

have been influenced by such religious concepts as Shamanism. In this case Matobo Hills area demonstrates one of the longest religious continuums involving initially Stone Age and later Iron Age communities.

Such intangible values have helped to maintain close links between the indigenous communities and the environment in the Matobo Hills area in spite of changes resulting from economic and other considerations.

2.3.4 Authenticity of the archaeological record

2.3.4.1 Stone Age Sites

The Matobo Hills area has an abundance of sites representing the Stone Age period. Some of the most researched sites include Bambata, Nswatugi, Pomongwe and Inanke, which have yielded invaluable archaeological information such as stone tools, bones, ash and rock art. These studies have contributed immensely to the scientific knowledge of past lifestyles. Bambata pottery from the site name continues to present a challenge to national and international scholars. At Nswatugi Cave the oldest human skeleton in Zimbabwe and evidence of Middle Stone Age dating to circa 42 000 years BP was recovered. The same caves and many others are associated with some of the most outstanding rock paintings in Southern Africa. The multi-chrome galloping giraffe at Inanke cave is the finest known naturalistic painting in Zimbabwe. Although the above caves have been excavated they have been so well refilled that a visitor would not be able to notice the disturbance. The focus of research on rock art has been on the distribution and interpretation. The fabric of the paintings was therefore, not tempered with. The situation of the rock art in sheltered caves ensures protection from the elements. The scientific value of the sites has not diminished.

2.3.4.2 Iron Age Sites

Iron Age in the Matobo Hills area is attested to the 9th Century AD. Evidence abounds that the distribution of most Early Iron Age sites coincides with that of Stone Age sites. Their identification is based on the fact that tools and weapons recovered during excavations are made of iron. The few open sites are associated with scatters of pottery, iron slag, furnaces and free-standing stone-walled enclosures. The material culture of these sites compares favourably with that from Leopard's Kopje and Khami, Early Iron Age and Later Iron Age sites respectively, which are located on similar landscapes in South-western Zimbabwe.

2.3.4.3 Historical Sites

Some historical events that took place in Zimbabwe are represented in the Matobo Hills area by such icons as burial sites of important personalities like King Mzilikazi and Cecil John Rhodes, battle sites, indaba sites and settlements. Mzilikazi and Rhodes were buried in graves situated on rocky outcrops in 1868 and 1902 respectively. The two men are still regarded as important empire builders and their graves were accorded national monument status in 1937 and 1942 respectively. While a traditional custodian cares for King Mzilikazi's grave, Rhodes's grave is under the care of both National Parks and National Museums and Monuments officials. The graves and other historical sites in the area owe their pristine condition to the importance that people attach to the national history and the

role they are playing in the tourism industry.

The Matobo Hills area also played an important role during periods of unrest in the country. The associated events of these periods include foreign invasions, displacement of local people and wars of resistance. The Hills provided refuge to young and old people during the Mfecane, when Zimbabwe was invaded by groups of Nguni people from Zululand and also during the early stages of its colonization, which were characterised by wars of resistance. The most prevalent evidence of this period is the presence of intact granaries in some rock shelters.

2.3.4.4 Rock Art

The Matobo Hills area has one of the largest concentrations of rock art sites in Zimbabwe and the sub-region with no less than 3 500-rock art sites. More surveys are likely to reveal additional sites in the Matobo Hills area.

Most of the rock paintings of the Matobo Hills, and Zimbabwe in general, are attributed to the hunter-gatherer communities of the Late Stone Age period, but some belong to the Early Farming Communities (Walker 1995; Garlake 1995). The red oxides commonly known as red ochre and white pigments were used in the execution of the paintings. Generally the red paintings are attributed to the Hunter-gatherer communities while those in white pigments belong to the early farming communities. Hematite and magnetite iron oxides provided the pigments used in drawing the paintings. The ochre happens to occur in a variety of shades ranging from browns to yellows, oranges and purples. The white pigments were derived from kaolin clays or by crushing quartz. These pigments were pounded, crushed and rubbed to a fine powder, then mixed with a binder to produce the different shades seen today in the Matobo Hills area. The binding medium also made the paintings more permanent when applied to the granite surfaces. Researchers have suggested organic and inorganic binding mediums, but to date none has yet been identified in the Matobo Hills area (Garlake 1995; Goodall 1959). Also the recipes of individual artists have not been ascertained throughout Southern Africa.

Indirect methods have been used to date the Matobo rock art to 13000 – 8000 years ago (Garlake 1995). This date was derived from an excavation carried out at Bambata cave in the Matobo by Walker between 1972 and 1982. The date is derived from an exfoliated piece of rock, which therefore refers to the time the stone got incorporated into the archaeological deposit. There is therefore a possibility that the rock art of Matobo may be much older than what is generally believed. The generally agreed dates are also supported by the subject matter of the art itself, for example, man with bows and arrows are typical of the Stone Age period, while paintings of sheep denote the presence of early farming communities.

The rock art of Matobo is essentially “naturalistic, but impressionistic in that movement was often conveyed by dramatically distorting body proportions and positions” (Walker 1996). Artists frequently used size to show importance, with most figures between 15-25cm high. However small figures were also drawn. Another important feature of the art of Matobo is the style\technique of superimposition, whereby paintings are drawn one on

top of the other. This in most cases brings out the complexity of the message being conveyed, as well as the technique employed in terms of artistic skills. This is a frequent phenomenon in Zimbabwe, and Southern Africa at large.

In terms of styles, the artists of Matobo paid particular attention to the way in which they applied the paint. Initially, the styles were distinguished on the basis of colours used rather than the effect produced (Walker 1996; Garlake 1995). But contemporary researches have produced well-defined styles on the basis of colour, technique and effect. Broad styles include (i) outlines (figure drawn out of a line in one colour or line drawn as flakes, dashes, or chevrons), (ii) monochromes (flat wash, outline and fill, fine outline, wide outline or outline and body fill using one colour), (iii) bichromes (two colours; different colour outline with different colour detail or contrast colours), and (iv) polychromes; unblended or shaded, (Walker 1996). Generally the styles of the Matobo range from Outlines to Monochrome, Bichromes and Polychromes. Other paintings were simply retouched in another colour. What is unique about paintings of the Matobo is that colour and technique were used to encode the significance of the paintings (Walker 1996). However a contrast is seen between the hunter-gatherer and early farming community paintings. The latter were not executed with the same skill, accuracy and precision as that of the hunter-gatherers. In the whole, it is noted that styles gradually changed from simple outlines to polychromes in the Matobo Hills area. Some sites have a multi-representation of all these styles and techniques. Studies of superimposed paintings help in deciphering the meanings and styles of the art (Cooke 1969; Garlake 1995; Goodall 1959). According to Walker (1996) the paintings of Matobo, on the basis of the defined style, is relatively homogeneous throughout the Matobo cultural landscape. However, he acknowledges the existing indications that different groups painted distinctive images deliberately or because of isolation in their respective home bases.

2.3.5 Instruments maintaining the authenticity and integrity of the Matobo Hills area

2.3.5.1 The National Museums and Monuments of Zimbabwe Act (Cap 25:11)

It provides protection to archaeological sites, rock art shelters and historical sites in the entire Matobo Hills area. The natural elements are protected by the Parks and Wild Life Act (Cap 20:14) and the Natural Resources Act (Cap 20:13) covering the entire Matobo Hills landscape. The protection in the communal and commercial farming areas of Matobo Hills area is accentuated by a provision in the National Parks and Wildlife Act granting Appropriate Authority to Rural District Councils, a status that empowers them to adopt and implement a Communal Areas Management Programme for Indigenous Resources (CAMPFIRE) with a focus towards community participation and benefits. The combined institutional preservation effort ensures sustainable management, maintenance of authenticity and integrity of the cultural and natural heritage in the Matobo Hills area.

2.3.5.2 Accessibility

Access to rock art and other cultural sites, in the National Park, communal and commercial farming areas is restricted to the few that have custodians. In some cases, the distance from prescribed routes has a regulatory effect on the number of visitors thus reducing adverse impacts on such sites.

2.3.5.3 Living traditions
The Mwari religion and its associated taboos still in practice engender in the people a sense of respect for the cultural and natural elements of the landscape. For example certain tree species can only be cut with express permission of the traditional leadership. Pristine forests are still evident in the communal areas, which in Zimbabwe are commonly associated with environmental degradation.

2.3.5.4 Permits
The issuing of permits by both National Museums and Monuments of Zimbabwe and the Department of National Parks and Wild Life Management ensures that research; hunting and commercial filming are carried out according to set rules and regulations throughout the Matobo Hills landscape.

2.3.5.5 CAMPFIRE
Communal Areas Management Programme for Indigenous Resources (CAMPFIRE) projects as implemented by the Rural District Councils (RDCs) ensure the preservation of both cultural and natural resources in the communal areas of the Matobo Hills area. In addition, Rural District Councils have established Conservation Committees to further this cause.

2.3.5.6 DNPWLM, NMMZ and RDCs
The statutory bodies above insist on tourist facilities that are empathetic to the cultural and natural environment of the Matobo Hills area through the use of local building material. The location of these facilities are well planned to avoid interfering with cultural sites and they are not close to sacred shrines. Furthermore all roads, except the tarred main routes in the park, are gravel roads.

2.3.5.7 Fire management
Programmes exist in the National Park, commercial and communal farming areas with the first two practising modern methods and the last employing traditional methods.

2.3.5.8 Outreach programmes
Through Heritage Education outreach programmes, NMMZ and DNPWLM are bringing about increased awareness of the importance of the cultural and natural elements of the Matobo Hills area to thousands of school children. Non-governmental organisations such as the Wild Life Society and the Matobo Conservation Society also play an important role in creating conservation awareness in the Matobo Hills.

2.4 Criteria under which inscription of Matobo Hills area is proposed:
2.4.1 Category of Matobo Hills area as a cultural landscape
For more than 500 000 years, Matobo Hills landscape has hosted different communities that interacted with the natural environment in many different ways. From Stone Age period to the present, there is ample evidence that designates the area as a venerated landscape. The rock art painted by the San people supposedly while they were in a trance, a religious phenomenon known as Shamanism, and the existence of religious shrines all over Matobo Hills area are clear testimony that the cultural landscape has maintained and

sustained its religious status for the greater part of its human occupation. Although rock art painting stopped with the in-migration of iron using communities, Mwari/Mwali religion has persisted to this day thus manifesting Matobo Hills area as an associative cultural landscape. The powerful religious and artistic associations of the peoples of the Matobo Hills area with their natural environment over a very long period of time are quite evident. The natural environment has benefited enormously from these traditional/religious beliefs and practices especially in the area of conservation while providing the ideal ingredients for the development and refinement of the cultural and economic activities of the communities. The Matobo Hills area is probably one of the richest Cultural Landscapes in the world.

2.4.2 Criteria for Cultural Property

2.4.2.1 Criterion 24 (vi)

The establishment, development and sustenance of the Matobo Hills cultural landscape was due to the conducive physical environment. Notable among the physical components are the various granitic landforms, which gave rise to one of the highest diversities of vegetation and animals associated with such landforms. The landform-floristic diversity, which influenced plant-herbivore, host-parasite, and predator-prey interactions, ensured that there was and continue to be ample resources for the various communities. While this manifestation of high diversity and densities of certain flora and fauna had a pull-effect on the said communities, the same characteristics continue to render the hills a globally important area for conservation and research. So communities then and now in both communal and commercial farming areas, have continued to interact with this physical environment to produce a cultural landscape worth cherishing and preserving.

The Matobo Hills area demonstrates one of the longest religious continuums from Stone Age to the present. The rock paintings represent the only historical record of the intangible beliefs and ideas of the original Stone Age hunter-gatherer inhabitants. The paintings are password to the deeper meaning of the socio-religious beliefs of the communities, which were based on Shamanism. Within the context of Shamanism, the nature of the designs and character of subjects are attributed to the fact that the paintings were executed while the artists were in a trance. The religious status of the Matobo Hills area continued even after the Stone Age communities had been displaced by their iron-using counterparts who also communicated with their God while in a trance. It is these Iron Age communities who established the Mwari religion, which is practiced to date. Some historical events, such as the First Chimurenga (Umvukela/Chindunduma), were inspired by Mwari through the oracles who operated from shrines in the Matobo Hills area.

Drought, famine, wars and epidemics are some of the natural disasters that have been chronicled in human history. The Matobo Hills area had a fair share of such phenomena. The reaction to these disasters by the Bantu speaking communities was and still is to appeal to the spiritual world for ancestral intervention. The appeal was and still is made at selected and scared shrines found within the sprawling hills. This appeal is in the form of rainmaking, thanksgiving and propitiation ceremonies. In this respect the Matobo Hills area has always played an important role within Zimbabwe, and in the sub-region. The

extant three major shrines are Njelele, Dula and Zhilo, and there are many other smaller shrines that are interrelated and strategically located in the Matobo Hills area. The shrines are what separate the spectacular hills of the Matobo from any other similar landscape in Zimbabwe and the entire sub-region.

The living traditions and associated shrines represent one of the most powerful oracles of the Mwari religion, which Bantu speaking communities of Southern Africa still practise. According to the local people, the oracle represents the authority of Mwali (God) whose 'voice speaks from the sacred rocks of the Matopos' (Ranger 1999). The link between the people's lives and these sacred shrines is many centuries older than thought by most scholars (Ranger 1999).

Zimbabweans, South Africans, BaTswana and Zambians make pilgrimages to the shrine. Traditionally appointed shrine custodians lead pilgrims to the shrines and at the various ceremonies. The pilgrimages signify the religious importance of the Matobo Hills area to the Bantu communities of Southern Africa, who believe in their strong ties with the spiritual world. The oracles have continued to play tutelary and mediatory roles. Even during resistance to colonialism and wars of liberation, right through to the post-independence period, the shrines have always played an important political role in "making war and peace" in Zimbabwe (Ranger 1999). In a World Heritage Committee meeting held in Harare (1998), Matobo Hills was identified as one of the several sites representing the "unique living traditions and sites associated with rain making ceremonies".

The spiritual value of the Matobo Hills area has been extended to some of the most significant historical sites in Zimbabwe. Icons such as battlefields, settlements and burial places evident in the Matobo Hills area have not only chronicled the history of Zimbabwe from inception to the present but have also brought groups of people together to honour those who took part in the celebrated events. Some of the outstanding historical relics include the World's View, where Cecil John Rhodes and other eminent settlers were buried, the Moth shrine and many others. Close to World's View lies the grave of the Great King of the Ndebele – Mzilikazi, while the Njelele rain making shrine, which draws thousands of pilgrimages from Zimbabwe, Zambia, Botswana and South Africa, marks the spiritual or religious heritage of the area. The foregoing demonstrates the importance of the intangible heritage in the Matobo Hills area qualifying it for nomination under criterion 24 (vi) as a landscape directly associated with events and living traditions, ideas and beliefs, as well as artistic works of outstanding universal value.

2.4.2.2 Criterion 24 (iii)

Stone Age research in the Matobo Hills area has revealed that human occupation dates back more than 500 000 years though not continuously. Evidence shows that the Matobo Hills area was occupied from the Middle Pleistocene (700 000 to 125 000) through to Late Pleistocene (125 000BP to 120 000) and to the end of the Holocene (12 000BP to present). Excavations at some sites in the area, which include Bambata, Pomongwe, Nswatugi and Inanke, have contributed significantly to the discipline of archaeology in

Southern Africa. The pottery from Bambata Cave, now known by that site name (Bambata pottery), has attracted the attention of both national and international scholars because some believe that it was produced by hunter-gatherer societies while others argue that it was the product of iron-using communities. Nswatugi cave on the other hand yielded the oldest human skeleton in Zimbabwe and Middle Stone Age material dating to circa 42 000 years BP. The relationship between Early, Middle and Later Stone Ages was clearly demonstrated in the stratigraphy at Pomongwe Cave where material representing the three stages was recovered in-situ. The use of terms such as Pomongwan, Bambata, Matopan etc. to describe Stone Age material and phases are an indication of the contribution that Matobo Hills area has made to the scientific knowledge.

Both archaeology and historical records demonstrate that people who account for the different cultures occupied the Matobo Hills landscape at different and definite times throughout its history. According to recent studies by Walker (1995) "LSA prehistory of Matopos provides a full picture of the kind of foraging societies that emerged in Southern and Central Africa during or after the last cold maximum and which maintained their lifestyles into the last two millennia before disruption in the face of new communities with different lifestyles based on agriculture". The rich archaeological deposits of the area and the rich art found in the hemispherical caves and other rock faces provide an invaluable insight into the lifestyles of past communities and the man-environment relationships. Stone Age communities who were essentially Hunter-gatherers gave way to Iron using communities who integrated pastoral and crop farming at approximately 1st century AD.

The Matobo Hills area has one of the highest concentrations of rock art sites in Southern Africa. The rock art of Matobo dates back to 13 000 years ago (Walker 1995; Garlake 1995). This date is based on the spalls of stones with traces of pigments recovered in the archaeological deposit at Bambata cave since no direct dating has been done on the paintings. It is generally believed that the paintings could be much older than this date, making them some of the oldest on the sub-continent, and probably in the whole of Africa. However, this tradition is no longer being practised in Zimbabwe and in other countries of Southern Africa.

The techniques and styles exhibited by the paintings, ranging from outlines of images with a single line to monochromes (with colour blocked in), bichromes and polychromes, bear testimony to this unique, invaluable and irreplaceable artistic achievement of the Hunter-gatherer communities of the Matobo Hills area. The prevalence of the phenomenon of superimposition on several panels has provided researchers with comparative material for determining different styles and techniques used in executing the paintings.

The styles and techniques in turn illustrate the deeper and diverse cosmology of the extinct hunter-gatherer communities of Zimbabwe. This cosmology is linked to the socio-religious beliefs of the painters, particularly the shamanism and potency theories (Garlake 1997; Vinnicombe 1972; Walker 1995). They explore aspects of the painter's society ranging from people to the magico-religious symbolisms. The hunter-gatherer cosmology

exhibited in the Matobo Hills area fits very well in the Southern African Hunter-gatherer cosmology stretching from South Africa to Tanzania.

Given that the Hunter-gatherers and their painting tradition are extinct, the rock art and the Stone Age material in the Matobo Hills area testify to a rich cultural tradition that has since disappeared. Therefore, the Matobo Hills area bears an exceptional testimony both to a living cultural tradition and to a rock-painting tradition that has disappeared and thus qualifies to be nominated onto the World Heritage List on the basis of criterion 24 (iii).

3.0 DESCRIPTION

3.1 Description of property

The Matobo Hills is a region of approximately 3100 km^2 in extent. It is located between the western lowveld and the Zambezi-Limpopo watershed, and is part of the northern Limpopo catchment area. Zimbabwe's second largest city, Bulawayo, lies about 25km to the north of this area.

3.1.1 Physical and climatic attributes of the property

3.1.1.1 Climate

Matobo is a semi-arid region that lies in agro-ecological zone III. It receives a normal annual rainfall of around 600-625 mm. The rainfall pattern is not evenly distributed throughout the year. Rainfall mostly falls between October and March. According to Tredgold (1956), January to March period receives the greatest (about 322 mm) followed by October to December period (about 232.75 mm). April to June period receives 30.25 mm and finally the least (3.5 mm) during the period July to September. Presently, substantive/official information about variations in rainfall according to sections of the park is not readily available. In the absence of such information, use can be made of the recordings taken at the different stations by the Parks officers taking of course the question of reliability and integrity of the data into consideration. Owing to the considerable run-off from the granite hills, water is plentiful throughout the year (except in drought years) in dams, springs and streams.

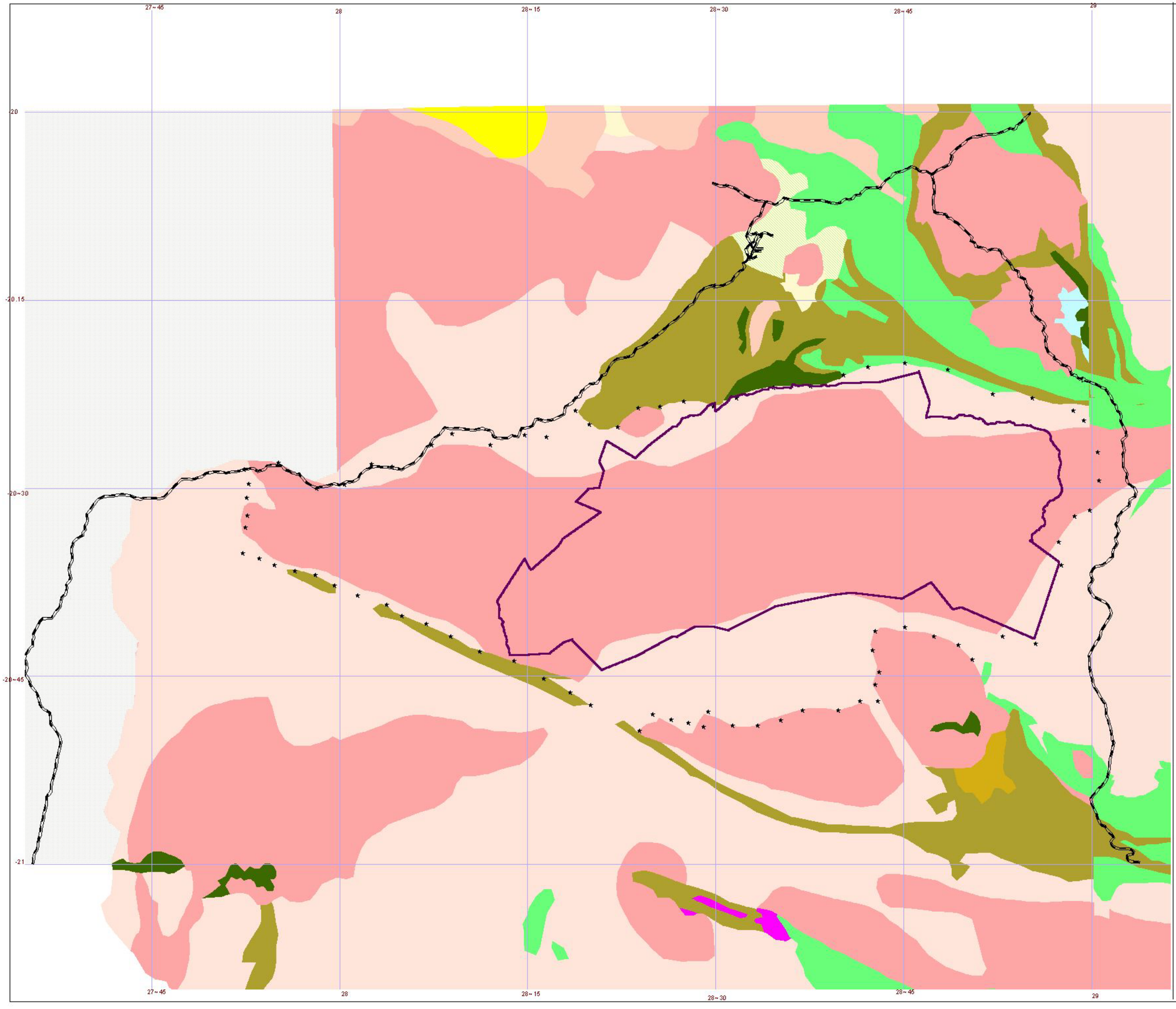
Daily mean temperatures tend to be comparatively high, mean night daily range can be as low as 8.6 degrees Celsius, making the nights relatively cool. High temperatures are recorded during the months of September to November, with October normally being the hottest month, having a mean monthly temperature of about 26.3 degrees Celsius, and the mean maximum and minimum temperatures being 32.8 degrees Celsius and 21.9 degrees Celsius and daily range 11 degrees Celsius. The hottest months are October and November, temperatures falling during the months of December to March due to overcast days. Night temperatures are the same as for October. The May to mid-August period has the ideal climatic conditions characterised by cloudless days, mild temperatures and cold nights often with frosts. Cold cloudy spells with drizzle (known as "guti"), occasionally occur in winter, with June normally being the coldest month having a mean average temperature of 20.4 degrees Celsius with a mean minimum of 14.6 degrees Celsius.

3.1.1.2 Geology

Matobo Granite, 2.65 billion years old, extends for about 2050 km^2 (Garson 1995) and occupies most of the area to be nominated (Figure 4). The batholith is an irregular oval body with the maximum east-west and north-south dimensions of about 100 km and 30 km respectively. Other rock pockets include augen gneisses, older granites and grandiosities.

The augen gneisses form most of the buffer zone. Matobo granites are mostly grey to pinkish–grey and buff, medium to coarse- grained with microcline as phenocrysts or porphyroblasts in the groundmass of quartz, feldspar and biotite. Because of the variation

Geology



Produced By Richard Nyatoti
For World Heritage

in the composition, grain size and grain alignment the Matobo Hills region was carved into unique landscape features as the rocks responded differently to the agents of weathering (Fountain 1982) The elongate phenocrysts are aligned subvertically in an east-west direction (Fountain 1982; Garson 1995). In densely porphyritic zones, the alignment inhibits the development of minor joints (Fountain 1982), which are very important in the development of topographic features. Lack of joints resulted in the development of dwalas, instead of castle kopjes. Augen gneisses are located in the northern boundary and northwest corner. Their composition varies from tonalitic to granodioritic (Garson 1995). Medium- to coarse grained, grey and black augen gneiss is the main rock type. Both leucocratic (light coloured) and mesocratic (dark coloured) rock types are present. There are xenoliths, which were derived from greenstone rocks. The lengths of the xenoliths range from 2 to 4 metres, and are aligned parallel to the gneissic foliation (Fountain 1981, 1982; Garson 1995). The augen gneisses were further modified by the introduction of feldspar megacrysts from the later intrusion of the porphyritic granodiorite and granite. As a result the rocks are often porphyroblastic having feldspar (microcline and oligoclase) porphyroblasts (large crystals). The transition between gneisses and other rocks (granites and granodiorites) is marked by a break in slope, which is up to 100 metres. The low-lying gneissic plain is however interrupted by isolated granitic hills. Paul's Rest type and Lucydale are the only granodioritic rocks present. The former is found on the northwest corner whereas the latter is restricted to the north and northwest. Both rock formations were intruded into the augen gneisses and were also affected by the later intrusion of the Matobo Granite Porphyry. Most of the rocks are medium-to coarse- grained, pale pinkish grey with microcline porphyroblasts in the groundmass of quartz, feldspar and biotite. The porphyroblasts developed ahead of and during the emplacement of the Matopos and Falls porphyritic intrusions (Garson 1995).

3.1.1.3 Geomorphology

The imposing geomorphology of the Matobo Hills is expressed in the granitic shield. The granitic shield in Zimbabwe covers at least 70% of the country. The resistant rocks of the granitic shield form an imposing relief of varied landforms. The granites of the Matobo region form the southwest margin to the granitic shield. The geology and geomorphology of the Matobo region is outstanding; the most distinctive landforms are the inselbergs, whalebacks, dwalas and castellated hills (commonly termed kopjes). Nowhere else on the granitic shield, if not the world, can one find so profuse an expression of granitic landforms in so limited an area, expressed in the unique and complex ecology of a landscape structured by the underlying granitic rocks. The singular ecological feature is the complexity of habitats available to organisms. The ecological complexity of this landscape is expressed in the unusual density and diversity of predators.

Weathering and erosion of the Matobo Hills rocks has generated a distinct system of landforms in the resultant drainage and relief (Figures 3, 5 and 6). These landscape patterns are most feasibly construed in terms of differences in spatial scale. At the largest scale is the network of large river valleys (approximately twelve in total), which in turn have structured smaller landforms, notably the relief of dwalas and kopjes. These form the "sea of hills" that dominates the landscape. These are the residual detritus of millions of years of weathering and erosion of the parent granites. Finer scaled patterns in smaller

granitic landforms (including gnamma, tafoni and crevices) contribute greatly to the complexity of the landscape. This complexity accounts for the uniqueness of the Matobo ecosystems in providing a plethora of habitats for organisms. The varieties of rock crystals in the granitic rocks comprise the finest grain in complexity of the Matobo landscape.

3.1.1.3.1 Scale-dependent patterns in the Geomorphology of the Matobo Hills

The following is a summary of the hierarchical system of scale-dependent patterns in the geomorphology of the Matobo Hills area. This scale-dependent pattern renders the landscape to be of outstanding universal value.

3.1.1.3.1.1 Scale dependent Variety across the Landscape

The largest scale is seen in the overall pattern across the landscape. This is the network of the drainage system. This large-scale pattern has been determined by the major jointing structures across the granites. The most distinctive manifestation of this pattern is the system of parallel valleys that run NNW to SSE. A major river has formed each valley. A myriad of tributaries feed these larger rivers. There are in fact three major systems of joints that have regulated patterns in the resultant drainage. These are NW-SE, WNW-ESE, and E-W. The result has been a complex drainage system at a scale of hundreds of metres to kilometres.

3.1.1.3.1.2 Medium scale - relief

The history of weathering and erosion has left behind the “residual detritus” of a more contiguous granitic mass. These vary from whalebacks, bornhardts, and exposed boulders to castle kopjes and the more weathered hills.

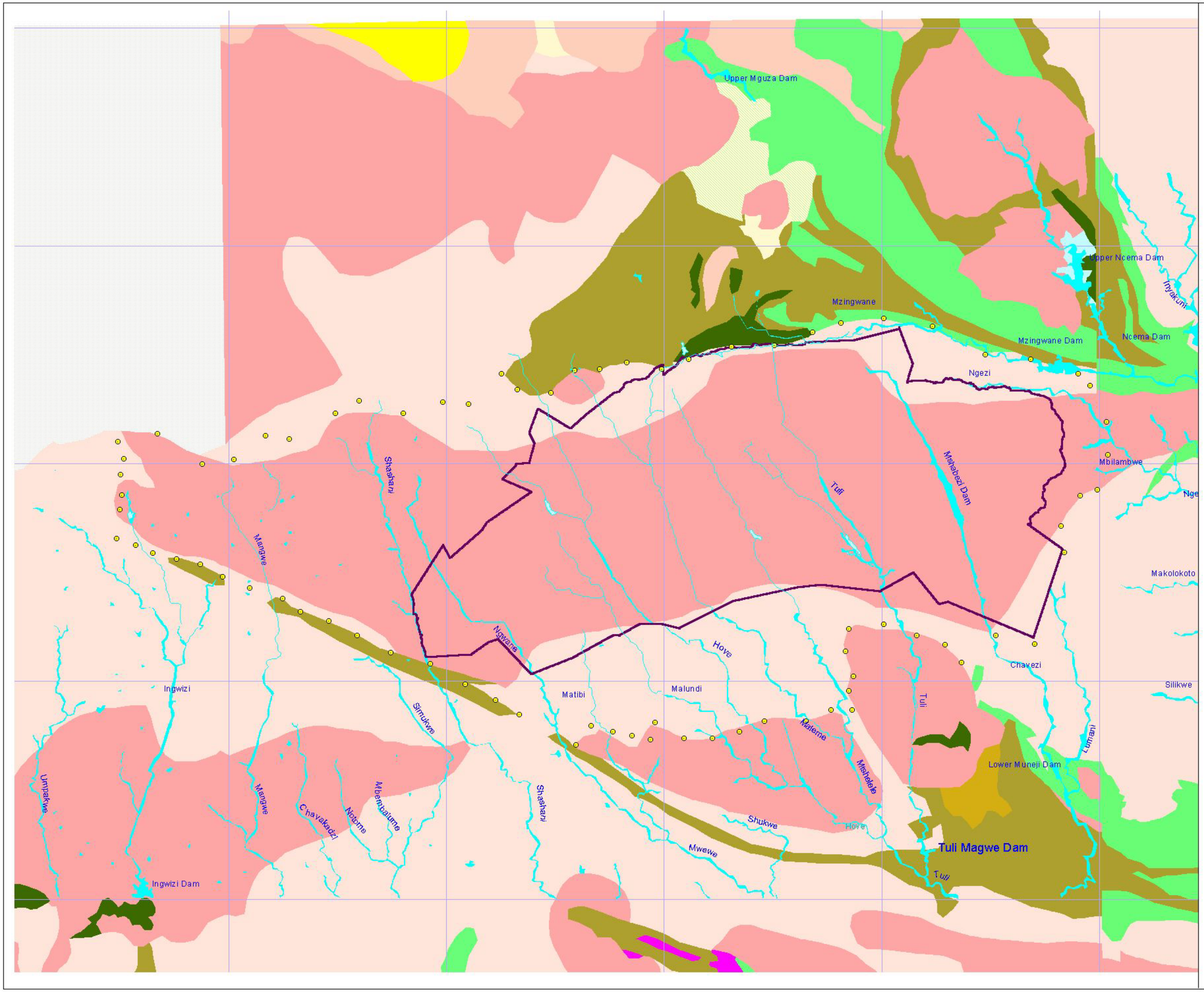
3.1.1.3.1.3 Small Scale - weathering features and structures

Each exposed granitic feature is unique in its plethora of small-scaled patterns. These range from cracks and joints to the more remarkable features produced by mainly sub aerial weathering. Exfoliation has been an important agent in generating a variety of landforms by “onion-skin peeling”. These include caves under fallen slabs and deep crevasses.

Sub aerial weathering has produced spherical caves, gnamma, flared slopes, mammellated tafoni, among many other modifications to exposed granitic surfaces. It is at this scale of the Matobo landscape that perhaps the greatest diversity of habitats is generated for multicellular plants and animals, including mammals. One notable influence is the cave shelters for humans over the millennia. This has resulted in one of the greatest rock art galleries in the world.

Other contributions to landscape heterogeneity at this scale are the inclusions and secondary features exposed on and in granitic rocks. These range from xenoliths (some many cubic metres in volume) to quartz veins and pegmatite. In some exposed granites, the constituent minerals have been poorly mixed, such that dark patches appear in the lighter coloured feldspar and quartz dominated granite. The mafic inclusions appear to be rich in biotite (mica rich) or hornblende.

Geology With Major Drainage Patterns



WH Buffer
World Heritage Boundary
Rivers

Geology
- Aeolian Sands
- Alluvium and other Superficial Deposits
- Andesitic and Dacitic Metavolcanics
- Basaltic Metavolcanics With Intercalated Metasediments
- Dolorites
- Gneiss Complex
- Grit Sandstones and Siltstones
- Metasediments Felsic Volcanics
- Paragneiss Metasediments
- Phylites and Minor Quartizites
- Serpentinite and Pyroxenites
- Young Intrusive Granite

N

5 0 5 10 Kilometers

Produced By Richard Nyatoti
For World Heritage

Surface Relief Model of Matobo Conservation Area

Buffer Zone
World Heritage Boundary
Cadastral Boundary

Digital Elevation Model Of Matobo Area

- 900 - 1020
- 1021 - 1100
- 1101 - 1142
- 1143 - 1180
- 1181 - 1240
- 1241 - 1300
- 1301 - 1340
- 1341 - 1380
- 1381 - 1420
- 1421 - 1460
- 1461 - 1560

Commercial Farms
Communal Land
Monument

N

Produced By Richard Hyatod
For World Heritage

3.1.1.3.1.4 Finest scale - crystalline variation in rocks.
Geochemical determinants, operating at local and microscopic scales, have resulted in the crystalline structure of the granitic rocks varying greatly. The precise determinants of their differences are geochemical (biotite, quartz, or feldspars), and the history of crystallization in deeper geological time - as the superheated magma cooled slowly or rapidly at great pressures.

The ecological consequences are a variation in exposed crystals on the granitic rocks. These range from relatively huge feldspar phenocrysts (up to 5 cm long) and pegmatite in quartz veins to microscopic crystals. These provide very heterogeneous habitats for lichens and other microorganisms.

The obvious fine scale products of geological processes are the soils. These are predominantly sandy, but vary in clay content (derived from feldspars) depending on how the mineral content has been altered by secondary processes besides primary weathering. Matobo soils rich in clays are localized in weathered seeps and at the bases of catenas.

Soils have been differentiated across the catenas. There are some pronounced differences due to geochemical differences between parent rocks. One notable influence is sodium content of the soils, and the parent minerals (potassium or sodium rich feldspars) - discussed below. This difference is seen in some of the gneissic rocks abutting (and often intermingling with) the granites.

3.1.1.3.2 Deep Weathering
Commonly known as seeps, the bases of the larger drainage systems are undergoing deep weathering by biochemical and inorganic chemical agents. These agents include microbes, and plant chemicals, and biochemical products of decomposition processes in the landscape. The result is a more subtle contribution to the diversity of landforms in the Matobo Hills. Seeps and underground wetlands vary from submerged rocks to masses of decomposed granite. They play a key role in the hydrological processes in the landscape. Their biodiversity (apart from plants, including grasses and orchids) has not been explored. The diversity of microbes is likely considerable, and their ecological and geomorphological influences even more important.

3.1.2 Biological attributes
3.1.2.1 Vegetation Diversity
The Matobo Hills area, lying in the Zambezian savannah biome, has a very high diversity of vegetation types within a comparatively small area. Most of these are on soils derived from granite. This diversity, ranging from arid, desert-like slopes of large granite inselbergs to small ephemeral pools and wetland patches on peat, and from dry woodland to semi-forest in gullies, is a product of the diversity of granite landforms and differential exposure to moist southeastern airflow during the dry season. The mosaic nature of the vegetation and the diversity of species is also maintained by the patterns of past and present human impact.

Being one of the first comprehensively collected areas in the region, a number of taxa

(many now reduced to synonymy) were first described from the Matobo Hills area, which features in a number of early botanical accounts. The second oldest fire plots in Africa, which are still maintained, are found here, and much of the early work on the ecological distinction between broad-leaved savannah on sandy soils and microphyllous savannah on clays was carried out in the area. The Matobo Hills area, lying at the western extremity of the granite shield covering much of the country, is a moist and rocky island amidst the semi-arid savannahs of southwestern Zimbabwe.

The Matobo Hills area lies in the savannah biome under a climate generally too dry for miombo woodland. White (1978) places it in the broad Zambezian phytochorion under "undifferentiated woodland" although it also contains some Afromontane elements. The area is almost entirely on granite rocks, from which the soils are derived; hence they are generally coarse and sandy with only pockets of clay soil. There are few areas of red clays or similar nutrient-rich soils present. Patches of organic soils and peat are found locally in vleis and on some uplands.

Although the diversity of parent material is low, hence few soil types, there is a great range of vegetation types. This reflects geomorphology and climate, and (to a lesser extent) the effects of human activities over the centuries. Within the southern African region, it would appear that the Matobo Hills area is one of the most concentrated manifestations of the diversity of vegetation and plants associated with granite landforms. This is due to (a) its fairly extensive area compared to other, more isolated, occurrences, (b) the marked impact of winter moisture (guti) in the eastern parts, and (c) the mosaic nature of the impact of human activity compared to similar communal land situations in Zimbabwe. Vegetation diversity ranges from almost desert-like aridity with extreme temperatures on the rock domes to mesic dense woodland (including miombo) in protected, well-watered areas in the southeast part containing forest elements or outliers of the Eastern Highlands. Indeed, Wild (1956) and White (1978) call the Matobo Hills the westernmost outlier of the Limpopo escarpment forest element of the southern African flora.

Small temporary pools support an ephemeral flora of tiny annual plants. Occasionally there are wet flushes on rock surfaces. These are comparatively species-rich, but a rare habitat on rock domes. The Matobo Hills area has a few such permanent flushes, which is a rare microhabitat. Vegetation on the rock domes is dominated by very drought-tolerant flowering plants. Zimbabwe has 28 species of these drought tolerant plants, 15 of which are found in the Matobo Hills area (R. Seine, pers. comm.) including *Myriathamnus flabellifolius*, *Coleochloa setifera* and *Xerophyta villosa*. These plants form small communities a metre or so wide on skeletal soil in hollows.

At the base of the rocky slopes nutrients derived from disintegrating and weathering rock and moisture are much more available. Here dense woodland can form, consisting of such trees as *Heteropyxis dehniae*, *Ptaeroxylon obliquum*, *Pterocarpus rotundifolia* and *Olea europea africana*, and shrubs such as *Strychnos matopensis*. On the pediments the woodland is less dense and rich, being dominated by, *Pterocarpus rotundifolia*, *Burkea africana*, *Peltophorum africanum*, *Pseudolachnostylis maprouneifolia* and *Terminalia*

sericea, all species of dry woodland. There are significant patches of miombo woodland dominated by *Julbernardia globiflora* or *Brachystegia glaucescens* in moister sites in the eastern Matobo Hills area where fungal diversity is very high (C. Sharp. pers. comm.). The valley bottoms are often open with sluggish drainage (vleis) and support dense stands of tall grasses, including *Hyparrhenia*. Small wetlands are also found on the upland plateaux and have a rich flora of small herbs, many aquatic, otherwise rarely encountered this far west in the continent at this latitude.

There are 16 species of orchid and one tree orchid in the Matobo Hills, which represents a greater diversity of orchids than any other area in Zimbabwe. It is this diversity of vegetation formation – from low or tall grassland to open or dense woodland that gives rise to the diversity of habitats that underlies the Matobo Hills area's rich biodiversity.

3.1.2.2 Endemic Species and Outlying Populations

There are only a few plant species endemic to the Matobo Hills or the surrounding granite area. These include *Lobelia lobata* (herb), *Cyphostermma milleri* (climbing herb), *Maytenus heterophylla puberula* (spiny shrub), *Triaspis dumeticola* (shrub), and *Turrea fischeri eylesii* (shrub). In addition, the Matobo supports a major and significant portion of the population of a further nine species, one of which is *Cyathea dregei*, the tree fern, which has its western-most distribution in the Matobo Hills. A point of importance is that the Matobo Hills supports the western-most populations in southern Africa of a number of mesic (moisture-requiring) plant species. The Matobo Hills are also the western-most extension of the Royal fern *Osmondo regalis*, the cabbage tree *Cussoma spicata*, the coral tree *Erythrina latissima* and *E. lysistemon*. It is also the eastern most limit of *Ficus verruculosa*, and is a western outlier of the tree fern, *Cyathea dregei*.

3.1.2.3 Type specimens

Being close to Bulawayo, the major centre in this part of the country, the Matobo Hills were comparatively well collected by early botanists such as F. Eyles and O. B. Miller, as well as by more recent collectors. Hence a number of plant species were first described from specimens collected in the area. There are eleven currently accepted species/subspecies, the type specimens (holotypes) of which are from the Matobo area. Some of the species with type specimens from the area include: *Strychnos matopensis*, *Eriocaulon matopense*, *Maytenus heterophylla puberula*, *Lobelia dentate*, *Triaspis dumeticola*, *Turrea fischeri eyelsii*, *Streptocarpus eylesii eylesii*, *Abutilon matopense*, *Cyphostermma milleri*, and *Elaedendrom matabelicum*.

3.1.2.4 Lichens

Although not much work has been done on lichens in Zimbabwe, the Matobo area is particularly species-rich with 78 species. A high proportion of the country's species in the genera *Peltula*, *Parmotrema* and *Acarospora* have been recorded here. The majority of the diversity is of lichens growing on rocks, a reflection of the high number of microhabitats on the rock domes, in particular with respect to moisture availability, aspect and elevation. Such a high diversity of lichen life forms and species, many of which are very colourful, add to the scenic interest and impact (Figure 7). The most

speciose and common genus is *Peltula*, which occurs in particular on rock surfaces. However, most species recorded on inselbergs in Zimbabwe, including the Matobo Hills, are distributed widely over the tropics and subtropics. The lower parts of the hills have a lichen flora more typical of the Zimbabwe middle and highveld, while the elevated peak support species more typical of the montane region of Eastern Zimbabwe (U. Becker, pers. comm.).

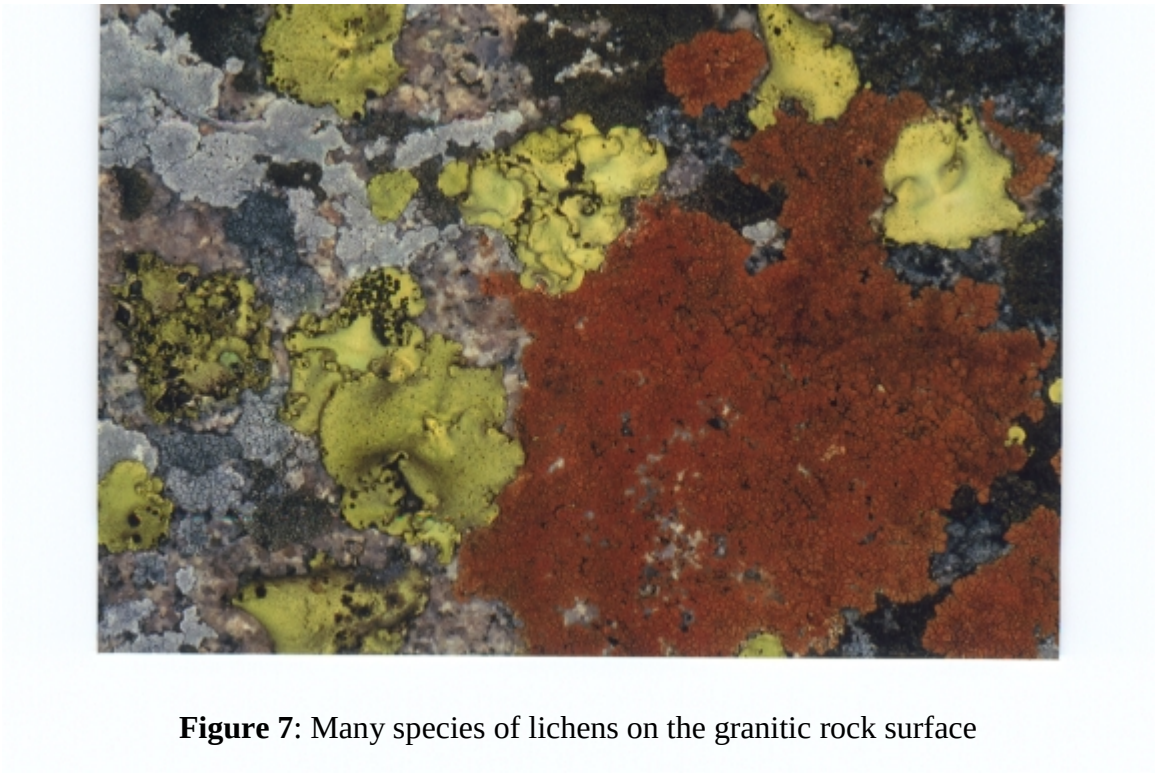


Figure 7: Many species of lichens on the granitic rock surface

3.1.2.5 Ecological Factors

Human impacts over the centuries, particularly in the valleys (many of which were formerly cultivated), have maintained the extent of grassland vegetation. In communal and surrounding the protected National Park area, grassland and open woodland predominate and add to the habitat and species diversity of the area. It is an anthropogenic landscape, and needs human management to maintain the diversity.

As well as clearance for cultivation, fire is an important ecological factor. It has been present in the Matobo for millennia and helped shape both vegetation pattern and composition. It is of interest that what are believed to be the second oldest fire plots in Africa, which are still maintained and recorded, are situated here. In addition, much of the early experimental and conceptual work on savannah ecology and determinants (e.g. effects of fire, moisture availability and nutrient differences between microphyllous and broad-leaved savannah) was developed and carried out on the Matopos Agricultural Research Station in the area (Barnes 1979; Huntley & Walker 1982). The juxtaposition of granite-derived oligotrophic and metavolcanic-derived eutrophic soils and vegetation in this area has significantly helped shape thinking on savannah ecology worldwide.

3.1.2.6 Predator prey interactions

The complex geomorphology of Matobo Hills supports a unique ecosystem of extensive open grasslands with groups of kopjes interspersed with wetlands: marshes (dambos) and streams. The huge whalebacks (dwalas) and numerous caves contribute to the high diversity of habitats in Matobo Hills (Lightfoot 1981). The combination of physical and climatic factors has resulted in the creation of special habitats such that in spite of its situation in dry semi-arid savannah, Matobo Hills represent a western extension of the ranges of many species characteristic of the higher rainfall areas in eastern Zimbabwe and parts of Mozambique (Grobler and Wilson 1972; Vernon 1967). The result is a unique combination and a diversity of flora and fauna worthy of special attention and preservation.

Predator-prey linkages are the prime movers of energy through food chains. They are an important factor in the ecology of populations, determining the dynamics that accompany prey mortality, predator births and recruitment. Mathematical models and logic suggest that a coupled system of predator and prey should cycle: predators increase when prey are abundant, prey are driven to low numbers by predation, the predators decline, and the prey recover, and so the cycle goes. Thus predation typically represents one of the important causes of the complex community interactions that one normally encounters in nature. In the Matobo Hills, a couple of predator-prey relationships are quite conspicuous because of the animal densities involved. While the predator spectrum includes leopards, raptors and snakes, an interesting observation is that dassies are a significant element of the prey base. Notably, dassies have no noticeable defence mechanism, behaviourally or otherwise, serve for high birth rates.

It is easy, therefore to visualize the predators as a hindrance to the dassies flourishing, but in nature it is always the predators who are in trouble, not their prey. This in the Matobo is typified by the fact that it is actually the raptors and leopards that are more vulnerable and have thus attracted more research. This makes a lot of sense for if there is a disruption of a food chain at the bottom, this gets magnified at each succeeding level. When it reaches the top, the disturbance appears as a major environmental disruption. This makes the predators at the top of food chains vulnerable. Therefore a lot of benefit can be derived from utilizing Matobo hills predators as barometers of environmental health, and for detecting potential problems before they become too serious.

3.1.2.6.1 Invertebrates

Data relating to invertebrate species are very limited although naturally, there is a higher diversity of invertebrates than vertebrates. Some of the significant predator-prey relationships involving invertebrates include the largest scorpion in the world, the rock scorpion, *Hadogenes troglodytes*, which grows to 21cm (M. J. FitzPatrick pers. comm.), and preys on other invertebrates such as millipedes and grasshoppers. It is in turn, preyed upon by baboons and owls. The wingless grasshopper, *Threcles* sp. feeds on the lichen substrates and is itself food for scorpions. Large populations of invertebrates, especially Arthropods ensure an abundance of protein needed to feed most avian nestlings as well as adult insectivores.

3.1.2.6.2 Herbivores

The ecological system of Matobo Hills is driven by the abundance of plant life with its ability to harness solar energy otherwise unavailable to animals. The large diversity of plant life in the Matobo Hills is as a result of the equally high diversity of microclimates prevailing in the various niches within the landscape ranging from rock faces, ledges, watercourses, open grasslands and patches of savannah type vegetation. In addition to the breeding and roosting sites that this variety of vegetation provides, large amounts of seeds, fruits, leaves and grasses are available to small and large herbivores. The vegetation supports both browsing and grazing species.

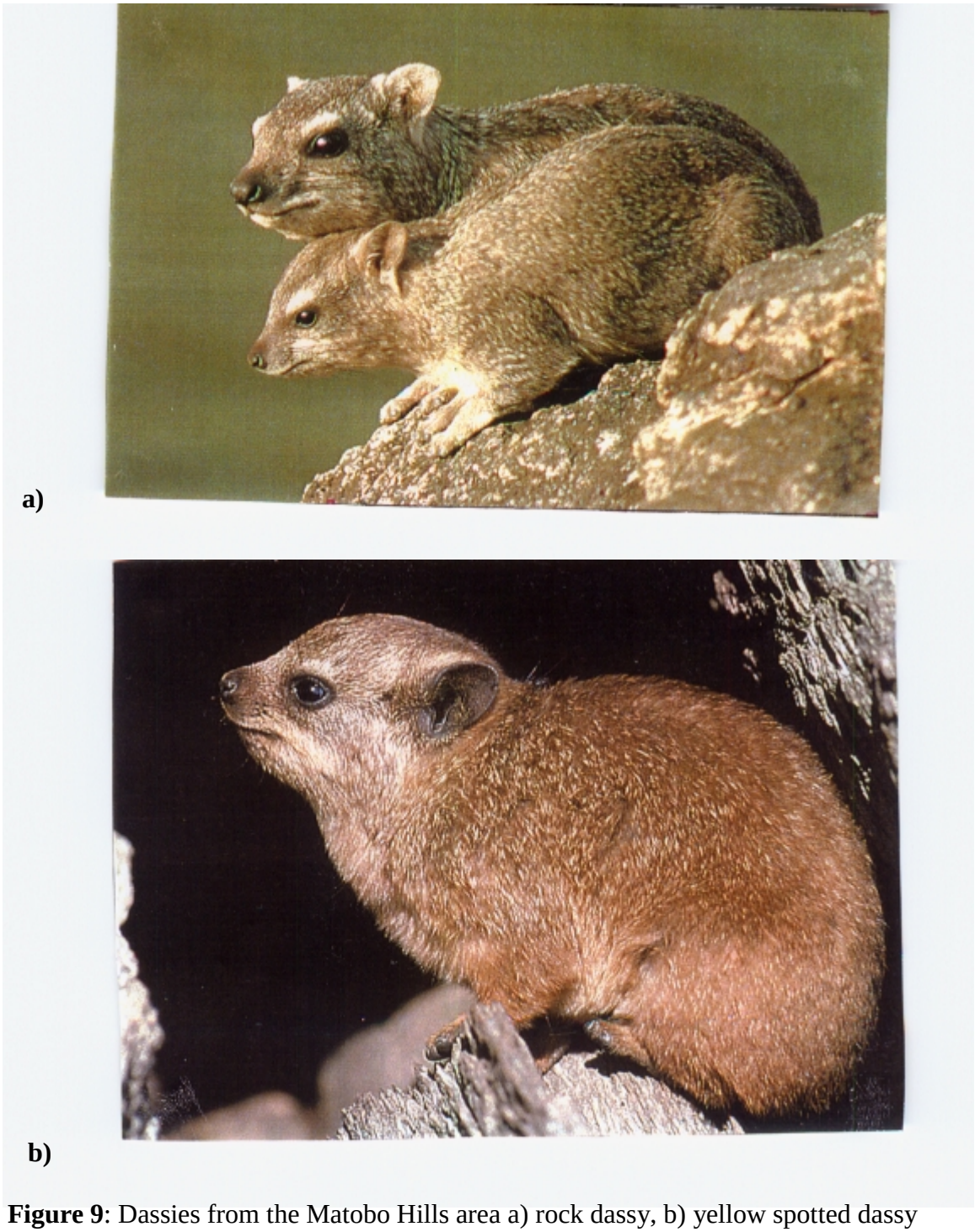
Important herbivores of Matobo Hills include the two largest herbivore residents, the rhinoceros species *Diceros bicornis* and *Ceratotherum simum* (Figure 8) and two of the smallest resident species, the rock dassy *Procavia capensis* and the yellow spotted hyrax *Heterohyrax brucei* that abound in the Matobo Hills (Barry and Mundy 1998). Other herbivores such as the klipspringer *Oreotragus oreotragus*, the common duiker *Sylvicapra grimmia* and the steenbok *Raphicerus campestris* also occur in Matobo Hills (Smith 1977). In all, thirteen species of antelope and 25 of rodents are found in Matobo Hills. This diversity of herbivores provides major prey species for vertebrate predators such as leopard, baboon, python, black mamba, raptors and humans.

Figure 8: Rhinos in the Matobo Intensive Protection Zone

3.1.2.6.3 Dassies/ Hyraxes

Hyrax population density in the Matobo Hills is considered one of the highest in the region (Barry and Mundy 1998) and these are key to the larger predators. The two resident hyrax species, the rock and the yellow spotted hyrax, benefit mostly from the

rocky shelter provided by the numerous rock crevices as well as the large supply of vegetation matter to graze and browse (Figure 9). Hyrax populations have over the years suffered at the hands of humans through hunting for food and karosses; habitat



a)

b)

Figure 9: Dassies from the Matobo Hills area a) rock dassy, b) yellow spotted dassy

modification as well as persistent droughts (N. Chiweshe pers. comm.). However, the populations have been able to stabilise, even increase, thanks to work conducted by the Ornithology Research Unit of the Department of National Parks and Wild Life Management in educating the surrounding communities on conservation of natural resources. Dassies provide the main source of food for many of the larger vertebrate predators in Matobo Hills.

3.1.2.6.4 Vertebrate Predators

3.1.2.6.4.1 Raptors

About 400 of the 674 Zimbabwean bird species occur in the Matobo Hills and some of these do not occur anywhere in the adjacent districts except as visitors or occasional wanderers. Of the 43 protected species of birds of Zimbabwe, 35 are found in Matobo Hills. Matobo Hills have one of the highest density and diversity of raptors in the world, with 33 breeding, 19 occurring but not known to breed and 7 vagrants. Of these 15 are eagles. To put this diversity into context it is worth noting that the whole of Europe has only nine eagles, South America six, North America two and Australia three. In Idaho, United States of America, an eight-year study revealed 27 species of raptors and it was decided to recommend to the President and Congress for preservation of the area. No doubt the Matobo Hills with perhaps the highest density of raptors in the world (Gargett 1990) qualify for preservation at an international level.

Two raptor species have received special attention over the years: Mackinder's Eagle Owl *Bubo capensis mackinderi*, and the Black Eagle *Aquila verreauxii* (Figure 10). The former is currently considered a subspecies of the Cape Eagle Owl, which spans all of southern Africa, but is of taxonomic importance in that the Matobo population is isolated from the rest of the species in its southern African range (Irwin 1981). Preliminary work suggests that this population may be sufficiently distinct from the rest of the southern African birds to merit special study and consideration as a full species. The Black Eagle on the other hand, has been monitored for close to 40 years for breeding and other activities in Matobo (Gargett 1990). This is the longest running eagle study in the world. Matobo Hills support an unusually high density of Black Eagles.

Normally the eagles defend large territories and an area the size of Matobo Hills would support only a few breeding pairs. However, in the Matobo the eagles nest at very close proximity with more than 70 pairs nesting in the 100km by 30km area. According to Gargett (1990) sizes of territory varied from 6 to 14km^2 in the central area. This is the highest known density of Black Eagles in their range. Dassies comprise 98% of the prey of the Black Eagle (Barry and Mundy 1998).

The combined breeding density of diurnal and nocturnal raptors was estimated at 76 pairs per 100 square kilometres. This huge concentration of raptors in Matobo Hills is closely related to the availability of a high diversity and density of niches and suitable nest sites due to the special geomorphology of the area, on the one hand. On the other hand and also closely linked to the geomorphology is the unusually high population of prey species, especially small mammals, birds and reptiles.

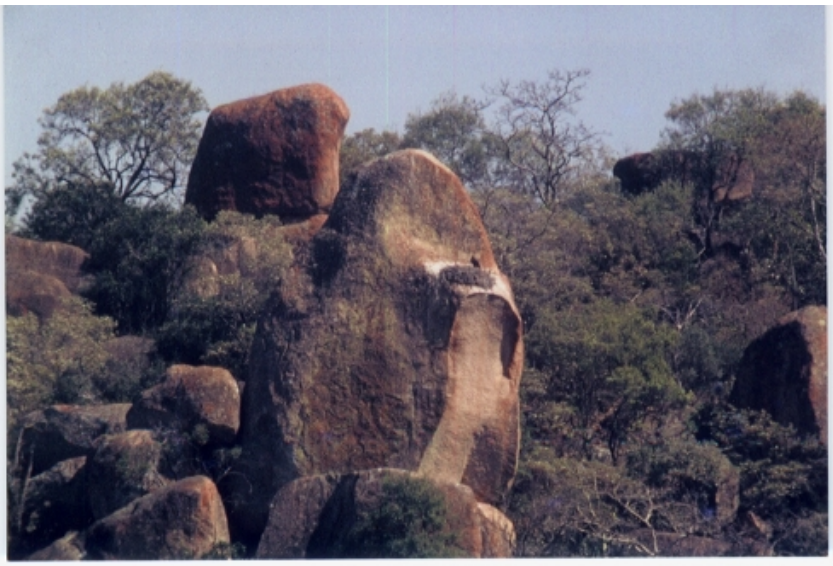


Figure 10:
Top: Black Eagle nest
Middle: Black Eagle in flight

Bottom: Mackinder's Eagle Owl

3.1.2.6.4.2 Leopards

The leopard (*Panthera pardus*) is the biggest predator occurring in the Matobo Hills (Figure 11). Generally regarded as being widespread throughout Zimbabwe (Child & Savory 1964), in the Matobo Hills it is now primarily confined to the Rhodes Matopos National Park. The leopard has been eliminated from most of the countryside due to anthropogenic effects that have gradually depleted their habitat, leaving the Rhodes Matopos National Park as one of the remaining sanctuaries. Its conservation is of international concern (Turnbull-Kemp 1967).

The leopard is the most adaptable predator in Africa; able to subsist in every biome except for outright desert (Myers 1974), as long as annual rainfall exceeds 50mm. Hence it has the widest distribution of the wild cats, showing also a great variation in appearance and behaviour. It is a generalist predator, with such terms as 'opportunist carnivore', 'ready scavenger' being applied to it. Consequently the known prey items it consumes range from dung beetles (Fey 1964) to adult male eland (Grobler & Wilson 1972). In the Rhodes Matopos National Park, its food spectrum covers about 19 different prey species (Grobler & Wilson 1972), with Wilson (1981) describing this felid as being very catholic in its diet. Bailey (1993) found at least 92 prey species documented in the leopard's diet in sub-Saharan Africa. In the study of the leopards in Matopos (Grobler & Wilson 1972) the common belief that leopards prey on the larger species of buck, like impala and reedbuck was challenged and Wilson (1981) is convinced that the largest percentage of prey animals are small mammals. However, it should be noted that Grobler and Wilson used scat analysis to identify prey animals and these do not allow for a direct measurement of volume in the diet (Smith 1977) which would be a lot more informative statistic.

In the 1970s the Matobo Hills had the highest recorded densities of the leopard in its natural range of Africa and Asia. Smith (1977) recorded 20 animals in an area of about 123km^2 arriving at one animal per 6km^2. Factoring in allowances for juveniles and non-residents, he postulated an overall density of one leopard per 4.5 to 5km^2 or a population of some 100 animals in the Park. Probable determinants of density are habitat configuration, prey availability, and carnivore competition. In Matobo Hills, the wooded granite kopjes interspersed with open grasslands allow the leopard to thrive as it has use of both terrestrial and arboreal habitats availed to it. This alone eliminates pressure from any other of the great African felids that are exclusively terrestrial. Small mammals, especially the dassies (*Procaviidae*), comprise about 69% of the Matobo Hills leopard's diet (Grobler & Wilson 1972; Smith 1977). The Rhodes Matopos National Park has a high density of the yellow-spotted hyrax (*Heterohyrax brucei*) and the rock dassy (*Procavia capensis*) providing a plentiful supply of food to the leopard. Analyses of prey remains have shown that although leopards in Matobo are opportunists they show preference for mammalian prey, especially hyrax and antelope species. The only other large cat in the area is the cheetah, thus this minimal carnivore competition might be used to explain this high density. The high density of antelope and hyrax prey species as well as the availability of cover provided by the large number of kopjes help maintain the high

population of leopards in the Matobo Hills.

In the Matobo Hills, the leopard occurs mainly in the National Park, then in the commercial farms, and in least numbers in the communal lands. Hence the ecological and behavioural attributes that permit the leopard a wide distribution in its range also enable it to live close by man's estate and also right within it. However, although the leopard appears tolerant of habitat modification and occurs in the vicinity of settled areas, density is certainly reduced when compared to occurrence in the natural habitat (exemplified here by the Rhodes Matopos National Park), and thus becomes more vulnerable to exploitation and population fragmentation.

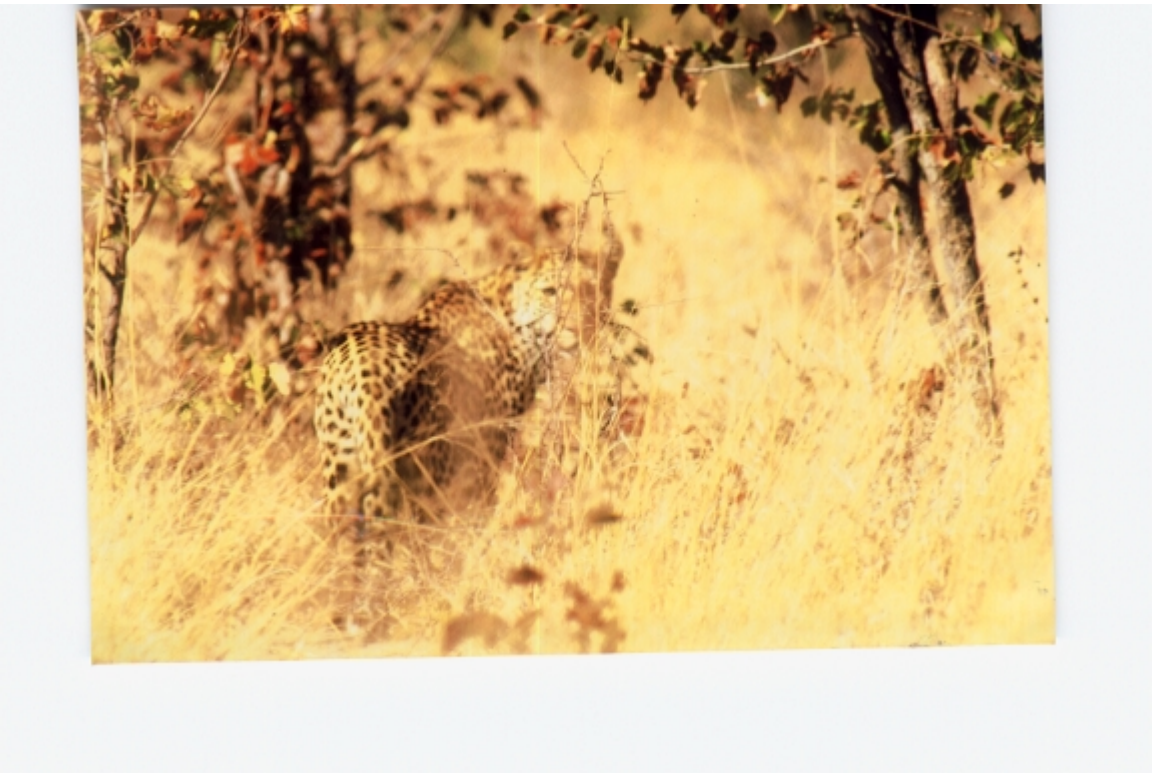


Figure 11: The African leopard (*Panthera pardus*)

3.1.2.6.4.3 Snakes

All snakes are carnivorous, and therefore form a special predator group in any ecosystem. They are also conceived to be shy and elusive animals (Broadley 1983) and generally very difficult to encounter even where they abound. Consequently extremely intense studies are needed before any population figures of the snake species can be produced; it is no surprise therefore that in the absence of any such studies no figures exist for the snakes of the Matobo Hills. However based on the frequency of encounters and reported sightings, one can point to the important predatory snakes of an area. In the Rhodes Matopos National Park, these would be the Black Mamba (*Dendroaspis polylepis*), the black-phase of the snouted cobra (*Naja annulifera*), puff adder (*Bitis arietans*), and the rock python (*Python natalensis*, previously *sebae*).

The Black Mamba is the most notorious snake in the Matobo Hills area. It seems to be the most frequently encountered snake in the Park. Its most widely used Shona name Rovambira relates to the generally held and accepted notion that it feeds exclusively on dassies, and thus throughout the country on rock outcrops where dassies occur, any snake that occurs there is invariably identified as a Black mamba. This snake feeds almost exclusively on warm-blooded prey – small mammals and birds (Broadley 1983). It feeds especially on the former, with rock dassies being its most recognized prey item in the Matobo Hills area, and then squirrels and other rodents. It is territorial. Therefore obtaining a rough estimate of this snake's population in a given area is possible as it keeps to a permanent home in a termite mound or more often rock crevice. Therefore the high dassy population, and mamba 'encounter frequencies' seem to point to high population densities of this species in the Matobo Hills area.

The snouted cobra in its black phase is generally mistaken for black mambas. But a marked difference on its food prey preference can be shown. The cobra shows a marked preference for toads when they are available (Broadley 1983) but will also readily take any of the rodents, lizards, other snakes, frogs, birds and their eggs. Africa is generally regarded as the centre of cobra distribution with Asia being an eastward extension from this centre. Cobras are regarded as one of the most adaptable genera occurring at all the altitudes that snakes are known to occur.

The puff adder is the typical adder of southern Africa, and is probably the most common and widespread snake on the African continent (Branch 1992). Hence although it is not the most venomous of the African snakes it is considered the most dangerous as its wide occurrence and predilection to bite means it inflicts the most bites on people by snakes in Zimbabwe (Broadley 1983). It is important ecologically because it is one of the few viviparous snakes in the country. Its diet is mostly made up of small ground-living mammals (rats, mice, etc.), and also birds, lizards, toads, frogs, and other snakes in their absence.

Another important, and the only protected, predator species in the Matobo Hills area is

the rock python. This species is non-venomous, but its size and the possession of the ability to pick up heat waves from living prey make it as formidable an adversary as snakes come. It is the largest snake in southern Africa with lengths of some 4 to 6 metres being common for adult members. Its prey consists of warm-blooded animals, principal among them being dassies, hares, rodents, small antelopes, monkeys, and birds.

3.1.3 Description and inventory of Cultural Heritage

3.1.3.1 History of human habitation

3.1.3.1.1 Prehistory

The rock shelters of the Matobo Hills area date from the latter part of the middle Pleistocene (700 000 to 125 000 BP) through the Late Pleistocene (125 000 to 12 000 BP) to the end of the Holocene (12 000 to the present) (Walker 1995). The prehistory of the Matobo Hills area is therefore closely linked to the large number of natural shelters, which have formed under big boulders. Evidence includes Early, Middle and Later Stone age tools and rock paintings attributed to the San communities (Hunter-gatherers) whose economies comprised of gathering wild fruits and other plant foods and hunting wild animals. Evidence from the Iron Age occurs in the hemispherical caves and other forms of rock shelters and most of the sites overlay Stone Age deposits. Another feature of this period is the occurrence of dry stone walled enclosures of the Khami phase of the Zimbabwe Tradition.

The prehistory in Zimbabwe spilled into the 19th century. In the Matobo Hills the manifestations of the arrival of the Nguni groups fleeing Zululand in the 1830s' include several granaries in the rock shelters. The events and the period of mass movements and social upheavals are generally known as Mfecane period. The Nguni groups came and displaced local Karanga ethnic groups who sought refugee in the Matobo Hills. The Hills provided refuge to both the Ndebele and the Karanga when they went to war against European Settlers in 1893 and 1896 in what are known as Matebele War and the Rebellion, respectively.

3.1.3.1.2 Stone Age Sites

There is an abundance of sites representing the Stone Age periods. Most of the sites are found in the hemispherical caves and other forms of rock shelters and faces. In many of these sites, exceptional examples of a variety of subjects can be seen and these are attributed to the Late Stone Age inhabitants of the area. The most important Stone Age Sites where extensive research has been conducted since the early twentieth century are: -

3.1.3.1.2.1 Bambata Cave

It is one of the most extensively researched cave sites in southern Africa. Excavations here have revealed the oldest decorated piece of stone in Zimbabwe. Bambata pottery (type-site name) is one of the riddles in Zimbabwean archaeology regarding its dates and traditional associations. Paintings in the cave are in a very good state of preservation.

3.1.3.1.2.2 Nswatugi Cave

This is where the oldest human skeleton in Zimbabwe was recovered. From this cave was recovered evidence of Middle Stone Age dating to circa 42 000 years BP. Of its paintings

Garlake (1987) says, "…the paintings are among the most varied, beautiful and colourful in the Matobo."

3.1.3.1.2.3 Pomongwe Cave (Figure 12)
Middle and Late Stone Age deposits were recovered here with a wide range of stone tools and implements, bone tools and other related domestic paraphernalia. In addition, there is a big Site Museum with comprehensive displays explaining the Stone Age of Matobo Hills area in particular and that of Zimbabwe in general.

Figure 12: Pomongwe Cave of the Matobo Hills

3.1.3.1.2.4 Inanke Cave (Figure 13)
The paintings here are of outstanding beauty. The multichrome galloping giraffe could be the finest naturalistic painting in Zimbabwe. There is a display of exceptional complexity and skill in their execution. Garlake says of Inanke Cave, “In the cave, the prehistoric art of Zimbabwe reaches its peak of beauty, technical skill and complexity” (Garlake 1987)

Figure 13: Inanke Cave showing rock paintings

3.1.3.1.3 Iron Age Sites

The Matobo Hills area has many Iron Age Sites with most of them overlying Stone Age deposits in caves. Another important feature of this period is the occurrence of dry-stone walled enclosures of the Khami phase of the Zimbabwe Tradition, and the iron furnaces (Figure 14).

Figure 14: Iron furnace in the Matobo Hills area

3.1.3.1.4 Historical sites

Events of the 19th century history of Zimbabwe include the Mfecane period when Nguni groups fleeing Zululand into different parts of southern Africa occupied most of southwestern Zimbabwe. They came into Zimbabwe in the 1830s and displaced local Shona ethnic groups who then sought refuge in the Matobo Hills. During the 1893 and 1896 wars between the European settlers on one hand and the Ndebele and the Shona on the other the latter sought refuge in the same hills. What can be seen now are the relics of that period that include intact granaries (Figure 15).

The Matobo Hills area is thus rich in historical sites of great significance to the country. The following are examples of historical sites in the area: -

Figure 15: Granaries in the Matobo Hills.

3.1.3.1.4.1 Burial sites

The two most important graves in the area are those of King Mzilikazi and Cecil John Rhodes (Figure 16). The former founded the Ndebele nation and the latter led the European settlers into the country and Zimbabwe was originally known as Rhodesia after Cecil John Rhodes. The View of the World where Rhodes' grave is located is visited by thousands of tourists every year. The tomb of King Mzilikazi, on the other hand, is deliberately restricted from public access in deference to traditional custom.

Figure 16: Rhodes's Grave at the World's View, Matobo Hills

3.1.3.1.4.2 Rhodes Indaba Site

The first indaba (peace conference) was held at this site in an effort to end the 1896 war. The mound on which Rhodes and his colleagues sat is still existent and well preserved.

3.1.3.1.4.3 MOTH Shrine

This is a memorial site for the servicemen who died during both World Wars.

3.1.3.1.4.4 Other sites

Other sites of historical interest in the Matobo Hills include Mzilikazi's Wagon Cave, Rhodes' Summer House and Stables, Matobo Railway Terminus and many others.

3.1.3.1.5 Rock Art Sites

3.1.3.1.5.1 Status and Distribution of Rock Art

Matobo Hills area contains the best-known rock art sites in Zimbabwe, the other concentrations being Mutoko (Northeast of Zimbabwe), Chiredzi (South-east Zimbabwe) and Chinamora communal areas (North-east of Zimbabwe). All these rock art areas are

found on the granitic belt of Zimbabwe, except in Chiredzi where they are located on sandstone rocks. In comparison with similar areas in the sub-region and the world at large, Matobo Hills area has one of the largest concentrations of rock art sites. The Matobo Hills area is also part of the "distinctive art region" of the well-known prehistoric art of Southern Africa, which stretches from South Africa to Tanzania (Walker 1996). Many researchers have carried out a number of studies on the rock art of Matobo Hills to document and decipher its significance.

The Matobo Hills area contains no less than 3 500-rock art sites, according to the records in the National Museums and Monuments of Zimbabwe national database. If more surveys are to be conducted in the Matobo Hills area, the total number of rock art sites is estimated to be around (6 000. Most of the known sites contain a large number of paintings; therefore total individual paintings in the Matobo Hills area is likely to run into a million. The rock art sites of the Matobo Hills area consist of paintings located on spectacular granitic rock outcrops. These include caves, boulders, and cliff faces. The caves also provided shelter for the paintings, the artist and their communities. Therefore the paintings and the granite are inextricably linked.

Although most of the rock paintings of the Matobo Hills, and Zimbabwe in general, are attributed to the hunter-gatherer communities of the Late Stone Age period, some belong to the Early Farming Communities (Walker 1995; Garlake 1995). Generally the red paintings are attributed to the Hunter-gatherer communities while those in white pigments belong to the early farming communities (Figure 17). Hematite and magnetite iron oxides provided the pigments used in drawing the paintings. The oxides are commonly known as red ochre. The ochre happens to occur in a variety of shades ranging from browns to yellows, oranges and purples. These ochres were pounded, crushed and rubbed to a fine powder, then mixed with a binder to produce the different shades seen today in the Matobo Hills area. The binding medium also made the paintings more permanent when applied to the granite surfaces. Researchers have suggested organic and inorganic binding mediums, but to date none has yet been identified in the Matobo Hills area (Garlake 1987, 1995; Goodall 1959; Walker 1987, 1996). Also the recipes of individual artists have not been ascertained throughout Southern Africa.

On the other hand, the white pigments were derived from kaolin clays or by crushing quartz. Rock art sites in the Matobo Hills area, just like elsewhere in Southern Africa, have not been directly dated due to the non-availability of sufficient quantities of organic material in the pigments. Therefore, indirect methods have been used to date the Matobo rock art to 13000 – 8000 years ago (Garlake 1995; Walker 1987, 1998). This date was derived from an excavation carried out at Bambata cave in the Matobo by Walker between 1972 and 1982. Scores of small spalls of granite that had traces of paintings were recovered at the site. These were dated in the context of the stratigraphy to give a date range between 13000 – 8000 years. Given the fact that the date is derived from an exfoliated piece of rock, the date therefore refers to the time the stone got incorporated into the archaeological deposit. This technically implies that the rock art of Matobo may be much older than what is generally believed. Also the slow and variable weathering and exfoliation rates of granite rocks might support the fact that the paintings are much older

(Walker 1987). The generally agreed dates are also supported by the subject matter of the art itself, for example, man with bows and arrows are typical of the Stone Age period, while paintings of sheep denote the presence of early farming communities.

a)

b)

Figure 17: The Matobo Hills rock paintings, a) white paintings at Sikiti, b) red paintings at Nswatugi Cave

However, more trials with possible direct dating methods are required to put the rock art of Zimbabwe in its proper cultural chronology (Taruvinga 1997). What is clear from the existing direct and indirect dating methods is that the paintings of Matobo are much older than 13000 years.

3.1.3.1.5.2 Techniques and Styles

The rock art of Matobo is essentially "naturalistic, but impressionistic in that movement was often conveyed by dramatically distorting body proportions and positions" (Walker 1996). Artists gave attention to showing all parts of humans or animals by drawing limbs and horns incorrectly positioned or proportioned. Some trees were drawn with their roots, while animals and humans were shown in profile, and for the latter full frontal views or near-complete side views were used (Walker 1996). Artists frequently used size to show importance, with most figures 15 – 25 cm high. However small figures were also drawn. Another important feature of the art of Matobo is the style\technique of superimposition, whereby paintings are drawn one on top of the other. This in most cases brings out the complexity of the message being conveyed, as well as the technique employed in terms of artistic skills. This is a frequent phenomenon in Zimbabwe, and Southern Africa at large.

In terms of styles, the artists of Matobo paid particular attention to the way in which they applied the paint. Initially, the styles were distinguished on the basis of colours used rather than the effect produced (Walker 1996; Garlake 1995). But contemporary researches have produced well-defined styles on the basis of colour, technique and effect. Broad styles include (i) outlines (figure drawn out of a line in one colour or line drawn as flakes, dashes, or chevrons), (ii) monochromes (flat wash, outline and fill, fine outline, wide outline or outline and body fill using one colour), (iii) bichromes (two colours; different colour outline with different colour detail or contrast colours), and (iv) polychromes; unblended or shaded, (Walker 1996). Generally the styles of the Matobo range from Outlines to Monochrome, Bichromes and Polychromes. Other paintings were simply retouched in another colour. What is unique about paintings of the Matobo is that colour and technique were used to encode the significance of the paintings (Walker 1996). However a contrast is seen between the hunter-gatherer and early farming community paintings. The latter were not executed with the same skill, accuracy and precision as that of the hunter-gatherers. In the whole, it is noted that styles gradually changed from simple outlines to polychromes in the Matobo Hills area. Some sites have a multi-representation of all these styles and techniques. Studies of superimposed paintings help in deciphering the meanings and styles of the art (Cooke 1969; Goodall 1959). According to Walker (1996) the paintings of Matobo, on the basis of the defined style, is relatively homogeneous throughout the Matobo cultural landscape. However, he acknowledges the existing indications that different groups painted distinctive images deliberately or because of isolation in their respective home bases.

3.1.3.1.6 Living traditions and the Intangible Heritage

3.1.3.1.6.1 Sacred Shrines

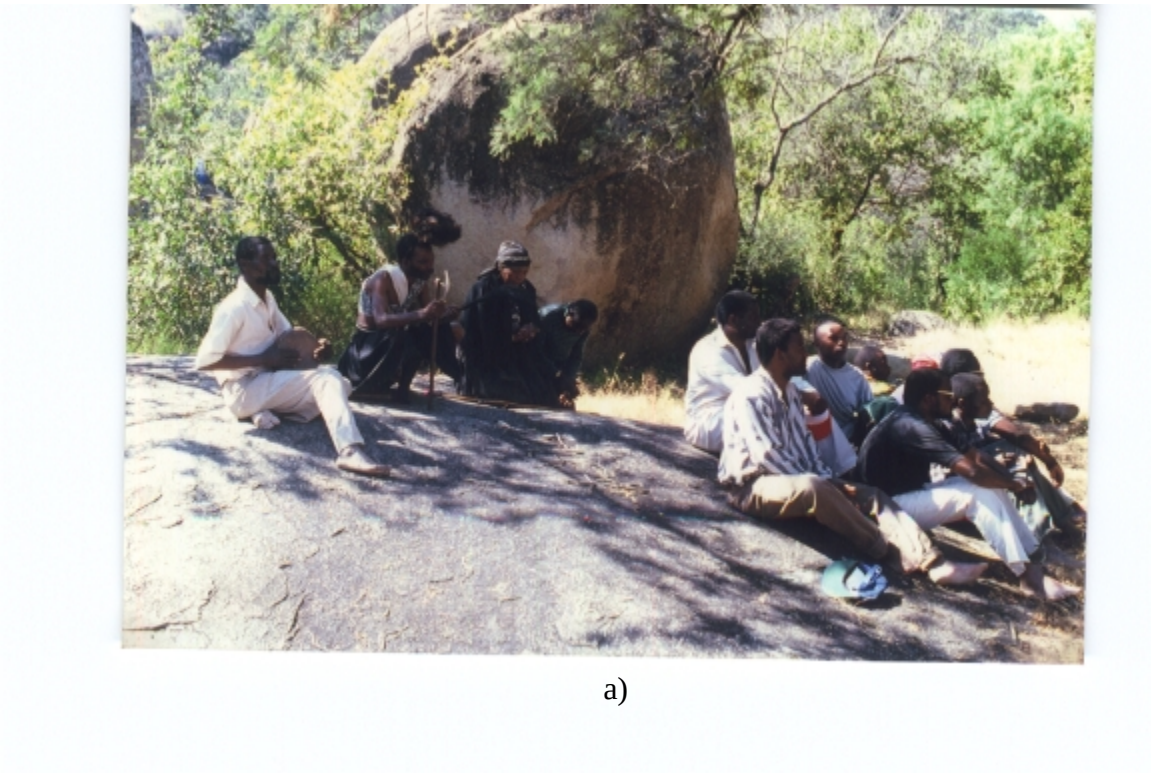
Among the important traditional shrines in the Matobo Hills area are Njelele, Dula, Zhilo, Ntunjambila, Wirirani, and Manyangwa, of which Njelele is the highest shrine (Figure 18). Njelele is situated west of Matobo National Park in the Khumalo communal area about 100 km. south of Zimbabwe's second largest city, Bulawayo. The site itself is a rock outcrop similar to hundred others in the Matobo. The outcrop is located on a mountain range that runs east west. Before getting to the site one passes through a well maintained forest which stretches for more than 500 metres before being interrupted by modern settlements. Within this forest is a variety of plants and wildlife. No human activities are allowed in the area. The tangible heritage is therefore benefiting from the sacredness of the place. The secret behind the respect accorded sacred areas and their environs lies in the taboos that are associated with such places.

These shrines represent the authority of God (Mwari/ Mwali). The voice of Mwari is believed to be heard from the rocks. Mwari of the Matojeni has attracted the attention of politicians, laypersons, missionaries and scholars in both the past and the present (Daneel 1970; Ranger 1999). These people had varied interests that ranged from calls for the destruction of Mwari shrines to efforts to prove that Mwari and the concept of spirit possession are the figment of imagination. People like Daneel (1970) and Ranger (1999) produced more scholarly work. The integrity of traditional places of worship was negatively affected by the arrival into present Zimbabwe by groups of people who did not empathise with them. Many shrines and sacred places were desecrated and the culture of taking care of the tangible heritage waned in the process. In Zimbabwe today the poor state of the environment (the tangible heritage) is blamed on ignorance, overpopulation, overgrazing and several other woes. In the Matobo Hills area the indigenous traditional religious beliefs and practices (intangible heritage) were and still are conducive to the preservation of the tangible heritage. People converge on these places to pray for rainfall or ask for good health. The tutelary functions of Mwari and the ancestral spirits are believed to be enhanced through such gatherings where individuals or their priests and priestesses commune with them.

The Njelele Shrine is often referred to as "Dombo letshipoteleka"; the shifting or turning rock. This indigenous name refers to how different the hill looks as one walks around it. The Stone at Njelele, which used to talk, is said to have stopped in 1914. The hill has areas that are considered sacred, which are not supposed to be tampered with in any way, including cultivation and grazing. For instance the swampy sacred area was used to determine whether rains would fall or not (Ranger 1999).

A traditionally appointed and tested Shrine custodian resides at the shrine to lead all Zimbabweans and other pilgrims from South Africa, Botswana and Namibia in all ceremonies performed at the site. The shrine custodian looks after the site in respect to set traditional rules, which everybody else should also observe. Among the ceremonies conducted at the Shrine is praying for rains, good harvests, diseases, appeasement of territorial spirits, and seeking guidance from the spiritual world in many issues. According to Ranger (1999) the shrine custodian controls the agriculture of the Matobo communal area (east) where several shrines and sub-shrines interact with each other. In that respect the custodian blesses the seeds by soaking them in water oozing from the

rocks of Njelele. These seeds are later distributed to local communities for planting at specified times, even the harvesting is also specified. Ranger (1999) summarizes this



a)

b)

Figure 18: The shrines in the Matobo Hills area, a) Njelele and b) Ntunjambila

process: "Njelele used to lay down everything-when to plant, when to eat certain plants, when to reap. In those days you did not harvest until early August when the corn was really dry and mature. The land was protected for longer, the cattle did not stray on the land".

All the other shrines play a similar role to the Bantu communities of Southern Africa. It is important to note that these shrines were selected because of the abundance of water, and presence of caves, which are traditionally known as 'Daka'. All the shrines are accessible throughout the week except on Wednesdays because on this day all people must rest, 'Chisi' or 'iZilo'.

3.1.3.1.6.2 Taboos associated with the sacred places

It is believed that the spirits reside in forests, mountains, caves, hollowed trees and pools. In other words, the intangible heritage makes use of the tangible heritage as its home. The adherents of the traditional Mwari and the ancestral spirits therefore attach great respect to the environment because they argue, by despoiling it, they will be depriving their god and the spirits a home to live in.

3.1.3.1.6.2.1 Individuals or groups of people are not allowed to visit a sacred place or its environs in the absence of the official priest or priestess or his/her appointee. Songs of praise precede approach to the shrine and an appropriate person leads the visitors. That way no mischief is envisaged.

3.1.3.1.6.2.2 It is taboo to cut down a tree in a sacred place. Trees constitute the dwelling place of the ancestral spirits and removing them is tantamount to exposing Mwari and the spirits. Such behavior is punishable. For anyone to remove a tree from the sacred forest or shrine, the priest or priestess has to ask for permission to do that giving a convincing reason. Failure to observe that would result in individuals or their families or the entire community being punished by the grieved spirits. Unsanctioned removal of trees from such places is interpreted as a sign of disrespect.

3.1.3.1.6.2.3 Traditionally, whenever hunters chasing after an animal saw it entering a sacred forest, the chase was immediately called off. The animal was regarded as part of the sacred herd. However, from time to time, residents close to such sacred places would find an animal in their midst and kill it. That was inevitably interpreted as a gift from Mwari or the ancestral spirits. The meat was shared amongst the households in the vicinity. Special parts of the animal were taken to the local spirit medium and to the chief both of whom were important custodians of the local traditions. The animals in the sacred areas did not belong to an individual and so no one could hunt them with impunity. That way, the wildlife was protected against poaching. Contemporary places such as Njelele and Dula are still in pristine condition, thanks to their sacredness.

3.1.3.1.6.2.4 The generally acceptable behaviour when entering a sacred shrine is to

remove one's shoes, watch and leave money 'outside'. Visitors to Njelele, Zhilo, Dula and many other sites are expected to leave these items at the home of the keeper.

The Matobo Hills area has always played a very important role in lives of past and contemporary communities. According to Ranger (1999) people of the Matobo "value their special relationship to a unique environment, their ownership of shrines, their very particular form of agriculture"; all these associated with the Matobo Hills area. The communities also value their founding of the Ndebele State (as represented by Mzilikazi's grave at Entumbane), their links with the adepts of the Mwari religion, of which the Mwali resides in the Matobo. It is these intangible values that have kept the indigenous communities attached to the Matobo Hills area despite being alienated due to the establishment of a park in that area. According to Ranger (1999) Colonial Masters, European artists, explorers, adventurers and Jesuits did not realize the Matobo Hills area was "the home of the wide ranging oracular cult of the high God, Mwali". It is this powerful oracle that links the indigenous communities with the Hills, which are sometimes referred to as 'Malindidzimu', home of spirits. In this traditional concept of Malindidzimu, the landscape, has no beginning or an end, it just rolls over and over, repeating itself through space in an almost homogeneous manner.

3.2 History and Development of the property

3.2.1 Prehistory

The potential for development of the Matobo Hills area dates back to the latter part of the middle Pleistocene through the Late Pleistocene to the end of the Holocene (Walker 1995). The availability of natural shelters, forests, spongy areas provided the necessary raw materials for the development of art, and later agriculture. Today the same assets are playing a pivotal role in the tourism industry. Early, Middle and Later Stone age tools and rock paintings evidence the interaction of man and the environment. Successive iron-using communities also left evidence of their activities in the form of iron tools and weapons, stonewalled settlements, and iron-smelting furnaces. From Stone Age therefore to the present, the icons in the Matobo Hills area chronicle a progression in human (intellectual) development and interaction with the environment.

In the Zimbabwean context, the separation between the prehistoric and historic periods is not clearly defined. There is therefore an overlap that makes research exciting. Some events of the 19th Century, such as the arrival of the Nguni groups fleeing Zululand in the 1830s, belong to both the prehistoric and historic eras.

3.2.2 The Historical Era

The history of the Matobo Hills area can be divided into three eras: the pre-colonial (before 1890), colonial (1890-1979), and the post-colonial (1980 to present). The events of historical significance left indelible marks in the form of physical icons such as remains of early settlements, graves of great leaders, forts and many others.

3.2.2.1 Pre-colonial era (before 1890)

The dividing line between the prehistoric period outlined above and the early pre-colonial is not distinct. The little that is known about this period was due mostly to

the presence of missionaries, mineral seekers, hunters and a few adventurers. Of note is the arrival and establishment of settlements of the ancestors of the present Ndebele ethnic groups during the first half of the 19th century under the leadership of King Mzilikazi. Mhlahlandlela, on the northern fringes of the Matobo Hills, was one of King Mzilikazi's earliest settlements. His son, Lobengula, who succeeded him as king in 1871, also built a settlement just north of Mhlahlandlela at KoBulawayo (the first Bulawayo).

The pre-colonial period also saw the introduction of Christianity, by the missionaries who founded several mission stations including Cyrene and Matobo missions, which continue to be important centres of learning today (Ranger 1999). The arrival of the Nguni, the missionaries, the hunters and gold prospectors accounts for the cultural diversity and richness of Matobo Hills.

3.2.2.2 The Colonial era (1890-1979)

The events that took place during the colonial period had profound social, economic and political imprints on the indigenous population. The Pioneer Column raised its flag at Fort Salisbury in 1890 and moved southwest to Matebeleland in search of gold. This met with resistance from the Ndebele and the confrontations of 1893 and 1896 are well documented. Matobo Hills played a pivotal role in providing refuge to the indigenous people, who derived their inspiration from the oracles of the Mwari shrines (Ranger 1999).

3.2.2.3 Post Colonial era (1980 to present)

The major historical landmarks which impacted on the Matobo Hills landscape during this period include: land reform, Communal Areas Management Programme For Indigenous Resources (CAMPFIRE) projects, development of a Management Plan for Rhodes Matopos National Park, cultural tourism, rock art, historical sites, minerals prospecting in the Matobo Hills area, Rural District Council tourism plans, and the development of roads, schools and clinics.

3.3 Form and date of most recent records of property.

There is a computerised database for all the cultural sites in the Matobo Hills area, which is stored at the Archaeological Survey Centre, Museums of Human Sciences in Harare. In addition, records of each site are kept at the Natural History Museum in the form of registers and cards. These records are continually updated in line with operational, tactical and strategic plans of NMMZ, and are also incorporated with related research programmes in published annual reports of the organization.

Annual reports of vegetation mapping, Black Eagle Survey, Raptor Survey, dassies, leopards, rhinoceros, and other fauna are kept at the DNPWLM regional office in Bulawayo and the Harare head office. Also, there is a partially computerised database of the Matobo Hills fauna housed at the departments of Herpetology, Ichthyology, Entomology, Mammalogy, Ornithology, and Arachnids at the Natural History Museum, Bulawayo.

3.4 Present state of conservation

3.4.1 Institutional arrangement for the conservation of Matobo Hills area.

All key stakeholders in the Matobo Hills area play a vital role in the conservation of the heritage that falls under their jurisdiction. The conservation is carried out in accordance with the dictates of traditional practices and beliefs and pieces of respective legislation.

3.4.1.1 Community

The activities of the Matobo Hills area community are governed not only by various pieces of legislation but more importantly by their traditional practices and beliefs. The need to keep the Matobo Hills area as a venerated landscape is inculcated into the local communities at ceremonial gatherings that take place annually at Mwari shrines. Individuals and/or groups also visit these shrines to make specific requests. Consequently, the pieces of legislation alluded to are more effective because of the conducive attitude of the people towards conservation of the area. Chiefs, headmen and spirit mediums all play an important role in coordinating such traditional activities and mobilising the people.

3.4.1.2 Department of National Parks and Wild Life Management

The Department of National Parks and Wild Life Management takes care of the natural resources in accordance with the Parks and Wildlife Act (Cap. 20:14). A Management Plan for the period 2000-2004 has since been produced for the Rhodes Matopos National Park. The Management Plan addresses:

- Ecological management, research and monitoring programme
- Stakeholder interaction and involvement in the park
- Law enforcement.
- Infrastructure development
- Business planning and financial management
- Tourism and tourist facilities or services in the Park

3.4.1.3 National Museums and Monuments of Zimbabwe

The National Museums and Monuments of Zimbabwe (NMMZ) manages all the cultural resources found in the Matobo Hills area irrespective of boundaries and ownership. This is in accordance with the NMMZ Act (Cap.25: 11). However the management is done in conjunction with other stakeholders who happen to be administrators of any particular area that falls under the defined Matobo Hills area.

3.4.1.4 Rural District Councils (RDCs)

All RDCs have active Environmental Conservation Committees. They all have an option to apply for Appropriate Authority from DNPWLM to establish CAMPFIRE areas. Umzingwane and Matobo RDCs have viable CAMPFIRE projects.

3.4.2 Cultural Heritage of Matobo Hills area

The Western Region, an administrative branch of the National Museums and Monuments of Zimbabwe, is managing the diverse cultural heritage in the Matobo Hills area. There are 3 resident archaeologists, and 2 technical officers to ensure that the conservation of the diverse cultural heritage in the Matobo is on course, and in accordance with international charters. Among the three archaeologists, one is a Monuments Inspector

whose duties include routine inspection of all monuments, and to recommend appropriate action where necessary. At some of the sites open to the public, custodians are stationed there to monitor and guide visitors. As for the shrines e.g. Njelele, traditionally appointed custodians reside at the site to enforce rules that relate to the shrine.

3.4.3 Natural heritage of the Matobo Hills area.

The core area comprises the Rhodes Matopos National Park, communal and commercial farming areas. The park has been a conservancy since 1926 and boasts an invaluable game sanctuary that has been used to breed and reintroduce internationally and nationally threatened faunal species with great success. The success of animal breeding is attributed to the availability of high diverse plant species.

Outside the park area, anthropogenic impacts on the fauna and flora have been appreciably higher. Communal areas have however become more aware of natural resource conservation through CAMPFIRE projects. These areas now have structures to manage and monitor the utilization of their resources. Therefore the flora and fauna that has survived within the communal areas is now under a regime of conservation.

3.5 Policies and programmes related to the presentation and promotion of the property.

The reverence of the entire landscape is fostered through spirit mediums who work closely with chiefs and other traditional leaders. The communities are involved in periodic ritual performances that take place at shrines. The rituals therefore conscientise the community about the sites thereby promoting conservation of the entire landscape.

There is a Management Plan (2000-2004) for the Rhodes Matopos National Park, which among other things defines the benefits to and responsibilities of the contingent communities. CAMPFIRE programmes ensure that the communities benefit directly from the resources.

The National Museums and Monuments (NMMZ) has a Management Plan for the conservation, promotion and presentation of cultural sites.

4.0 MANAGEMENT

4.1 Ownership

The proposed World Heritage Site comprises three types of land ownership, recognised by Zimbabwean laws. These are –

- State-protected areas such as national parks
- Communal lands, state land without individual tenure and
- Privately owned land with individual tenure, also called commercial land.

Each land category is administered by Acts of Parliament that demarcate boundaries and regulate activities within. The DNPWLM manages the Rhodes Matopo National Park and the RDCs manage the communal areas on behalf of the President and people of Zimbabwe. The management of archaeological and other cultural properties fall under the National Museums and Monuments Act irrespective of land tenure. However, the ownership and management of shrines and ritual activities, is the responsibility of members of the community.

4.2 Legal status

In all the land tenure systems represented in the proposed Matobo Hills area, the owners have to comply with the requirements of several pieces of legislation including Rural Districts Council Act (29:13), Parks and Wild Life Act, (20:14), Natural Resources Board Act, (20:13) and National Museums and Monuments Act, (25:11).

4.3 Protective measures and means of implementing them

The DNPWLM, NMMZ and the RDCs have complementary roles in the management of the Matobo Hills area. The conservation objectives are achieved through strategies spelt out in the respective management plans of the three institutions.

4.4 Agencies with management authority

The following are some of the agencies responsible for the management of the Matobo Hills area:

- Matobo and Umzingwane Rural District Councils
- National Museums and Monuments of Zimbabwe
- Department of National Parks and Wild Life Management (DNPWLM)
- Natural Resources Board
- Forestry Commission
- Rhodes Matopos Committee

4.5 Level at which management is exercised and name and address of responsible person for contact purposes

4.5.1 National Parks

The day-to-day management of Rhodes Matopos National Park is undertaken by a resident warden who reports to a provincial warden based in Bulawayo. The DNPWLM Headquarters in Harare is responsible for policy directives. In addition the administration of the park falls under the Rhodes Matopos Committee, which is constituted by the

Minister of Environment and Tourism. The person to contact for more information on the park is the Provincial Warden, Box 963,Bulawayo, Zimbabwe.

4.5.2 Sites and monuments (Archaeological, Rock art sites and shrines)

All monuments are administered by NMMZ irrespective of where they are found. The cultural heritage of the hills is directly managed by the Monuments Inspectorate, which includes archeologists. For administration purposes NMMZ is divided into five regions namely Northern, Southern, Western, Eastern and Central. The Matobo Hills area falls within the Western Region. More information can be obtained from the Regional Director at the Natural History Museum, P. O. Box 240, Bulawayo.

4.5.3 Communal Lands

Management of the communal areas is through Matobo and Umzingwane Rural District Councils in collaboration with the traditional leaders. The traditional leadership consists of Chiefs, Village Heads and Headmen and they participate in the decision making of RDCs through their representatives. All chiefs are ex-officio members of RDCs. Each RDC has an environmental officer who works with the community on conservation issues. More information can be obtained from the Chief Executive Officers, Umzingwane Rural District Council, Box 50, Esigodini and Matobo Rural District Council, Private Bag 1, Maphisa.

4.5.4 Commercial Farms

For administrative purposes the commercial farms fall under the RDCs.

4.6 Agreed plans related to property

Refer to the Draft Management Plan for Matobo Hills area.

4.7 Sources and levels of finance

4.7.1 National Museums and Monuments of Zimbabwe

Funded through:

- An annual grant from the National Government Budget, through the Ministry of Home Affairs.
- Fees and charges
- International donor support

4.7.2 Department of National Parks and Wildlife Management

Funded through the National Parks Statutory Fund, which receives income as follows:

- An annual grant from the National Government Budget, through the Ministry of Environment and Tourism
- Fees and charges

4.7 3 Department of Natural Resources

Funding is through an annual grant from the National Government Budget, through the Ministry of Environment and Tourism.

4.8 Sources of expertise and training in conservation and management

techniques

4.8.1 Principal sources of expertise

There are four principal government departments active in the Matobo Hills in matters of conservation, land management and preservation of historic sites. These are

- National Museums and Monuments of Zimbabwe (NMMZ)
- Rural District Councils (RDCs)
- Department of National Parks and Wild life Management (DNPWLM)
- Department of Natural Resources (DNR)

Each of these bodies have staff based permanently within, or active within the proposed World Heritage Site.

4.8.2 Subsidiary sources of expertise

Other professionally based organisations that operate in the area include:

- Chipangali Wildlife Sanctuary, which has an active research unit in the Matobo Hills area.
- The Biodiversity Foundation for Africa is also involved in research in the Rhodes Matopos National Park.
- Marwell Trust Zimbabwe is currently researching on small antelope within the Rhodes Matopos National Park.
- The Faculty of Environmental Studies at the National University of Science and Technology (NUST)
- The Matobo Conservation Society is engaged in education and research throughout the whole area.
- The Black Eagle Research group has been monitoring the Black Eagle, *Aquila verauxii*, for over forty years.
- The Matebeleland Branch of the Zimbabwe Wildlife and Environment Society also operates in the area.
- The Matebeleland Branch of the Zimbabwe Tree Society likewise takes a keen interest in the hills, conducting a number of field trips into the area.
- The Zimbabwe Ornithological Society, Matebeleland Branch is active in the hills, in conjunction with the other similar interest groups.
- The Bulawayo Aloe and Cactus Society has conducted studies in the area on the indigenous aloe species.
- The Bulawayo Orchid Society conducts regular field trips into the Hills to review indigenous orchid species.
- It should not be forgotten that traditional conservation techniques, as well as protection of specific sites, such as Njelele and other rain making sites, are important sources of expertise. This is passed down from generation to generation and forms an important, source of knowledge, practice and custom.

4.9 Visitor facilities and statistics

4.9.1 Visitor facilities

The National Park, commercial farms and communal lands offer a host of visitor facilities, which include accommodation (hotels, lodges, chalets, camping sites, caravan parks, etc.), picnic sites and offer various recreational activities.

4.9.2 Visitor statistics

The Rhodes Matopos National Park and the cultural sites and monuments in and outside the park have been a favourite destination for many tourists. The Park averages 100 000 visitors annually.

4.10 Property management plan and statement of objectives

The management will be based on the attached Draft management plan, which draws from the following:

4.10.1 Rhodes Matopos National Park

The Department of National Parks and Wildlife Management has a comprehensive development and management programme for the five-year period 2000 to 2004.

4.10.2 Commercial farms – individual farmers have specific plans.

4.10.3 Communal lands - Both the Matobo and Umzingwane Rural District Councils have broad-based programmes in place, in which conservation and restoration of the environment play a significant part. Specific projects include the DEAP programme in Ward 15 of the Umzingwane RDC. (DEAP = District Environmental Action Plan, a UNDP sponsored initiative)

4.10.4 Proposed Management team for the World Heritage Site

NMMZ, DNPWLM, Matobo Rural District Council, Umzingwane Rural District Council, Chiefs and Matobo Conservation Society

4.11 Staffing levels.

For the conservation, maintenance and monitoring of the Matobo Hills, the following stakeholders have these key full-time staff complements:
National Museums and Monuments of Zimbabwe – 60 people;
National Parks and Wildlife Management – 123 people;
Department of Natural resources – 2 people;
Matobo Rural District Council – 1 person;
Umzingwane Rural District Council – 1 person.

5.0 FACTORS AFFECTING THE PROPERTY

5.1 Development Pressures

Tourism has become one of the mainstays of the Matobo Hills area by providing employment. Visitor facilities such as, lodges, recreation and interpretive centers, camping and picnic sites have been established in order to lure visitors to the area. Roads have been provided to improve accessibility and all these developments have had an impact on the environment. With the high number of tourists more such facilities may be needed in future. However, the provision of these facilities is preceded by intensive consultations of stakeholders to ensure that the impacts on the environment are mitigated.

Although the area receives higher rainfall relative to its environs, the rainfall distribution pattern is not conducive to viable crop production. To overcome this, some non-governmental organizations (NGOs), RDCs and the Ministry of Water Resources and Rural Development have embarked on the construction of small-scale dams throughout the Matobo Hills area. These developments are aimed at improving the quality of life of the locals thereby making them appreciate their environment even more.

5.2 Environmental Pressures

Population pressure has increased significantly over the past one hundred years, through natural growth and in-migration. There is no encroachment within the National Park and commercial farms. Because of the congestion in the communal lands of the Matobo Hills area there is a relatively higher level of environmental degradation compared with the protected areas alluded to above. However, the RDCs responsible and other stakeholders are working very closely with the affected communities to minimise and in some cases reverse the situation. Within the communal lands, there is little wildlife left due to the heavy population pressure. It is hoped that the current resettlement programme will result in the decongestion of the Matobo communal areas; a move that is likely to reduce pressure on the existing resources. There is a controlled harvesting of the Grey Mukwa, used to make curios.

The state of conservation of rock art sites outside the National Park has greatly improved through the establishment of CAMPFIRE projects and the educational impact of the outreach programme of NMMZ. Local communities through their RDCs now realize the importance of such sites in the lucrative tourism industry and therefore protect them from graffiti. There have been a few reports of damage caused by children and in rare cases, tour operators who throw water on the rock art to improve the resolution of the paintings. The NMMZ works closely with RDCs, commercial farmers and tour operators to ensure the protection of archaeological and historical sites in the area.

Within the entire region, the greatest threat to the environment after population pressure is that of the encroachment of exotic plants. High on the list is *Lantana camara*, which has established itself in the eastern hills and in parts of the National Park. Both the DNPWLM and the RDCs have ongoing programmes for the eradication of the pest.

The introduction of plots of *Eucalyptus* species in the Matobo Hills area is aimed at reducing dependence on the indigenous tree species by providing timber for both construction of houses and for firewood.

5.3 Natural disasters and preparedness

The Hills are a watershed with rivers flowing towards the north and south. Flooding is restricted to localised rivers bursting their banks for very short periods of time. Approximately every ten years or so, cyclones crossing the Mozambique coast, and traveling inland will result in significant rainfall, but by the time that these reach the Hills, they will have been reduced to tropical depressions, and so are not characterised by destructive winds. However, the last such weather pattern, “Cyclone Eline”, experienced in the area in February 2000 resulted in extensive destruction of property and the environment.

Seasonal fires that burn during the dry winter season are usually controlled. Some sporadic and uncontrolled fires have been recorded but were quickly contained

5.4 Number of inhabitants within the property.

From the 1992 National Population census, the estimated number of inhabitants in the proposed Matobo Hills area is 15 000.

6.0 MONITORING

6.1 Key indicators for measuring state of conservation

The major cultural and natural components of the Matobo Hills area are continuously monitored in order to maintain a reasonable level of state of conservation. The major stakeholders involved in the monitoring process include the Department of National Parks and Wildlife Management (DNPWLM), National Museums and Monuments of Zimbabwe (NMMZ), Chiefs and spirit mediums.

NMMZ archaeologists based at the Natural History Museum in Bulawayo in conjunction with the local communities are responsible for monitoring the state of conservation of all the archaeological and rock art sites irrespective of where they are. NMMZ has established site museums at some archaeological and historical sites and stationed custodians at some sites to improve the presentation to the visitors. The site museums also serve as points where the visitors are made aware of the need to protect and preserve the sites. The custodians are also responsible for the day-to-day monitoring of the archaeological sites in the area.

The number of participants at and visitors to sacred shrines in the Matobo Hills area has steadily increased over the years indicating their fidelity. Chiefs and the local community maintain the state of conservation of shrines within the Matobo hills.

DNPWLM, DNR and RDCs monitor the state of conservation of both flora and fauna under their jurisdiction. The results of NGOs participating in the monitoring of specific environmental components provide an indication of the state of preservation of the environment. In communal areas, the number of CAMPFIRE projects are a useful measure of the state of conservation.

6.2 Administrative arrangements for monitoring the property

The Regional Director of the Western Region administers the archaeological sites in the Matobo Hills area from the Natural History Museum in Bulawayo. However, members of the Monuments Department who are also based in Bulawayo do the daily monitoring exercise. The department is represented in the Matobo Hills area by a number of custodians. The conservation activities of the relevant department are based on the NMMZ Strategic Plan that details the conservation and related research programmes in the Matobo Hills area. Monthly, quarterly, half-yearly and annual reports of the conservation status as well as the activities carried out are produced and these reports are reposited at the NMMZ Head Office in Harare.

The spirit mediums in consultation with the chiefs and the local community have the sole responsibility of monitoring the shrines.

DNPWLM is mandated to take care of Rhodes Matopos National Park.

The DNR and RDCs are responsible for monitoring in both communal and commercial farming areas.

7.0 DOCUMENTATION

7.1 Photographs, slides and video

A video of the property has been attached and photographs are included in the document.

7.2 Management plan

Draft Management Plan for the Matobo Hills area.

7.3 Bibliography

Arnold and Jones, N. 1919. Notes on the Bushman cave at Bambata, Matopos. *Transactions of the Rhodesian Scientific Association* **17 (1)**: 5-19.

Bailey, T. N. 1993. *The African leopard: a study of the ecology and behavior of a solitary felid*. Colombia Univ. Press, New York

Barnes, D.L. 1979. Cattle ranching in the semi-arid savannahs of east and southern Africa. In: *Management of Semi-Arid Ecosystems* (ed. B.H. Walker), Elsevier. Amsterdam.

Barry, R. E. and Mundy, P. J. 1998. Population dynamics of two species of hyraxes in the Matobo National Park, Zimbabwe. *African Journal of Ecology* **36**: 221-233.

Branch, W. R. 1992. *Field Guide to the Snakes and Other Reptiles of Southern Africa*. Struik Publishers, Cape Town.

Broadley, D. G. 1983. *FitzSimons' Snakes of Southern Africa*. Delta Books (Pvt.) Ltd., Johannesburg and Cape Town.

Child, G. & Savory, C. R. 1964. The distribution of large mammal species in Southern Rhodesia. *Arnoldia (Rhodesia)* **1(14)**: 1-15.

Cooke, C. K. 1963. Report on excavation at Pomongwe and Tshangula caves, Matopo hills, Southern Rhodesia. *Southern African Archaeological Bulletin* **18(71)**: 73-157.

Cooke, C. K. 1969. *Rock Art of Southern Africa*. Books of Africa (Pvt.) Ltd., Cape Town, South Africa.

Daneel, L. 1970. *The God of the Matopos Hills*. Mouton, The Hague.

Deacon, J. 2000. *Common Heritage: A Comparative Analysis of the Rock Art of Southern Africa* (unpublished paper).

Fagan, B. 1964. *A Guide the Victoria Falls*. Longmans, Salisbury.

Fey, V. 1964. The diet of leopards. *African Wildlife* **18**: 105-109

Fountain, A. J. 1981. The geology of an area south of Bulawayo. *Annals of the Zimbabwe geological Survey* **7**: 1-9.

Fountain, A. J. 1982. On the geology and structure of the country around Bulawayo. *Annals of the Zimbabwe geological Survey* **8**: 9-20.

Gargett, V. 1990. *The Black Eagle: A Study*. Russel Friedman Books, Halfway House, Johannesburg.

Garlake, P. 1987. *The Painted Caves: An introduction to the prehistone Art of Zimbabwe*. Modus Publications, Harare.

Garlake, P. 1995. *The Hunters' Vision: The pre-histone Art of Zimbabwe*. Zimbabwe Publishing House, Harare, Zimbabwe.

Garlake, P. 1997. The first eight years of Rock Art Studies, 1890-1970, in Gilbert Pwiti. *Caves, Monuments and Texts: Zimbabwean Archaeology Today*. Uppsala, Sweden.

Garson, M. S. 1995. The geology of the Bulawayo-Greenstone Belt and the surrounding granitic terrain. *Bullettin of the Zimbabwe geological Survey* **93**: 83-109.

Goodall, E. 1959. The Rock Paintings of Mashonaland. In: R. Summers (ed.). *Prehistoric Rock Art of the Federation of Rhodesia and Nyasaland*. National Publication Trust Zimbabwe.

Grobler, J. H. & Wilson, V. J. 1972. Food for the leopard *Panthera pardus* (Linn.) in the Rhodes Matopos National Park, Rhodesia. *Arnoldia (Rhodesia)* **5(35)**: 1-10.

Huntley, B. J. and Walker, B. H. (eds.). 1982. *Ecology of Tropical Savannahs*. Springer Verlag, Berlin.

Jones, N. 1933. Excavations at Nswatugi and Madiliyangwa, and notes on new sites located and examined in the Matopos hills, Southern Rhodesia 1932. *Occasional paper of the National Museums, Southern Rhodesia* **1**: 1-44.

Kumirai, A., Muringaniza, S. J. and Munyikwa, D. 2000. Victoria Falls/Mosi-oa-Tunya World Heritage site (Zambia and Zimbabwe): Issues and Values. *Authenticity and Integrity in an African Context: Proceedings of the Expert Meeting-Great Zimbabwe-26/29 May 2000*: 108-113.

Lightfoot, C. J. 1981. The history and natural resources of the Matopo Hills. *Zimbabwe Science News* **15(11)**: 213-217.

Myers, N. 1976. The status of the Leopard and Cheetah in Africa. In: R.L.Eaton, (ed.).

The World's Cats, Contributions to Status, Management and Conservation. University of Washington, Seattle, USA. Vol. 3 (1): 53-69

Ranger, T. 1999. *Voices from the Rocks: Nature, Outline and History in the Matopos Hills of Zimbabwe*. BAOBAB, Harare.

Smith, R. M. 1977. Movement patterns and feeding behaviour of leopard in the Rhodes Matopos N.P., Rhodesia. *Arnoldia (Rhodesia)* **8(13)**: 1-16.

Taruvinga, P. 1997. The state of the Art: Rock Art in Zimbabwe. *INORA*, **No 16**: 27-31.

Tredgold, R. 1956. *The Matopos*. Federal Department of Printing and Stationery, Salisbury.

Turnbull-Kemp, 1967. *The Leopard*. Timmins, Cape Town.

Vernon, C. J. 1967. Birds of the Matopos, Rhodesia. *South African Avifauna Series* **48**: 1-24.

Vinnicombe, P. 1972. Motivation in African Rock Art. *Antiquity* **46**: 124-133.

Walker, N. 1987. The dating of Zimbabwean Rock Art. *Rock Art Research* **4(2)**: 137-149.

Walker, N. 1995. *Late Pleistocene and Holocene, Hunter-gatherers of the Matopos: An Archaeological Study of change and continuity in Zimbabwe's societies.* Archaeological Upsailiensis, Uppsala Sweden.

Walker, N. 1996. *The Painted hills, Rock of the Matopos*. Mambo Press, Zimbabwe.

Walker, N. 1998. King of foods Marula economics in the Matopos. *South African Wildlife* **43(6)**: 281-285.

White, F. 1978. The Afromontane Region. In: M.J.A Werger (ed). *Biogeography and Ecology of Southern Africa*. W. Junk, The Hague.

Wild, H. 1956. Flora of the Matopos. In: R. Tredgold (ed). *The Matopos*. Government Printer, Harare.

Wilson, V.J. 1981. *Lions, Leopards and Lynxes: Twenty Years with the Wild Cats*. Books of Zimbabwe Publishing Co., Bulawayo.

7.4 Address where inventory records and archives are held

The Natural History Museum of Zimbabwe
Leopold Takawira Avenue/Park Road, Bulawayo, Zimbabwe

Copy held by: Zimbabwe Commission for UNESCO

Department of National Parks and Wildlife Management
Matobo Conservation Society

8.0 SIGNATURE ON BEHALF OF THE STATE PARTY, REPUBLIC OF ZIMBABWE.

_____
Dr. S. Mumbengegwi
Minister of Higher Education and Technology

_____
Date

Management Plan

for the Proposed

MATOBO HILLS WORLD HERITAGE AREA

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- Matobo Conservation Society
- Ministry of Local Government, Public Works and National Housing
- Ministry of Higher Education
- UNESCO Regional and National Office

Advisor
Dr. Weber Ndoro – Senior Lecturer, *University of Zimbabwe*

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1.0 INTRODUCTION

For more than 500 000 years, Matobo Hills landscape has hosted different communities that interacted with the natural environment in many different ways. From Stone Age period to the present, there is ample evidence that designates the area as a venerated landscape. The rock art painted by the San people supposedly while they were in a trance, a religious phenomenon known as Shamanism, and the existence of religious shrines all over Matobo Hills area are clear testimony that the cultural landscape has maintained and sustained its religious status for the greater part of its human occupation. Although rock art painting stopped with the in-migration of iron using communities, Mwari/Mwali religion has persisted to this day thus manifesting Matobo Hills area as an associative cultural landscape. The powerful religious and artistic associations of the peoples of the Matobo Hills area with their natural environment over a very long period of time are quite evident. The natural environment has benefited enormously from these traditional/religious beliefs and practices especially in the area of conservation while providing the ideal ingredients for the development and refinement of the cultural and economic activities of the communities. The Matobo Hills area is probably one of the richest Cultural Landscapes in the world.

The natural landscape comprises scenic geological formations providing a wide diversity of niches supporting a variety of flora and fauna. The geomorphology of the Matobo Hills gives rise to microclimates and soil conditions that change markedly over short distances. The resultant landscape comprises extensive open grasslands with groups of kopjes (rock outcrops) interspersed with wetlands (marshes and streams). The huge whalebacks (dwalas) and numerous caves also contribute to the high diversity of habitats in Matobo Hills. The combination of physical and climatic factors has resulted in the creation of special habitats such that in spite of their situation in dry semi-arid savannah, the Matobo Hills represent a western extension of the ranges of many species characteristic of the higher rainfall areas in eastern Zimbabwe and parts of Mozambique (Grobler & Wilson 1972).

The ecological complexity of this landscape is expressed in the unusual density and diversity of predators. The area possesses a great variety and large population density of predator species, especially raptors and leopards. It is regarded as the most important sanctuary for birds of prey, and includes the largest population of Black Eagle *Aquila verreauxii,* to be found anywhere in the world. The hills also possess one of the largest populations of leopard *Panthera pardus*, and are an important sanctuary and research centre for two endangered rhinoceros species *Ceratotherium simum* and *Diceros bicornis*. The more than 210 tree species and 17 species of wild orchid give the area a botanical significance.

It is this combination and diversity of flora and fauna and its long history of interaction with mankind that makes the Matobo Hills area a cultural landscape worthy of special attention and preservation. The conservation of heritage in the Matobo Hills area is carried out in accordance with the dictates of traditional practices and beliefs and pieces of respective legislation. The success of conservation in the proposed Matobo Hills World Heritage Landscape (MHWHL) depends on the co-operation of the various

stakeholders.

The following therefore constitute the objectives of this management plan:

- To identify and define the values of Matobo Hills area
- To provide guidance for the sustainable management of the proposed MHWHL for the next 5 years
- To assist in the standardisation and regularisation of the conservation practices of various stakeholders towards the preservation of the authenticity of the cultural heritage and ecological integrity of the MHWHL
- To help elevate the standard of living of the inhabitants of the area through sustainable utilisation of resources
- To present MHWHL as a competitive tourist destination.

2.0 CONTEXT

2.1 Geographical

The Matobo Hills area is a semi-arid region that lies in agro-ecological zone III. It receives an annual rainfall of about 600-625 mm. The rainfall is not evenly distributed throughout the year falling mainly between October and March. The peak period is January to March with an average of 322 mm followed by October to December with an average of 232.75 mm. Little or no rain falls during the cooler months of April to September, averaging some 32.75mm (Rhodes Matopo National Park Management Plan 2000-2004). Owing to the considerable run-off from the granite hills, water is plentiful throughout the year (except in drought years) in dams, springs and streams. Daily mean temperatures tend to be comparatively high while the mean night daily range can be as low as 8.6 degrees Celsius, making the nights relatively cool. High temperatures are recorded during the months of September to November, with October normally being the hottest month, having a mean monthly temperature of about 26.3 degrees Celsius, and the mean maximum and minimum temperatures of 32.8 degrees Celsius and 21.9 degrees Celsius and a daily range of 11 degrees Celsius. Temperatures tend to fall during the months of December to March due to overcast days. The period May to mid-August experiences temperatures between 20.4 and 14.6 degrees Celsius. This period is also characterised by cloudless days and cold nights often with frost. Cold cloudy spells with drizzle (known locally as "guti") occur in winter.

The proposed Matobo Hills World Heritage Landscape (MHWHL) is located in Matabeleland South Province of the Republic of Zimbabwe. It measures about 3100km^2 extending from 28^0 00^1 E to 29^0 00^1 E and from 20^0 25^1 S to 20^0 45^1 S (Figure 1). The site is part of the Matobo granite landscape, which extends almost to the Botswana border in the west while to the east it merges with the Mbalabala granite pluton. In deciding the boundary of the proposed World Heritage Landscape however, consideration was given to the administrative implications and practical nature of the proposed boundary. In order to strike a balance a decision was made to use both natural and man-made features such as drainage, roads and administrative boundaries to demarcate the proposed area for nomination. As a result only two administrative districts, Matobo and Umzingwane were considered. Although the area west of the Shashani River is an extension of the Matobo granite and falls under the Bulilimamangwe District, it was excluded from the proposed

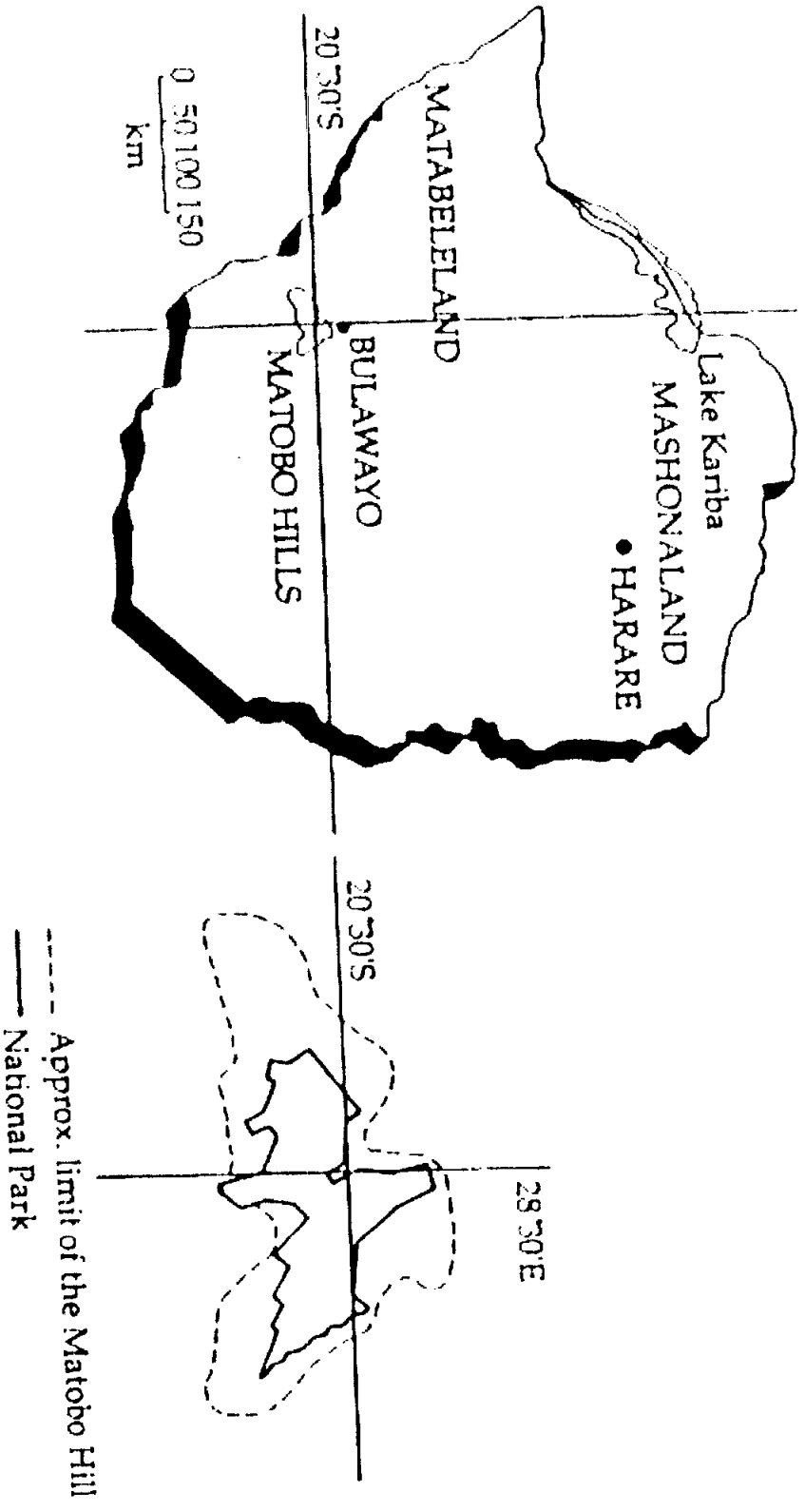


Figure 1: Regional map of the Matobo Hills area

site in order to limit administrative problems. Although there would be need for a buffer zone contingent to a World Heritage Landscape, in the case of the Matobo Hills cultural landscape where there are people living within engaged in activities similar to those taking place outside the proposed area, it was decided not to have a buffer zone. Thus the Shashani River marks the western boundary of the proposed MHWHL. The southern boundary coincides with the southern boundary of the Khumalo and Matobo Communal Lands, extending along the northern boundaries of three commercial properties. The eastern boundary follows the Matobo Communal Land boundary, the Lumane River, and an established road. In the north, the boundary makes use of Maleme and Ngezi rivers, the Bulawayo-Kezi road and some commercial farm boundaries (Figure 2).

The following list of properties are incorporated in the proposed Matobo World Heritage Site: Rhodes Matopo National Park (also known as the Matopo National Park); the Lake Matopos Recreational Park; portions of the Rhodes Matopos Estate; Gulati, Khumalo and Matobo Communal areas in Matobo Rural District; southern portion of Mzinyathini and western portion of the Nswazi Communal areas both of Umzingwane Rural District and some commercial farms within the Matobo Rural District.

The name Matobo derives from the Kalanga word "Matombo" meaning rocks. Early missionaries who could not pronounce Matobo later introduced the names Matopo Hills or Matopos. However, Matobo Hills is now more acceptable than Matopo or Matopos. The local people also refer to the area as Matojeni.

2.2 Historical

The rock shelters of the Matobo Hills area date from the latter part of the middle Pleistocene (700 000 to 125 000 BP) through the Late Pleistocene (125 000 to 12 000 BP) to the end of the Holocene (12 000 to the present) (Walker 1995). Some of these rock shelters were important settlement sites with evidence of Early, Middle, Later Stone Age, Iron Age and the Historical Period activities in the form of stone tools, rock paintings, iron implements and historical remains, respectively. Some national events that contributed to Zimbabwe's statehood are well documented as historical icons in the Matobo Hills area. Notable among these are sites that relate to the use of the Matobo Hills area as refuge for the ancestors of the present Ndebele and Shona ethnic groups during the Ndebele and Shona uprisings against colonial settlers. Some of the icons of the succeeding colonial era include the important graves of King Mzilikazi and Cecil John Rhodes, shrines commemorating fallen heroes of the 2nd World War and many *indaba* sites.

2.3 Cultural

The Matobo Hills area has always played a very important role in lives of past and contemporary communities. According to Ranger (1999) people of the Matobo "value their special relationship to a unique environment, their ownership of shrines, their very particular form of agriculture"; all these associated with the Matobo Hills area. It is these intangible values that have helped to maintain close links between the indigenous communities and the Matobo Hills area. People converge on these places to pray for rainfall or ask for good health. The tutelary functions of Mwari and the ancestral spirits

World Heritage Boundary and Buffer Zone

WH Buffer
World Heritage Boundary
Monuments

N

5 0 5 10 Km

Produced By Richard Nyatoti
For World Heritage

are believed to be enhanced through such gatherings where individuals or their priests and priestesses commune with them.

Njelele is the most important shrine in the Matobo Hills area and people from as far as South Africa, Namibia, Botswana and Lesotho join their Zimbabwean counterparts there to pray for rains, good harvests, good health, peace and guidance in many national and regional issues.

3.0 DESCRIPTION OF THE MATOBO HILLS AREA

This section defines the constituent physical, biological and cultural characteristics of the proposed Matobo Hills area whose management the plan is addressing.

3.1 Natural attributes

The natural attributes of the Matobo Hills area have been the main ingredient of the current cultural landscape. These comprise geological formations, landforms resulting from geomorphological processes, which have given rise to a wide diversity of niches supporting a variety of flora and fauna.

3.1.1 Geology and Geomorphology

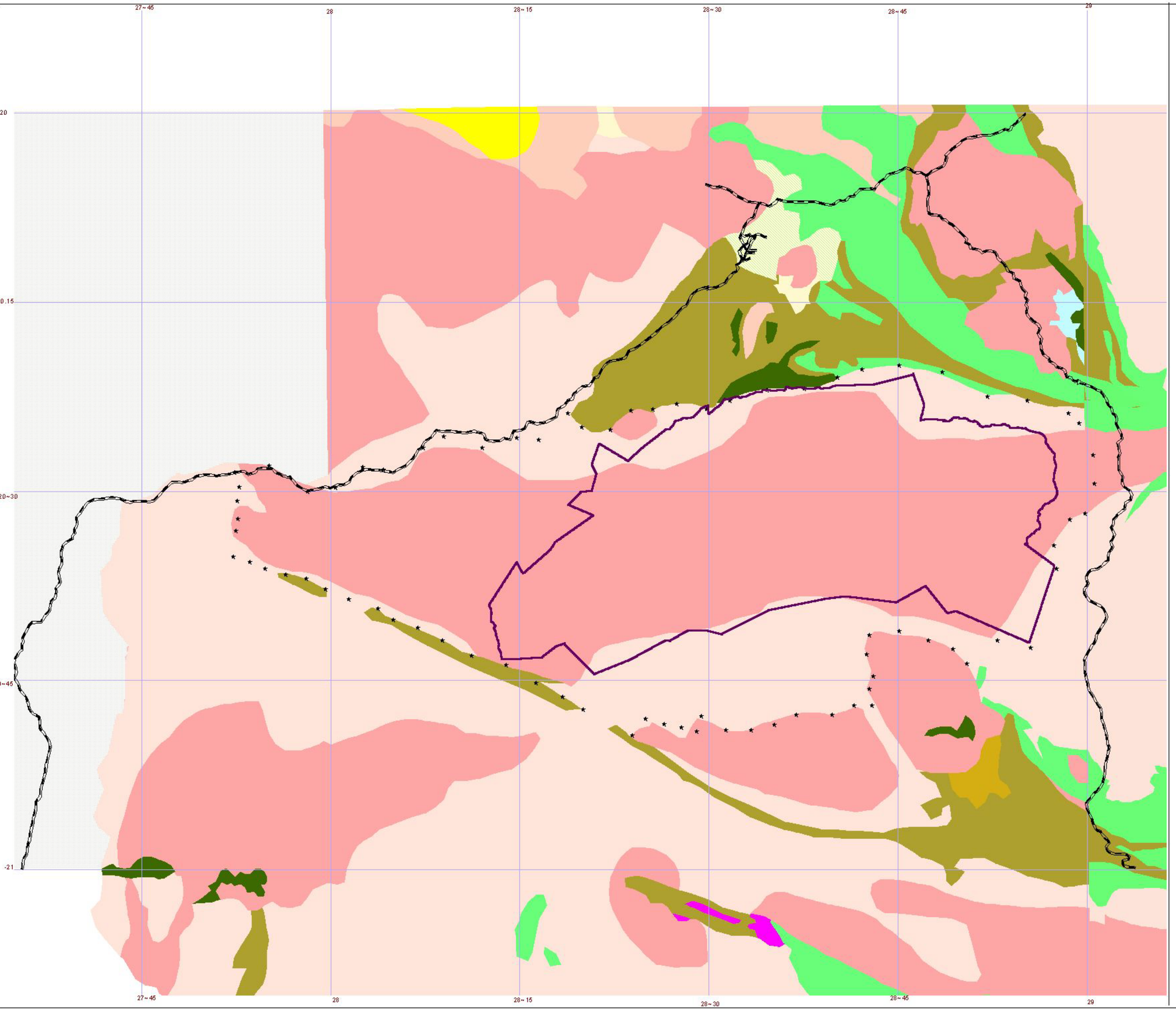
The granitic shield of Zimbabwe covers at least 70% of the country. The resistant rocks of the granitic shield form an imposing relief of varied landforms. The batholith of the Matobo Hills area forms the southwest margin to the granitic shield. The Matobo Granite is approximately 2.65 billion years old and is an irregular oval body with maximum east-west and north-south dimensions of about 100 km and 30 km respectively (Figure 3).

The imposing geomorphology of the Matobo Hills is expressed in the granitic shield. The geology and geomorphology of the Matobo region is outstanding; the most distinctive landforms are the inselbergs, whalebacks, dwalas and castellated hills (commonly termed kopjes). It is rare to find so profuse an expression of granitic landforms in so limited an area, expressed in the complex ecology of a landscape structured by the underlying granitic rocks. The singular ecological feature is the complexity of habitats available to organisms. The ecological complexity of this landscape is expressed in the unusual density and diversity of predators.

Weathering and erosion of the Matobo Hills rocks has generated a distinct system of landforms in the resultant drainage and relief (Figures 4 and 5). These landscape patterns are most feasibly construed in terms of differences in spatial scale. At the largest scale is the network of large river valleys (approximately twelve in total), which in turn have structured smaller landforms, notably the relief of dwalas and kopjes. These form the "sea of hills" that dominates the landscape. These are the residual detritus of millions of years of weathering and erosion of the parent granites. Finer scaled patterns in smaller granitic landforms (including gnamma, tafoni and crevices) contribute greatly to the complexity of the landscape. This complexity accounts for the plethora of habitats available in the Matobo ecosystems. The varieties of rock crystals in the granitic rocks comprise the finest grain in complexity of the Matobo landscape. Sub-aerial weathering has produced spherical caves, gnamma, flared slopes, mammellated tafoni, among many other modifications to exposed granitic surfaces. It is at this scale of the Matobo landscape that perhaps the greatest diversity of habitats is generated for multicellular plants and animals, including mammals. One notable influence is the cave shelters for humans over the millennia. This has resulted in one of the greatest rock art galleries in the world.

Another contribution to landscape heterogeneity at this scale is the inclusions and secondary features exposed on and in granitic rocks. These range from xenoliths (some

Geology



World Heritage Boundary
WH Buffer
Railway Line

Geology
- Aeolian Sands
- Alluvium and other Superficial Deposits
- Andesitic and Dacitic Metavolcanics
- Basaltic Metavolcanics With Intercalated Metasediments
- Dam
- Dolorites
- Gneiss Complex
- Grit Sandstones and Siltstones
- Metasediments Felsic Volcanics
- Paragneiss Metasediments
- Phylites and Minor Quartizites
- Serpentinite and Pyroxenites
- Young Intrusive Granite
- No Data

N

10 0 10 Km

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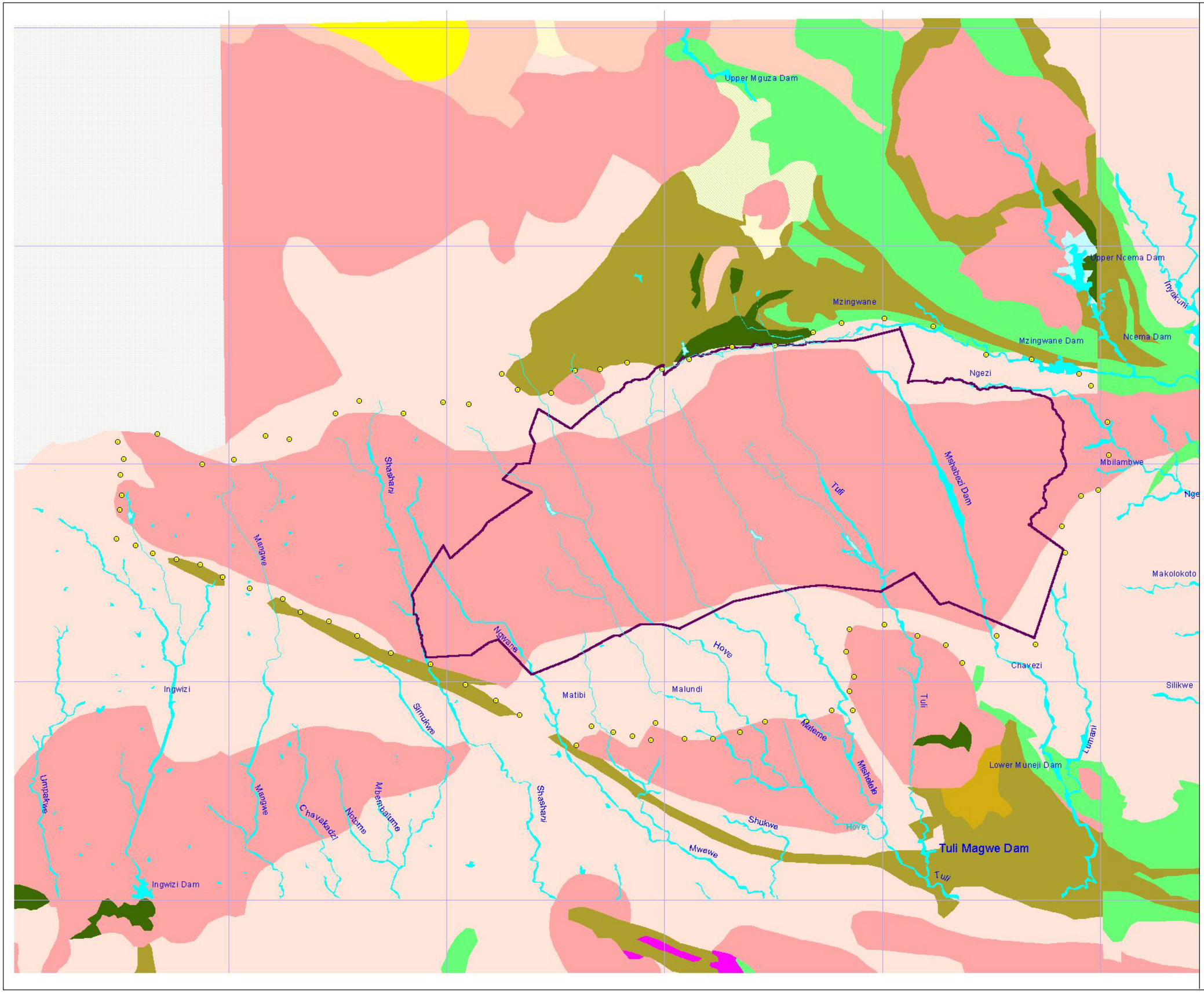
Geology With Major Drainage Patterns



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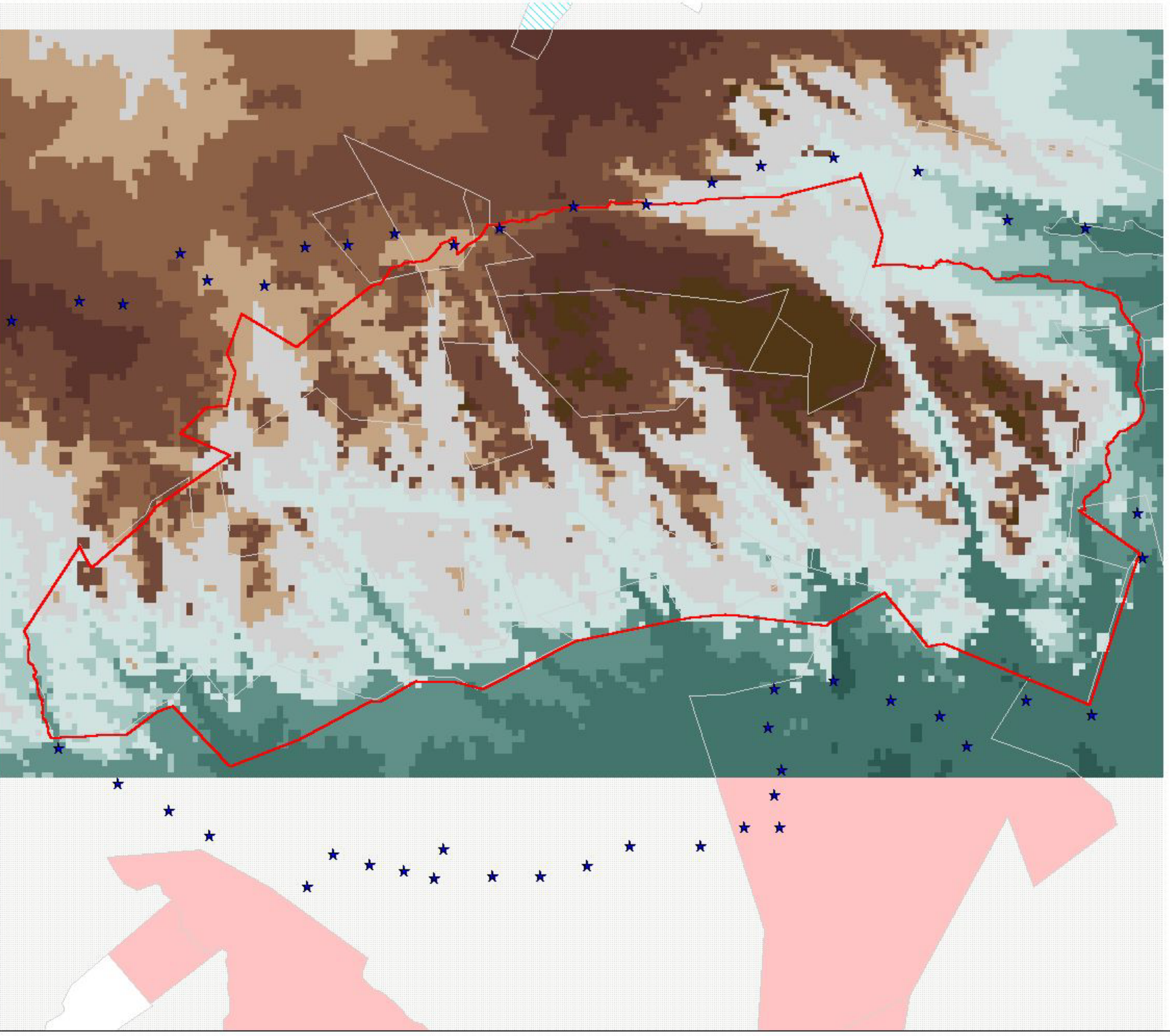
Surface Relief Model of Matobo Conservation Area



Buffer Zone
World Heritage Boundary
Cadastral Boundary

Digital Elevation Model Of Matobo Area

- 900 - 1020
- 1021 - 1100
- 1101 - 1142
- 1143 - 1180
- 1181 - 1240
- 1241 - 1300
- 1301 - 1340
- 1341 - 1380
- 1381 - 1420
- 1421 - 1460
- 1461 - 1560

Commercial Farms
Communal Land
Monument

N

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many cubic metres in volume) to quartz veins and pegmatite. In some exposed granites, the constituent minerals have been poorly mixed; such that dark patches appear in the lighter coloured feldspar and quartz dominated granite. The mafic inclusions appear to be rich in biotite (mica rich) or hornblende.

The obvious fine scale products of geological processes are the soils. These are predominantly sandy, but vary in clay content (derived from feldspars) depending on how the mineral content has been altered by secondary processes besides primary weathering. Matobo soils rich in clays are localized in weathered seeps and at the bases of catenas.

Soils have been differentiated across the catenas. There are some pronounced differences due to geochemical differences between parent rocks. One notable influence is sodium content of the soils, and the parent minerals (potassium or sodium rich feldspars) - discussed below. This difference is seen in some of the gneissic rocks abutting (and often intermingling with) the granites.

Commonly known as seeps, the bases of the larger drainage systems are undergoing deep weathering by biochemical and inorganic chemical agents. These agents include microbes, and plant chemicals, and biochemical products of decomposition processes in the landscape. The result is a more subtle contribution to the diversity of landforms in the Matobo Hills. Seeps and underground wetlands vary from submerged rocks to masses of decomposed granite. They play a key role in the hydrological processes in the landscape. Their biodiversity (apart from plants, including grasses and orchids) has not been explored. The diversity of microbes is likely considerable, and their ecological and geomorphological influences even more important.

3.1.2 Ecology

The Matobo Hills area, lying in the Zambezian savannah biome under a generally dry climate, has a very high diversity of vegetation types within a comparatively small area including miombo woodlands and afromontane vegetation. Most of these are on soils derived from granite. This diversity, ranging from arid, desert-like slopes of large granite inselbergs to small ephemeral pools and wetland patches on peat, and from dry woodland to semi-forest in gullies, is a product of the diversity of granite landforms and differential exposure to moist southeastern airflow during the dry season. The mosaic nature of the vegetation and the diversity of species are also maintained by the patterns of past and present human impact.

Small temporary pools support an ephemeral flora of tiny annual plants. Occasionally there are wet flushes on rock surfaces. These are comparatively species-rich, but a rare habitat on rock domes. Vegetation on the rock domes is dominated by very drought-tolerant flowering plants. Zimbabwe has 28 species of these drought tolerant plants, 15 of which are found in the Matobo Hills area including *Myriathamnus flabellifolius*, *Coleochloa setifera* and *Xerophyta villosa*. These plants form small communities a metre or so wide on skeletal soil in hollows.

At the base of the rocky slopes nutrients derived from disintegrating and weathering rock

and moisture are much more available. Here dense woodland can form, consisting of such trees as *Heteropyxis dehniae*, *Ptaeroxylon obliquum*, *Pterocarpus rotundifolia* and *Olea europea africana*, and shrubs such as *Strychnos matopensis*. On the pediments the woodland is less dense and rich, being dominated by, *Pterocarpus rotundifolia*, *Burkea africana*, *Peltophorum africanum*, *Pseudolachnostylis maprouneifolia* and *Terminalia sericea*, all species of dry woodland. There are significant patches of miombo woodland dominated by *Julbernardia globiflora* or *Brachystegia glaucescens* in moister sites in the eastern Matobo Hills area where fungal diversity is very high. The valley bottoms are often open with sluggish drainage (vleis) and support dense stands of tall grasses, including *Hyparrhenia*. Small wetlands are also found on the upland plateaux and have a rich flora of small herbs, many aquatic, otherwise rarely encountered this far west in the continent at this latitude.

Some of the plant species known to be endemic to the Matobo Hills or the surrounding granite area are *Lobelia lobata* (herb), *Cyphostermma milleri* (climbing herb), *Maytenus heterophylla puberula* (spiny shrub), *Triaspis dumeticola* (shrub), and *Turrea fischeri eylesii* (shrub). In addition, the Matobo supports a significant portion of the population of a further nine species, one of which is *Cyathea dregei*, the tree fern, which has its western-most distribution in the Matobo Hills. A point of importance is that the Matobo Hills although situated in an arid region, supports the western-most populations in southern Africa of a number of mesic (moisture-requiring) plant species including the royal fern *Osmondo regalis*, the cabbage tree *Cussoma spicata*, the coral tree *Erythrina latissima* and *E. lysistemon* as well as the tree fern, *Cyathea dregei*. It is also the eastern most limit of *Ficus verruculosa*.

A number of plant species were first described from specimens collected in the Matobo Hills area. Currently accepted species/subspecies, the type specimens (holotypes) of which are from the Matobo area include: *Strychnos matopensis*, *Eriocaulon matopense*, *Maytenus heterophylla puberula*, *Lobelia dentate*, *Triaspis dumeticola*, *Turrea fischeri eyelsii*, *Streptocarpus eylesii eylesii*, *Abutilon matopense*, *Cyphostermma milleri*, and *Elaedendrom matabelicum*.

The Matobo area is particularly rich in lichens with 78 recorded species. A high proportion of the country's species in the genera *Peltula*, *Parmotrema* and *Acarospora* has been recorded here. The high diversity of lichens growing on rocks is a reflection of the high number of microhabitats on the rock domes. Such a high diversity of lichens including some colourful ones, adds to the scenic interest and impact (Figure 6). The lower parts of the hills have a lichen flora more typical of the Zimbabwe middle and highveld, while the elevated peak support species more typical of the montane region of Eastern Zimbabwe. The largest scorpion in the world, the rock scorpion, *Hadogenes troglodytes*, which grows to 21cm, and preys on other invertebrates such as millipedes and grasshoppers is found in the Matobo Hills area.

About 400 of the 674 Zimbabwean bird species occur in the Matobo Hills and some of these do not occur anywhere in the adjacent districts except as visitors or occasional wanderers. Of the 43 protected species of birds of Zimbabwe, 35 are found in Matobo

Hills. Matobo Hills have one of the highest density and diversity of raptors in the world, with 33 breeding, 19 occurring but not known to breed and 7 vagrants. Of these 15 are eagles.

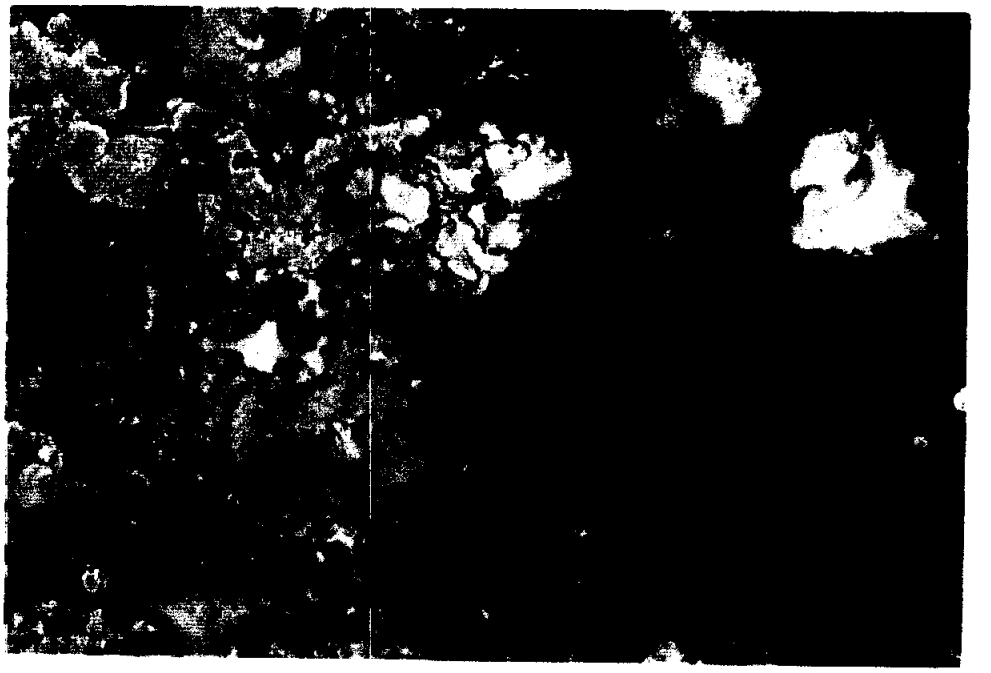


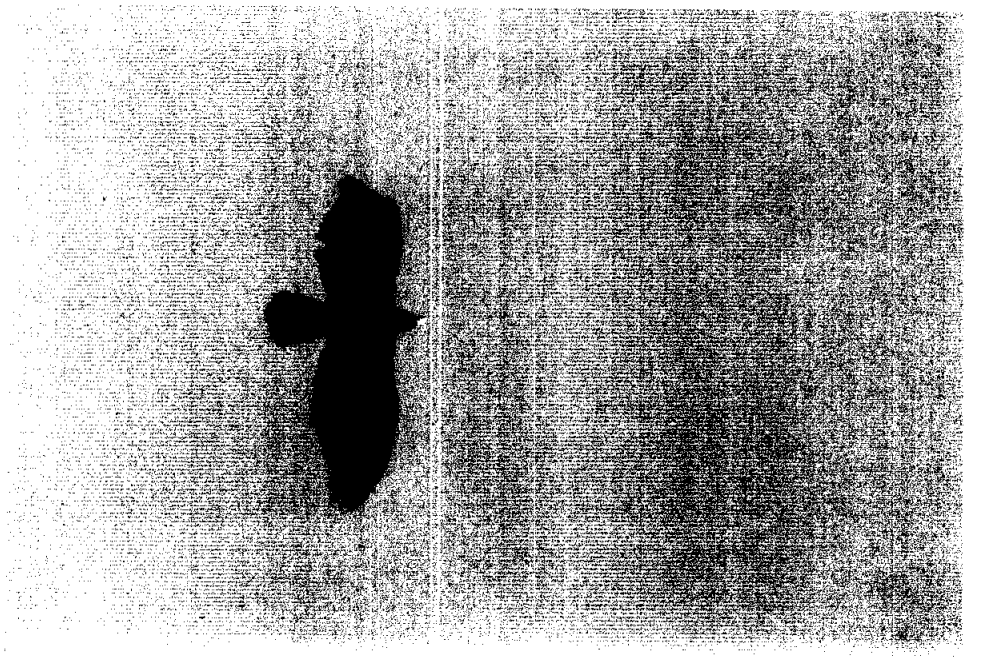
Figure 6: Lichens on Matobo granitic rock

To put this diversity into context it is worth noting that the whole of Europe has only nine eagles, South America six, North America two and Australia three. In Idaho, United States of America, an eight-year study revealed 27 species of raptors and it was decided to recommend to the President and Congress for preservation of the area. No doubt the Matobo Hills with perhaps the highest density of raptors in the world (Gargett 1990) qualify for preservation at an international level.

Two raptor species have received special attention over the years: Mackinder's Eagle Owl *Bubo capensis mackinderi*, and the Black Eagle *Aquila verreauxii* (Figure 7). The former is currently considered a subspecies of the Cape Eagle Owl, which spans all of southern Africa, but is of taxonomic importance in that the Matobo population is isolated from the rest of the species in its southern African range (Irwin 1981). Preliminary work suggests that this population may be sufficiently distinct from the rest of the southern African birds to merit special study and consideration as a full species. The Black Eagle on the other hand, has been monitored for close to 40 years for breeding and other activities in Matobo (Gargett 1990). This is the longest running eagle study in the world. Matobo Hills support an unusually high density of Black Eagles.

3.1.3 Predator prey interactions

Predator-prey linkages are the prime movers of energy through food chains. In the Matobo Hills, a couple of predator-prey relationships are quite conspicuous because of the animal densities involved. While the predator spectrum includes leopards, raptors and



a)

b)

Figure 7: a) Black Eagle and b) MacKinder's Eagle Owl

snakes, an interesting observation is that dassies are a significant element of the prey base. Notably, dassies have no noticeable defence mechanism, behaviourally or otherwise, save for high birth rates.

Important herbivores of Matobo Hills include the two largest herbivore residents, the rhinoceros species *Diceros bicornis* and *Ceratotherum simum* (Figure 8) and two of the smallest resident species, the rock dassy *Procavia capensis* and the yellow spotted hyrax *Heterohyrax brucei* (figure 9) that abound in the Matobo Hills (Barry and Mundy 1998). Hyrax population density in the Matobo Hills is considered one of the highest in the region (Barry and Mundy 1998) and these are key to the larger predators. Other herbivores such as the klipspringer *Oreotragus oreotragus*, the common duiker *Sylvicapra grimmia* and the steenbok *Raphicerus campestris* also occur in Matobo Hills (Smith 1977). In all, thirteen species of antelope and 25 of rodents are found in Matobo Hills. This diversity of herbivores provides major prey species for vertebrate predators such as leopard, baboon, python, black mamba, raptors and humans.

Figure 8: A rhinoceros in the Rhodes Matopo National Park IPZ

Black Eagles *Aquilla verreauxii* are known to defend large territories and an area the size of Matobo Hills would support only a few breeding pairs. However, in the Matobo the eagles nest at very close proximity with more than 70 pairs nesting in the 100km by 30km area. This is attributable to the abundance of dassy populations that comprise 98% of the prey of the Black Eagle (Barry and Mundy 1998).

Other raptors of importance in Matobo Hills are listed in Appendix 1. The combined breeding density of diurnal and nocturnal raptors was estimated at 76 pairs per 100 square kilometres. This huge concentration of raptors in Matobo Hills is closely related to the availability of a high diversity and density of niches and suitable nest sites due to the

a)

b)

Figure 9: Dassies from the Matobo Hills area, a) Yellow-spotted dassy and b) Rock dassy

special geomorphology of the area, on the one hand. On the other hand and also closely linked to the geomorphology is the unusually high population of prey species, especially small mammals, birds and reptiles.

The leopard *Panthera pardus* is the biggest predator occurring in the Matobo Hills (Figure 10). Generally regarded as being widespread throughout Zimbabwe (Child & Savory 1964), in the Matobo Hills it is now primarily confined to the Rhodes Matopo National Park. It is the most adaptable predator in Africa and in the Rhodes Matopo National Park; its food spectrum covers about 19 different prey species. Small mammals, especially the dassies (*Procaviidae*), comprise about 69% of the Matobo Hills leopard's diet (Grobler & Wilson 1972; Smith 1977).

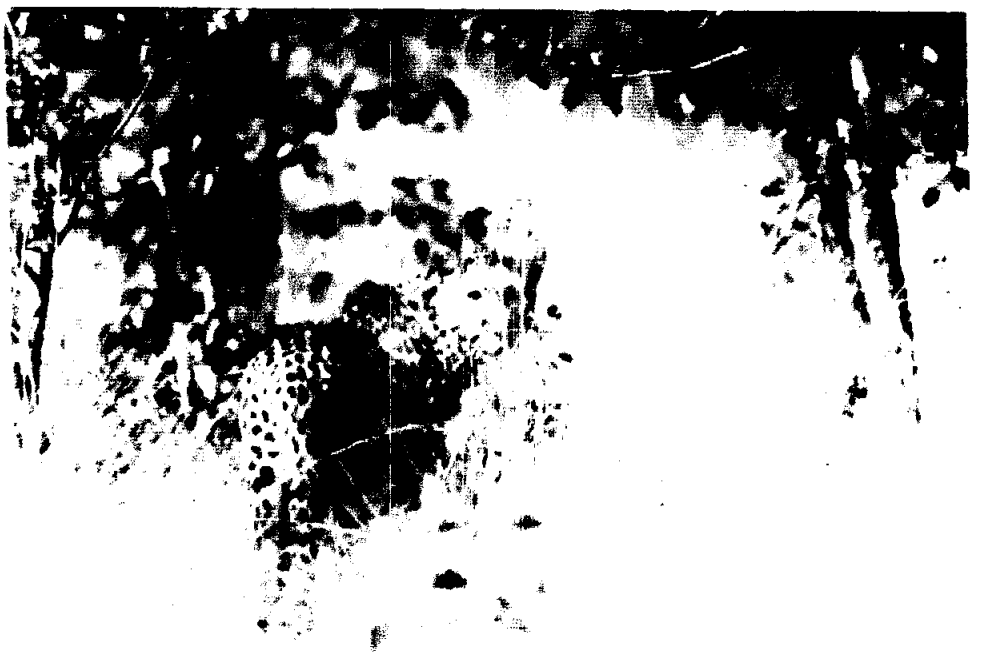


Figure 10: The African leopard

3.2 Cultural attributes

The presence of a mosaic of highly varied habitats in the Matobo Hills area, including caves, whalebacks, patches of bare rock, broken rock, wooded slopes, forest stands, grasslands, granitic sponges, rivers and aquatic vegetation has given rise to the establishment of a self-sustaining cultural landscape.

The diversity of the cultural patrimony in the Matobo Hills area bears testimony to the intertwined relationship between man and the natural environment. There is evidence of a long sequence of human occupation in the Matobo Hills area, with breaks during the coldest and driest periods (Walker 1995). The long history of occupation (from Stone Age to Historical period); the rich biodiversity, the awe-inspiring geological landscape and the extant living traditions define the Matobo Hills area as one of the most important cultural landscapes in Zimbabwe and the sub-region. A symbiotic relationship still exists between the indigenous people (local communities) and the hills.

3.2.1 Living traditions and the Intangible Heritage

The concept of living traditions encompasses the places of worship, beliefs and practices of the local people.

3.2.1.1 Sacred Shrines

Among the important traditional shrines in the Matobo Hills area are Njelele, Dula, Zhilo, Ntunjambila, Wirirani, and Manyangwa, of which Njelele is the highest shrine (Figure 11). Njelele is situated west of Matobo National Park in the Khumalo communal area about 100 km. south of Zimbabwe's second largest city, Bulawayo. The site itself is a rock outcrop similar to hundred others in the Matobo. The outcrop is located on a mountain range that runs east west. Before getting to the site one passes through a well maintained forest which stretches for more than 500 metres before being interrupted by modern settlements. Within this forest is a variety of plants and wildlife. No human activities are allowed in the area. The tangible heritage is therefore benefiting from the sacredness of the place.

These shrines represent the authority of God (Mwari/ Mwali). The voice of Mwari is believed to be heard from the rocks. Mwari of the Matojeni has attracted the attention of politicians, laypersons, missionaries and scholars in both the past and the present (Ranger 1999). The integrity of traditional places of worship was negatively affected by the arrival into present Zimbabwe by groups of people who did not empathise with them. Many shrines and sacred places were desecrated and the culture of taking care of the tangible heritage waned in the process. In Zimbabwe today the poor state of the environment (the tangible heritage) is blamed on ignorance, overpopulation, overgrazing and several other woes. In the Matobo Hills area the indigenous traditional religious beliefs and practices (intangible heritage) were and still are conducive to the preservation of the tangible heritage. People converge on these places to pray for rainfall or ask for good health.

The Kalanga often refer to Njelele shrine as "Dombo letshipoteleka"; the shifting or turning rock. This indigenous name refers to how different the hill looks as one walks around it. The Stone at Njelele is believed to have talked until 1914. The hill is considered sacred and may not be tampered with in any way, including cultivation and grazing. The secret behind the respect accorded sacred areas and their environs lies in the taboos that are associated with such places.

3.2.1.2 Taboos associated with sacred sites

It is believed that the spirits reside in forests, mountains, caves, hollowed trees and pools. In other words, the intangible heritage makes use of the tangible heritage as its home. The adherents of the traditional Mwari and the ancestral spirits therefore attach great respect to the environment because they argue, by despoiling it, they will be depriving their god and the spirits a home to live in.

- Individuals or groups of people are not allowed to visit a sacred place or its environs in the absence of the official priest or priestess or his/her appointee. Songs of praise precede approach to the shrine and an appropriate person leads the visitors. That way no mischief is envisaged.

a)

b)

Figure 11: Shrines in the Matobo Hills, a) Njelele and b) Ntunjambila

- It is taboo to cut down a tree in a sacred place. Trees constitute the dwelling place of the ancestral spirits and removing them is tantamount to exposing Mwari and the spirits. Such behaviour is punishable. For anyone to remove a tree from the sacred forest or shrine, the priest or priestess has to ask for permission to do that giving a convincing reason. Failure to observe that would result in individuals or their families or the entire community being punished by the grieved spirits. Unsanctioned removal of trees from such places is interpreted as a sign of disrespect.
- Traditionally, whenever hunters chasing after an animal saw it entering a sacred forest, the chase was immediately called off. The animal was regarded as part of the sacred herd. However, from time to time, residents close to such sacred places would find an animal in their midst and kill it. That was inevitably interpreted as a gift from Mwari or the ancestral spirits. The meat was shared amongst the households in the vicinity. Special parts of the animal were taken to the local spirit medium and to the chief both of whom were important custodians of the local traditions. The animals in the sacred areas did not belong to an individual and so no one could hunt them with impunity. That way, the wildlife was protected against poaching. Contemporary places such as Njelele and Dula are still in pristine condition, thanks to their sacredness.
- The generally acceptable behaviour when entering a sacred shrine is to remove one's shoes, watch and leave money 'outside'. Visitors to Njelele, Zhilo, Dula and many other sites are expected to leave these items at the home of the keeper.
- All the shrines are accessible throughout the week except on Wednesdays because on this day known as 'Chisi' or 'iZilo' all people are expected to rest.

3.2.2 Prehistory

The rock shelters of the Matobo Hills area date from the latter part of the middle Pleistocene (700 000 to 125 000 BP) through the Late Pleistocene (125 000 to 12 000 BP) to the end of the Holocene (12 000 to the present) (Walker 1995). The prehistory of the Matobo Hills area is therefore closely linked to the large number of natural shelters, which have formed under big boulders. Evidence includes Early, Middle and Later Stone age tools and rock paintings attributed to the San communities (Hunter-gatherers) whose economies comprised of gathering wild fruits and other plant foods and hunting wild animals. Evidence from the Iron Age occurs in the hemispherical caves and other forms of rock shelters and most of the sites overlie Stone Age deposits. Another feature of this period is the occurrence of dry stone walled enclosures of the Khami phase of the Zimbabwe Tradition.

The prehistory in Zimbabwe spilled into the 19th century. In the Matobo Hills the manifestations of the arrival of the Nguni groups fleeing Zululand in the 1830s' include several granaries in the rock shelters. The events and the period of mass movements and social upheavals are generally known as Mfecane period. The Nguni groups came and displaced local Karanga ethnic groups who sought refugee in the Matobo Hills. The Hills provided refuge to both the Ndebele and the Karanga when they went to war against European Settlers in 1893 and 1896 in what are known as Matebele War and the Rebellion, respectively.

3.2.2.1 Stone Age Sites

There is an abundance of sites representing the Stone Age periods. Most of the sites are found in the hemispherical caves and other forms of rock shelters and faces. In many of these sites, exceptional examples of a variety of subjects can be seen and these are attributed to the Late Stone Age inhabitants of the area. The most important Stone Age Sites where extensive research has been conducted since the early twentieth century are: -

- **Bambata Cave**

It is one of the most extensively researched cave sites in southern Africa. Excavations here have revealed the oldest decorated piece of stone in Zimbabwe. Bambata pottery (type-site name) is one of the riddles in Zimbabwean archaeology regarding its dates and traditional associations. Paintings in the cave are in a very good state of preservation.

- **Nswatugi Cave**

This is where the oldest human skeleton in Zimbabwe was recovered. From this cave was recovered evidence of Middle Stone Age dating to circa 42 000 years BP. Of its paintings Garlake (1987:85) says, "...the paintings are among the most varied, beautiful and colourful in the Matobo."

- **Pomongwe Cave** (Figure 12)

Middle and Late Stone Age deposits were recovered here with a wide range of stone tools and implements, bone tools and other related domestic paraphernalia. In addition, there is a big Site Museum with comprehensive displays explaining the Stone Age of Matobo Hills area in particular and that of Zimbabwe in general.

Figure 12: Pomongwe cave of the Matobo Hills

- **Inanke Cave** (Figure 13)

The paintings here are of outstanding beauty. The multichrome galloping giraffe could be the finest naturalistic painting in Zimbabwe. There is a display of exceptional complexity and skill in their execution. Garlake says of Inanke Cave, "In the cave, the prehistoric art of Zimbabwe reaches its peak of beauty, technical skill and complexity" (Garlake 1987)

Figure 13: Inanke cave showing rock paintings

3.2.2.2 Iron Age Sites

The Matobo Hills area has many Iron Age Sites with most of them overlying Stone Age deposits in caves. Another important feature of this period is the occurrence of dry-stone walled enclosures of the Khami phase of the Zimbabwe Tradition, and the iron furnaces (Figure 14).

Figure 14: An iron furnace in the Matobo Hills

3.2.3 Historical sites

Events of the 19th century history of Zimbabwe include the Mfecane period when Nguni groups fleeing Zululand into different parts of southern Africa occupied most of southwestern Zimbabwe. They came into Zimbabwe in the 1830s and displaced local Shona ethnic groups who then sought refuge in the Matobo Hills. During the 1893 and 1896 wars between the European settlers on one hand and the Ndebele and the Shona on the other the latter sought refuge in the same hills. What can be seen now are the relics of that period (Figure 15). The Matobo Hills area is thus rich in historical sites of great significance to the country. The following are examples of historical sites in the area: -

- **Burial sites**

  The two most important graves in the area are those of King Mzilikazi and Cecil John Rhodes (Figure 16). The former founded the Ndebele nation and the latter led the European settlers into the country and Zimbabwe was originally known as Rhodesia

Figure 15: Granaries representing refuge sites in the Hills

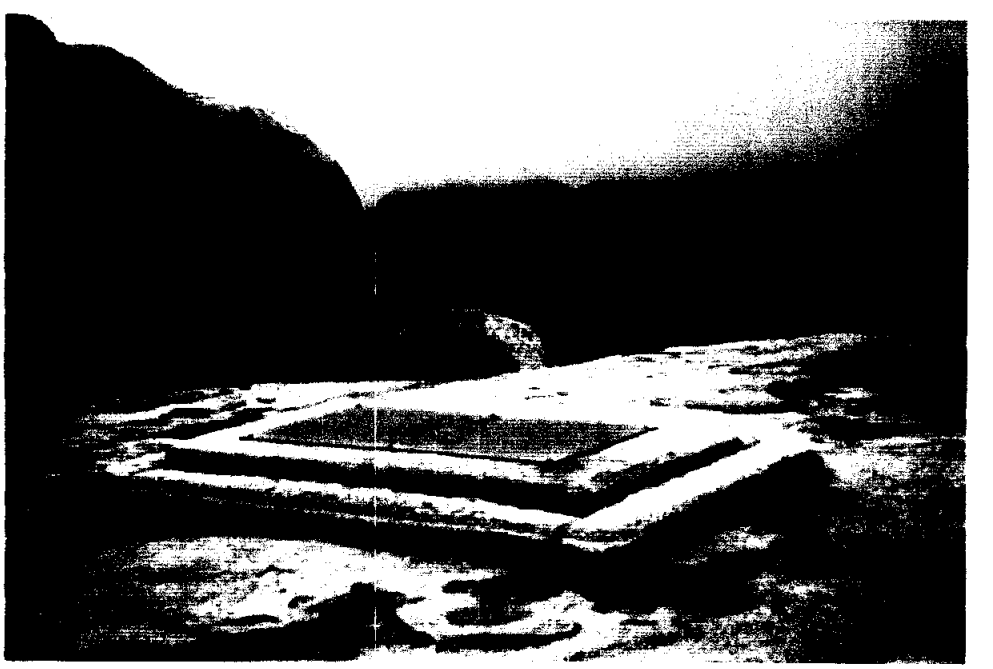


Figure 16: The grave of Cecil John Rhodes

after Cecil John Rhodes. The View of the World where Rhodes' grave is located is visited by thousands of tourists every year. The tomb of King Mzilikazi, on the other

hand, is deliberately restricted from public access in deference to traditional custom.

- **Rhodes Indaba Site**

The first indaba (peace conference) was held at this site in an effort to end the 1896 war. The mound on which Rhodes and his colleagues sat is still existent and well preserved.

- **MOTH Shrine**

This is a memorial site for the servicemen who died during both World Wars.

- **Other sites**

Other sites of historical interest in the Matobo Hills include Mzilikazi's Wagon Cave, Rhodes' Summer House and Stables, Matobo Railway Terminus and many others.

3.2.4 Rock Art Sites

3.2.4.1 Status and Distribution of Rock Art

The Matobo Hills area contains the best-known rock art sites in Zimbabwe, the other concentrations being Mutoko (Northeast of Zimbabwe), Chiredzi (South-east Zimbabwe) and Chinamora communal areas (North-east of Zimbabwe). All these rock art areas are found on the granitic belt of Zimbabwe, except in Chiredzi where they are located on sandstone rocks. In comparison with similar areas in the sub-region and the world at large, the Matobo Hills area has one of the largest concentrations of rock art sites. The Matobo Hills area is also part of the "distinctive art region" of the well-known prehistoric art of Southern Africa, which stretches from South Africa to Tanzania (Walker 1996). Many researchers have carried out a number of studies on the rock art of Matobo Hills (Walker 1995) to document and decipher its significance.

The Matobo Hills area contains no less than 3 500-rock art sites, according to the records in the National Museums and Monuments of Zimbabwe national database. Some of the sites are listed in Appendix 2. If more surveys are to be conducted in the Matobo Hills area, the total number of rock art sites is estimated to be around 6 000. Most of the known sites contain a large number of paintings; therefore total individual paintings in the Matobo Hills area is likely to run into a million. The rock art sites of the Matobo Hills area consist of paintings located on spectacular granitic rock outcrops. These include caves, boulders, and cliff faces. The caves also provided shelter for the paintings, the artist and their communities. Therefore the paintings and the granite are inextricably linked.

Although most of the rock paintings of the Matobo Hills, and Zimbabwe in general, are attributed to the hunter-gatherer communities of the Late Stone Age period, some belong to the Early Farming Communities (Walker 1995; Garlake 1995). Generally the red paintings are attributed to the Hunter-gatherer communities while those in white pigments belong to the early farming communities (Figure 17). Hematite and magnetite iron oxides provided the pigments used in drawing the paintings. The oxides are commonly known as red ochre. The ochre happens to occur in a variety of shades ranging from browns to yellows, oranges and purples. These ochres were pounded,

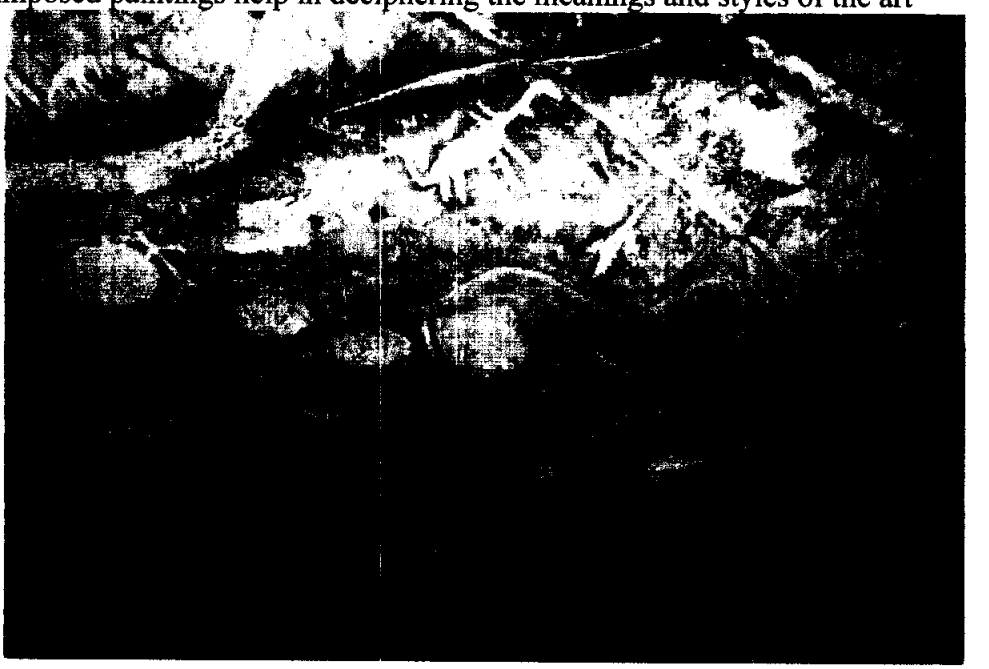
crushed and rubbed to a fine powder, then mixed with a binder to produce the different shades seen today in the Matobo Hills area. The binding medium also made the paintings more permanent when applied to the granite surfaces. Researchers have suggested organic and inorganic binding mediums, but to date none has yet been identified in the Matobo Hills area (Garlake 1995; Walker 1996). Also the recipes of individual artists have not been ascertained throughout Southern Africa.

On the other hand, the white pigments were derived from kaolin clays or by crushing quartz. Rock art sites in the Matobo Hills area, just like elsewhere in Southern Africa, have not been directly dated due to the non-availability of sufficient quantities of organic material in the pigments. Therefore, indirect methods have been used to date the Matobo rock art to 13000 – 8000 years ago (Garlake 1995; Walker 1998). This date was derived from an excavation carried out at Bambata cave in the Matobo by Walker between 1972 and 1982. Scores of small spalls of granite that had traces of paintings were recovered at the site. These were dated in the context of the stratigraphy to give a date range between 13000 – 8000 years. Given the fact that the date is derived from an exfoliated piece of rock, the date therefore refers to the time the stone got incorporated into the archaeological deposit. This technically implies that the rock art of Matobo may be much older than what is generally believed. Also the slow and variable weathering and exfoliation rates of granite rocks might support the fact that the paintings are much older (Walker 1987). The generally agreed dates are also supported by the subject matter of the art itself, for example, man with bows and arrows are typical of the Stone Age period, while paintings of sheep denote the presence of early farming communities. However, more trials with possible direct dating methods are required to put the rock art of Zimbabwe in its proper cultural chronology (Taruvinga 1997). What is clear from the existing direct and indirect dating methods is that the paintings of Matobo are much older than 13000 years.

3.2.4.2 Techniques and Styles

In terms of styles, the artists of Matobo paid particular attention to the way in which they applied the paint. Initially, the styles were distinguished on the basis of colours used rather than the effect produced (Walker 1996; Garlake 1995). But contemporary researches have produced well-defined styles on the basis of colour, technique and effect. Broad styles include (i) outlines (figure drawn out of a line in one colour or line drawn as flakes, dashes, or chevrons), (ii) monochromes (flat wash, outline and fill, fine outline, wide outline or outline and body fill using one colour), (iii) bichromes (two colours; different colour outline with different colour detail or contrast colours), and (iv) polychromes; unblended or shaded, (Walker 1996). Generally the styles of the Matobo range from outlines to monochrome, bichromes and polychromes. Other paintings were simply retouched in another colour. What is unique about paintings of the Matobo Hills area is that colour and technique were used to encode the significance of the paintings (Walker 1996). However a contrast is seen between the hunter-gatherer and early farming community paintings. The latter were not executed with the same skill, accuracy and precision as that of the hunter-gatherers. In the whole, it is noted that styles gradually changed from simple outlines to polychromes in the Matobo Hills area. Some sites have a multi-representation of all these styles and techniques. Studies of

superimposed paintings help in deciphering the meanings and styles of the art



a)

b)

Figure 17: Matobo Hills rock paintings, a) white paintings at Sikiti, b) red paintings at Nswatugi cave

(Cooke 1969; Garlake 1997). According to Walker (1996) the style of the paintings of Matobo cultural landscape is relatively homogeneous throughout. However, he acknowledges the existing indications that different groups painted distinctive images deliberately or because of isolation in their respective home bases.

Another important feature of the art of Matobo is the style\technique of superimposition, whereby paintings are drawn one on top of the other. This in most cases brings out the complexity of the message being conveyed, as well as the technique employed in terms of artistic skills. This is a frequent phenomenon in Zimbabwe, and Southern Africa at large.

4.0 LAND USE

4.1 Communal Farming areas

People who practise mixed farming occupy the communal areas. They grow a variety of crops and keep some livestock. Families and individuals residing close to spongy areas also engage in market gardening. Farming in the communal areas is no longer entirely for subsistence because some of the produce is sent to markets either at Maphisa or in Bulawayo for sale. Communal areas have become more aware of natural resource conservation through the Communal Areas Management Programme For Indigenous Resources (CAMPFIRE) projects. These areas now have structures to manage and monitor the utilization of their resources. Therefore the flora and fauna that has survived within the communal areas is now under a regime of conservation.

4.2 Commercial Farming areas

These are characterized by individual or company ownership. The owners acquire and hold title deeds to the properties. Such properties are found to the north and south of the proposed World Heritage area and like their communal counterparts, they also report to the Matobo Rural District Council. Some farmers engage in large-scale crop farming while others keep livestock.

4.3 Rhodes Matopo National Park

An area of 49 600ha in the Matobo Hills area was proclaimed a National Park in 1926. This was increased to 98 000 ha in 1953 but was later deproclaimed and reduced to 36 00 ha in 1963 to make way for Gulati and Khumalo Communal Lands. In 1965 the present Rhodes Matopo National Park was established by an Act of Parliament which also apportioned additional land to the game section bringing the total area of the park to 44 200 ha. (Management Plan 2000-2004). The park therefore, is state land managed by the Department of National Parks and Wild Life Management (DNPWLM). Within the park relatively higher densities of flora and fauna have been maintained. The park has also been an invaluable game sanctuary that has been used to breed and reintroduce internationally and nationally threatened faunal species such as the rhino with great success.

4.4 Shrines and sacred areas

Spirit mediums in liaison with chiefs and the communities perform rituals on the shrines, and the reverences by which these rituals are received accord these places their value. The rituals therefore remind the community about the sites thereby promoting their conservation and use value. A variable forest area surrounds each shrine.

4.5 Infrastructure

The Matobo Hills area is accessible through a network of all-weather and seasonal roads. As a tourist destination visitor facilities, which include, accommodation (hotels, lodges, chalets, camping sites, caravan parks, etc.), picnic sites have been provided. Dams have also been built for irrigation and recreational activities. During the past year (2000) an estimated 100 000 visitors entered the Matobo Hills area.

4.6 Forest areas (indigenous and exotic)

In Matobo Communal area the Forestry Commission runs some bee keeping projects. Pristine forest areas of indigenous plant species surround all sacred shrines in the Matobo Hills area. These forests owe this condition to the respect accorded Mwari and any activities associated with the forests are co-ordinated by those selected to be intermediaries between the living and the spirit world thus ensuring their maintenance.

5.0 MAIN STAKEHOLDERS

All key stakeholders in the Matobo Hills area play a vital role in the conservation of the heritage that falls under their jurisdiction. The conservation is carried out in accordance with the dictates of traditional practices and beliefs and pieces of respective legislation.

5.1 Rural District Councils (RDCs)

Rural District Councils Act, (Cap. 29:13) provides for the establishment of rural district councils and the administration of their areas. Rural District Councils in Zimbabwe are under the Ministry of Local Government, which provides a financial grant for their operations. Within the proposed World Heritage area are two district councils; Matobo and Umzingwane with their offices at Maphisa and Esigodini, respectively. The area under the jurisdiction of Matobo Rural District Council includes Matobo, Gulati and Khumalo Communal areas as well as some commercial farms while under Umzingwane Rural District Council are only two Communal areas namely, Nswazi and Umzinyathini.

All RDCs participate in the conservation of their areas through Environmental Conservation Committees (ECCs), which are usually chaired by a qualified Environmental Officer. They all have an option to apply for Appropriate Authority from DNPWLM to establish CAMPFIRE areas. Umzingwane and Matobo RDCs have viable CAMPFIRE projects. The ECCs can co-opt specialists working in the areas of their jurisdiction from any government department or ministry, including the Ministries of Agriculture, Health, Home Affairs and Environment and Tourism. At grassroots level, the communities initiate conservation activities through the village development committees (VIDCOs) or ward development committees (WADCOs), which are in turn communicated to the executing agency (Chief Executive Officer) through elected councilors (Figure 18).

5.2 Community

The communities constitute the major stakeholder in the Matobo Hills area because they have permanent residences there and derive their subsistence from the resources within the World Heritage area. The communities directly affected are those from Matobo, Gulati, Kumalo (Matobo district), Umzinyathini and Nswazi (Umzingwane district). Although the activities of these communities are governed by various pieces of legislation their attitude towards the resources and traditional practices and beliefs play a vital role in the overall conservation of the environment. The need to keep the Matobo Hills area as a venerated landscape is inculcated into the local communities at ceremonial gatherings that take place annually at Mwari shrines. Individuals and/or groups also visit these shrines to make specific request. The pieces of legislation alluded to above are therefore, effective because of the conducive attitude of the people towards the conservation of the area. Chiefs, headmen and spirit mediums all play an important role in coordinating such traditional activities and mobilising the people.

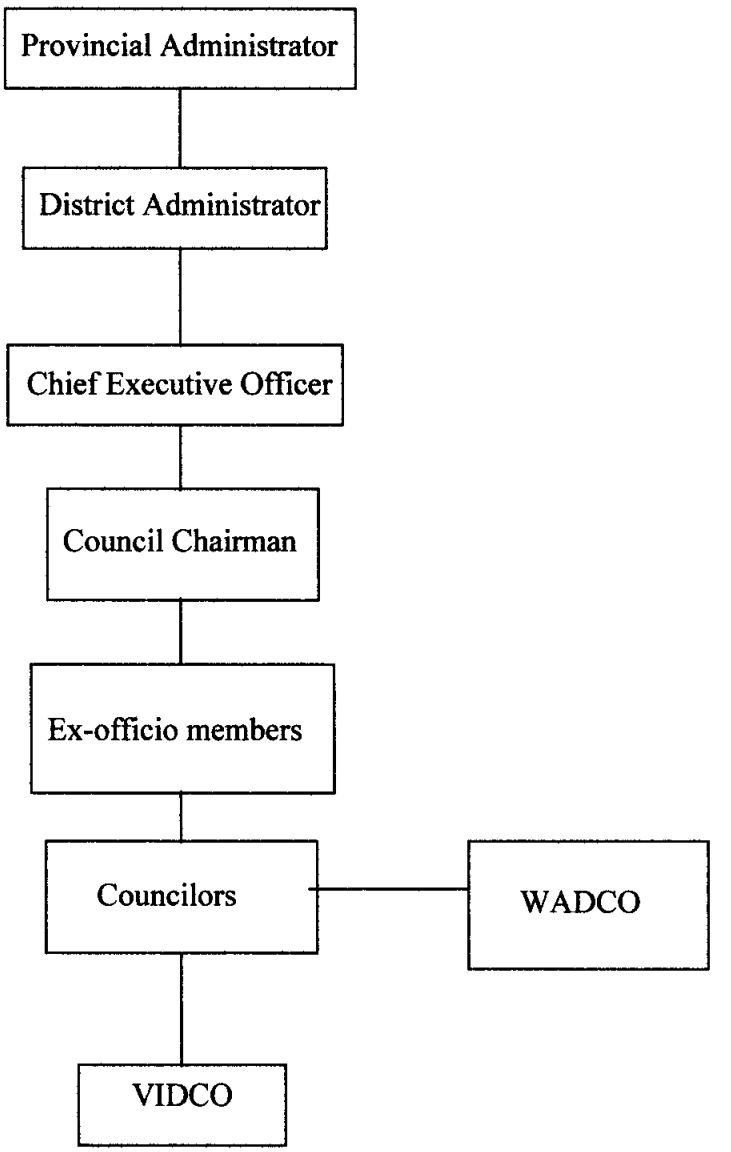


Figure 18: Administration structure of Rural District Councils (RDCs)

Management of the communal areas is through Rural District Councils (RDCs) in collaboration with the traditional leaders. Each Council comprises of various wards each with an elected Councilor, while the traditional leadership system is made of Chiefs, Village Heads and Headmen nominated under traditional suffrage with the aid of the government. Employed environmental officers are active within the areas and answer to the RDCs. Management is therefore intimate if not direct.

The protection in the communal and commercial farming areas of Matobo Hills area is accentuated by a provision in the National Parks and Wildlife Act granting Appropriate

Authority to Rural District Councils, a status that empowers them to adopt and implement a Communal Areas Management Programme for Indigenous Resources (CAMPFIRE) with a focus towards community participation and benefits. The combined institutional preservation effort ensures sustainable management, maintenance of authenticity and integrity of the cultural and natural heritage in the Matobo Hills area.

Both the Matobo and Umzingwane Rural District Councils have broad-based programmes in place, in which conservation and restoration of the environment play a significant part. Specific projects include the DEAP programme in Ward 15 of the Umzingwane RDC. (DEAP = District Environmental Action Plan, a UNDP sponsored initiative)

5.3 National Museums and Monuments of Zimbabwe

The National Museums and Monuments Act, (Cap. 25:11) entrusts the operations of the National Museums and Monuments of Zimbabwe (NMMZ) to a Board of Trustees. Under section 4 of the Act the Board is empowered to administer museums and national monuments and is expected to maintain a register of all known sites and monuments in Zimbabwe. Some monuments and sites are accorded special status through gazetting them as national monuments.

As per stipulations of the said Act above, the National Museums and Monuments of Zimbabwe (NMMZ) is expected to manage and inventory all the cultural and natural resources found in the Matobo Hills area irrespective of where they may be on behalf of the people of Zimbabwe. However, the situation on the ground demands that the management be done in conjunction with other stakeholders such as the RDCs' Conservation Committees, National Parks officials, Chiefs and shrine custodians.

The administrative and conservation functions of NMMZ are executed through five regional offices (each headed by a Regional Director). According to Figure 19 the Matobo Hills area falls within the Western Region and the Regional Director (RD) is based at the Natural History Museum in Bulawayo. Monuments Inspectors and archaeologists also based at the same museum in Bulawayo, facilitate the conservation of the archaeological heritage in the Hills, while the natural scientists assist in the inventorying of the natural heritage.

NMMZ is funded through:

- An annual grant from the National Government Budget, through the Ministry of Home Affairs.
- Fees and charges
- International donor support

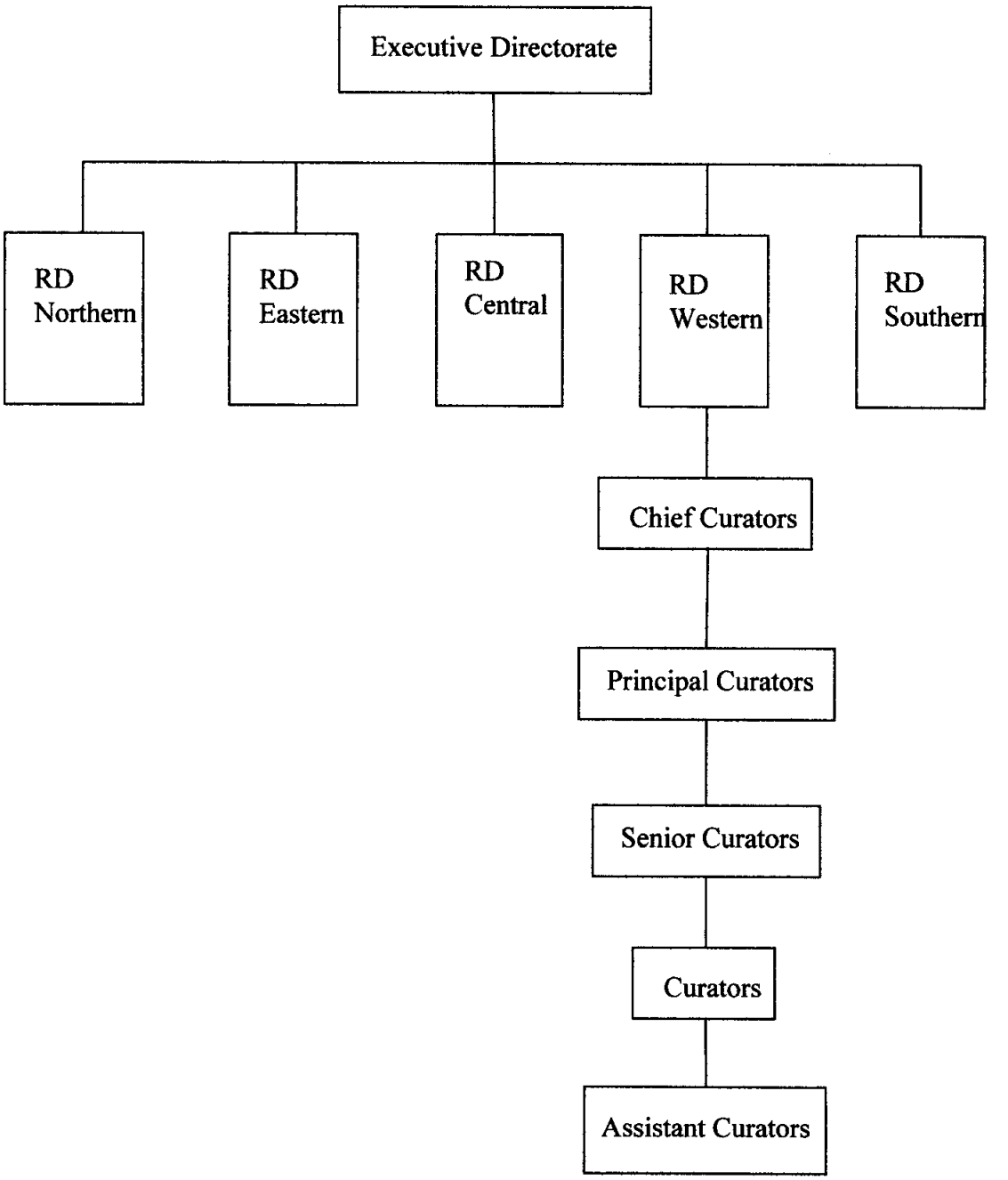


Figure 19: Administrative structure of National Museums and Monuments of Zimbabwe (NMMZ)

5.4 Department of National Parks and Wild Life Management

Section 3 of Parks and Wildlife Act, (Cap. 20:14) has provision for the establishment of a Parks and Wildlife Board and Section 10 for any of its committees. The Board examines policies to be adopted to give effect to the objects and purposes of the Act, the conservation of wild life resources and protection of natural landscapes. Section 24 prohibits visitors to the park from picking plants, hunting wildlife, destroying nests, fishing, or carrying any weapon, or domestic animal into the park. The demarcated area is for recreation, preservation and protection of the natural and cultural features and enjoyment of the public.

The Ministry of Environment and Tourism accounts for the management of all Parks and Wildlife Estates in Zimbabwe. In the case of the Rhodes Matopo National Park, a special committee, Rhodes Matopos Committee was set up to monitor the activities and approve recommended developments within the Park. This Committee that answers to the Minister of Environment and Tourism through the Board of Trustees of the Parks and Wild Life Management has an advisory and management function within the Rhodes Estate.

Whilst the DNPWLM is administered from Headquarters based in Harare, more direct management is derived from the Provincial Warden, based in Bulawayo, and from the Warden resident within the Rhodes Matopo National Park. Management of the Park is therefore direct and immediate (Figure 20).

A Management Plan for the period 2000-2004 has since been produced for the Rhodes Matopo National Park. The Management Plan addresses:

- Ecological management, research and monitoring programme
- Stakeholder interaction and involvement in the park
- Law enforcement.
- Infrastructure development
- Business planning and financial management
- Tourism and tourist facilities or services in the Park

When the need for specialists arises, the Warden of Rhodes Matopo National Park can request such expertise from their Head Office in Harare. On the ground, rangers and scouts assist the Warden. Also the Warden has access to the Police and the Army should their services be deemed necessary in the maintenance of the integrity of the Park.

The activities of DNPWLM are funded through the National Parks Statutory Fund, which receives income as follows:

- An annual grant from the National Government Budget, through the Ministry of Environment and Tourism

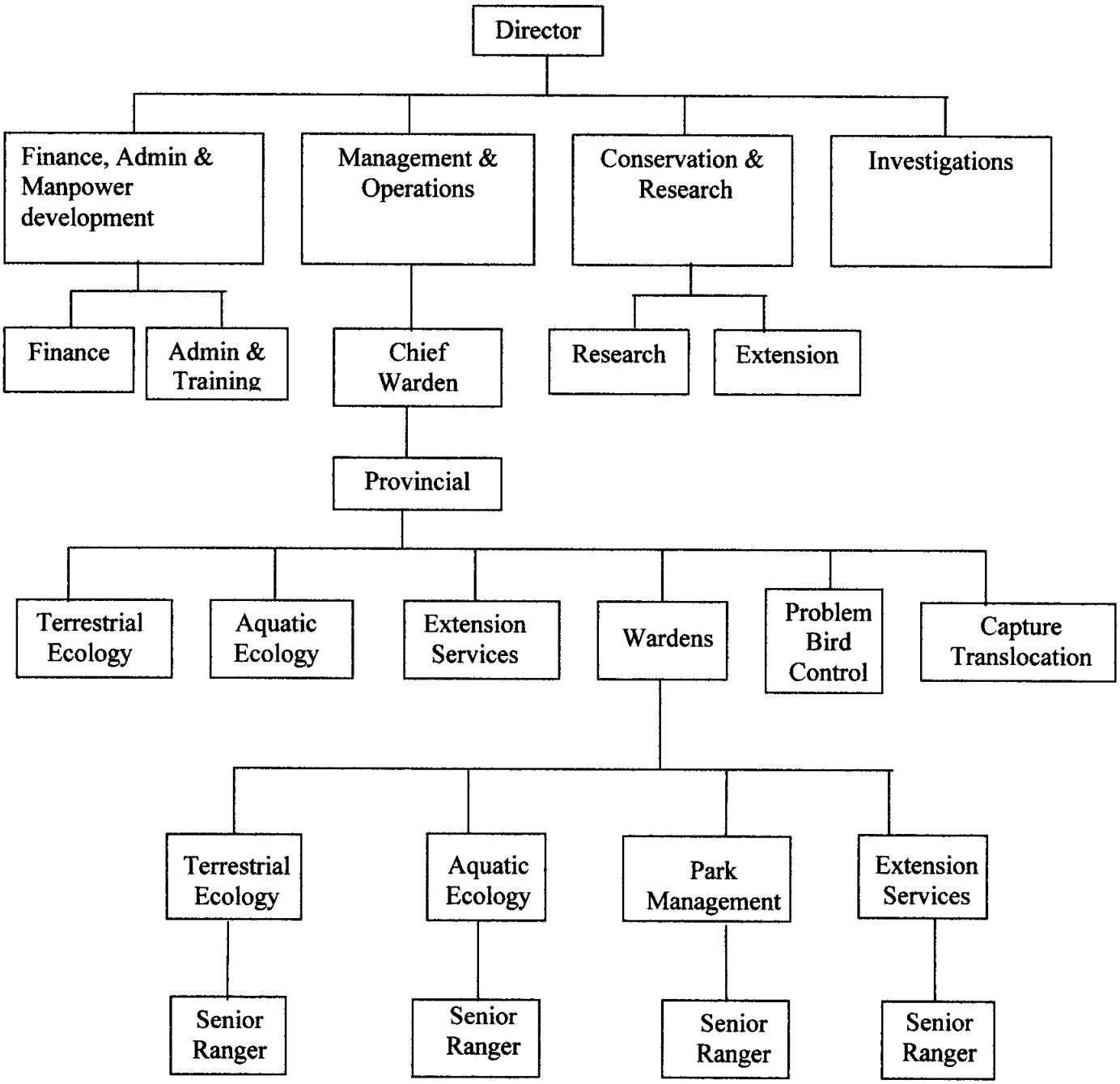


Figure 20: Administrative structure of the Department of National Parks and Wild Life Management (DNPWLM)

- In terms of Section 97 of the Parks and Wildlife (General) Regulations, Statutory Instrument 362 of 1990, the Director of the Department of National Parks and

Wildlife Management, with the approval of the Minister, fixes tariffs for entry and certain activities within the National Parks. The latest General Notice 288 of 2001 published in the Government Gazette Volume No. LXXIX No. 23 dated 1 June 2001 prescribes fees for entry, accommodation and use within the Rhodes Matopo National Park.

- The donor community assists
- For certain projects the department has borrowed money from World Bank.

5.5 Commercial Farms

Individual farmers manage their properties directly, most being resident on their respective properties. For administrative purposes the commercial farms also fall under the RDCs. Unlike their counterparts in the communal areas, commercial farmers have title deeds to their properties. However, their activities on these farms have to conform to the laws of Zimbabwe and have to co-operate with Department of Natural Resources (DNR), DNPWLM, NMMZ and the RDC responsible for the area in which the farm is located.

5.6 Department of Natural Resources

Natural Resources Act (Cap. 20:13) provides for the conservation and improvement of natural resources and construction of works on communal lands through a Board and sub-committees. The Board may also cause the construction of works in non-communal areas for the preservation of streambeds and banks or conservation of water. The mandate of the Board is translated into action by the Department of Natural Resources, which is headed by a director. The department has operatives who provide information to the people on conservation and assist in community- initiated projects. In addition to the government grant, the Board has a mandate to fundraise for the department. The department is under the Ministry of Environment and Tourism.

5.7 Forestry Commission

Section 15 (2) of the Forest Act (Cap. 19:05) empowers the Forestry Commission to control and manage any demarcated forest in the Rhodes Estates whether acquired through declared demarcation or lease agreement. The administration of the Act is once again under the Minister of Environment and Tourism. The mandate of the Commission established by this Act includes:

- the administration, control and management of State forests
- providing for the transfer of certain assets belonging to the government to the Commission
- providing for the setting aside of State forests and for the protection of private forests, trees and forest produce
- providing for the conservation of timber and the compulsory afforestation of private land.

Several schools and communities in the Matobo Hills area have some woodlots that were established with the help of experts from the Commission.

5.8 Others

The following organisations are by no means statutory but are important stakeholders either as pressure groups or research units that complement the activities of statutory bodies such as DNPWLM and NMMZ:

- The Matobo Conservation Society has been supportive of initiatives to have the hills listed as World Heritage and as a society is engaged in education, research studies and other activities throughout the whole area.
- Chipangali Wildlife Sanctuary has an active research unit that works throughout the African continent but has conducted specific studies in the proposed World Heritage Landscape.
- The Biodiversity Foundation for Africa has initiated research on the biological diversity of the Matobo Hills. Drawing upon earlier work conducted by curators within the Natural History Museum of Zimbabwe, the Foundation has been able to utilise modern technologies to enhance research work.
- Marwell Trust Zimbabwe is based outside Bulawayo and is the local research unit of the British based Marwell Trust is currently surveying small antelope within the Matobo National Park.
- The National University of Science and Technology was established in Bulawayo in 1995, and includes a faculty of Environmental Studies. It is anticipated that this faculty will contribute enormously to future research.
- The Black Eagle Research group has been monitoring the Black Eagle, *Aquila verrauxii*, for over forty years. Other raptors are also studied.
- The Matebeleland Branch of the Zimbabwe Wildlife and Environment Society also operates in the area.
- The Matebeleland Branch of the Zimbabwe Tree Society likewise takes a keen interest in the hills, conducting a number of field trips into the area.
- The Zimbabwe Ornithological Society, Matebeleland Branch is active in the hills, in conjunction with the other similar interest groups.
- The Bulawayo Aloe and Cactus Society has conducted studies in the area, though it is noted that only aloes are indigenous to the area.
- The Bulawayo Orchid Society conducts regular field trips into the Hills to review indigenous orchid species.
- Traditional groups such as Imbovani Yamahlabezulu advocate for the upholding of traditional conservation techniques, as well as protection of specific sites, such as Njelele and other rain making sites.

6.0 THREATS AND MITIGATION

6.1 Threats

In the Matobo Hills area both natural processes and human activities are possible sources of threats to cultural and natural resources. Natural processes include erosion, exfoliation of rock surfaces, drought resulting in the drying up of rivers and dams and consequently the death of wild animals and vegetation. Human activities include agricultural practices, tourism and provision of tourism-related infrastructure, human induced soil erosion and deforestation. The nature and magnitude of the threat depends on the intensity of the process or practice and the absence of mechanisms to reduce the impacts. As already alluded to above, the purpose of this management plan is among others, to reduce negative impacts on the environment within the World Heritage Landscape.

6.1.1 Population Pressures

Population pressure has increased significantly over the past one hundred years, due to natural births and migrations from the extreme southern parts of the province to the Hills. As a result there is severe degradation in some parts of the communal areas, particularly along stream banks. Hunting of wildlife does occur in the National Park, commercial farms and communal areas. However, within the communal lands, there is little wildlife left due to the heavy population pressure.

The hills are located in agricultural zone 3 of Zimbabwe that is characterized by low or erratic rainfall and poor soils. The poor sandy soils are not suitable for any significant agricultural development. The subsistence agriculture of varying intensity carried out in the communal land within the World Heritage landscape is failing to adequately address the food needs of the inhabitants. In addition, preparation of the fields has resulted in deforestation. Uncontrolled burning has also caused destruction of the vegetation and animals. Until recently, most of the habitations in the Matobo Hills area were built of pole and dagga. This also had a negative impact on the vegetation. However, despite the poor soils there is some commercial agriculture, particularly ranching, within the World Heritage landscape.

6.1. 2 Natural disasters

By virtue of its location in agricultural zone 3, the Matobo Hills area is prone to droughts. The prolonged drought of 1994 – 1996 for example caused remarkable stress on both fauna and flora. As a result, animals had to be artificially watered and some had to be relocated. Natural fires were also rampant.

Being on the watershed, flooding is restricted to localised rivers bursting their banks for very short periods of time. Approximately every ten years or so, Cyclones crossing the Mozambique coast, and travelling inland will result in significant rainfall, but by the time that these reach the Hills, these Cyclones have been delisted to tropical depressions, and so are not characterised by extreme wind. The last such weather pattern, "Cyclone Eline", to cover the area passed over in February 2000.

The greatest threat to the environment after population pressure is that of the encroachment of exotic plants. The current threat in the Matobo Hills is *Lantana camara*,

which has established itself in the eastern hills and in parts of the National Park. The recent introduction of Eucalyptus and Bottlebrush in the Maleme valley of the National Park is a potential threat to the natural vegetation. The presence of the fast growing *Azolla* fern in the Maleme dam is also a cause for concern.

The natural factors, which are posing a threat to the art of the Matobo include; water erosion (in all forms), mineral accretion, salt deterioration, micro flora, animals, dust and general weathering processes.

6.1. 3 Visitor/tourism pressures

Since 1980, tourism has grown rapidly, with Rhodes Matopo National Park recording the second highest tourist numbers after Victoria Falls. Because of the popularity of Matobo Hills area as a tourist destination the National Park (with an average of 100 000 visitors annually), commercial farms and communal lands are playing an increasing role in providing visitor facilities which include accommodation (hotels, lodges, chalets, camping sites, caravan parks, etc.), picnic sites and other recreational activities. Whilst tourism has an economic value, the increased visitor numbers have resulted in increased dust on paintings; vandalism, particularly graffiti; accelerate rock exfoliation and deterioration of paintings through spraying water on painted panels when taking photographs.

As a cultural landscape the introduction of some traits of foreign cultures has negatively impacted on local perceptions of Matobo Hills area. The harvesting of some tree species such as the grey mukwa has increased in order to satisfy the tourist market. Because of this lucrative market tree species suitable for curio carving found in venerated forests have fallen prey to curio dealers. This is in spite of the fact that such action is generally considered sacrilegious.

6.1.4 Developmental pressures

The fact that there are homes in Matobo Hills area and that it is a favourable tourist destination has called for provision of amenities and facilities. The establishment of irrigation schemes to offset the impact of droughts has resulted in the construction of a number of dams. The area has also recorded a dense road network to facilitate movement of agricultural produce and visitors. The net impact of these developments has been a general change in the outlook of the environment. Included in this change is the introduction of new plant species, removal of trees to give way to roads and visitor lodges.

6.2 Mitigation

The traditional leadership, RDCs, DNPWLM, Ministry of Agriculture, DNR, Forestry Commission and NMMZ have complementary roles in the management of Matobo Hills area that have among other things, ensured the maintenance of authenticity and integrity of the cultural and natural resources of the area.

From a preservation and protection perspective, the diverse cultural and natural patrimony of the Matobo Hills enjoys fair protection from the different stakeholders and

their respective legislation. Archaeological sites, rock art shelters and historical sites are well protected by National Museums and Monuments Act (NMMZ Act 25:11) while the natural attributes are protected by the National Parks and Wildlife Act 20:14 and the Natural Resources Act 20:13. The National Parks and Wildlife Act has a provision for granting Appropriate Authority to Rural District Councils, a status that empowers them to adopt and implement a Communal Areas Management Programme for Indigenous Resources (CAMPFIRE) with a focus towards community participation and benefits. This concerted institutional preservation effort ensures sustainable management, maintenance of authenticity and integrity of the cultural and natural patrimony enclosed in the Matobo Hills area. The entire landscape, which is held in very high esteem by the local people, enjoys an unfettered benefit from traditional conservation practices as enshrined in the Mwari religion.

The following are either existing or suggested measures to reduce negative impacts in the proposed WHL as highlighted above:

6.2.1 Reducing impacts due to population pressure

6.2.1.1 Resettlement programme

The government initiated resettlement programme has resulted in the decongestion of some parts of the Matobo World Heritage Landscape. Some communal farmers have been resettled on commercial farms inside and outside the boundaries of the proposed WHL. The exercise has resulted in the reduction of pressure on the resources such as land, trees and grass for pasture. Land under stream bank cultivation, which was necessitated by the need for extra land to cater for the surplus population may be released to nature thus increasing the natural habitats for fauna and flora.

6.2.1.2 Alternative sources of fuel and building materials

Deforestation has been justifiably blamed on exploitation of wood for fuel and building material. To overcome this problem there is need to introduce alternative sources of energy and building materials, which are environment friendly and affordable. The use of biogas for example, which is manufactured from cow dung and other domestic refuse, could be pursued more vigorously to reduce community dependence on firewood as a source of energy. While the local people could be encouraged to retain some pole and dagga traditional houses in order to maintain the vernacular architecture they could also be encouraged to adopt the more environment friendly brick under asbestos or zinc houses. Communities could be encouraged to establish more wood lots of exotic and indigenous tree species for their use. Such woodlots would further reduce dependence on the existing indigenous forests.

6.2.1.3 Community benefits

The success of any programme depends to a very large extent on how the people perceive it. Those programmes that adopt a top-down approach are perceived with suspicion while the communities will inevitably identify with programmes that they have initiated themselves and from which they derive direct benefits. The CAMPFIRE projects for example, have enabled communities to participate in the lucrative tourism industry and access wildlife for meat and other animal products. The Forestry Commission has introduced bee-keeping projects in the Matobo Communal area and the community is

generating income through the sale of honey in addition to having honey for their consumption. It is envisaged that more projects that offer benefits to the communities and are amenable to the conservation of the environment should be established throughout the Matobo Hills area. Food-for-work programmes that operate in communal areas and have made possible conservation projects such as gully reclamation and road repairs should be extended to other areas throughout the MHWHL.

The projected increase in tourism activities and supporting infrastructure will create more employment for the local community. The perceived benefits will lead to the local community to support the local conservation programmes for the MHWHL.

6.2.1.4 Living traditions

The Mwari religion and its associated taboos still in practice engender in the people a sense of respect for the cultural and natural elements of the landscape. For example certain tree species can only be cut with the permission of the traditional leadership. Pristine forests are still evident in the communal areas, which in Zimbabwe are commonly associated with environmental degradation.

6.2.1.5 Outreach programmes

Both NMMZ and DNPWLM are involved in raising awareness of the importance of the cultural and natural elements of the Matobo Hills area to thousands of school children through Heritage Education outreach programmes. For example, populations of hyraxes have been able to stabilise, even increase, due to work conducted by the Ornithology Research Unit of the DNPWLM in educating the surrounding communities on conservation of natural resources. Non-governmental organisations such as the Wild Life Society and the Matobo Conservation Society also play an important role in creating conservation awareness in the Matobo Hills. In order to empower the people with information, more and intensive outreach programmes will be introduced in those areas, which are currently unaffected.

6.2.2 Averting natural disasters

6.2.2.1 Droughts and floods

Since the Matobo Hills area is drought prone, it is recommended that a number of well-planned irrigation schemes be established in the proposed area. Whilst the construction of dams will alter the general outlook of the environment, they are necessary in order to offset the impact of droughts and enhance the quality of life of the local people and their livestock. The government of Zimbabwe has established a Civil Protection Unit to mobilise resources in order to deal with natural disasters.

6.2.2.2 Control of pests

The DNPWLM has in its management plan strategies to remove *Lantana camara* and other invasive plant species as well as deal with problem animals in and outside the park boundaries. Both DNPWLM and the DNR are working closely with the communities to contain the problems of invasive species and problem animals in the Matobo Hills area.

6.2.3 Reducing visitor/tourism impacts

6.2.3.1 Accessibility

Access to rock art and other cultural sites, in the National Park, communal and commercial farming areas should be restricted to the few that have custodians. The inaccessibility of some sites tends to have a regulatory effect on the number of visitors thus reducing human-induced adverse impacts. It should be made conditional that before a site is opened to the public a custodian to man it should be employed first.

6.2.3.2 Permits

The issuing of permits by both National Museums and Monuments of Zimbabwe and the Department of National Parks and Wild Life Management ensures that research; hunting and commercial filming are carried out according to set rules and regulations throughout the Matobo Hills landscape.

6.2.3.3 Curio dealers

The DNPWLM, commercial farmers and Forestry Commission should be encouraged to harvest grey mukwa from their land and sell this at affordable prices to the curio dealers. This is to reduce the undesirable felling of green trees but at the same time assisting the curio dealers to continue their business of selling curios.

6.2.4 Reducing developmental pressures

6.2.4.1 Environmental Impact Assessments (EIA)

In order to control implementation of developmental projects and inventory cultural and natural materials in the affected areas, the Management Committee should make EIAs compulsory.

6.2.4.2 Fire management

Since the region is prone to natural fires, particularly during the dry periods, it is recommended to have fireguards in place around the National Park, CAMPFIRE areas and commercial farms, to prevent the spread of such fires from one land use to another. Through outreach programmes and the involvement of traditional leadership communities should be constantly reminded of the dangers of uncontrolled fires.

7. 0 MONITORING AND KEY INDICATORS

All the major cultural and natural components of the Matobo Hills area will be monitored in order to measure the state of conservation. It is important to monitor the various activities that will take place within the WHL to ensure the objectives of this Management Plan, which include the maintenance of the integrity of the natural attributes and the authenticity of the cultural attributes of the landscape, are achieved. The state of conservation of the natural and cultural attributes of the Matobo Hills area should therefore be the concern of all stakeholders. Effective methods to monitor the state of conservation of the environment should be identified and implemented. Equally important should be the key indicators that assist those involved in the management to decide when and how to intervene.

7.1 Monitoring

7.1.1 Natural environment

The stability of an ecological system depends on the maintenance of the delicate balance between primary producers, predators and their prey. The current monitoring processes; the Black Eagle Survey, Chipangali leopard surveys, dassy population studies, problem birds projects and removal of exotic plants such as *Lantana camara* will be strengthened and co-ordinated under the auspices of the Matobo World Heritage Management Committee. Apart from co-ordinating the current players the monitoring should be extended to include local communities. Schools for example should be encouraged to establish conservation clubs with a responsibility to maintain inventories. The statutory bodies and NGOs involved in the monitoring exercise should work closely with community based conservation clubs and committees in order to achieve a higher multiplier effect.

In the communal areas, RDCs monitor the utilization of natural resources in their respective areas through CAMPFIRE and their Conservation Committees and in conjunction with relevant government departments and ministries. In addition, the natural environment benefits from the conservation efforts of the traditional leaders.

DNPWLM is mandated to produce a vegetation map every decade, the latest being in 1999. Anti-poaching patrols by DNPWLM are continuously in operation, to protect the two species of rhinoceros and the other game. DNPWLM also conducts an annual survey of the two species of dassy while the Black Eagle survey is conducted annually by the Matebeleland branch of BirdLife Zimbabwe to determine pairs in occupation and the fledglings produced. The raptor survey group monitors the other raptors.

NMMZ, through its natural scientists based at the Natural History Museum in Bulawayo, is playing an important role in the inventorying of biological diversity in the Matobo Hills area. Its activities will be increased through networking with other stakeholders in order to update conservators on changes in the environment for speedy reaction.

7.1.2 Cultural environment

The chiefs, spirit mediums and the local communities will continue to monitor the state of conservation of shrines within the Matobo hills. Archaeologists who are based at the

Natural History Museum in Bulawayo monitor rock art. Under the tripartite agreement between the governments of Zimbabwe (NMMZ), Norway (NORAD) and Sri Lanka (CCF) the monitoring of the state of conservation of the rock art sites in the Matobo hills has been enhanced. As a result, monthly, and annual reports of the conservation status as well as the activities carried out are produced and these reports are reposited at the NMMZ Head Office in Harare and the Natural History Museum in Bulawayo.

7.2 Key indicators for measuring state of conservation

The monitoring process will involve looking out for stress signs in plant and animal species and changes in population numbers of certain faunal species. It is equally important to continually assess the attitudes of the people towards the spiritual value of the Matobo Hills area. The state of conservation of rock art in the Matobo Hills area will provide an indicator on how people are relating with their cultural environment.

7.2.1 Natural attributes

It is easy, therefore to visualize the change in the environment through

- The variation in the populations of predator species such as raptors and leopards and prey species particularly dassies.
- The disappearance of some plant species and the establishment of plant species alien to the Matobo Hills area (*Lantana camara*, eucalyptus, water hyacinth) resulting from developmental pressures, population pressure, overstocking or climatic changes.
- The fluctuation in the water levels of local dams and rivers
- Quarrying and mining activities

7.2.2 Cultural attributes

The following constitute some of the symptoms of changes in the cultural landscape:

- The attendance and regularity of ritual ceremonies at sacred shrines will indicate whether or not the shrines are still considered important.
- The extent of the catchment area of delegates to ritual ceremonies
- Desecration of sacred sites
- Vandalisation of rock art through graffiti, scratching and pouring water on the paintings
- Fluctuations in visitor numbers
- Increased investments in visitor facilities

8.0 MANAGEMENT

8.1 Land tenure

The proposed Matobo Hills World Heritage Landscape comprises three types of land ownership, recognised by Zimbabwe law. These are –

- Matopos National Park, comprising 45 000 ha, held in trust by the President of the Republic of Zimbabwe. Those portions that formed part of the Rhodes Estate, and now form part of the National Park, also vest in the President, and shall be held in trust by him for the people of Zimbabwe.
- Communal Lands held in tribal trust by the President of the Republic of Zimbabwe.
- Commercial Farm Land, which is freehold title, held by individual persons or companies.

8.2 Management Committee

The conservation of the property will be coordinated by a Management Committee comprising representatives from the Traditional leadership (chiefs and custodians of shrines), NMMZ, DNPWLM, Matobo Rural District Council, Umzingwane Rural District Council and NRB (Figure 21). This will be a committee of decision makers. However, the day-to-day conservation activities will be carried out by a team of technocrats appointed by the Management Committee with the assistance of various non-governmental organizations (NGOs). To be effective the Committee should be in a position to solicit funds in order to sponsor some of the conservation initiatives in Matobo Hills.

The management arrangement in Figure 21 recognises the different institutional structures (Section 5 above) and their statutory obligations. It however, facilitates a co-coordinated approach to the management of the World Heritage Landscape. This in essence means that the various management plans generated by the stakeholders are subjected to scrutiny and the associated conservation and developmental activities are well co-coordinated. Whilst the Rhodes Matopo National Park has a management plan covering the period 2000-2004, those stakeholders without such plans will be encouraged to produce some to ensure that conservation activities remain focused.

A cost-benefit analysis will be the guiding principle in the implementation of this plan. This principle has been demonstrated by the DNPWLM which has offered some benefits to the communities in the form of employment, infrastructure (hotels, lodges, chalets, roads, dams, etc.), informal trade opportunities through the sale of curios and crafts; harvesting of grass and wood for construction of dwellings and pasture for livestock. The CAMPFIRE programmes in communal areas demonstrate how communities can benefit directly from their resources. At the same time a culture of conservation is instilled within the beneficiaries through interaction with other stakeholders. It is envisaged that under the proposed management system for the World Heritage Landscape, the communities as the main beneficiaries will initiate the conservation activities.

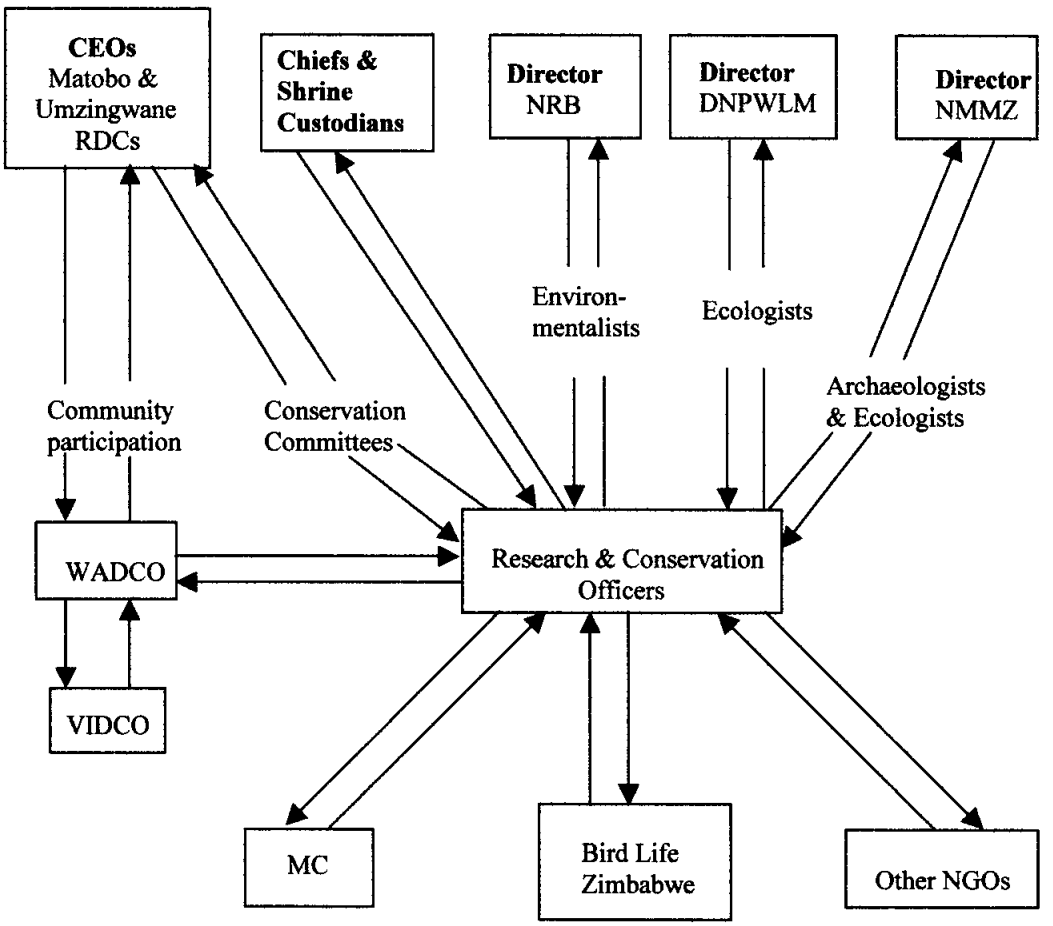


Figure 21: Proposed management structure for Matobo Hills World Heritage Landscape.

8.3 Management of cultural property

Management of archaeological heritage of the Matobo Hills area is the responsibility of the Western Region of the National Museums and Monuments of Zimbabwe. There are three archaeologists and two technical officers resident in Bulawayo. These undertake conservation of the cultural heritage in the entire region including the Matobo Hills area. However, the resource situation militates against an effective management of all sites in the region. This therefore, calls for a very close co-operation between NMMZ experts on conservation with the resident communities in the Matobo World Heritage Landscape. Resources permitting, the present practice of stationing custodians at some sites as monitors and guides could be extended to other sites on the MHWHL. It is envisaged that some members of the Matobo Hills community who are contingent to some sites could be empowered to take care of them.

8.3.1 Living traditions

8.3.1.1 Sacred shrines

All the living tradition sites are well preserved and managed by both NMMZ and shrine custodians appointed according to the customs of the community. Access to the sites is regulated and monitored by the custodians. The shrine custodians also preside over rituals

at the religious shrines. The traditional methods of conserving the shrines, which include the observance of taboos are still in place and continue to enforce rules that relate to the shrine.

8.3.1.2 Taboos associated with the sacred places

It is believed that the spirits reside in forests, mountains, caves, hollowed trees and pools. In other words, the intangible heritage makes use of the tangible heritage as its home. The adherents of the traditional Mwari and the ancestral spirits therefore attach great respect to the environment because they argue, by despoiling it, they will be depriving their god and the spirits a home to live in.

- Individuals or groups of people are not allowed to visit a sacred place or its environs in the absence of the official priest or priestess or his/her appointee. Songs of praise precede approach to the shrine and an appropriate person leads the visitors. That way no mischief is envisaged.
- It is taboo to cut down a tree in a sacred place. Trees constitute the dwelling place of the ancestral spirits and removing them is tantamount to exposing Mwari and the spirits. Such behaviour is punishable. For anyone to remove a tree from the sacred forest or shrine, the priest or priestess has to ask for permission to do that giving a convincing reason. Failure to observe that would result in individuals or their families or the entire community being punished by the grieved spirits. Unsanctioned removal of trees from such places is interpreted as a sign of disrespect.
- Traditionally, whenever hunters chasing after an animal saw it entering a sacred forest, the chase was immediately called off. The animal was regarded as part of the sacred herd. However, from time to time, residents close to such sacred places would find an animal in their midst and kill it. That was inevitably interpreted as a gift from Mwari or the ancestral spirits. The meat was shared amongst the households in the vicinity. Special parts of the animal were taken to the local spirit medium and to the chief both of whom were important custodians of the local traditions. The animals in the sacred areas did not belong to an individual and so no one could hunt them with impunity. That way, the wildlife was protected against poaching. Contemporary places such as Njelele and Dula are still in pristine condition, thanks to their sacredness.
- The generally acceptable behaviour when entering a sacred shrine is to remove one's shoes, watch and leave money 'outside'. Visitors to Njelele, Zhilo, Dula and many other sites are expected to leave these items at the home of the keeper.
- All the shrines are accessible throughout the week except on Wednesdays because on this day known as 'Chisi' or 'iZilo' all people are expected to rest.

8.3.2 Rock Art Sites

Of the estimated 30 000 rock art sites in Zimbabwe only 15.3% have been recorded in the national monuments register. Most of these sites are from the Matobo Hills area. A few of these have been documented through photography and tracings. The available archive for rock art sites therefore forms the data bank for the conservation programmes so far implemented in the Matobo Hills.

NMMZ has formulated management strategies to ensure the preservation and sustainable utilisation of the rock art sites. These include:

- Opening a few sites to the public, which are easy to monitor on a regular basis. In the Matobo these are Silozwane, Pomongwe, Bambata, Nswatugi, White Rhino and Inanke caves open to the public.
- Erection of barricades in caves open to the public with the aim of reducing cases of vandalism at these sites. For instance, a cage mesh was put up at White Rhino site to deter visitors from coming into contact with the rock paintings.
- For selected rock art sites, custodians have been employed to man the sites i.e. receive and guide visitors, and report on adverse developments at the site.
- Conducting tour guide courses for tour operators. The aim is to conscientise them about the value of these rock art sites. They are also told the dos and don'ts at the site.
- Routine inspections by the Monuments Inspector, and routine graffiti removal using methods with minimal impact on the paintings themselves.
- Two site Museums have been established at Pomongwe and Nswatugi to effectively communicate the significance of the cultural patrimony of the Matobo Hills area to the public.
- Heritage education programmes have been conducted in the primary schools within the Matobo Hills area, towards conscientising future heritage managers.

Generally the rock paintings of the Matobo are well preserved and presented because of the concerted institutional approach to conservation and the material which constitute the fabric of the site i.e. granite rock. NMMZ has initiated a rock art documentation programme in the Matobo Hills area with the assistance of NORAD (Government of Norway). The documentation exercise involves photography, transcription, production of site registers and generation of accurate co-ordinates using GPS. The rock art in the area benefited when the Matobo Hills was used as the venue for the inaugural training in the Conservation and Management of Rock Art Sites in Southern Africa (COMRASA) in 1999. COMRASA is a sub-regional effort to promote the proper conservation of rock art in Southern Africa and training workshops revolve around the sub-region. 'NORAD' and 'AFRICA 2009' are funding the programme.

8.3.3 Historical sites

Most of the historical sites, which include World's View, are open to the public, except the Ndebele burial grounds. The sites are well preserved although at World's View a metallurgist is required to deal with the problem of corrosion of the metal used in erecting parts of the Allan Wilson Memorial structure, and the intense graffiti introduced on the lids of all graves at the site, including that of Cecil John Rhodes. A register of all historical sites is maintained at the Archaeological Survey at the Museum of Human Sciences in Harare. Regular inspections of the sites generate condition reports that assist conservators in making decisions on the nature of appropriate interventions.

8.4 Management of natural property

The responsibility of managing the natural resources rests with the RDCs, DNPWLM, DNR, Forestry Commission and the Ministry of Lands, Agriculture and Resettlement.

Some of the practices of the community complement the conservation efforts of the statutory bodies above.

In the communal areas Conservation Committees of the RDCs are responsible for the management and conservation of natural resources. In addition the RDCs have CAMPFIRE projects, which they run in conjunction with the DNPWLM.

Programmes to manage the natural habitats exist in the National Park, commercial and communal farming areas practising both modern and traditional methods. For example, fire is used as an important ecological management tool in the Matobo Hills. It has been present in the Matobo for millennia and helped shape both vegetation pattern and composition. It is of interest that what are believed to be the second oldest fire plots in Africa, which are still maintained and recorded, are situated here. In addition, much of the early experimental and conceptual work on savannah ecology and determinants (e.g. effects of fire, moisture availability and nutrient differences between microphyllous and broad-leaved savannah) was developed and carried out on the Matopos Agricultural Research Station in the area (Huntley & Walker 1982). The juxtaposition of granite-derived oligotrophic and metavolcanic-derived eutrophic soils and vegetation in this area has significantly helped shape thinking on savannah ecology worldwide.

While the DNPWLM has an educational programme on the conservation of wildlife for local schools, the Forestry Commission has introduced re-afforestation programmes of indigenous tree species in the same schools. Both programmes have spill over effects and benefit the parents and the entire communities.

9.0 Bibliography

Barry, R. E. and Mundy, P. J. 1998. Population dynamics of two species of hyraxes in the Matobo National Park, Zimbabwe. African Journal of Ecology 36: 221-233.

Child, G. & Savory, C. R. 1964. The distribution of large mammal species in Southern Rhodesia. Arnoldia (Rhodesia) 1(14): 1-15.

Cooke, C. K. 1969. Rock Art of Southern Africa. Books of Africa (Pvt.) Ltd., Cape Town, South Africa.

Gargett, V. 1990. The Black Eagle: A Study. Russel Friedman Books, Halfway House, Johannesburg.

Garlake, P. 1987. The Painted Caves: An introduction to the prehistone Art of Zimbabwe. Modus Publications, Harare.

Garlake, P. 1995. The Hunters' Vision: The pre-histone Art of Zimbabwe. Zimbabwe Publishing House, Harare, Zimbabwe.

Garlake, P. 1997. The first eight years of Rock Art Studies, 1890-1970, in Gilbert Pwiti. Caves, Monuments and Texts: Zimbabwean Archaeology Today. Uppsala, Sweden.

Grobler, J. H. & Wilson, V. J. 1972. Food for the leopard *Panthera pardus* (Linn.) in the Rhodes Matopo National Park, Rhodesia. Arnoldia (Rhodesia) 5(35): 1-10.

Huntley, B. J. and Walker, B. H. (eds). 1982. *Ecology of Tropical Savannas*. Springer Verlag, Berlin.

Irwin, M. P. S. 1981. The Birds of Zimbabwe. Quest, Salisbury.

Ranger, T. 1999. Voices from the Rocks: Nature, Outline and History in the Matopos Hills of Zimbabwe. BAOBAB, Harare.

Rhodes Matopo National Park Management Plan 2000-2004. Department of National Parks and Wild Life Management. Ministry of Environment and Tourism.

Smith, R. M. 1977. Movement patterns and feeding behaviour of leopard in the Rhodes Matopos N.P., Rhodesia. Arnoldia (Rhodesia) 8(13): 1-16.

Taruvinga, P. 1997. The state of the Art: Rock Art in Zimbabwe. INORA, No 16: 27-31.

Walker, N. 1987. The dating of Zimbabwean Rock Art. Rock Art Research 4(2): 137-149.

Walker, N. 1995. Late Pleistocene and Holocene, Hunter-gatherers of the Matopos: An Archaeological Study of change and continuity in Zimbabwe's societies. Archaeological

Upsailiensis, Uppsala Sweden.

Walker, N. 1996. The Painted hills, Rock of the Matopos. Mambo Press, Zimbabwe.

Walker, N. 1998. King of foods Marula economics in the Matopos. South African Wildlife 43(6): 281-285.

APPENDIX 1

List of raptors known to occur in the Matobo Hills area

Common name	**Scientific name**
Secretary Bird	*Sagittarius serpentarius*
Hooded Vulture	*Necrosyrtes monachus*
Cape Vulture	*Gyps coprotheres*
White-backed Vulture	*Gyps africanus*
Lappet-faced Vulture	*Torgos tracheliotus*
Black Kite	*Milvus milvus migrans*
Yellow-billed Kite	*Milvus milvus parasitus*
Black shouldered Kite	*Elanus caeruleus*
African Cuckoo-hawk	*Aviceda cuculoides*
Bat Hawk	*Macheiramphus alcinus*
Honey Buzzard	*Pernis apivorus*
Black Eagle	*Aquila verreauxii*
Steppe Eagle	*Aquila nipalensis*
Tawny eagle	*Aquila rapax*
Lesser Spotted Eagle	*Aquila pomarina*
Wahlberg's Eagle	*Aquila wahlbergi*
Booted Eagle	*Hieraaetus pennatus*
African Hawk Eagle	*Hieraaetus spilogaster*
Ayre's Eagle	*Hieraaetus ayresii*
Long-crested Eagle	*Lophaetus occipitalis*
Martial Eagle	*Polemaetus bellicosus*
Crowned Eagle	*Stephanogetus coronatus*
Lizard Buzzard	*Kaupifalco monogrammicus*
Brown Snake Eagle	*Circaetus cinereus*
Black-breasted Snake eagle	*Circaetus pectoralis*
Bateleur	*Terathopius ecaudatus*
African Fish eagle	*Haliaeetus vocifer*
Steppe Buzzard	*Buteo buteo*
Augur Buzzard	*Buteo augur*
Ovambo Sparrow-hawk	*Accipiter ovampensis*
Little Sparrow-hawk	*Accipiter minullus*
Black Sparrow-hawk	*Accipiter melanoleucus*
Little Banded Goshawk	*Accipiter badius*
African Banded Goshawk	*Accipiter tachiro*
Gabar Goshawk	*Micronisus gabar*
Dark Chanting Goshawk	*Melierax metabates*
African Marsh Harrier	*Circus vanivorus*
Montagu Harrier	*Circus pygargus*
Pallid Harrier	*Circus macrourus*
Gymnogene	*Polyboroides typus*
Osprey	*Pandion haliaetus*

Perregrine	*Falco peregrinus*
Lanner Falcon	*Falco biarmicus*
European Hobby	*Falco subbuteo*
Western Red-footed Falcon	*Falco vespertiuns*
Eastern Red-footed Falcon	*Falco amurensis*
Rock Kestrel	*Falco tinnunculus*
Greater Kestrel	*Falco rupicoloides*
Lesser Kestrel	*Falco naumanni*
Barn Owl	*Tyto alba*
African Grass Owl	*Tyto capensis*
Wood Owl	*Strix woodfordii*
Marsh Owl	*Asio capensis*
African Scops Owl	*Otus senegalensis*
White-faced Owl	*Otus leucotis*
Pearl-spotted Owl	*Glaudidium perlatum*
Barred Owlet	*Glaucidium capense*
Cape Eagle Owl	*Bubo capensis mackinderi*
Spotted Eagle Owl	*Bubo africanus*
Giant Eagle Owl	*Bubo lacteus*

Appendix 2

LOCATION OF SOME ROCK ART AND OTHER CULTURAL SITES WITHIN THE MATOBO HILLS AREA

QDS		Common name		
2028:AD:01	PH-495-384	Fort Inugu	HIST?	Western
2028:AD:02	PH-56-44	Govt. Res. Stn.	RP/ SA/ IA	Western
2028:AD:03	PH-447-511	Fort Marquand	RP/ MSA/ LIA	Western
2028:AD:04	PH-444-506	Collaton Farm	LSA/ LIA	Western
2028:AD:05	PH-500-515	Collaton Farm	ESA/E/LIA	Western
2028:AD:06	PH-46-49	Collaton Farm	LSA	Western
2028:AD:07	PH-42-49	Figtree - Irene	ESA	Western
2028:AD:08	PH-34-59	Springfontein Farm	MSA	Western
2028:AD:09	PH-50-39	Bedza - Famona	SA/ LIA	Western
2028:AD:10	PH-53-44	West Acre Creek	MSA	Western
2028:AD:100	PH-488-417	Matopos Research Station	RP/ SA/ IA	Western
2028:AD:101	PH-487-417	Matopos Research Station	RP/ SA/ IA	Western
2028:AD:102 a	PH-515-418	Gladstone W Cluster	RP	Western
2028:AD:102 b	PH-515-418	Gladstone W Cluster	RP	Western
2028:AD:102 c	PH-515-418	Gladstone W Cluster	RP	Western
2028:AD:103	PH-47-51	Cyrene Mission	IA	Western
2028:AD:104	PH-541-426	Matopos Railway Terminus	HIST	Western
2028:AD:105 a	PH-443-513	Matopos National Park	RP/ IA	Western
2028:AD:105 b	PH-443-513	Matopos National Park	RP	Western
2028:AD:106	PH-441-515	Matopos National Park	RP	Western
2028:AD:107	PH-446-511	Matopos National Park	RP	Western
2028:AD:108	PH-443-511	Matopos National Park	RP	Western
2028:AD:109	PH-444-508	Matopos National Park	RP	Western
2028:AD:11	PH-54-44?	West Acre Creek	MSA/ LIA	Western
2028:AD:110	PH-444-507	Matopos National Park	RP/ SA/ IA	Western
2028:AD:111	PH-447-509	Matopos National Park	RP	Western
2028:AD:112	PH-447-512	Cyrene Mission	RP	Western
2028:AD:113	PH-447-5105	Cyrene Mission	RP	Western
2028:AD:114	PH-469-337	Matopos National Park	RP/ SA/ IA	Western
2028:AD:115	PH-453-337	Matopos National Park	IA	Western
2028:AD:116	PH-452-336	Matopos National Park	IA	Western
2028:AD:117	PH-491-377	Famona Farm	SA/ IA	Western
2028:AD:118	PH-488-374	Famona Farm	RP/ IA	Western
2028:AD:119	PH-478-361	Famona Farm	IA	Western
2028:AD:12	PH-53-57	Khami River	ESA	Western
2028:AD:120	PH-478-360	Gladys Farm	IA	Western
2028:AD:121	PH-477-358	Excess Farm	RP/ IA	Western
2028:AD:122	PH-474-348	Excess Farm	RP	Western
2028:AD:123	PH-475-347	Excess Farm	RP/ SA/ IA	Western
2028:AD:124	PH-476-349	Excess Farm	RP/ IA	Western
2028:AD:125	PH-477-348	Excess Farm	RP/ IA	Western
2028:AD:126	PH-475-345	Excess Farm	RP	Western
2028:AD:127	PH-477-346	Excess Farm	RP/ IA	Western
2028:AD:128	PH-477-347	Excess Farm	RP/ IA	Western
2028:AD:129	PH-476-346	Excess Farm	RP/ IA	Western
2028:AD:13	PH-54-58	Khami Magazine Site	MSA/ LIA	Western
2028:AD:130	PH-475-344	Excess Farm	RP	Western
2028:AD:131	PH-482-339	Excess Farm	RP/ IA	Western
2028:AD:132	PH-488-370	Anglesea Farm	RP/ SA/ IA	Western

2028:AD:133	PH-491-350	Gladys	RP	Western
2028:AD:134	PH-490-349	Gladys	RP	Western
2028:AD:135	PH-485-348	Gladys	IA	Western
2028:AD:136	PH-485-350	Gladys	RP/ SA/ IA	Western
2028:AD:137 a	PH- 488-344	Gladys	RP/ SA/ IA	Western
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2028:AD:137 c	PH-488-344	Gladys	RP/ SA/ IA	Western
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2028:AD:139	PH-484-344	Excess	RP	Western
2028:AD:14	PH-36-43	Dunnichen - C	SA	Western
2028:AD:140 a	PH-488-346	Gladys	IA	Western
2028:AD:140 b	PH-488-346	Gladys	IA	Western
2028:AD:141	PH-487-347	Gladys	IA	Western
2028:AD:142	PH-485-346	Excess/ Gladys	IA	Western
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2028:AD:144	PH-481-343	Excess	IA	Western
2028:AD:145	PH-475-358	Anglesea	RP/ IA	Western
2028:AD:146	PH-558-425	Figtree	EIA	Western
2028:AD:147	PH-495-347	Amalinda Safari Camp	EIA	Western
2028:AD:148	PH-496-349	Amalinda Furnace	IA	Western
2028:AD:149	PH-498-349	Amalinda Dolly Holes	IA	Western
2028:AD:15	PH-488-529	Two Tree Kop	IA	Western
2028:AD:16	PH-558-427	Westacre Creek Farm	E/ LIA	Western
2028:AD:17	PH-458-467	Mdanyazana Ruin	LIA	Western
2028:AD:18	PH-488-527	Two Tree Kop	LIA	Western
2028:AD:19	PH-56-60?	Lakweni Farm/ Hlekweni	LIA	Western
2028:AD:20	PH-38-44	Eskdale Farm	LIA	Western
2028:AD:21	PH-53-44	West Acre Creek	E/ LIA	Western
2028:AD:22	PH-464-465	Longsdale	LIA	Western
2028:AD:23	PH-529-5523	Woollandale	SA/ LIA	Western
2028:AD:24	PH-49-52	Khami Dam	LSA	Western
2028:AD:25	PH-564-329	World's View Farm	LSA	Western
2028:AD:26	PH-44-41	La Concorde	RP	Western
2028:AD:27	PH-41-34	Forword's Block	RP	Western
2028:AD:28	PH-37-35	Monkton	RP	Western
2028:AD:29	PH-36-54	Doublevale	RP	Western
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2028:AD:32	PH-435-450/ 500-515	Collaton Farm	RP	Western
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2028:AD:38	PH-457-471	Irene	LIA	Western
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2028:AD:49	PH-535-356	Gladstone Farm	RP	Western
2028:AD:50	PH-565-368	Little Ififi	RP	Western
2028:AD:51	PH-561-347	Gladstone Farm	RP	Western
2028:AD:52	PH-559-349	Gladstone Farm	RP	Western
2028:AD:53	PH-488-527	Two Tree Kop	LIA	Western
2028:AD:54	PH-482-328	Mhlahlandhlela	RP	Western
2028:AD:55	PH-38-47	Figtree	IA	Western
2028:AD:56	PH-547-405	Ntudjwana	RP	Western
2028:AD:57	PH-53-42	Terminus	RP	Western
2028:AD:58	PH-537-427	Longsdale	RP	Western
2028:AD:59	PH-531-363	Gladstone	RP	Western
2028:AD:60	PH-563-525	Woollandale Rifle Range	MSA	Western
2028:AD:61	PH-56-35	Ififi	MSA	Western
2028:AD:62	PH-497-339	Mhlahlandhlela	RP	Western
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2028:AD:64	PH-513-536	Woollandale	IA	Western
2028:AD:65	PH-519-525	Woollandale	IA	Western
2028:AD:66	PH-553-401	Hazelside	RP/ L/ MSA	Western
2028:AD:67	PH-555-404	Hlambi	RP	Western
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2028:AD:72	PH-493-346	Gladys Farm	RP/ SA/ IA	Western
2028:AD:73	PH-559-390	Matopos National Park	RP	Western
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2028:AD:77	PH-442-514	Robin's Ruin	RP/ IA	Western
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2028:AD:79	PH-560-382	Hazelside	RP/ SA/ IA	Western
2028:AD:80	PH-564-381	Hazelside	RP	Western
2028:AD:81	PH-565-380	Hazelside	RP	Western
2028:AD:82	PH-512-425	Longsdale	RP/ IA	Western
2028:AD:83	PH-519-426	Matopos Research Station	RP	Western
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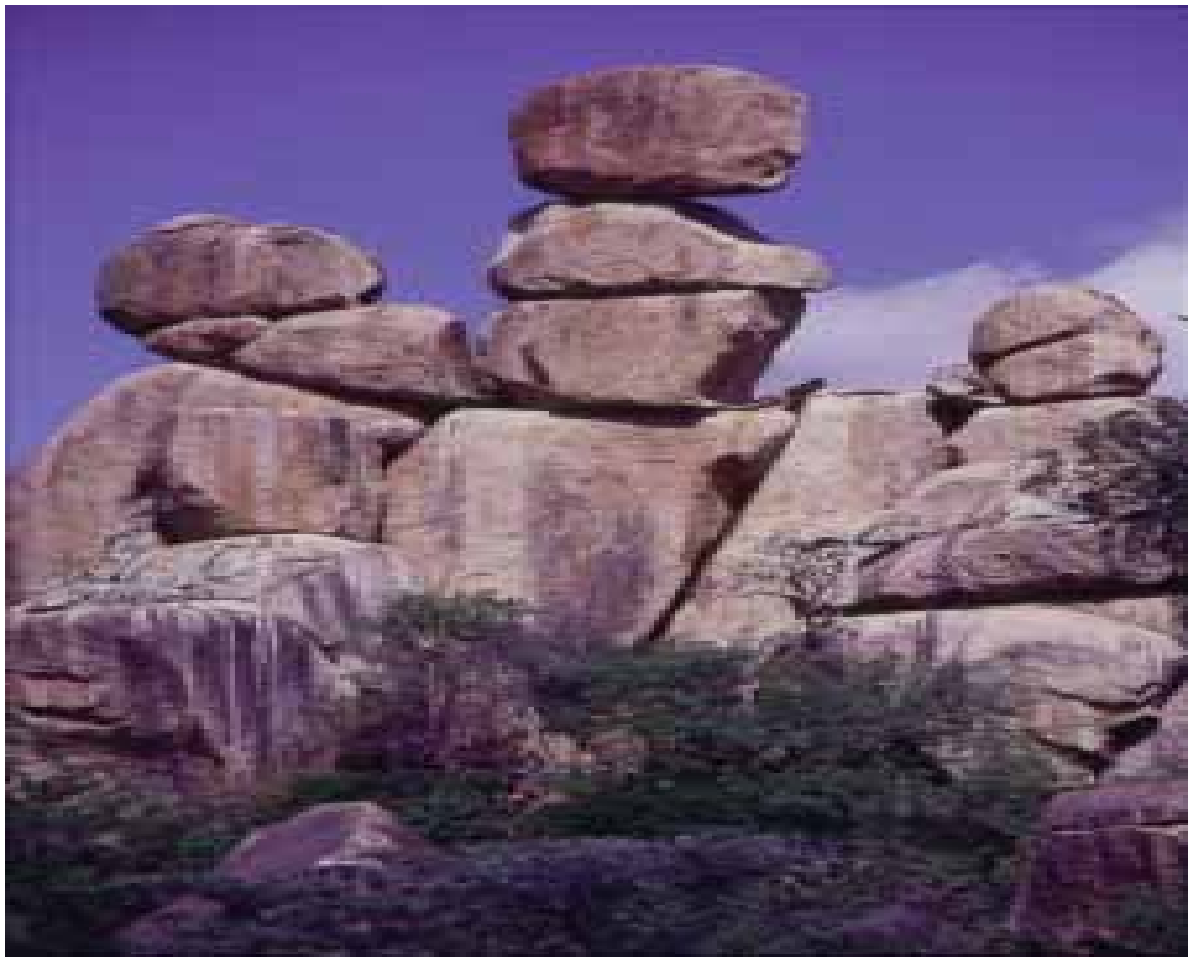
Matobo Hills World Heritage Area



Management Plan

2005-2009

CARING FOR ZIMBABWEAN CULTURAL HERITAGE IN ITS DIVERSITY

1. INTRODUCTION

Matobo Hills[1] was nominated as a cultural landscape and inscribed on the World Heritage list in June 2003, under the 1972 Convention on the Protection of the World's Cultural and Natural Heritage. In compliance with the terms of the Convention, stakeholders of the Matobo Hills developed this management plan for the period 2004-2009. It spells out the current state of conservation and outlines strategies for improved management for the next 5 years. The Matobo Management Committee represents all stakeholders, not only to take full congnisance of their views and objectives, but to sustain the unique qualities that give the Matobo Hills its exceptional significance as a cultural landscape.

2. BACKGROUND TO PLAN

Considering the limitations of time and resources, the planning process adopted was designed to be open, comprehensive, participatory and as consultative as possible. This approach was agreed upon and adopted by all participants after realising the need to manage different components of the World Heritage site in a coherent and integrated manner. The planning process, which spanned the period February to October 2004, had three phases.

The initial phase identified key stakeholders in the Matobo Hills, and involved research and fieldwork to gather information. The following organisations and communities were identified as having a stake in the cultural landscape: National Museums and Monuments of Zimbabwe (NMMZ), Zimbabwe Parks and Wildlife Management Authority (ZIPWA), Matobo and Umzingwane Rural District Councils, Forestry Commission, Zimbabwe Tourism Authority (ZTA), Commercial Farmers, Department of Natural Resources and local communities represented by traditional leaders such as Chiefs and Headmen. Within the first phase, a series of stakeholder meetings took place at Maleme Rest Camp in Rhodes Matobo National Park, to draft a programme of activities for the management of the landscape. Consultation and participation in the planning process cultivated interaction and close co-operation among stakeholders, culminating in an integrated structure for the management of heritage in the landscape. The stakeholders' workshops were followed by consultations with local communities. A series of meetings was organised and held in Matobo and Umzingwane, the two Rural Districts which are part of the Matobo landscape. Community consultation was held in Silobi, Dula, Kumbudzi, Mzinyathini and Longfield in Umzingwane. In Matobo, the meetings were conducted in Mthwakazi, Mazhayimbe, Nathisa, Figtree, Bazha and Silozwe. These consultations were conducted by the Technical Planning Committee, which was drawn from, and is representative of, all stakeholders. The exercise sought to create awareness of the significance of the cultural landscape among local communities, and how its inscription as a World Heritage Site will impact on their lives. Consultations also sought to gather information on how the communities perceive the current management system and the inscription

[1] The official name of the site in the nomination dossier to the World Heritage Committee is the Matobo Hills, although the name on the cover of the dossier is the Matobo Hills World Heritage Area.

Pictures showing interviews with communities

Plate 1: Matobo Mazhalimbe Communal Area: Ward 18

Plate 2: Matobo Gulati Communal Area: Ward 15

Plate 3: Umzingwane Silobi Communal Area: Ward 9 and 10

The second phase was devoted entirely to identifying key management issues, and a series of alternative strategies and options for achieving the desired management status.

The third and final stage saw the consolidation of inputs and identification of preferred options. Following the Logical Framework Approach, it spelt out how various activities will be implemented to meet management objectives. The Logical Framework Approach calls for identification of a problem or goal, strategies to arrest the problem or achieve the goal, inputs and personnel required, as well as indicators for progress towards achieving the goal. In this plan, management options are linked to implementation schedules, detailing strategies or activities to achieve the set goals, as well as respective implementation performance monitoring and evaluation indicators.

3. OBJECTIVES

The objectives of this plan are to:

a. develop an integrated management system with a hierarchy of accountability;
b. conserve and enhance the World Heritage values of the cultural landscape;
c. promote opportunities for visitor enjoyment, appreciation and education; and
d. develop socio-economic opportunities that include an education and interpretation programme for the local community.

Stakeholders who participated in the development of this plan were not only an important source of information, but also an important instrument for forging consensus building and cooperation, conflict resolution and integration of the overall management system for the inscribed Matobo Hills. This system includes Zimbabwe Parks and Wildlife that is responsible for the natural environment, and the National Museums and Monuments of Zimbabwe that is responsible for cultural heritage. Below is a summary of the consultative process adopted.

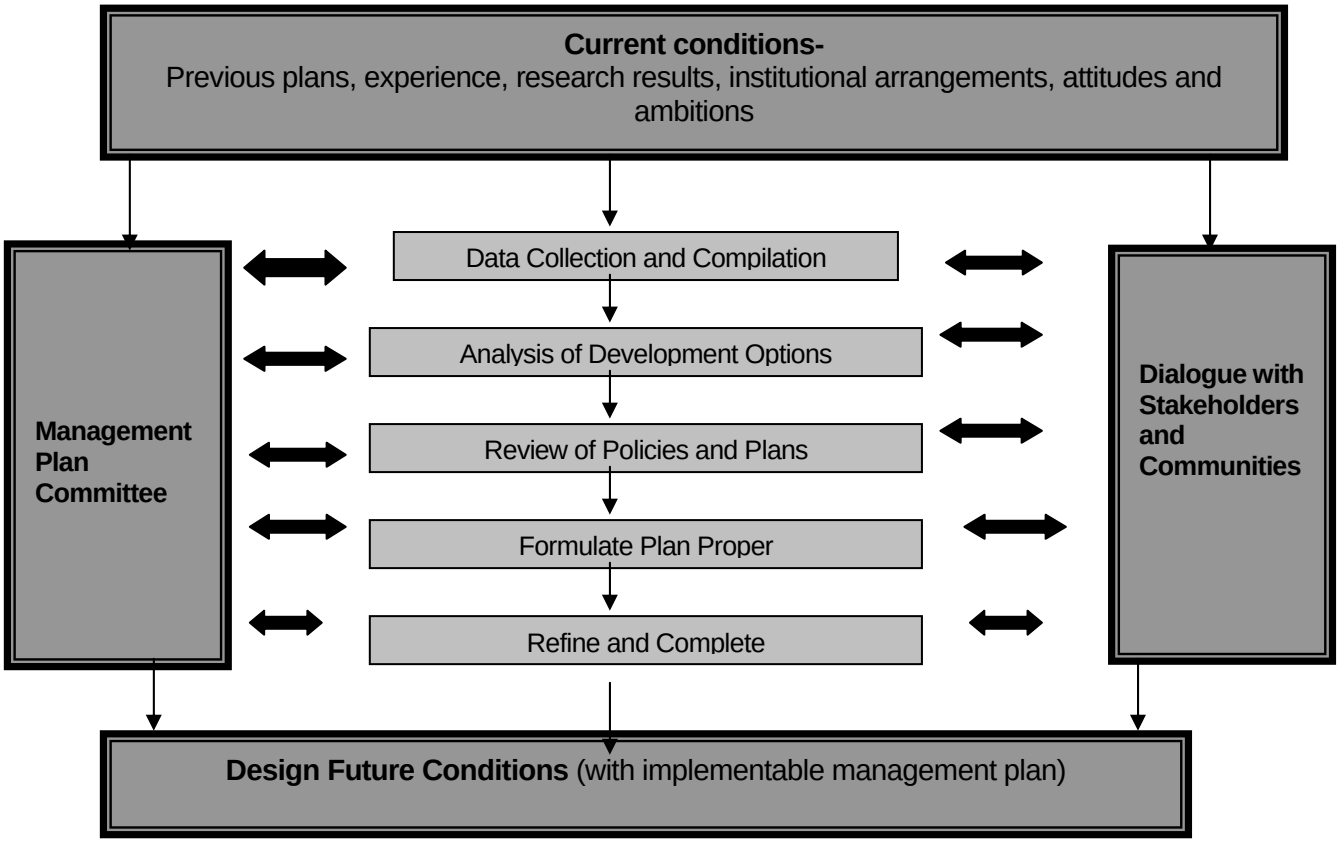


Figure 1. Steps followed in the Consultation and Planning process

4. STATEMENT OF SIGNIFICANCE

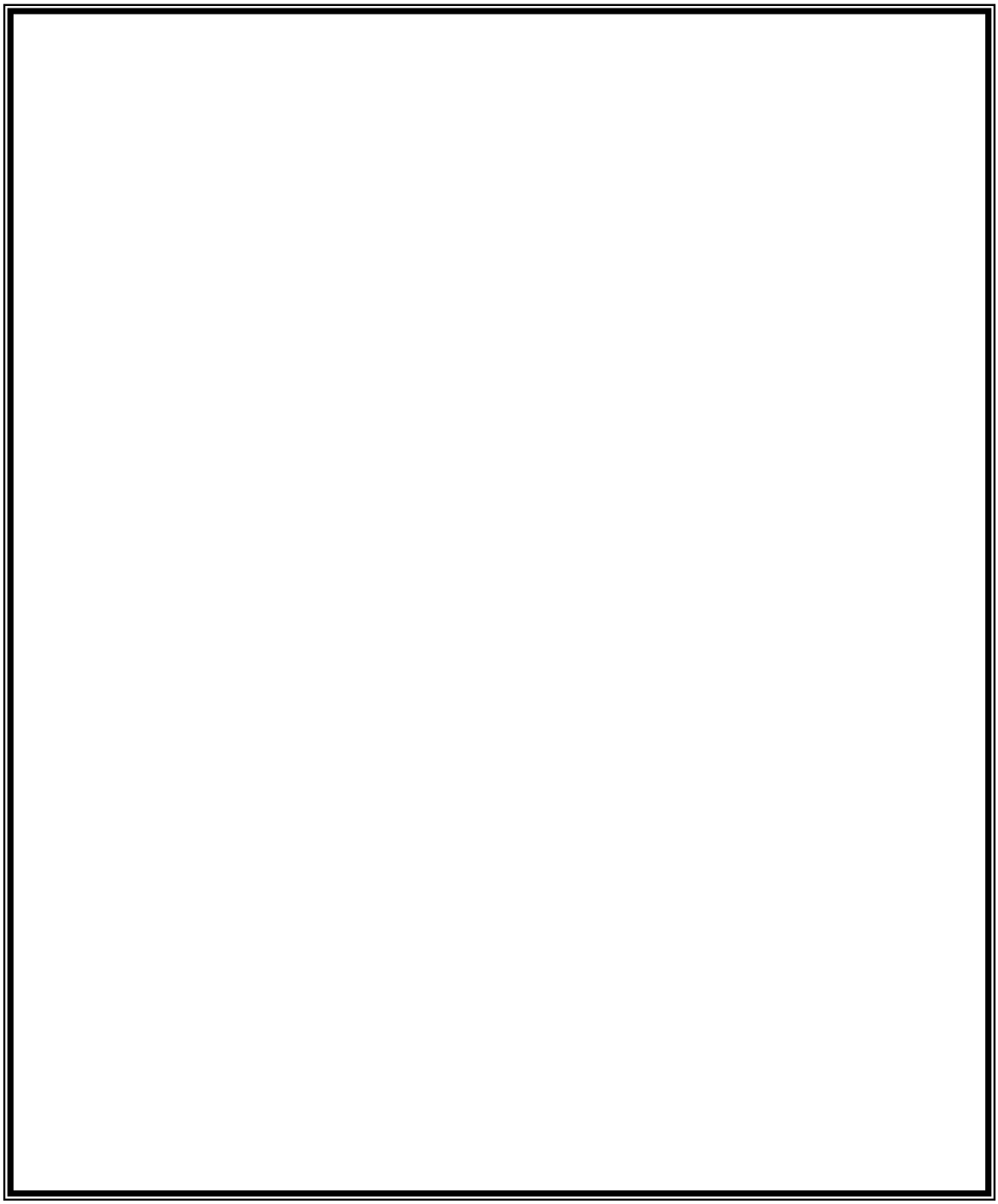
This management plan recognizes that the statement of significance for a place is the cornerstone for management decisions and planning. The significance of the Matobo Hills is summarised as follows:

> The intrinsic values of the cultural landscape of the Matobo Hills World Heritage Site stem from the way the cultural beliefs of people over many millennia have been inspired and influenced by its rock formations and associated features, and particular species of fauna and flora.
>
> Interaction between people and the landscape began at least 500 000 years ago. Within the last 10 000 years, rock paintings of outstanding beauty and intricate detail recorded how people obtained spiritual power from the landscape, trees and from animals such as the kudu, giraffe, elephant and termites.
>
> Strong religious beliefs fostered by the landscape continue to play an important role in contemporary communities. Some date to at least 2000 years ago and are based on rock formations, pools, trees and certain animals in rain-making, fertility, cleansing, burial, shielding and healing ceremonies. The Mwari religion, for example, regards the Matobo rocks as the seat of God and of ancestral spirits. The intangible heritage associated with the shrines is one of the most powerful living cultural traditions in Southern Africa and attracts pilgrims from all over the region.
>
> In recent times the synergy of landscape and beliefs has led to the choice of the Matobo Hills for the memorialization of historical figures, such as King Mzilikazi, Cecil John Rhodes and Leander Starr Jameson, and events such as World War II, the Shangani Battle and the Rhodes Indaba.
>
> The combination of the unique values of the Matobo Hills contributes to the economic empowerment of local communities. They generate income from employment opportunities in conservation management, tourism and accommodation, and from selling curios. Mutual benefits such as cutting of grass in the Park for thatching and stock fodder create good relationships with local communities.

5. DESCRIPTION OF THE MATOBO HILLS CULTURAL LANDSCAPE

5.1 Boundaries and Identification

The Matobo Hills are located in the Matebeleland South Province, in south western Zimbabwe. The landscape extends from 28. 00’ to 29.00’ E and 20.25’ to 20.45’ S. It is covered on map sheets 2028A4, 2028 B3, 2028 C2, 2028 D1, 2028 D2, and 2028 B4 of the Surveyor General’s office, Zimbabwe. This cultural landscape forms part of the granite complex, which stretches to the Zimbabwe/Botswana border in the west, and merges with the Mbalabala granite pluton in the east. The spatial extent of the Matobo Hills is 2050 sq km, surrounded by a buffer zone that covers 1050 sq km. The total area of the World Heritage Site therefore adds up to 3100 sq km.



Map showing location of Matobo Hills and relate Areas

The boundaries of the Matobo Hills were defined using both natural and artificial features. It is bound on the north by the Khumalo and Matobo communal areas, as well as the Maleme, Umzingwane and Nsezi Rivers. The western extent is defined by the Shashani River, while part of the Matobo communal lands, the Lumane River and an established gravel road mark the eastern boundary. Properties that fall within the confines of the Matobo Hills are Rhodes Matobo National Park, Lake Matobo Recreational Park, part of the Rhodes Matobo Estate. Parts of Gulati, Khumalo, Mzinyatini and Nswazi communal areas and some commercial farms administered by Matobo Rural District Council are also included.

5.2 The Cultural Landscape

5.2.1 Geology

The Matobo Hills cultural landscape is an outstanding example of how people and nature have interacted, and how both have influenced each other over a long period. This landscape is known for its distinctive geological formations and landforms, and it is these products of geomorphological processes that have hosted flora, fauna and human communities for more than 500 000 years. The most distinctive landforms are the inselbergs, whalebacks, dwalas and castellated hills, commonly referred to as kopjes. The geomorphology of the Matobo Hills has influenced the way societies view and relate with nature, not only in the past, but also among present day communities. The location of prehistoric sites clearly demonstrates how these landforms influenced settlement. Early, Middle and Late Stone Age tools and rock art are closely linked to a number of natural rock shelters that have formed under granite boulders (Walker 1995). The granite offered an ideal settlement setting and raw material for tools used in hunting, gathering and food processing.

The granite provided the surface for rock painting and rock art sites are found in many caves, on boulders and on cliff faces. Early Iron Age farmers (early farming communities) also utilised the landscape, with evidence of occupation common in hemispherical caves and rock shelters, in most cases overlying Stone Age deposits. Dry stone-walled enclosures of the Khami phase of the Zimbabwe tradition used the granite too. The historical period points to the importance of the Matobo landscape for Nguni groups fleeing Zululand in the 1830s as their granaries are still preserved in some rock shelters. The landscape in this case was a place of refuge in turbulent times.

In colonial and post-colonial times, people have utilised the gigantic boulders for spiritual purposes, especially those that are elevated, delicately balanced, or protect springs and pools. Studies of intangible heritage show that selected boulders and pools in the Matobo landscape have been, and continue to be, used as sacred venues for worship. For example, wetlands and valleys below dwalas, pools, springs and wells among hills and on top of hills, are used for rain-making. In such cases the landforms represent points of communication with the spirit world. Replication of landscape features is considered significant too as it providies natural camouflage for secret activities such as burials. It is therefore necessary to conserve the natural integrity of the landscape, especially when considering sites for the placement of interpretive centres and accommodation.

The distinctive landscape of the Matobo Hills also attracted the attention of the colonial masters, such as Cecil John Rhodes who ordered his burial on one of the granitic hills that

commands a magnificent view of the landscape. Today, this natural landscape stands out as one of the highlights for visitors and tourists who come to the Rhodes Matobo National Park.

The geology of Matobo has therefore rendered the landscape a living entity, influencing and impacting on human beings in many different ways.

5.2.2 Ecology

Soils, the fine-scale products of geological processes, are predominantly sandy, but there are variations in clay content (derived from feldspars) depending on how the mineral content has been altered by both primary and secondary processes. Soils rich in clays are localised in weathered seeps and at the bases of catenas. It is these soils, coupled with mean temperatures of around 26.3°C in summer, and 17°C in winter, that have sustained the long sequence of human occupation and the flora and fauna in the Matobo Hills.

The Matobo Hills cultural landscape, lying in the Zambezian savannah biome under a generally dry climate, has a high diversity of vegetation types within a comparatively small area, including miombo woodlands and afromontane vegetation. The most common vegetation types are the kopje vegetation that notably supports a variety of lichens and the resurrection plant *Myriathamnus flabellifolius*. Woodland species of *Albizia, Cassis, Combretum*, *Pterocarpus, Ziziphus* and *Kirkia*, interlace with the exposed granite. Grass cover is poor in the woodlands, although a sparse cover of *Oplisemenus hintallus* occurs with *Enteropogon macrostachys* and pure stands of *Panicum maximum* grow on woodland fringes. In the open woodland/sandveld areas, various dorminant species occur, including *Burkea africana, Pterocarpus rotundifolia* and trees such as *Terminalia sericea, Ozoroa reticulata, Rhus* spp, *Grewia* spp, *Maytenus senegalensis*. Open woodland mopane patches dominate some areas, and may be associated with *T. randii*, and a shrub layer of *Euclea divinorum and Grewia bicolour*. In these areas, grass cover is sparse, consisting of weak perennials and annuals of *Aristida* spp, *Eragrostis* and *Chloris.* Sometimes pure miombo stands of *B. spiciformis* occur in the Mtsheleli Valley and Whoi areas. The grasslands consist of thatching grass *Hyparrhenia* spp, spear grass, the couch grass for grazers such as *Cynodont dactylon* and others. This vegetation has been, and continues to be central to the livelihood of communities within the landscape. Vegetation was and still is used for domestic activities and medicinal purposes, and contributes to the subsistence of local communities. Today some tree species are being utilised for crafts and curios, and people derive a livelihood out of the business. Certain trees, such as the marula, are believed to be the home of spirits.

The Matobo Hills is home to a variety of faunal species that co-exist in various habitats in the area. This range of species includes amphibians, reptiles, fish, mammals and birds. About 400 of the 674 Zimbabwean bird species occur in the Matobo Hills, and some of them do not occur anywhere in the adjacent districts. Of the 43 protected bird species in Zimbabwe, 35 are found in Matobo. In the herbivore family, the dominant species are the dassies and the klipspringer. The leopard, which is the largest predator in the area, is a major attraction in the landscape. The black and white rhino are protected in the Intensive Protection Zone of the Rhodes Matobo National Park. There is an unusually high population of black eagles in the Matobo Hills that has been monitored in a well organised programme for the past 40 years. Twelve other raptors also constitute species under

special protection. Eagles play a special role in spiritual beliefs related to rain making and fertility.

Human beings have always interacted with faunal species, and have not only depended on some for subsistence, but also incorporate animal skins and bones, such as those of the rare brown hyena, in spiritual beliefs and rituals. Rock paintings used animal blood and fat as binders for the paint, and selected animal species – in particular the kudu, giraffe, elephant, leopard and termites – are depicted in the paintings because they were believed to have spiritual power and significance. In recent times the distinctive agama lizards at the grave of Cecil John Rhodes were 'tamed' by the site custodian and continue to guard the place.

5.2.3 Cultural Heritage

The diverse cultural heritage of the Matobo Hills spans more than 500 000 years with continual settlement over at least 100 000 years, as reflected in the numerous rock art sites, rock shelters with Stone Age and Iron Age deposits, graves and sites associated with living traditions that are the focus of communal contact with the spirits.

5.2.3.1 Rock Art

Compared with similar areas in the sub region and the world at large, the Matobo Hills has one of the largest concentrations of rock art with no less than 3500 sites in the records of the National Museums and Monuments database. More surveys could see the figure rise to 6000 sites. Many researchers have studied the rock art here (Walker 1996) to document and decipher the meaning and significance of the paintings.

Scholars who have worked in the Matobo Hills initially distinguished the styles used on the basis of the colours used rather than the effect produced (Walker 1996, Garlake 1995). Contemporary researchers, however, have produced well-defined styles on the basis of colour, technique and effect, defined as monochrome, bichrome and polychrome. Superimposition is also a feature. Some of the sites where extensive research has been carried out include the following.

> ***Bambata Cave*** is one of the most extensively researched prehistoric sites in Southern Africa. The paintings are in good state of conservation. Excavations have revealed the oldest piece of decorated stone in Zimbabwe dated to about 10 000 years ago.
>
> ***Nswatugi Cave*** is where the oldest human skeleton in Zimbabwe was recovered as well as evidence of Middle Stone Age occupation dating to around 42 000 years BP. In describing the paintings in this site, Garlake (1987:85) says "….the paintings are among the most varied and beautiful in the Matobo…"
>
> ***Pomongwe Cave*** has Middle and Late Stone Age deposits with a wide range of stone implements, bone tools and other related paraphernalia. It has a site museum, with comprehensive displays explaining the Stone Age of Zimbabwe in general, and that of Matobo in particular. Some of the paintings were unfortunately damaged when linseed oil was applied over them in the mistaken assumption that they would become more visible.

Inanke Cave has paintings of outstanding beauty. The polychrome galloping giraffe could be the finest naturalistic painting in Zimbabwe. There is exceptional complexity and skill in their execution. Garlake says of Inanke Cave, “In the cave, the prehistoric art of Zimbabwe reaches its peak of beauty, technical skill and complexity” (Garlake 1987).

5.2.3.2 Iron Age sites

The Matobo Hills has many Iron Age sites, mostly in caves, as well as dry stone walled enclosures of the Khami phase of the Zimbabwe Tradition, and iron furnaces.

5.2.3.3 Historical Sites

The Matobo Hills is well known for its historical sites, which are of great significance to the country’s history. The following are examples of the best known and important historical sites in the area:

Burial sites: The two most important graves in the area are those of King Mzilikazi and Cecil John Rhodes. The former founded the Ndebele nation and the latter led the European settlers into the country. Zimbabwe was originally known as Rhodesia after Cecil John Rhodes. World’s View, where Rhodes’s grave is located, is visited by thousands of tourists every year. The tomb of King Mzilikazi, on the other hand, is deliberately restricted from public access in accordance with traditional custom.

Rhodes Indaba Site: The first indaba (peace conference) was held at this site in an effort to end the 1896 war. The mound on which Rhodes and his colleagues sat still exists and is preserved.

MOTH shrine: This is a memorial site for the servicemen who died during both World Wars.

Other sites of historical interest include Mzilikazi’s Wagon Cave, Rhodes’s Summer House and Stables, Matobo Railway Terminus and many others.

5.2.4 Living traditions and Intangible Heritage

The concept of living traditions encompasses the places of worship, beliefs and practices of the local people.

5.2.4.1 Sacred Shrines/ Living traditions

Among the important shrines in the Matobo landscape are Njelele, Dula, Zhilo, Wirirani and Manyanga, of which Njelele is the highest. Njelele is situated south west of Rhodes Matobo National Park in the Khumalo communal area. The site itself is a rock outcrop similar to hundreds of others in the Matobo Hills landscape on a mountain range that runs east to west. Before getting to the site one passes through a sacred forest which stretches for more than 500 metres. Within this forest is a variety of plants and wildlife. No human activities and developments are allowed in this forest and the tangible heritage thus benefits from the sacredness of the place.

These shrines represent the authority of God (Mwari/Mwali). It is believed that the voice of Mwari is heard from the rocks. Mwari of the Matonjeni has attracted the attention of

politicians, laypersons, missionaries and schools both in the past and the present (Ranger 1999). The integrity of traditional places of worship was negatively affected by the arrival into present Zimbabwe of groups of people who did not empathise with them. Many shrines and sacred places in the country were desecrated, and the culture of taking care of this heritage waned in the process. In Zimbabwe today the poor state of the environment (the tangible heritage) is blamed on ignorance, overpopulation, overgrazing and several other causes. In the Matobo Hills indigenous religious beliefs and practices (intangible heritage) were, and still are responsible for the preservation of the tangible heritage. People converge on these places to pray for rain or ask for good health.

The Kalanga often refer to Njelele shrines as "*Dombo letshipoteleka"*, the shifting or turning rock. This indigenous name refers to how different the hill looks as one walks around it. The Stone at Njelele is believed to have talked until 1914. The hill is considered sacred and must not be tampered with in any way, including cultivation and grazing. The secret behind the respect accorded sacred areas and their environs lies in the taboos that are associated with them.

5.2.4.2 Taboos associated with sacred sites

It is believed that the spirits reside in forests, mountains, caves, hollow trees and pools, closely linking intangible aspects of heritage with these tangible places. The adherents of the traditional Mwari and the ancestral spirit therefore attach great respect to the environment because, they argue, by despoiling it they will be depriving their god and the spirits of a home to live in.

- Individuals or groups of people are not allowed to visit a sacred place or its environs in the absence of the official priest or priestess or his/her appointee. Songs of praise precede the approach to the shrine and an appropriate person leads the visitors to the place. That way no mischief is envisaged.

- It is taboo to cut down a tree in a sacred place. Trees constitute the dwelling place of the ancestral spirits and removing them is tantamount to exposing Mwari and the spirits. Such behaviour is punishable. For anyone to remove a tree from the sacred forest or shrine, the priest or priestess has to ask for permission to do so and give a convincing reason. Failure to observe that would result in individuals or their families or the entire community being punished by the aggrieved spirits. Unsanctioned removal of trees from such places is interpreted as a sign of disrespect.

- Traditionally, whenever hunters chasing after an animal saw it entering a sacred forest, the chase was immediately called off. The animal was regarded as part of the sacred herd. However, from time to time, residents close to such sacred places would find an animal in their midst and kill it because it was inevitably interpreted as a gift from Mwari or the ancestral spirits. The meat was shared among the households in the vicinity. Special parts of the animal were taken to the local spirit medium and to the chief, both of whom were important custodians of the local traditions. The animals in the sacred areas did not belong to an individual and so no one could hunt them with impunity. That way, the wildlife was protected against poaching. Places such as Njelele and Dula are still in pristine condition, thanks to their sacred status.

- ❖ The generally accepted behaviour when entering a sacred shrine is to remove one's shoes and wrist watch and leave money 'outside'. Visitors to Njelele, Zhilo, Dula and many other sites are expected to leave these items at the home of the keeper.

- ❖ All the shrines are accessible throughout the week except on Wednesdays because on this day, known as '*Chisi*' or '*iZilo*', all people are expected to rest.

The combination of natural aspects and the resultant higher diversity of flora and fauna of the Matobo Hills has led to the long history of interaction between nature and mankind up to this present day. The Matobo Hills is thus a living cultural landscape worthy of sustainable management in order to preserve its integrity. The conservation of this outstanding and unique heritage is carried out in accordance with the dictates of traditional practices and beliefs and various pieces of legislation, all integrated in a single management plan.

5.2.4.3 Traditional Uses of the Site

The living traditions attract people from all over the region who make pilgrimages to the sites on an annual basis to pray for rain or ask for good health through the authority of Mwari.

The local communities regard the Matobo Hills as *Malindadzimu* which basically refers to a burial place, making this place sacred. From historical times local communities have buried their relatives in different parts of the hills, and most Ndebele Kings are also buried in secret places (*ninga* in Shona and *ubhalu* in Ndebele) in the area. This is probably the reason why Mzilikazi's grave is in the Matobo landscape, and for the same reason Rhodes demanded to be buried at *Malindadzimu*. Local communities have viewed Rhodes' burial as desecration of the landscape, since the burial places are reserved for the local people whose roots are in the hills of Matobo..

Many families in and around the Matobo Hills have specific places or sites where they carry out family or clan rituals such as appeasing spirits; praying for the sick (for example at Dula), praying to territorial spirits in times of disasters or outbreak of diseases; and other traditional ceremonies which are important in their day to day lives.

Another important activity is the continued extraction of traditional medicines by village and local herbalists to help the sick in the community. This role has been extended to pharmaceutical research concerning certain drugs, particularly those relevant to chronic disease such as cancer, HIV/AIDS and many others. Medical students from state Universities also visit parts of the Matobo Hills to learn about traditional medicines. Various organisations such as the Zimbabwe Traditional Healers Association (ZINATHA) exploit plant and tree species for use as medicines for curing diseases. The community is not permittted to cut down trees such as *Muhacha* and Amarula, since they are sacred and important for certain rituals.

The landscape of Matobo has played a very important role in the lives of past and contemporary communities. According to Ranger, people of the Matobo "value their special relationship to a unique environment, their ownership of shrines, their very particular form of agriculture".

6. MANAGEMENT CONTEXT

6.1 State of Conservation

Natural processes and human activities pose the major threats to the sustenance of authenticity and integrity of the values and qualities associated with the cultural landscape of the Matobo Hills. Natural processes with the potential to destroy cultural landscape values include erosion, exfoliation of rock surfaces, drought, cyclones and wild fires. Agricultural practices, tourism, provision of tourism-related infrastructure, accelerated or human induced deforestation, gold panning, human induced fires and graffiti are the dominant human activities that could cause irreversible damage to the cultural landscape.

6.1.1 Rock art sites

According to a recent condition survey (see Annexure 3), most of the rock art sites are relatively stable and well preserved. The degree of damage due to human induced or natural factors varies among sites, but in general they have been protected by the concerted institutional approach to conservation adopted by the NMMZ and resistance of the granite to natural decay.

Currently, NMMZ employees implement the following preventive management measures:

- Opening of sites to the public has been monitored on a regular basis and only a few, Silozwane, Pomongwe, Bambata, Nswatugi, White Rhino and Inanke caves, are open to the public.

- Barricades have been erected in some caves open to the public to reduce vandalism. At White Rhino for instance, a wire mesh cage was erected to deter visitors from coming into contact with the paintings.

- At selected rock art sites, custodians have been employed to receive and guide visitors, and report on adverse developments at the site.

- Courses for tour operators and tour guides have been conducted in order to raise awareness of the value of the art, and how to interpret it to visitors.

- Routine inspections have been made by the Monuments Inspector based in Bulawayo, and routine graffiti removal has used methods with minimal impact on the paintings themselves.

- Site museums have been established at Pomongwe and Nswatugi to effectively communicate the significance of the cultural patrimony of the Matobo Hills to the public.

- Heritage education programmes have been conducted in the primary schools around the Matobo Hills with the aim of conscientising future heritage managers.

6.1.2 Historical Sites

While some historical sites within the Matobo Hills are open to the public, access to sites like Mzilikazi's grave is restricted purely on traditional and cultural grounds. This site has a custodian appointed by the traditional leadership.

Most of the historical sites are well preserved. World's View, however, suffers from the problem of corrosion of metal used in erecting part of the Allan Wilson Memorial structure, and the intense graffiti introduced on the lids of all graves at the site, including that of Cecil John Rhodes. Routine inspections of the sites must be conducted to generate condition reports that assist conservators in making decisions on appropriate management interventions or actions to take.

The NMMZ condition survey (see Annexure 3) has recorded the current state of conservation at selected historical sites within the landscape.

6.1.3 Flora and Fauna

Floral and faunal species are accorded more protection in Rhodes Matobo National Park than any other part of the World Heritage Site. However, conservation related problems still present challenges to the National Park. These include poaching of both flora and fauna by people suspected to be from local communities, and fire outbreaks and natural disasters like droughts, floods and cyclones.

Of these, fire and poaching of small game are the most regular threats. The most sought after species are impala, warthog, and dassies, while mvagazi *Pterocarpus capasa*, umvimila *Kirkia acuminata* and umtsviri *Combretum imberbe* are the tree species mostly poached for carving. Alien species such as *Lantana camara* have invaded some parts of the Park, with Eucalypts and Bottlebrush in the Maleme Valley and azola weed in the Maleme Dam. Such invasion, if unchecked, could potentially upset hydrological ecosystems and habitat structures and their functioning, displacing other indigenous tree and grass species that are important food sources and habitats for many floral and faunal species. Absence of a reliable boundary fence for the National Park is also a matter of concern as it can negatively affect biodiversity conservation. Animals do not recognise boundaries, and unless there is a fence, they cross the park boundary into surrounding areas where their lives are endangered and constantly under threat. Despite these problems, the situation regarding the state of conservation in the Park can be described as being within acceptable limits.

In the communal areas, where protection of biodiversity is not intensive, a different situation pertains. Clearing of land for settlement and for the curio business poses the greatest threat to biodiversity. Tree species, used either for curio carving, or as fencing poles and building materials, risk being wiped out completely through accelerated deforestation. Deforestation is identified in this plan as one of the main causes of accelerated soil erosion in communal areas. Wildlife in communal areas is also under threat of being randomly killed. Overgrazing has compromised the state of conservation in these parts of the cultural landscape.

The concentration of natural resources in the Park area relative to communal and resettlement areas largely reflects the degree of variation in the level of biodiversity protection throughout the cultural landscape. There is need for an inventory of resources,

and for surveys and research as well as monitoring, to establish the true state of conservation. Inventories are useful not only in updating and expanding existing faunal and floral checklists, but also in improving knowledge of habitats in the cultural landscape.

A soil and vegetation survey will provide an improved description and classification of plant economies, while aerial photography will enable the extent and rate of change to be determined, which, if correlated with factors like fire, game water supplies and soils, can generate hypotheses pertaining to the causes of change.

6.2 Authenticity and integrity

The Matobo Hills cultural landscape supports an ecosystem with a high diversity of habitats, ranging from open grasslands and wetlands to kopjes and numerous caves. However the history of human settlement in the area has left a mark on the authenticity of natural heritage. Exotic tree species like the eucalyptus and *Lantana camara* have been introduced, particularly in and around the Rhodes Matobo National Park. This has altered the appearance of the natural environment. Vegetation clearance is likely to be on the increase due to the land reform process, as new farmers clear land for cultivation. Poaching of flora and fauna for medicinal, economic and subsistence purposes is likely to further upset the integrity of natural resources in the landscape.

Cultural heritage sites in the Matobo Hills are comparatively more intact, and have been less disturbed. Most of the Stone Age sites are well protected and preserved. Many of these sites have been excavated, and have contributed immensely towards scientific knowledge of past lifestyles. Sites like Bambata and Pomongwe, where excavations took place, have been carefully backfilled in such a way that disturbances are hardly noticed. Rock paintings within this landscape are in a fairly good state. This is mainly because the focus on rock art studies has been towards interpretation and distribution; hence the fabric of the paintings has not been tampered with. In only one cave have images been affected by uninformed experiments carried out in the 1920s. Linseed oil was used to enhance the images and this has led to darkening of the area covered by the oil. There is no culture of retouching fading paintings in Zimbabwe, so all the paintings and pigments are original. Cultural practices at the rock art sites do not interfere in any way with the panels, leaving the paintings as authentic as before.

There are numerous Iron Age sites in the Matobo Hills, most of which are not open to the public. There is an operational policy for all stone walled sites in the country, and this also applies to those sites within the cultural landscape. This policy stresses the need to maintain the original setting, original workmanship and materials during restoration. It does not allow interference with the original set up and aesthetics of the site, and ensures the protection of the integrity and authenticity of the site.

With regard to the graves of Mzilikazi and Rhodes, the former is under traditional custodianship, and the latter is under the management of NMMZ and ZIPWA. The graves and other historical sites owe their pristine condition to the importance people attach to national history.

Matobo cultural landscape is endowed with living intangible values that are integral to the daily livelihood of local communities. Traditional management systems are enforced at important sites through spiritual and traditional leadership. At Njelele shrine for example, the traditional custodian ensures adherence to traditional taboos and restrictions, including dress code and behaviour at the shrine. The taboos and beliefs, which authenticate the

intangible values and living traditions in the area, bind the cultural and natural values of the World Heritage Site. It can be stated with certainty that there is a high degree of authenticity in all relevant aspects of the Matobo Hills.

6.3 Management Framework and Legal Status

Three organizations are bound by legal instruments to manage this heritage site. National Museums and Monuments of Zimbabwe, under the National Museums and Monuments Act (Chap 25:11) has the mandate to look after cultural and natural heritage within the landscape, while Zimbabwe Parks and Wildlife Management Authority administers and mans parks and wildlife through the Parks and Wildlife Act (Chap 25:11). The Forest Act (Cap 19:05) empowers the Forestry Commission to ensure conservation and sustenance of state and private forests within the landscape. However, traditional management systems implemented by the local communities and traditional leadership also contribute to the sustenance of the integrity of this heritage place. Several organizations through their operations and activities contribute to the conservation of the cultural landscape.

Key stakeholders in the Matobo landscape include:

6.3.1 National Museums and Monuments of Zimbabwe (NMMZ)

The National Museums and Monuments Act (CAP25:11) requires the organization to maintain a register of all known sites and monuments in the country. Some of the monuments and sites are accorded special status through gazetting as national monuments .As required by the Act, National Museums is expected to manage and inventory all the cultural and natural resources in the Matobo Hills, irrespective of where they may be. The administrative and conservation functions of NMMZ are executed through five regional offices. The Matobo Hills fall within the Western Region where the Regional Director heads the Institution (Natural History Museum). Monuments Inspectors and archaeologists based at the Natural History Museum facilitate conservation of cultural heritage, while natural scientists assist in the inventorying of natural heritage. The situation on the ground demands that management of the cultural landscape be done in conjunction with other stakeholders such as Rural District Councils, Conservation Committees, National Parks officials, Chiefs and shrine custodians.

6.3.2 Rural District Councils (RDCs) and Local Communities

The Rural District Councils Act (Cap 29/13) provides for the establishment of Rural District Councils which fall under the Ministry of Local Government. The main sources of income for RDCs are business licenses, levies and taxes. Two RDCs fall within the boundary of Matobo cultural landscape, and these are Matobo and Umzingwane. Gulati and Khumalo Communal lands fall under Matobo Rural District Council, while Matobo, Nswazi and Mzinyathini are under the jurisdiction of Umzingwane. Both RDCs participate in the conservation of their areas through Environmental Conservation Committees, usually chaired by a qualified Environmental Officer. Umzingwane and Matobo RDCs both have viable Communal Areas Management Projects for Indigenous Resources (CAMPFIRE), which seek to benefit communities through utilisation of local resources. At grassroots level, the communities initiate conservation activities through village development

committees (VIDCOs) or ward development committees (WADCO). In Umzingwane, Wards 4,6,7,8,910, 11 and 12 are actively involved in the District Environmental Action Plan which seeks to conserve and restore the environment. All these different community structures were consulted during the drafting of this management plan, and such consultation will continue throughout all stages of the plan. Local communities constitute a major stakeholder in the landscape, since they permanently reside there, and derive their subsistence from the resources in the area. This means they have a vital role to play in the conservation of the cultural landscape. Since local communities gather within Matobo for spiritual purposes, the need to keep the landscape as a venerated area is inculcated into them during such activities. The combined institutional preservation effort ensures sustainable management, and maintenance of authenticity and intergrity of the Matobo Hills.

6.3.3 Zimbabwe Parks and Wildlife Management Authority (ZIPWA)

The Parks and Wildlife Act (Cap 20:14) provides for the conservation of wildlife resources and protection of the natural landscape through establishment of a Parks and Wildlife Board and various committees. In the case of the Rhodes Matobo National Park, the Rhodes Matobo Committee was set up to monitor activities and approve recommended developments within the Park. Direct management is from the Principal Warden, based in Bulawayo, and the resident Senior Warden of Rhodes Matobo National Park. These work closely with the police and the army, should their services be deemed necessary in maintaining the integrity of the Park. A Management Plan was produced for the Rhodes Matobo National Park, for the period 2000 to 2004. This addresses the following:

- Ecological management, research and monitoring programme
- Stakeholder interaction and involvement in the park
- Law enforcement
- Infrastructure development
- Business planning and financial management
- Tourism and tourist facilities in the park

The activities of ZIPWA are funded through National Parks Statutory Fund, which receives income as follows:

- An annual grant from the National Government Budget, through the Ministry of Environment and Tourism
- In terms of Section 97 of the Parks and Wildlife Regulations the Director of the Department of Parks and Wildlife Management, with the approval of the Minister, fixes tariffs for entry and certain activities within the national parks. The General Notice 288 of 2001 prescribes entry fees, accommodation and use within the Rhodes Matobo National Park
- Assistance from the donor community
- For certain projects, money has been borrowed from the World Bank.

6.3.4 Department of Natural Resources

The Natural Resources Act (Cap.20:13) provides for the conservation and utilisation of natural resources, as well as construction of works through a Board and sub-committees. The Department of Natural Resources translates the mandate of the Board into action,

particularly through provision of information related to conservation, and assisting in community initiated projects. In addition to a government grant, the Board has the mandate to fundraise for operations of the department.

6.3.5 Forestry Commission

Section 15 (2) of the Forest Act (Cap 19:05) empowers the Forestry Commission to control and manage demarcated forests within the Matobo Hills World Heritage Site. The mandate of the Commission established by the Act includes:

- the administration, control and management of state forests
- providing for the transfer of certain government assets to the Commission
- providing for the conservation of timber and the compulsory afforestation of private land.

The Commission works closely with schools and ward members in imparting information and providing inputs needed for establishment and maintenance of forests. Several schools and communities in the Matobo Hills World Heritage Site have benefited from this programme, and have established some woodlots with the help of experts from the Commission.

6.3.6 Commercial Farmers

Individual farmers manage their properties directly, most being residents on their respective properties. These farmers fall under RDCs, and unlike their counterparts in communal areas, they hold title deeds to their properties. their activities conform to the laws of Zimbabwe, and have to cooperate with Department of Natural Resources, NMMZ, ZIPWA and the RDC responsible for the area in which their farms are located.

6.3.7 Other Stakeholders

These are several pressure groups or research units that complement the activities of statutory bodies like NMMZ, RDCs AND ZIPWA.

- **The Matobo Conservation Society**: is engaged in education, research studies and other activities throughout the cultural landscape.
- **Chipangali Wildlife Sanctuary**: has an active research unit that works throughout the African continent, but has conducted studies in the World Heritage Site.
- **The Biodiversity Foundation for Africa**: has initiated research on the biological diversity of the Matobo Hills. Drawing upon earlier work by curators from the Natural History Museum of Zimbabwe, the Foundation has been able to utilise modern technologies to enhance research work.
- **Marwel Zimbabwe Trust:** a local research unit for a British based organisation, the Marwel Trust, is currently surveying small antelope within Rhodes Matobo National Park.
- **National University of Science and Technology:** has a faculty of Environmental Studies which is expected to contribute enormously to future research programs.

- **The Black Eagle Research Group: has** monitored the black eagle, *Aquila verrauxii*, for over forty years.
- **Traditional Groups (**e.g. Imbovani Yamahlabezulu, Mthwakhazi Heritage Trust): advocate for the upholding of traditional conservation techniques, and protection of sacred sites like Njelele.
- **Matebeleland Branch of the Zimbabwe Wildlife and Environment Society**
- The **Matebeleland Branch of the Zimbabwe Tree Society**
- **Birdlife Zimbabwe: Matebeleland branch**
- The Bulawayo, Aloe and Cactus Society: has conducted studies in the area.
- **The Bulawayo Orchid Society:** conducts regular trips to view indigenous orchid species
- Matabo Research Unit
- Zimbabwe Tourism Authority
- Bulawayo Publicity Association
- Ministry of Education
- Ministry of Health
- Wildlife Society of Zimbabwe
- Department of veterinary Services
- Zimbabwe Republic Police
- Mafela Trust
- Geological Survey
- Shrine custodians
- Bulawayo Business Forum
- ICOMOS
- Tour Operators

6.4 Past Management Systems

6.4.1 Traditional

Conservation of heritage within this landscape is anchored in traditional management systems, which unfortunately were not documented. Archaeological evidence shows that people who lived within the Matobo Hills World Heritage Site depended solely on natural resources, and sustainable utilisation of resources was key to survival. The body of knowledge and beliefs attached to sustainable use of resources was passed on from generation to generation. It was only after the interaction of communities within the landscape with European travellers, that information about their lifestyles and interaction with the environment was recorded. These documents, though distorted in some cases, form important sources of information on the history of the area.

Records of past wildlife populations are equally scant. The only records available show that in the beginning of the twentieth century there were few wild animals in the Matobo Hills, except in the kopje environment where the duiker and steenbok were found. From 1904 and 1908, a game enclosure was erected on the Maleme River and the north western side of Hazelside, and some animals were introduced (sable, waterbuck, reedbuck, zebra). Unfortunately most of these animals had died by 1918. This is the only available record on wildlife and development of a game park within the cultural landscape prior to the establishment of the National Park.

NMMZ initiated a rock art documentation programme in the Matobo Hills with the assistance of the Norwegian Government (through NORAD). The documentation exercise involves photography, transcription, production of site registers and generation of accurate coordinates using GPS. The rock art of the Matobo Hills also benefited when the area was used as the venue for training in Conservation and Management of Rock Art Sites in Southern Africa (COMRASSA) in 1999. This is a regional effort to promote proper conservation of rock art in Southern Africa, funded by NORAD, the Getty Conservation Institute, ICCROM and AFRICA 2009.

6.4.2 Recent

Prior to the establishment of the current management system, the management of the Matobo Hills World Heritage Site was fragmented. Each institution implemented its own management programmes related to those aspects and attributes of the landscape falling under its jurisdiction and independent of those of other stakeholders. To a large extent management plans reflected institutional bias in the management approaches of the World Heritage Site. This did not only result in duplication of certain activities, but also led to uncoordinated and less integrated conservation, management and marketing efforts which did not yield the desired results. There was also antagonism and conflict among stakeholders, as well as the alienation of local communities. The impact of management programmes implemented by the different stakeholders in the same landscape was never evaluated. It became apparent that isolated management approaches are not appropriate for the management of cultural landscapes, hence the development of more holistic, consultative and integrated approaches.

The need to foster integration and co-ordination of the different management programmes within the cultural landscape saw the establishment of a management committee, comprising all stakeholders. An integrated management approach not only recognises the different institutional structures and their statutory obligations, but also facilitates a coordinated approach to the management of the World Heritage landscape.

6.5 Establishment of Matobo World Heritage Site Management Committee

The Matobo World Heritage Site Management Committee (MMC) was established at a stakeholders' meeting and workshop held on 27 February 2004, at Maleme Rest Camp (Rhodes Matobo National Park). The committee comprises key stakeholders of the cultural landscape, namely: National Museums and Monuments of Zimbabwe (NMMZ), Zimbabwe Parks and Wildlife Management Authority (ZIPWA), Zimbabwe Tourism Authority (ZTA), Mafela Trust (MT), Matobo Rural District Council, Umzingwane Rural District Council, Chiefs Representatives, Veterinary Services, Farmers' Representatives and Oral Traditions Association. For technical expertise, the management committee relies on technical staff drawn from major stakeholders.

6.5.1 Role and Functions of the Management Committee

The Management Committee is a policy making body representing the interests of all stakeholders, and is accountable to the stakeholders for its actions or activities. The Management Committee is also responsible for appointing technical committees to deal with specific management issues on its behalf. Each technical committee must last only for the duration of the activity it is constituted to undertake. Technical committee members can

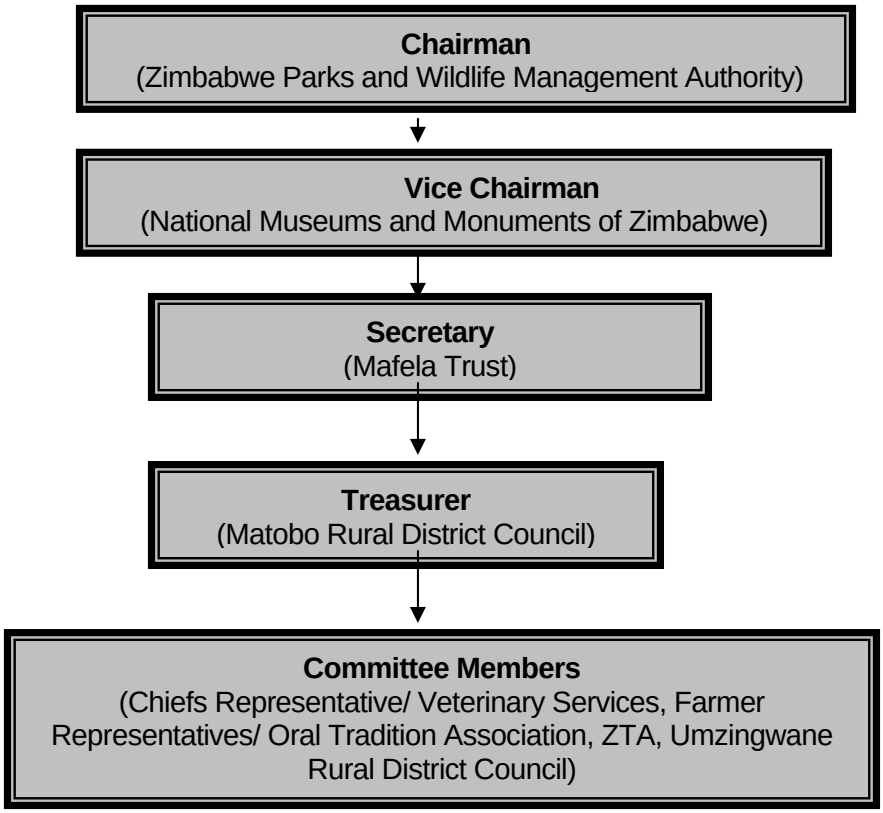
be drawn from among stakeholders or from elsewhere, depending on the kind of expertise required. The Committee is expected to carry out its mandate and functions in accordance with the terms of reference as set out by the stakeholders.

6.5.2 Terms of Reference for the Management Committee

In accordance with the World Heritage Convention (article 5), the Management Committee was established to implement policies that would maintain the integrity and significance of the cultural landscape. To achieve this, its activities will:

- activate the site action plan for Matobo Hills World Heritage Site
- set up a Technical Committee to formulate and design strategies for managing the integrated World Heritage Site on behalf of local communities
- establish a framework that enables management of the Matobo Hills as an integrated entity
- ensure that inventories of both the natural and cultural heritage are updated and reflect all components of the cultural landscape
- ensure an appropriate funding mechanism for the World Heritage Site.

Structure of the Matobo World Heritage Site Management Committee



6.5.3 Management Committee term of Office

The Management Committee will hold office for 3 years, after which the stakeholders, in consultation with National Commission for UNESCO (Zimbabwe) will elect new office bearers. Former members of the Management Committee are eligible for re-election, depending on their performance as assessed by stakeholders. The stakeholders also provide the terms of reference for the committee pertaining to management issues raised in the current and future integrated management plan for the Matobo Hills World Heritage Site.

6.5.4 Implementation of Management Plan by the Committee

Although individual agencies will implement management programmes, the overall decision making, co-ordination and implementation of the management plan will be the responsibility solely of the Management Committee. The cost-benefit analysis will be the guiding principle in the implementation of the plan. Through CAMPFIRE projects, ZIPWA has demonstrated that it is possible to generate economic benefit to compensate communities for the social and economic costs they incur by living with wildlife and other natural resources. Direct benefits for the community include employment creation, development of infrastructure, informal trade opportunities like carving and selling of curios, and harvesting of grass and wood for construction. The greatest achievement of this programme has been conservation of resources. It is envisaged that with the integrated management system, local communities will continue to benefit from utilisation of resources in their areas.

7. ANALYSIS AND DEVELOPMENT OF KEY ISSUES

7.1 Community Consultations

Local communities are always in contact with heritage, both natural and cultural. This means their activities have an impact on the conservation and management of heritage. To this end, meetings were held in both Umzingwane and Matobo districts to have local communities' input in the management plan. In Matobo District, six meetings were held in Gulati, Mthwakhazi, Mazhayimbe, Nathisa, Figtree, Bazha and Silozwe, while in Umzingwane, five consultative meetings were held in Silobi, Dula, Kumbudzi, Esibomvu and Longfield. After these meetings, the communities, through their representation, participated in the stakeholders meeting held at Maleme Rest Camp, and were afforded the opportunity to verify whether their concerns were covered in the draft management plan. Meetings with local communities were aimed not only at creating awareness of the inscription of the cultural landscape as a World Heritage Site, and advantages of such a development, but also capturing the communities' views and concerns on the management of Matobo. This exercise was also meant to identify and document places with tangible and intangible values, and the behaviour expected at such places. The consultations were taken as the platform to make communities aware of the possibilities of funding for income generation and conservation-related projects, which can contribute to economic development of communities.

7.2 Issues Arising from community consultations

7.2.1 Community involvement in management of the landscape

During the most recent community consultations, it became apparent that villagers were not aware of the inscription of the Matobo Hills as a World Heritage Site. Though members of the traditional leadership are involved in stakeholder meetings, it seems information is not passed down to the villagers at grassroots level. Though the communities are aware of the diverse resources in the landscape, they are not organised into proper structures that enable management of the resources. Most of them had the perception that management of heritage in the Matobo Hills is the responsibility of government agencies. They feel they have never been given the platform to contribute towards the management of this heritage. To this end, they have allowed desecration of sacred areas by both fellow locals and tourists. To address this issue, it was agreed that:

- Local community participation and involvement will become a basic component in the new integrated management strategy for the Matobo Hills.
- Government agencies like ZIPWA, NMMZ, and RDCs will work closely with both traditional and elected leadership to properly manage the heritage values of the Matobo Hills, particularly in communal areas.
- Appropriate organisational structures should be established in communal areas to manage resource-based tourism, or other projects that benefit the community.

7.2.2 Community benefits

Benefits to the community after the inscription of the cultural landscape as a World Heritage Site is an aspect that featured in most, if not all, of the discussions with communities. Most communities perceive the inscription as nothing new, but continuation of the past situation where they have been sidelined in the management of the landscape. Although employment by both private and public organisations operating in the area is often mentioned as one of the benefits, the communities themselves feel his is not enough an incentive to proper conservation of the values of the landscape. The need to strike a balance between conservation and socio-economic needs of communities was emphasised. To ensure benefits accrued to the community, it was recommended that the government and Rural District Councils develop and improve the infrastructure in communal areas, particularly in the road network as a way of enhancing and encouraging tourism. Absence of links between the communities with both government departments and local authorities was cited as the obstacle to the implementation of an integrated rural development programme. The other problem impeding development is lack of properly coordinated and organised village structures, and lack of finance to implement income generating eco-tourism projects. The need for villages and communities to organise themselves and take advantage of the available tourism and other development potentials in their areas was emphasised as the vehicle for empowering communities both socially and economically.

7.2.3 Visitor management

Villagers were concerned about uncontrolled visitor access into heritage places without the authority of local leadership. The other concern was that of visitors who access their scenic places without reporting, therefore not paying for the services. Lack of visitor information

and interpretive facilities was cited as a contributing factor to current visitor management problems. It was resolved that mechanisms to regulate visitor movement be put in place. It was suggested that tour guides be employed at some of the sites, as well as installation of entry fee collection points, as a way of regulating the movement of visitors.

8. THE MANAGEMENT PLAN

8.1 Vision

The management plan for the Matobo Hills was founded on a vision for the future sustainability of the cultural landscape. The vision reflects the important elements of the cultural landscape, and how they impact on, and have been influenced by, the people around it. The entire contents of the management plan, and implementation of various activities, will revolve around this vision. This vision, commonly shared by stakeholders, reflects their desire to manage the landscape in ways that will:

- develop an integrated management system with a hierarchy of accountability;
- conserve and enhance the World Heritage values of the cultural landscape;
- promote opportunities for visitor enjoyment, appreciation and education; and
- develop socio-economic opportunities that include an education and interpretation programme for the local community.

To achieve all these components of the management vision, it is envisaged that education, interpretation and orientation programmes be developed and implemented. The Vision statement for the management plan is as follows:

> *The Matobo Hills management plan protects the significance, integrity and authenticity of the universal values of the World Heritage Site. Integrated management approaches ensure that stakeholders contribute significantly to conservation cultural development in the landscape.*

8.2 Guiding principles

The long term goal in management of the site is to implement programmes that conserve and protect the significance of the cultural landscape. The following principles guide the framework for planning and implementation of management activities in the Matobo Hills.

- ❖ Improve and develop effective and efficient adaptive management strategies that integrate the needs of all stakeholders.
- ❖ Develop and maintain synergy between the natural and cultural values of the site through research and documentation to sustain the significance of the cultural landscape.
- ❖ Market, promote awareness and interpret the cultural landscape to inspire all visitors for tourism, recreation, research and education.
- ❖ Encourage and emphasise community participation to restore interest in traditional culture and increase the benefits that communities can draw from the landscape.

The key issues identified during the planning process for the next five years can be grouped under the following headings:

1. Conservation and management
2. Research and documentation
3. Tourism awareness, promotion and visitor management
4. Community co-operation and participation

8.3 Conservation and management

Existing institutional management plans were evaluated, and form the basis for this integrated management plan. It prepares for the final stage in defining responsibilities of the three levels of management that are overseen at different hierarchical levels by the Management Committee, the Technical Committee and Local Communities and RDCs.

Until very recently when the planning process commenced, there was no regular consultation among stakeholders on how to manage their responsibilities in the Matobo Hills resulting in an individualistic approach to management by the various agencies. The obvious result of this lack of co-operation was the implementation of uncoordinated management programmes, a situation that deprived stakeholders of the synergies that derive from an integrated management framework and led to duplication of effort in some cases and conflict in others.

The Management Committee has begun formulating a stakeholder policy outlining the ambitions and expectations of each stakeholder, and establishing an open and transparent stakeholder consultation system. The benefits are that with better relations among stakeholders, many opportunities arise that result in a better understanding of why certain changes in management strategies are planned and actions implemented. Integrated adaptive management also gives early feedback on the effects of planned changes, allows time for other stakeholders to adapt their own plans, and provides opportunities for balancing conflicting interests and adjusting demands to reduce potential conflicts.

As a result of their importance and significance, sacred sites are contested landscapes, not only in Matobo, but in the whole country and in the world. Ownership wrangles are, therefore, not uncommon in many communities. Conflicts often arise as to who the rightful owners of these sites are and different sections often claim ownership of shrines. In the Matobo Hills, ownership wrangles are the norm rather than the exception. Umzingwane and Matobo Rural District Administrators need to resolve ownership wrangles with the help of Chiefs and other traditional leaders.

Current programmes to conserve the values of the Matobo Hills cultural landscape are inadequate. Within the Rhodes Matobo National Park some sections are not fenced, while at most cultural sites the fences are no longer in existence. The routine patrols carried out in the Matobo Hills are not properly co-ordinated and are currently biased towards areas of interest to particular stakeholders. Because of financial constraints, inspection of cultural sites is confined to those open to the public.

Conservation of cultural sites involves a wide range of problems. Several natural and human induced factors affect the rock art within the landscape. Panels at some rock art sites have been subjected to dust accumulation due to increased tourism. Some of the

panels have succumbed to natural weathering processes. Graffiti, usually in the form of charcoal, is a problem for some sites, especially in communal areas such as Silozwane and Gulabawe which have been grossly affected. Visitors spray water on the paintings to enhance images for photographing purposes and this adversely affects the paintings over time.

The Matobo Hills receives visitors from all over the world, some of whom are not aware of, or do not subscribe to, traditional belief systems and the behaviour to be observed at sacred places. Violation of taboos and restrictions at the sites by both local people and visitors has led to desecration of some of these heritage places.

The Zimbabwe Environmental Impact Assessment policy is important for checking the impact of developments on the cultural landscape. Currently not all stakeholders are effectively enforcing the implementation of the policy in their respective areas, leading to permanent destruction of certain habitats of the landscape. Implementation of EIAs makes it mandatory for developers to carry out an impact assessment before any development, particularly those that have a negative impact on the cultural landscape.

Conservation of the natural resources is equally varied. Poaching of wildlife for subsistence and commercial benefits is a problem threatening important elements in the landscape. Poaching of selected tree species chosen for carving, an income generating activity and lucrative business in the face of increased visitorship to the Matobo Hills, threatens the integrity of the environment in general.

The provision of water for animals and people is a major challenge and the situation is usually worsened by severe droughts The wildlife relies on the dams in the Park but they are facing leakage problems and the water capacity is being reduced. Siltation of dams is an additional problem in the Park and in the communal areas, for example at Shashani dam in Matobo RDC. Mtshabezi dam in the Umzingwane area is still new but measures should be taken to ensure the sustainable conservation of the catchment area.

Soil erosion is a major problem in the Matobo Hills World Heritage Site, especially in the communal areas due to over-population and poor farming methods. This is further compounded by stream bank cultivation during periods of drought. The end result of erosion is siltation of both rivers and dams. Corrective measures such as gully reclamation and re-forestation of the areas as well as soil conservation awareness campaigns should be put in place to minimize the effects of erosion on the World Heritage landscape.

Encroachment of some exotic vegetation species in certain parts of the World Heritage Site is a pronounced problem, particularly Eucalyptus and bottlebrush which have the potential to upset the hydrological balance as well as ecosystem structure and function. Both the National Park and the Communal areas have been affected by *Lantana camara.* To maintain the integrity of the landscape the removal of alien species by both chemical and mechanical methods is recommended.

Deforestation is a pronounced problem in communal areas due to over population and uncontrolled burning. Absence of alternative sources of fuel forces people to resort to cutting down trees for domestic use. The high demand for curio carving from both local and regional markets has contributed to uncontrolled cutting of selected wood species. Such practices have led to severe degradation of some parts of the World Heritage Site. A programme to decongest communal areas is advocated as well as community education on the importance of sustainable utilization of resources.

Fire is a major ecological factor in the Rhodes Matobo National Park. Woodlands and grasslands are adapted to fire and have indeed evolved with it, but its frequency is now much higher than in the historical past and fire-tolerant species are starting to predominate at the expense of fire-sensitive ones. These effects are compounded by frost which is not uncommon on the granite sandveld. Fire and frost, coupled with the impacts of large herbivores such as giraffe, can cause wooded vegetation to be 'trapped' at coppice shrub stage, and inhibit regeneration.

In addition to the management of ongoing natural and artificial degradation, the World Heritage Convention recommends that all World Heritage Sites have a disaster management plan and this will be developed by the Management Committee.

The World Heritage Committee liaises with ICOMOS to inspect World Heritage sites and report on progress with the development and implementation of management plans. Zimbabwe should therefore prepare for a mid-term review in mid-2006 and a 5-year review in 2008.

8.3.1 Objectives and Activities

The main objectives, with strategies and activities for developing efficient and effective conservation and management of the Matobo Hills World Heritage Site over the next five years, are listed below.

1. *Finalise a hierarchy of integrated management structures through formal agreements between major stakeholders*.

    - The Management Committee will draft formal agreements between key stakeholders that set out the responsibilities of each organisation by March 2005.

2. *Develop capacity by appointing new staff, and by training and building capacity among existing staff, to effectively manage the site and maintain its significance as a World Heritage cultural landscape.*

    - The NMMZ and ZIPWA will conduct staff audits to identify gaps and overlaps arising from integrated management by March 2005.

    - NMMZ and ZIPWA will budget for and appoint additional staff by December 2005, and if unsuccessful, continue budgeting in 2006 and 2007. The priorities are Ecologists and a Librarian for ZIPWA; and a Heritage Manager, Historian/Ethnographer and Technical Assistant for NMMZ.

    - NMMZ and ZIPWA will assess training needs and opportunities and identify existing staff for capacity building by March 2005.

    - NMMZ and ZIPWA will arrange regular courses for training and capacity building between 2005 and 2007.

3. *Undertake regular inspections and take corrective action when necessary to conserve the significance of cultural sites and natural resources.*

- NMMZ will establish a checklist for routine inspection of cultural sites by the Heritage Manager and monuments inspectors by December 2005.

    - NMMZ and ZIPWA will implement appropriate conservation measures as required and report annually between 2005 and 2009.

4. *Focus on maintaining high quality management of selected cultural sites already open to the public.*

    - NMMZ will assess needs and threats at selected cultural heritage sites that are already open to the public, and develop individual site management plans between 2006 and 2009.

5. *Recognise traditional protection mechanisms for both natural and cultural resources, including appropriate visitor behaviour at all sacred sites.*

    - The Technical Committee will liaise with traditional leadership and communities to revive and implement traditional conservation methods wherever possible between 2006 and 2009.

    - Local Communities in consultation with the Technical Committee will facilitate the appointment of traditional custodians; reduce conflict among community members over ownership rights to shrines as this threatens authenticity, integrity and sacredness of the sites; bestow ownership rights to the correct people and implement appropriate management programmes by end of 2005.

    - The Technical Committee in consultation with Local Communities will design and implement community awareness programmes on the importance of spiritual sites in maintaining the cultural landscape between 2006 and 2009.

6. *Enforce the environmental impact assessment (EIA) policy for all proposed development projects in the World Heritage Site*

    - The Management Committee will ensure that no development projects within the World Heritage Site are accepted without an EIA approved by the Management Committee, and ensure that all developments comply with the agreed terms of the EIA, by June 2005.

7. *Monitor illegal activities that threaten biodiversity and the integrity of cultural sites*

    - The Management Committee will review penalties for illegal activities as a matter of priority before December 2005.

    - The Technical Committee in collaboration with ZIPWA will increase patrol frequencies within the Matobo Hills, adequately equip staff with communication and patrol equipment, prepare monthly reports for evaluation of progress by the end of 2005.

- The Technical Committee will carry out awareness programmes for local communities, law enforcement agents and the judiciary regarding illegal activities by December 2005.

8. *Maintain biodiversity by reducing deforestation, improving water supply systems, preventing the introduction of alien species and removing existing ones, reducing erosion and reducing fire outbreaks*

   The Technical Committee in collaboration with ZIPWA will:

   - Conduct an awareness campaign regarding the importance of biodiversity through increased participation of local communities in conservation programmes and planting of depleted species between 2006 and 2009.

   - Reinforce statutory and traditional laws relating to harvesting of forest species and keep a record of prosecutions and reports from traditional leaders for review of progress in 2008.

   - Rehabilitate boreholes, leaking and silted dams and construct new dams where possible and sink new boreholes by the end of 2009.

   - Improve and enforce measures to prevent introduction of alien species by the end of 2009.

   - Remove or control alien plant and animal species using manual, chemical and biological methods and maintaining records governing the movement, extent and introduction of alien species between 2005 and 2009.

   - Identify and map all badly eroded areas and areas of active erosion by 2006 and implement effective land use planning in communal areas by 2007.

   - Rehabilitate badly eroded areas by filling in gullies, planting suitable species, and constructing brushwood dams and report annually on progress to significantly reduce erosion by 2009.

   - Assess current stock levels and carrying capacity and compare with livestock records for all properties in the World Heritage site to control carrying capacity by December 2006.

   - Prepare an integrated fire protection plan by June 2005. Adopt and implement strategies such as early burning and rotational burning; construct and maintain fire guards; increase enforcement and policing efforts; procure fire fighting equipment and protective clothing; train personnel in fire-fighting techniques; place fire-warning banners or posters at appropriate points; and implement anti-fire awareness campaign programmes by end of 2005.

9. *Minimise conflict by controlling the movement of game, livestock and people between communal and protected areas*

   - ZIPWA and RDCs will repair and complete the fence along the Community-National Park boundary and fence selected cultural sites outside the Rhodes Matobo National Park.

10. *Comply with the World Heritage Guidelines and prepare for control of potential disasters*

    - The Management Committee will prepare a disaster management plan by mobilising and consulting all stakeholders, and will implement the plan and improve responses to disaster calls by procuring radio communication equipment by the end of 2005.

11. *Prepare for UNESCO World Heritage mid-term inspection and 5-year inspection.*

    - The Management Committee and UNESCO National Commission will prepare the necessary reports and make arrangements for a mid-term review of progress in mid-2006, and a five-year review in 2008.

8.4 Research and Documentation

Research and documentation are vital for understanding the ecological systems and the synergies between natural resources and cultural practices. Research and surveys of the natural and cultural resources are the basis for adaptive management.

The available surveys for cultural sites for the Matobo Hills World Heritage Site are inadequate and incomplete. The majority of the cultural sites known and recorded are in the Rhodes Matobo National Park which has been a centre of research for several decades. However, only sporadic surveys have been carried out on communal, commercial and private land, thereby creating data gaps in site distribution records.

A Heritage Manager is needed to implement research programmes to identify, document and interpret the rock art sites in communal, commercial and private land to enhance the understanding of the scientific and social values of the cultural landscape. There is also a need to create awareness among local communities who could help in identifying and reporting cultural sites in their areas.

There is overwhelming literature pertaining to the colonial period, with very little information on the history of the indigenous communities who lived in the area before the arrival of white colonists. There is no doubt that these earlier communities also played a very crucial role in shaping the history of the present day landscape through their artistic works, religious beliefs and traditions, that prevailed before the colonial period. If the early history of the Matobo Hills World Heritage Site is to be deeply understood, then research programmes must be implemented as a matter of priority to remove the distortions that currently occur. Historian/Ethnographers will be needed to carry out this research in a comprehensive manner.

Like rock art and historical sites, intangible heritage has not been adequately recorded and there is no databank on intangible values of the Matobo Hills. This information is crucial in enhancing our understanding of the living traditions and of how traditional protection systems can complement scientific approaches in managing the cultural landscape. Some communities are unwilling to disclose information relating to identification and management of certain sacred sites. For them, it is a highly guarded secret, as knowledge of such sites and their management systems is regarded as a source of power and

influence over others. If important information gets to be known by all and sundry, then one's power is jeopardised and threatened. It is believed that there are several secret sacred sites within the World Heritage Site that are not yet recorded because myth and "holiness" surrounds them. Sites that have not been properly recorded include Zhilo, Dula, Mzilikazi's Grave, Silozwane and Njelele among many others. Traditionally, there are mechanisms for protecting such sites that are passed on from generation to generation. However, the secrecy surrounding them has made it difficult for those with knowledge to divulge information that could lead to proper recording, conservation or preservation. It is important that knowledge relating to traditional belief systems and sacred sites is gathered by trained oral historians and ethnographers before those elders with information disappear from the earth.

Research is an important element in developing or modifying management systems for the natural landscape. Much of the inaction or hesitation in implementing adaptive management strategies stems from uncertainty and risk of ecological failure. In the absence of concrete information on what impacts certain activities are likely to have on biodiversity, it is risky to implement trial and error management strategies. Although most of the research work needs to be of a basic applied nature, it is also essential that certain in-depth academic research be undertaken to increase knowledge on species and other specific aspects of biodiversity.

Animal population trends, even in Rhodes Matobo National Park where most research programmes have been focussed or directed, are not known with certainty. For a long time animal population forecasts or statistics and trends in the park have been based on estimates. No detailed ecological or biodiversity inventory in the World Heritage area, including in the park, has been done for several years. This creates problems in knowing when wildlife management interventions or actions (such as translocation, culling, manipulation or provision of artificial water supplies, population recovery, threatened species and introductions) are required. The fact that Rhodes Matobo National Park does not have a resident ecological research officer at the moment is a major challenge to overcome in light of the weak financial resource base.

For sound management of biodiversity it is imperative that every stakeholder, including RDCs, takes stock of its resources. Umzingwane RDC says it has plans to carry out an inventory of all its natural resources soon. In the Park, research programmes on population dynamics of specific species such as leopard, cheetah and the black eagle are ongoing. Under an integrated management framework, there is need for such monitoring and research programmes to be extended and applied to all other parts of the World Heritage Site. Although the institutions concerned are aware of the need to update existing inventories and undertake new ones, they are incapacitated financially and have critical manpower, vehicle and equipment shortages in the areas of monitoring and research. Inventories are required to update and expand the existing fauna and flora checklists. The surveys and inventories will provide information that can be used to generate hypotheses as to the relationships between plant communities and large herbivores (both grazers and browsers). Routine monitoring of fauna is concerned with changes in the species populations, whilst monitoring changes in flora is concerned with establishing the extent of woodland and the density of canopy cover, density of woody species in grasslands, and soil erosion.

Research on the results of monitoring the effects of such diverse aspects as fire and the habits of large herbivores inform conservation management and is critical for the survival

of the natural ecosystem. In the Rhodes Matobo National Park the white rhinos and the giraffe play a key role in the ecology. They cause major modification to vegetation and the overall functioning of the ecosystem. The white rhino, the only mega-herbivore in the Park, grazes extensively in open grasslands and thus maintains the dynamism of the grasslands. Giraffe can cause major modification of the vegetation structure, changing woodlands into shrubland and wooded grassland.

The effects that termites have on hydrological patterns in wetlands is often overlooked. They are critical in recycling nutrients and create islands of high nutrient content in otherwise impoverished environments, a factor that was understood even by the Stone Age people who made rock paintings of termitaria in the Matobo Hills.

The design of long-term monitoring protocols for key ecological processes is important and will generate essential information for the adaptive management programme of the Park. Long-term and short-term research projects on biodiversity composition, distribution and population dynamics and interaction should therefore be undertaken. The use of external researchers to complement the research efforts of internal research personnel should be considered, given the meagre financial resources available at the disposal of the major institutional stakeholders for funding research programmes by internal researchers. Involving the local community as well creates ownership of such projects and alleviates poverty by creating jobs in ecotourism in the future.

8.4.1 Objectives

The main objectives, with strategies and activities for managing research and documentation in the Matobo Hills World Heritage Site over the next five years, are listed below.

1. *Develop and operate applied research projects within the Matobo Hills World Heritage Site that contribute to the scientific knowledge base for the planning and operational activities of on-going adaptive management*

    - NMMZ will budget for, recruit and appoint a Heritage Manager, Historian/Ethnographer and Technical Assistant, or re-assign, train and build capacity among existing staff between 2005 and 2009.

    - ZIPWA and NMMZ will budget for, recruit and appoint resident Ecologists and a Librarian, or re-assign, train and build capacity among existing staff between 2005 and 2009.

    - Staff will formulate research and documentation survey methods, undertake surveys and research, and produce quarterly reports between 2005 and 2009.

2. *Develop a survey and documentation programme for all types of cultural sites to update and expand existing checklists and ensure maintenance of the World Heritage values*

- Liaise with members of the local community for information on unrecorded sites between 2005 and 2009.

- Investigate the histories of local communities and interview elderly people, producing quarterly reports and publishing findings by 2009.

- Record the intangible heritage of local communities, especially of sacred sites and their management systems between 2006 and 2009.

- Promote the preservation of local traditional culture, especially among the youth through school culture competitions, traditional ceremonies and dances between 2006 and 2009.

- Survey and record rock art and other cultural sites between 2005 and 2009.

- Apply the knowledge gained through research and surveys to conservation management planning for cultural sites within the Matobo Hills between 2005 and 2009.

3. *Develop a biodiversity inventory and continue research into particular species to ensure maintenance of the values of the Matobo Hills World Heritage Site*

   The Technical Committee in collaboration with stakeholders will:

   - Undertake short and long-term biodiversity monitoring, including regular animal censuses so that the status and trends are known and appropriate wildlife adaptive management action can be prescribed between 2005 and 2009.

   - Conduct biodiversity inventories, research and surveys on selected groups of animals and plants and report and publish results between 2005 and 2009.

   - Encourage continuation of surveys of black eagles, cats, small antelopes, invertebrates, reptiles and fish by other stakeholders, and publish results from 2005 to 2009.

   - Monitor long term effects of fire, termites, giraffes and rhinos and other herbivores on the structure and function of the ecosystem, keep records and publish results between 2005 and 2009.

4. *Make research and documentation results on cultural sites and natural resources available and accessible in the World Heritage Site by constructing a conservation and documentation centre in the Rhodes Matobo National Park.*

   - Identify potential sponsors to build a documentation centre in the Rhodes Matobo National Park; procure archiving and library equipment; procure documents, information and archiving equipment; and form partnerships with other World Heritage cultural landscapes through memoranda of understanding, to create a comprehensive data bank for cultural heritage conservation and biodiversity studies, and commence construction in 2008.

- Invite and create opportunities for researchers in universities and biodiversity organisations, and members of local communities, to assist with surveys in the World Heritage Site by the end of 2007.

8.5 Tourism and Visitor Management

The Matobo Hills is one of Southern Africa's premier tourist destinations. The main tourist attraction within the Matobo World Heritage Site is the Rhodes Matobo National Park with its unique flora and fauna, Rhodes's grave and several rock art sites. Village and farm based tourism is also important, with many lodges and small conservancies sprouting in and around the Matobo Hills.

Various agents, including Zimbabwe Tourism Authority, Zimbabwe Council of Tourism, private tour operators, various government departments and parastatals, and individuals, market the Matobo Hills cultural landscape at national, regional and international level, but in a more or less fragmented fashion. As efforts to market the Matobo Hills as a World Heritage Site gather momentum and begin to bear fruit, it is expected that the area will experience an influx of tourists and other visitors. It is therefore essential that plans deal effectively with visitor and tourist pressure and its negative impacts on the natural environment and on local culture and traditional belief systems. If severely disturbed, the integrity and authenticity of Matobo Hills as a World Heritage Site could be threatened.

Communities in Matobo and Umzingwane RDCs have constructed chalets at selected scenic sites under the CAMPFIRE programme. Cultural villages have also been put up – one in each of the two districts – but they need to be equipped and promoted more vigorously in the marketing strategy of the Matobo Hills. Umzingwane has gone a step further and has a few homesteads that are used for village chalets. All these eco-tourism projects aim at encouraging the communities to participate fully in activities that enhance benefits through utilisation of natural and cultural resources. More needs to be done to instil a sense of ownership and pride in the communities who would be encouraged to participate more actively in visitor management in the World Heritage Site if they had a larger share in the tourism market. Research and monitoring by ZTA could determine visitor use patterns, levels of satisfaction and the appropriateness of site management objectives. Visitor services and facilities could then be adjusted accordingly to mitigate negative impacts.

It is envisaged that education and interpretation should play a much more significant role in the operation of the Matobo Hills World Heritage Site as a tourist destination in the future. Opportunities for both visitors and local people to learn about and experience the environment of the site as a cultural landscape will be a priority.

For visitors to have a quality experience in the World Heritage Site, they require orientation and information. Fundamental is the need for a brochure in a language that the visitor understands with a map showing all roads, trails and visitor facilities at an appropriate scale. The brochure should contain a brief description of the significance and history of the World Heritage Site, safety messages and the activities that are offered. Although there are site-specific interpretive museums at Pomongwe, Nswatugi, and World's View, there is at present no general interpretive centre or brochure that provides orientation for the new visitor to the area or information about other sites and the cultural landscape in general.

Other attractions and activities that could be offered include village tours, cultural dances, tour of the Lumene and Matshatshatsha Falls, and mountain climbing and biking.

Roads traversing the cultural landscape are in a generally bad state except for the Bulawayo-Kezi road and the main access road in the park, which are tarred. The bad roads have resulted in some parts of the landscape being inaccessible especially in the rainy season. The road network within the site is shared among different institutions such as RDCs, National Parks, State Roads and District Development Fund (DDF). These authorities are ill equipped and therefore have no capacity to keep or maintain their roads in a good condition. Due to lack of appropriate equipment, roads have over the years been repaired or maintained on a more or less ad-hoc basis. Poor road drainage systems cause damage to vehicles and soil erosion, and eventually result in higher repair and maintenance costs. Balanced access to the World Heritage Site is required to contribute to the objectives enshrined in the vision and statement of significance.

As some visitors are not aware of the traditions and taboos at sacred sites, an awareness programme is needed to empower traditional custodians as official site custodians to ensure that all visitors abide by the traditional restrictions meant to preserve the spirituality of such places.

At present, two authorities – ZIPWA and NMMZ - manage the tourism facilities within the Rhodes Matobo National Park. Tourists pay a fee to both institutions at different points: to ZIPWA on entering the Park and to NMMZ when visiting World's View, Pomongwe and Nswatugi. Since these facilities are within the Park, tourists feel they are being charged double. In terms of tourism marketing this is counter-productive and leads to conflict. It is therefore advisable to harmonise entry fees by charging one amount that will be shared by the two parties on an acceptable share ratio.

There is currently no specific marketing programme for the Matobo Hills World Heritage Site apart from the general tourism campaign for Zimbabwe by the Zimbabwe Tourism Authority (ZTA). Efforts by other agencies or organisations such as the Zimbabwe Council of Tourism (ZCT), National Parks, hoteliers, tour operators, and many others that market their own business entities are largely uncoordinated. The result is that the significance, attributes and components of the World Heritage Site are not marketed as a complete package. It is therefore recommended that a marketing strategy and plan that is specific for the World Heritage Site be developed and coordinated by ZTA and ZCT, but spearheaded by the Management Committee. ZTA and the Ministry of Environment and Tourism should be lobbied to accord Tourism Development Zone Status to the site, thereby attracting tariff free or subsidised investments, and of course more focused and aggressive promotion and marketing of the site.

Similarly, the craft products offered for sale by the local community are the same as those that tourists can purchase anywhere else in the region. Liaison with a design consultant could help the community develop new products that embody the significance of the World Heritage Site and that are unique to it.

8.5.1 Objectives

The main objectives, with strategies and activities for tourism and visitor management in the Matobo Hills World Heritage Site over the next five years, are listed below.

1. *Develop an interpretation programme that makes visitors aware of the synergy between natural and cultural values in the Matobo Hills cultural landscape*

   The Management Committee and Technical Committee will:

   - Design and implement visitor and local community awareness programmes focusing on the cultural landscape between 2006 and 2009.
   - Approach potential donors to construct an interpretive centre to orientate visitors in the cultural landscape of the Matobo Hills by 2009.
   - Design and produce brochures, videos, maps and other information for visitor orientation
   - Approach potential donors and raise funds to maintain and equip the existing cultural villages by the end of 2005.

2. *Develop and maintain an efficient road network*

   The Management Committee in collaboration with ZIPWA and RDCs will:

   - Hire or acquire road maintenance equipment to upgrade all existing roads to all-weather; and sub-contract road maintenance services between 2005 and 2009.
   - Improve road and other signage and launch the new signage by the end of 2006.

3. *Control access to sacred sites to avoid commercialization and maintain their integrity, authenticity and significance in the World Heritage area*

   The Technical Committee in collaboration with the Local Communities will:

   - Select and appoint custodians and train guides as required between 2005 and 2009.
   - Produce guidelines and literature relating to appropriate behaviour at sacred sites by mid-2005.
   - Ensure that all guides and custodians have a copy of the printed guidelines by the end of 2005 to reduce the number of visitors trespassing on sacred sites.

4. *Harmonise entry fees to sites open to the public in the Rhodes Matobo National Park*

   The Management Committee will:

   - Work out and agree on an acceptable share ratio for entry fees with a single entry fee and a memorandum of understanding between ZIPWA and NMMZ in place by the end of 2005.

5. *Develop a sustainable marketing strategy and promotional programme focusing on the values of the cultural landscape*

   The Management Committee will:

   - Appoint a consultant or invite tourism or media departments in universities and training colleges to formulate a sustainable marketing strategy and promotional programme (including logo, brochures, films, website and tour packages) focusing on the values of the cultural landscape by the end of 2005.

- Encourage research and monitoring by ZTA to determine visitor use patterns between 2005 and 2006.
- Implement the marketing strategy and promotional programme by the end of 2006.
- Provide appropriate information on the cultural landscape for inclusion in the syllabus for guides studying for the Professional Hunters and Guides Licence for Matobo Hills and other World Heritage Sites in Zimbabwe by the end of 2005

6. *Develop a diverse craft product range unique to the Matobo Hills that embodies the values of the World Heritage Site*

   The Management Committee will liaise with appropriate specialists and Local Communities to:

   - Improve the quality, design and diversity of existing tourism products and design others unique to the Matobo Hills by the end of 2007.

7. *Lobby for Tourism Development Status*

   The Management Committee will:

   - Consult with ZTA and the Ministry of Environment and Tourism for Tourism Development Status for the Matobo Hills World Heritage Site by the end of 2005.

8.6 Community Co-operation and Participation

The enactment of the Land Apportionment Act of 1930 and the Land Tenure Act of 1952 forced the inhabitants of the Matobo Hills from the National Park into the drier unproductive surrounding areas. This development effectively deprived them of their right to exploit natural resources such as game and the patches of fertile soils their forefathers had been using for many years. The displacement of people to create room for the National Park created problems of conflict and antagonism between the Park administrators and communities who, feeling alienated, showed apathy towards conservation activities. To make matters worse, conservation activities were planned and implemented without the consent, participation and involvement of local communities. A typical example was the compulsory construction of contour ridges without prior education and awareness campaigns with respect to the importance of contours. Laws against utilisation of resources were enacted and local people were prosecuted for poaching what they considered to be their own resources by birthright. In defiance and retaliation for their brutal eviction, communities engaged in various acts of sabotage, including poaching of the Park's resources.

In the late 1990s, Matobo and Umzingwane RDCs embraced the Communal Areas Management Programme for Indigenous Resources (CAMPFIRE). The programme set out to create community ownership in the management of their natural resources. In addition, the Umzingwane District embarked on the District Environmental Action Plan, a programme that seeks to empower communities in developmental planning and sustainable utilisation of their natural resources.

However, follow-up training has been slow and anticipated benefits have not been easily realised as they have accrued intermittently and have not been shared as expected, resulting in apathy towards resource conservation and management. Communities usually prefer programmes with benefits that are immediate and are shared on an individual basis, rather than those with a long-term effect that are shared on a group or community basis.

Lack of empathy towards living heritage traditions and customs due to the dynamics of present day social life is a common problem among some local communities, especially the younger generation. Christianity and the advent of technology such as the internet have compounded the problem. The younger generation thinks that this kind of heritage belongs to people with an affinity for traditional beliefs and rural settings as opposed to the modern urban life, which is rapidly encroaching into the rural areas.

While tourism has an economic value, there is also a growing threat of deterioration of local cultural values and norms resulting from increased interactions with visitors and tourists from different cultural backgrounds. Extension programmes for local communities should explain the importance of the cultural landscape and the unique heritage it represents. They should also reinforce the value and encourage restoration of traditional ways of living, highlighting that the majority of visitors to the site are genuinely interested in local traditions which are an important and significant component of the World Heritage cultural landscape. Opportunities for visitors to interact with local people through dance and other forms of artistic performance would enhance their experience.

The UNESCO World Heritage in Young Hands Programme is already in place at other World Heritage Sites in Zimbabwe (Victoria Falls and Great Zimbabwe). It encourages young people to participate in conservation of World Heritage Sites and offers opportunities for interaction with schools near World Heritage Sites in other countries. It could be adopted by at least three schools in the Matobo Hills World Heritage Site by 2009.

8.6.1 Objectives

The main objectives, with strategies and activities for community cooperation and participation in the Matobo Hills World Heritage Site over the next five years, are listed below.

1. *Ensure that regular consultative meetings are held between the Management Committee and local community representatives to develop mutual understanding and respect*

   The Management Committee and the RDCs will:

   - Consult communities and involve them in conservation and management programmes, focusing on cultivating trust, co-operation, and the flow of information amongst all stakeholders between 2005 and 2009.

   - Establish a hierarchical system of accountability between traditional leadership, environmental management committees, Local Communities, RDCs and the Technical and Management Committees before the end of 2005.

The Management Committee in collaboration with ZIPWA and the RDCs will:

- Include Umzingwane RDC in Rhodes Matobo National Parks meetings by the end of 2005.

- Continue to design and implement CAMPFIRE projects to increase benefits accruing to communities around the Rhodes Matobo National Park between 2005 and 2009.

- Engage in continuous consultation between the local communities and the Parks and Wildlife Management Authority between 2005 and 2009.

2. *Create opportunities for local communities to benefit from the World Heritage status of the Matobo Hills through sustainable resource utilisation*

   The Management Committee and the RDCs will:

   - Investigate possibilities and set up at least two new income generating projects to increase benefits to communities, for example through village tourism and interpretive centres, to raise the standard of living and increase participation in management of the site between 2005 and 2009.

3. *Promote awareness of the value of local traditions and culture that contribute to the significance of the World Heritage Site, especially to restore lost interest among the youth in traditional customs*

   The Management Committee and the RDCs will:

   - Carry out effective awareness and educational campaigns among the youth through schools and through print and electronic media to create empathy towards the significance of the intangible heritage of the Matobo Hills, between 2005 and 2009.

   - Make communities aware of the importance of adaptive management of the World Heritage Site and buffer zone. A series of workshops will be conducted for the communities at all levels, that is, the traditional leadership, the general populace and schools, between 2006 and 2009.

   - The Management Committee will approach the Ministry of Education to incorporate information about the Matobo Hills as a World Heritage Site and cultural landscape in the Zimbabwe schools syllabus.

   - Promote a sense of ownership and pride among school children through the World Heritage in Young Hands programme in at least three local schools by 2009, and through competitions focusing on the World Heritage Site between 2006 and 2009.

9. IMPLEMENTATION, MONITORING AND FUNDING

9.1 Implementation

In the initial stages of the planning process stakeholders took the initiative to set up a Management Committee to plan and implement operations and developments required to effectively manage the Matobo Hills World Heritage Site. Performance indicators to measure success in implementation of the plan have been identified in the Table in Annexure 2. The Committee assumes full responsibility for the plan, particularly its implementation.

The commitment shown by all stakeholders in supporting the Management Committee and the planning procedures is an indication of the close cooperation and relationships that have developed among those interested in the protection of the values of the site. During the preparation phase, most of the stakeholders showed their commitment by providing resources for the development of the management plan.

9.2 Monitoring

Monitoring is an important element in the implementation of the plan. It enables evaluation of several factors, most importantly whether or not progress is in line with time schedules and expected results. It also enables adaptation and necessary changes if there are any deviations from the planned goals.

To establish efficient monitoring schemes for all components of the management plan, performance indicators are included in the tables in Annexure 2. They are presented in a Logical Framework Format, which spells out the goals, objectives, activities, resources needed and indicators to point to the successful implementation of activities. Quarterly meetings will be held by the Management Committee, Technical Committee and all stakeholders to assess progress of various activities**.**

The Management Committee will prepare for an interim monitoring assessment by UNESCO after two and a half years (end of 2005) and a major evaluation will be carried out in 2008, the fifth year after World Heritage listing in mid-2003.

9.3 Funding and financial planning

The planning process was set up with funding from participating stakeholders. Most of the activities and strategies identified during the planning process need to be carried out by specific institutions. It is their responsibility to cost the activities for which they are responsible and they should therefore submit budgets and business plans to address identified issues, including provision for the equipment needed to accomplish their assigned responsibilities. Currently, there are severe shortages of essential items, particularly computers, vehicles, field equipment, radios and road maintenance equipment. Raising financial capital for equipment and visitor facilities and services is therefore a top priority.

The Management Committee through the Technical Committee will evaluate the business plans and recommend ways of raising the capital required. It will facilitate applications for donor funding for equipment and services for infrastructure development, but political will and an increase in regular financial support from government will be essential to employ permanent staff and provide running expenses for implementation of the plan in the long term.

To supplement the available sources, a Fund Raising and Publicity Committee was set up to source funds on behalf of the Management Committee. There is hope of funding from the donor community – the World Bank has in the past funded Rehabilitation and Conservation projects within Rhodes Matobo National Park. Should such funding resume within the implementation period, it would be possible to implement projects identified within the Park.

The integrated management system, as articulated in this management plan, has underlined the need to involve and benefit local communities within the cultural landscape. This is expected to unlock significant resources from Non-Governmental Organisations that seek to empower communities. The Management Committee has to lobby for government funding, particularly through the Ministry of Environment and Tourism's agency – the Zimbabwe Tourism Authority - for the Tourism Zone status of the entire cultural landscape. This can be a potential source of investment capital required for the development and maintenance of infrastructure within the heritage site.

Public-private partnerships, government support and strong cooperation among the stakeholders, will enable transition from the traditional agency-specific system, to a more integrated management system co-ordinated by the Management Committee.

9.4 Implementation Schedule

Table 1 summarises the timing of the activities to be implemented, along with the agency responsible. Annexure 2 summarises the Logical Framework Analysis, including objectives, performance indicators, inputs required and measurable outputs.

UNESCO will do a mid-term review of progress at the end of 2005 and during 2008.

10. CONCLUSION

The Matobo Hills World Heritage Site has the potential to become a world class tourist destination and research centre.

Achieving this goal requires dedicated long-term government funding, and an integrated management structure that focuses on maintaining the values and significance of the Matobo cultural landscape.

The preparation of this first 5-year Management Plan emphasised the importance of improved relations among all stakeholders, including the local communities. The planning process encouraged greater interaction amongst stakeholders and participation in

decision-making and implementation of the site management operations by incorporating their views, opinions, interests, concerns and aspirations.

While increases in tourism in response to aggressive publicity, marketing and promotion programmes proposed in the plan may be very welcome, in the long-term the emphasis should be on local community participation, involvement and benefits. The provision made for local community education and interpretation is therefore a critical element for successful plan implementation. Anything less may result in dismal failure.

Above all, the support and political will of the Zimbabwean Government will be a key factor for achieving national pride and international recognition of the unique intangible heritage of this cultural landscape.

TABLE 1: IMPLEMENTATION PLAN: 2005-2009

Activity	Year 2005	2006	2007	2008	2009	IMPLEMENTING AGENTS
1ST YEAR						
Establish 3 tier management hierarchy.						MC
Sign agreements between major stakeholders regarding responsibilities.						MC
Staff Audit.						NMMZ, ZIPWA
Assess training and capacity needs.						NMMZ, ZIPWA
Appoint additional staff.						NMMZ, ZIPWA
Identify potential donors for funding.						NMMZ, ZIPWA
Draft Checklist for recording cultural sites.						NMMZ
Traditional management systems and custodians in place at sacred sites						NMMZ, RDCs, LC
Behaviour guidelines for visitors to sacred sites printed and distributed.						NMMZ, ZIPWA, RDCs, LC
Increase patrols and equip staff.						ZIPWA
Review penalties for illegal activities.						MC, NMMZ, ZIPWA, RDCs
Awareness programmes for local communities, law enforcement agents. and the judiciary						NMMZ, ZIPWA
Finalise disaster management plan and mobilise necessary resources.						MC, NMMZ, ZIPWA, RDCs
Prepare integrated fire protection plan.						
Establish system for Management Committee to review EIAs in WH area.						NMMZ, ZIPWA, RDCs,
Commence biodiversity inventory.						ZIPWA
Implement single entry fee.						NMMZ, ZIPWA,
Develop marketing and publicity programme						MC, NMMZ, ZIPWA, ZTA
Obtain Tourism Development Status.						MC, ZTA, ZCT
Approach potential donors for funding for orientation centre, cultural villages and documentation centre						MC, NMMZ, ZIPWA, RDCs
Equip cultural villages						NMMZ, RDCs, LC
Prepare for mid-term inspection						

2ND YEAR

Hold training and capacity building courses.	NMMZ, ZIPWA
Appoint additional staff.	NMMZ, ZIPWA
Map badly eroded areas.	RDCs, ZIPWA
Report on livestock carrying capacity in the World Heritage Site.	RDCs, ZIPWA
Launch new signage.	RDCs, ZIPWA, NMMZ
Control access to sacred sites.	NMMZ, LC
Start marketing and publicity programme.	MC, NMMZ, ZIPWA, ZTA
Budget for additional staff if not yet appointed	NMMZ, ZIPWA
Implement one management plan for a cultural site open to the public.	NMMZ
Budget for and procure fire-fighting equipment, train personnel and conduct awareness campaign.	ZIPWA
Implement disaster management plan and procure radio communication equipment	ZIPWA, RDCs
Establish partnerships with other research institutions.	NMMZ, ZIPWA
Begin recording history of indigenous communities.	NMMZ, LC
Begin recording intangible heritage.	NMMZ, LC
Begin recording cultural sites.	NMMZ, LC

3RD YEAR

Appoint staff and arrange training and capacity building courses if not yet done.	NMMZ, ZIPWA
Review campaign to reduce poaching and loss of indigenous plant species.	ZIPWA, RDCs, LC
Commence building of orientation centre if funds have been obtained.	NMMZ, ZIPWA
Develop a unique range of craft products.	NMMZ, ZIPWA, RDCs, LC

4TH YEAR

Complete fencing of selected areas.	ZIPWA
Complete second management plan for a cultural site open to the public.	NMMZ, LC, RDCs
Commence construction of dcumentation centre if funds are available.	NMMZ, ZIPWA
Prepare for World Heritage 5 Year inspection and evaluation.	MC, NMMZ, ZIPWA, RDCs

5TH YEAR

Complete third management plan for a cultural site open to the public.	NMMZ, LC, RDCs
Publish history of indigenous communities.	NMMZ, LC
Prepare 5 year plan for 2009-2014.	MC, NMMZ, ZIPWA, RDCs

On going activities

Regular Management Committee meetings	MC
Commmunity awareness campaigns.	NMMZ, ZIPWA, RDCs
Cultural heritage site inspections.	NMMZ
Biodiversity research and evaluations.	ZIPWA
Improve water supply strategies.	ZIPWA, RDCs
Remove or control alien plants.	ZIPWA, RDCs
Rehabilitate eroded areas.	ZIPWA, RDCs
Reduce deforestation.	ZIPWA, RDCs
Plant depleted species.	ZIPWA, RDCs
Repair and replace fences.	ZIPWA
Develop and maintain road network.	RDCS, ZIPWA
Create opportunities for local communities	NMMZ, ZIPWA, RDCs
Raise funds for projects.	MC, NMMZ, ZIPWA, RDCs
Implement appropriate conservation programmes	NMMZ, ZIPWA

Key
MC-Management Committee
NMMZ-National Museums and Monuments of Zimbabwe
ZIPWA-Zimbabwe Parks and Wildlife Authority
RDCs-Rural District Councils
LC Local Communities

ANNEXURE 1

COMMUNITY VIEWS ON MANAGEMENT OF THE MATOBO HILLS WORLD HERITAGE SITE

Eleven meetings were held in the two districts of Matobo and Umzingwane, five were held in Umzingwane District and six were held in Matobo district. The meeting venues were set in order to accommodate people from different wards in the same venue. The aims of the meetings were to:

1. Create awareness of the significance of the world heritage site to the communities settled within the site, how the listing of site would affect the communities, and vice-versa.
2. Capture the communities' views on the management of the site.
3. Identify some sites that have intangible values and the 'dos' and 'don'ts' when one visits the area.
4. Make the communities aware of the possibilities of funding for projects that could enhance the values of the heritage site.
5. Create awareness of the possible influx of tourists to the area considering that the marketing of the site is now done world-wide

In all the ten venues, the communities mentioned the three main shrines and called for strict observance of the traditions at those sites. The sites are Njelele, Dula/KoMaswabi and Zhilo.

SILOBI AREA

The meeting had representatives from Wards 9,10 and part of Ward 11 (Matobo Communal Area).

TOURIST SITES IN WARDS 9 & 10

(a) Matshatshatsha Falls and cave with rock art
(b) Gabheni Cultural village
(c) Gabheni Village Chalet
(d) Sweswe and Malilangwe ruins
(e) Ntshelelezani (sliding place for entertainment)

Rock Art Sites

Ntinile,Gudale,Mdlalo,Sihlahla,Shanga,Dunu,Duli,Nhlangano,Gu-lembehze (where there used to be very cold water dripping from the top of the cave that could be drunk by the community who would be resting there). Sibadzi, Masumbelume, Danamgombe, Ngwangwe, Kore, Labadzimba, Sibazwi, Lamakaladi, Masumbelume, Zhome, Bhelabantu, Lubadzimbab, Nwanwe, Kankali and Ntidze.

Matemangali Cave – was used as the "Isiphala seNkosi" where grain was stored in the granaries inside the cave that were only opened during severe drought and wars).

PROPOSED MANAGEMENT OF THE SITES

There is need for a tour guides to lead people to different sites so as to avoid accidents, littering and land degradation that can be caused when scores of people/visitor move randomly.

Sacred areas

Amadaka – vleis that are visited during the rain making ceremonies. These include Daka, Savudzi, Sihlahla, Luvula, Evimileni-daka.

Wells – the wells used for both livestock watering and water for domestic use which are also regarded as sacred include the following:-

Wuyane, Entuteni, uSwelabhululu, eMasweswe, Ntinhile, Luvula Sihlahla, Enos, Esavudzi, Somakwankwa, Zidumbu and Matsidzamuru, Simamize (the well never dries regardless of the intensity of a drought. No one is supposed to go into that well area except the shrine keepers during the rain making ceremonies).

Management of these sites-

- No gardens or homesteads are supposed to be erected close to the sites.
- Water should not be collected using a pot with soot or a pot that is used for cooking.
- The wells should not be protected, that is, no cement should be used to construct well covers and no metal pipes are allowed to be fitted on the sites.
- No tourists and young people who are sexually active are allowed during the rain making ceremonies.
- Tree around the wells should not be cut down.
- Custodians of the sites should always inform people of the 'do's' and 'don'ts' at those sites
- A proposal to formulate local by-laws was suggested, as sites are the responsibility of the local communities.
- Sacred wells are cleaned only by very old women who neither engage in sexual activities nor have menstrual periods.

WARD 9 DOBE VILLAGE

The village was named after a well that never dries and is one of the sacred places visited during the rain making ceremonies.

Rock art sites

- Sotshe-Embalweni and Buhwa Cave.
- Masukunyunyu rock art and granaries. The place is on a steep slope and therefore visitors should definitely be guided to avoid accidents.

The caves are not regarded as sacred and visitors could visit them in the company of a guide.

Wells

Dziridziba - a very big well on top of Sotshe mountain. The water never dries up and is characterised by changing colour- at times a greenish colour, at times the water looks muddy and at times it is deep blue in colour. The well is regarded sacred. Wild animals, domestic animals and humans can utilise the water. When humans bathe in the water, no soap is allowed. Only the traditional soap - inkunzani is allowed.

Idibha lendwangu – (Baboon's dip-tank) - a well where humans were not supposed to drink water using any container but were to kneel down and drink the way the wild animals do.

Dale- **Ko Bhebhe** - a secret mountain within the area and is visited during the month of September for rain making ceremonies.

- ❖ no visitors/tourists allowed in the area
- ❖ no shoes are to be worn when going there
- ❖ only traditional attire allowed and should be put on when one is still a distance of about four kilometres away from the site.
- ❖ Only elders responsible for the ceremony are allowed close to the site
- ❖ No young people allowed in the area.

WARD 8 (MATOBO COMMUNAL LANDS AND WARDS 4 AND 3 – MZINYATHINI COMMUNAL LANDS)

Tourist Attractions

1. Diana's Pools (25 pools of various sizes in total) – the site is both a tourist attraction and sacred place. Tourists need to be informed of the dos and don'ts at the site so as to avoid mysterious accidents such as tourists drowning in the pools, clothing being "swallowed by the pools" and vehicles mysteriously rolling over and crashing into the foot of the pools.

- The area is a no-go area if you see water from the pools just splashing out of the pools in all directions.
- Mr. Matala Khumalo is the custodian who should be consulted if the community wants to perform their traditional ceremonies in the pools area.
- Local name – Embizeni

2. Dombo – mountain with caves and rock art
3. Imiganu- (Plates) of different sizes curved on granite rocks
4. Orbicular granite – a rare rock. The granite is found only in Diana's Pools and no where else in the whole of Zimbabwe.
5. Rhodes Indaba Site. The site is a historical one that can be visited by the tourists.

Sacred Sites

1. Shashe Mountain and Lumene Tree Ferns are found on the foot on the mountain in a valley. Although both the trees and mountain are sacred, tourists could be guided to see the tree ferns and the custodian is responsible for telling them of the do's and don'ts in the area.

2. Dindindi Gande – One fruit tree that stand close to a vlei and whose fruits are not to be picked for commercial purposes. The tree fruits ripen well after the fruit season and only the custodian has the mandate to call together the village advising them of the availability of the fruits and then the fruits are picked and eaten on site. No fruits are carried away from the site.
3. Ntuntema pools visited during rain making ceremonies
4. Shale – a woodlot full of umbuze trees that form a circular shape. There is neither firewood gathering nor tree cutting in the area
5. Ntazi – Bee hive. No one has ever collected honey from the hive. The site is not accessible. It looks like anyone could climb-up and collect the honey but once you move closer, the site seems higher than anticipated.
6. Pindakoshora – a mountain area and when one approaches the site, there is a sound of a person coughing. There is a very big cave in the area that was used as a shelter.
7. Chingengoma- a rock that looks like a drum. And indeed sounds of drumbeats are heard in the area every morning when the rainy season approaches. This is a sign of a good rainy season.

   People passing by the area need to be guided and need to show respect for the rock by throwing some coins under the rock.

8. Zhilo (Zhame)- a national shrine.

- no one is allowed to just go in without the custodian guiding them
- all nationals who are possessed with spirits connected with rain making are allowed to visit the site provided they follow the guidance of the custodian. It is not permitted to

a) shoot pictures
b) wear shoes at the site

Ward 8 is geared to receiving a lot of visitors in that

- There is an information centre at Diana's Pools and a Ward information centre is planned to be constructed at Shale, the ward centre.
- There are also tour guides that were trained by the School of Hospitality in Bulawayo some three years ago.
- Three is a committee responsible for the tourism activities in the area although the committee currently needs strengthening as some of its key position holding members have since passed away.

WARD 12 KUMBUDZI

Sacred Places

1. Magubu - a shrine
2. Gobambidzi – Shrine and visited during rain making ceremonies. Used to have water flowing down throughout the year but because of the trigonometric beacon, the water has since dried and the rain making spirits in that mountain have been disturbed.

- THE COMMUNITY WANTS THE BEACONS REMOVED.

3. Ntondochilila – (the stone that talks) is visited also during the rain making ceremonies.
4. Dondorio - considered to be very sacred. Only the chosen few can visit the site.
5. Bhopomo – curved pots on granite rocks. Nice rhythm of water falling into the pots – also a sacred place for rain making ceremonies.

6. Hariawadza -sacred place where diseases and pest outbreaks were reported
7. Mazibotumba- only the clan memberss of the shrine custodians are allowed close to the site

Custodian – Johani Vesi Majuta.

The do's and don'ts in the sacred sites

1. do not commercialise. The custodians are not to commercialise by charging those who want to consult the spirits exorbitant fees.
2. Only old people and chiefs to be responsible for advising the younger generations of the right behaviour on the sites
3. Livestock should also be monitored not to move too close to the sites especially the Hariawadza
4. Finger pointing at the sacred sites is not allowed
5. People visiting the sites should be bare foot
6. People who wish to consult the spirits should be allowed in the areas only during the appropriate time that can be specified by the shrine keepers, kraalheads and chiefs of the area.

WARD 4

1. Makunkubo – a site where the Mbilambowe River starts. The site is historic in that it is a white settlers' fort. The site is scenic with a unique vegetation cover. The road they used to from South Africa through the site to Old Bulawayo is still visible at the site.
2. Fort Mlugulu – Grave -site for white settlers. A Historic site that can be visited by tourists.

*THE COMMUNITIES REQUESTED THE SERVICES OF NATURAL HISTORY MUSEUMS TO DO RESEARCH ON THE SITE AS IT IS BELIEVED TO HAVE A BURIAL SITE FOR THE NDEBELE WARRIORS.

WARD 11

Caves

1. Wanakuridza, Wariawadzdza, 'Ezibilileni', Bembelele, Shashe, Dula,'Magwiro, Gulabatwa, Njuluja Caves and Impu caves.
2. Scared Places

Maswabi – Dula Shrine

- no one is supposed to go as far as the sacred cave except with the permission of the custodian – Jetro Ncube.
- No finger pointing at the site
- No perfumes and shoes are allowed within the vicinity of the site.

Tourist Facilities
There is a proposed information centre at the business centre. The structure is already available. In addition, there is a village chalet that can accommodate up to four visitors at a time.

A committee has been set that will be responsible for tour guiding and other tourist-related activities within the ward.

WARD 7 LONGFIELD

Sacred Places

1. Dombo – there is a space that can accommodate a person under the rock. However, no one is allowed to go under. A tale is told of a man who did not want his daughter to go and be a custodian at Njelele for fear of losing lobola. The daughter was taken up by the spirits to beat a drum sited on a rock that grew, with the lady on top, to a height that was not reachable. She later died still on top. The site is visited for rain making ceremonies.

The communities linked the Dombo shrine to Njelele and pointed out the need to revive the tradition by consulting the elders and chief in the area who would in turn consult the custodians so that they could 'report' on the listing of the site to the spirits. This will ensure that nothing goes amiss if suddenly an influx of visitors decide to visit the area. The intended consultation should coincide with the traditional ceremony months of between August and September.

- No perfumes are allowed on the sacred sites
- Sacred sites visited only through the custodians
- The elders are responsible for initiating the ceremonies as they are well versed in the communication channels.

MATOBO DISTRICT

Gulathi - Gu – means cave. Therefore the name Gulathi means "the cave said"

Caves

1 Nkantolo – there is a ruin, believed to be one of the king's palaces situated between Tohwe and Lahlamkonto. There are granaries inside the cave and people's 'knee-skeletons'. The place is sacred and needs to be respected.
2. Lahlamkonto – a place for a cease-fire between the whites and Ndebele warriors. The site is historic and there is a ruined wall on the site.
3. Malindidzimu – very sacred place. The mountain was culturally respected and visited for war purposes before Rhodes was buried on the mountain.

- The people believe that it was a deliberate move by Rhodes so as to diffuse the local people's spirits in order to facilitate his divide and rule policy
- Communities at Silobi in Umzingwane believed that that should have been the National shrine for the war heroes.

4. Mhlahlandlela- national monument
5. Tankwe cave in Gali Mountain - sacred place and one could hear sounds of pistol and mortar fire.
6. Lukadzi – a rock that resembles a woman with breast features visible. Elderly women who took young ladies with feminine problems to do some rituals there used the site.
7. Sani Hill – rock art site with visible fire place
8. Mavavani Cave close to Numbane village – rock art site
9. Ntunjambili – a very big cave with rock art

The communities suggested that there should be water within the sites so as to enhance the beauty of the site. This could be done by construction of water bodies within the site.

There is also a need to have local guides and someone well versed in the culture of the area should regulate entrance to some sites.

There have to be some locally formulated by-laws that will assist in preserving the rock art sits and some sacred trees within the site.

The communities also noted that the meeting was sort of an eye opener, which therefore calls for deeper consultations with elders who have all the cultural knowledge so as to have a clear way forward.

- of note was the observation by one community member who pointed out that Mzilikazi's grave is symbolic as it is based on the site where four big rivers start – Mzingwane, Thuli, Khami and Maleme.

MTHWAKAZI

The issue of no-maintenance of Mzilikazi's grave was raised in almost all the meetings and also clarified by the Museum personnel. The communities in the meeting were echoing the sentiments of people in previous meetings concerning the big shrines – Njelele, Dula and Zhilo.

They however added that besides being a rock art site, Silozwani is also sacred and is visited during rain making ceremonies.

They also queried the existence of the trigonometric beacons, which they blamed of 'invading' the spirits' habitats.

Chibizina – a mountain close to Ntunjambili, was also mentioned and regarded as sacred. The place is visited during rain making ceremonies and only women are supposed to go there.

No tourists should be allowed to go to that mountain.

The communities also indicated that there is need for all parties concerned to try and curb illegal gold panning as it was causing deforestation, especially in newly resettled area. This was cited as one issue that will cause the value of the site to go down. New farmers cut down trees in order to make fences for their homesteads and fields. A request was therefore put forward for fencing materials to be made available in order to curb the problem.

MAZHAYIMBE

Sacred sites

1. Fumugwe – one is not supposed to point a finger on that mountain as doing so leads to cold weather the following day regardless of the season.
   The mountain used to burn up as a sign that rains are close-by. The mountain is also visited during the rain making ceremonies.
2. Ukhalo Luka Ndakela sacred place within the site. Passers-by are to throw a stone at a certain point shown to the passer-by by the custodian
3. Lunuwa- only men went to the site during rain making ceremonies.

NATHISA

Caves

1. Gu-mela (Ubhalu lwamaxaba), Mdlalose – Gudu – where only old women went for traditional ceremonies.
2. Emdlawuzweni – rock art site
3. Ndindinkoma there is need for a guide to the site. When hit by a stone, the rock produces different drum sounds

Sacred Places

1. Shakambani – cave within the National Park. A shrine with pots and snuff. Cultural ritual performed there.
2. Dewe – a river that never dries. In fact, it miraculously yields more water during the dry months of August and September. The river is sacred.
3. Njelele. Its real name is Shalimano inamoni inodla. Very sacred. Rain making and issues pertaining to wars and other social ills.

- Njelele is visited only between August and September and early October before the onset of the first rains, except for people in very difficult situations who cannot wait for the stipulated time.
- Motor vehicles should be parked some 3 km away from the site.
- Tourists should also see the place from a distance of three kilometres
- Only the right people may conduct the ceremonies at the shrine.
- No finger pointing at the mountain.

FIGTREE

Sacred Places

1. Ntabemnyama – there are two mountains facing each other. The whites do their ceremonies in the month of March on the mountain on the eastern side and the local communities conduct their ceremonies in August on the opposite mountain.
2. Intaba zikaMangweni a cave with spears inside. At times there is a sound of a lion roaring in the area. The area is regarded as sacred.

- no tree cutting in the area and no homesteads are to be constructed. It is said that homesteads that were constructed some time ago could just vanish mysteriously and the owners found themselves sleeping in the open with no sign of a homestead ever having been constructed there.

3. Manjeya(Mantsheya) Jeqe's place. The area is sacred. One could hear sounds of cows bellowing, dogs barking and people pounding grain but you could not see any sign of a homestead on that mountain.

- People are not supposed to move very close to the site. They have to spot it some one and a half kilometres away.

4. The communities stressed that there should be
   - no commercialisation of any sacred places
- visitors should be guided and should follow the local tradition
- trees that include the marula, umvimila, umkambaa and other big trees should never be cut down
- those visiting the shrines should be bare foot and wear no head dresses
- all homesteads constructed close to the shrines should be moved in order to avoid a situation where one moves too close to the site, or
- goes to the site during restricted months, eg herdboys.

SILOZWANE

Besides echoing the sentiments of other communities regarding the sacred places, the community at Silozwane pointed out that there were some shrines within the National Parks, which need to be revived. Their concern was how they will access the shrines since the entry to the place is restricted, However, it was pointed out that arrangements could be made and that National Parks was also within the World Heritage site whose values have to be upheld.

ANNEXURE 2

MATOBOS HILLS WORLD HERITAGE SITE

CONDITION REPORT
(State of Conservation)

Report prepared by

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1. HISTORICAL AND NATURAL SITES

1.1 World's View Monument (Map sheet:/site number: 2028BC: 36, grid ref: PH580 335)

This monument is one of the most popular and highly visited site associated with Cecil John Rhodes, and other members instrumental in the colonisation process. The site has graves and a memorial shrine.

Conservation status

Rhodes's grave

The grave is cracking along the interface between the tombstone and the rock upon which the grave is cast. Also the brass plate needs to be regularly cleaned. There is evidence that tourists sometimes splash beverages on Rhodes's grave especially alcohol.

Jameson's grave

This grave is still intact, and does not show any sign of tampering.

John Coghlan's grave

The grave is still intact, and does not show any sign of vandalism.

Memorial Shrine

The memorial shrine consists of four panels of copper statues placed on each side of the upper levels of the built up structure. However the statues are rusting as evidenced by the greenish staff colonising the panels. The greenish staff also covers the brick-work of the structure. Also the lower section of the structure is cracking along the construction joints, and what needs to be ascertained is the depth of these cracks and their impact on the overall stability of the structure.

Signage

The signage plaque on the northern side, that is diagonally opposite the memorial shrine has been vandalised, resulting in an incomplete sentence.

Generally signage at the site is poor except for directional boards along the national park scenic route.

Presentation and other Facilities

The site has limited visitor facilities such as toilets and piped water and lacks a proper site orientation centre as well as effective and informative information on the attributes and significance of the site. Panels that used to give information to tourists were removed by NMMZ for repairing but up to now they have not been returned to the site. Currently a rondavel doubles as the reception and an exhibition area.

1.2 Mzilikazi Memorial Shrine (Map sheet:/site number: 2028BC: 2, grid ref: PH644 519)

This shrine is one of the most important historical shrines relating to famous Ndebele King Mzilikazi. It is located 21 km along the Old Gwanda road. A protective barbed wire fence is in place and the shrine is still intact except for the few problems noted. These include:

- Overgrown grass within the shrine area.
- Small shrubs growing along the wall of the memorial shrine.
- The extreme right entrance stone is cracking as a result of the vegetation growing next to the walls.
- Dust is accumulating on the walls of the shrine as a result of cars passing along the Old Gwanda road.
- The site lacks proper signage and presentation facilities for the enjoyment of visitors.

1.3 Mzilikazi's Grave (Map sheet:/site number: 2028BC: 1, grid ref: PH655 464)

The grave is one of the most sacred historical sites relating to King Mzilikazi. It is his burial place, which according to the descendants should be preserved in its natural state. The use of traditional protection systems has ensured that the site remains well maintained. The grave is completely protected using a stone wall and a lockable gate. The traditional custodian of the site keeps the access keys, and enforces traditional protection systems.

However the following problems were noted:

- The access road needs to be upgraded to an all weather gravel road to improve access to the site by the public.
- The signage leading to the site needs to be standardised and improved for the benefit of visitors.
- A parking space, which does not dramatically alter the natural serenity of the site, needs to be created.
- Non-indigenous trees planted in the area have to be removed in order to promote the regeneration of the original vegetation.
- The site lacks presentation facilities for the benefit of all visitors yet it is one of the highly visited historical sites apart from World's View.
- Illegal use of the site by traditional healers and other spirit mediums for various rituals occurs against the wishes of the descendants of the Mzilikazi lineage.

1.4 Moth Shrine (Map sheet/site number: 2028BC: 22, grid ref: PH588 402)

The MOTH shrine is located within the Rhodes Matobo National Park along the scenic route. The Shrine is consecrated ground for the MOTHs associated with the 1st and 2nd World Wars. It is well protected with barbed wire and a mesh fence. There is a steel gate, and the grounds are well maintained including the visitors' facilities.

Conservation status

- The diamond mesh fence covering the sacred octagonal hut has been vandalised in some sections.
- The door on the same hut does not have a lock.
- Graffiti is rampant on the sisal plants in the sacred ground.

- Weeds are slowly colonising the floor of the small octagonal hut.
- Asbestos sheets inside the hut have collapsed in some sections.
- Some name tags are missing from the list of the heroes whose ashes are interred at the site.
- The drainage system on the right side of the site is completely closed up with soil and other debris, thereby creating small floods around the site during the rainy season.
- Surface erosion is also rampant on the extreme right side of the site due to water flowing from the hill.
- Generally the site lacks proper and routine preventive conservation work.

Presentation of the site

- The site lacks adequate and informative visual presentations for the enjoyment of the public.
- However it has eight wooden benches with steel supports for use by visitors.
- The engine for pumping water to the site is now defunct.

1.5 Diana's Pool (Map sheet/site number: 2028BD: 11, grid ref: PH966 366)

Diana's pool is one of the natural sites found in the Matobo Hills, but is located in Umzingwane rural area, under the management of Umzingwane Rural District Council as a CAMPFIRE project. The site has 25 pools of varying depths and diameters. The local communities consider these pools sacred. Several taboos and myths exist about the site and these have to be observed by all visitors lest certain misfortunes befall them.

Conservation status

The sacred pools are heavily affected by siltation along the river system due to improper cultivation methods as well as the lack of sound environmental conservation measures. The net effect of all this is reduced water flow thereby reducing the whirlpools associated with the 25 pools.

Another problem is the uncontrolled drawing of water from the river system by several communities around the site. One farmer actually put in place water pipes to draw water from the river, which feeds the pools. Also there are visitor facilities at the site but some of them are dilapidated and would require extensive face lifting. Also the site does not have a custodian to ensure continued and effective preventive conservation. Currently people are quarrying the orbicular granites found along the river, and the fence that used to protect the entire site has been vandalised in several areas thereby rendering it ineffective.

In terms of presentation, there is no proper signage leading to the site, and it lacks interpretative facilities for the benefit of all visitors.

2. ROCK ART SITES

2.1 Pomongwe Cave (Map sheet/site number: 2028DA: 2, grid ref: PH577 273)

Pomongwe cave lies at 28^0 30'50"E and 20^0 32'50S in Matobo Hills World Heritage site, south western Zimbabwe, and is one of the major rock art sites open to the public in the Matobo Hills and the Rhodes Matobo National Park. The cave is a kilometre from the Maleme River. The name Pomongwe is derived from the Kalanga word for 'melon' in reference to the dome shaped hill (Cooke 1963). This is typical of many rock sites which have indigenous names often relating to use or perceived shapes. On the eve of colonialism, Richard Hall named the site "the cave of the Eland Bull" after an outstanding painting, but it is not certain which figure this is (Cooke 1963). The paintings and Stone Age deposits make the site scientifically very significant.

Management History of Pomongwe Cave

Given the location of the site within the Rhodes Matobo National Park (which now is part of the Matobo Hills World Heritage Site) the management of the site has changed hands from the Zimbabwe Parks and Wildlife Authority (ZIPWA) to National Museums and Monuments of Zimbabwe (NMMZ). The site has a custodian and a site museum interpreting the cave in the context of the Matobo cultural landscape. It is in this history of management that the sad conservation story has its roots

A human error in presenting and preserving the Pomongwe rock art panels led to the intense vandalism in the name of professionalism. A warden from what was then the National Parks and Wildlife Authority (NPWA) coated all paintings with linseed oil or varnish resulting in the disappearance of individual paintings. The linseed oil through time literally cleaned the painted surfaces. It was applied to the painted surfaces in the 1960s to preserve them and enhance image visibility in preparation of the British Queen's visit to the then Rhodesia. For sure, when the Queen visited the site the paintings looked marvellous, but months after this grand visit, they started disappearing in a way no one understands to this present day. It is thus evident that even those concerned about rock art conservation can cause damage by inadvertently touching the paintings, kicking up dust or applying chemicals they do not understand to the painted surfaces. Sheer human ignorance from a site custodian cost us the entire cave. It is now a pathetic void and disappointing cave to visit, save for the informative exhibits in the site museum.

It is also believed that the same over-zealous Park Warden levelled the cave deposit and added red soil to make it less dusty for the visitors. The linseed oil application has encouraged dust to settle on pictures. Also natural processes such as exfoliation have stripped the cave of its beautiful paintings.

At the moment, some of the paintings are resurfacing. However no one is sure whether the resurfacing paintings will last long or if they will eventually disappear again. This site is a typical example of the misuse of chemicals. The Park Warden did not carry out a thorough research on the possible impact of the linseed oil on the rock paintings. This very significant rock art site tells a very sad story about rock art conservation in Zimbabwe. Today it stands as an example of how people with a full mandate to look after heritage places can inadvertently destroy the same resource they are supposed to look after, and turn a blind eye thereafter.

Conservation status

A condition survey carried out at the site showed that some of the paintings damaged by the application of linseed oil are resurfacing, and that the major problem is dealing with the dust and the emerging rock art panels. The cave is strangely empty in many sections because of the linseed oil incident.

Entrance

Save for the stone passage leading into the cave, the entrance is completely covered with medium dense vegetation, which is characterised by large green trees especially during the rainy season. This is typical Matobo vegetation and obviously supported by local niches. A lot of undergrowth is accumulating in this area as a result of trees shedding leaves, and dead grass. Rain-wash and erosion are evident in this area as a result of water flowing down the hill into the low lying area in which the site museum is located. The entrance of the site is gradually being eroded. But this process is more pronounced during the rainy season.

A paved small canal exists at the entrance of the cave, and is running parallel to the fence, to drain water from the cave. The water will either becoming from the drip line of the cave or flowing down the hill especially during the rain season.

Cave floor

The Pomongwe cave floor is characterised by loose sandy soil, which is very dusty, except on the extreme right side where there are a few granite stones (relatively large), stretching all the way to the extreme right entrance of the cave. Metal 'picks' can be seen on the floor of the cave marking areas subjected to extensive excavations that were carried out in the cave by several researchers among them, CK Cooke. Dead leaves are slowly accumulating in the cave, probably due to wind, especially during the dry season and when trees are shedding leaves. The leaf accumulation concentration is high on the extreme left part of the cave. As people walk around the cave dust is raised, and accumulates as a thin film on the rock art panels.

The Rock Art Gallery

The rock art panel at Pomongwe is just one big gallery stretching from the right to the left side of the cave, with open spaces in between. Currently the visible panel is about two metres off the ground; below this level the entire surface is covered by a thick film of dust, especially the left side. On the right side of the cave, the area spared from dust accumulation is about 10 metres. The rock art panel itself is approximately two and half metres high. The central part of the cave's roof has got no paintings at all. This area is also cracking due to water related problems, and mud nests are also visible in this section. Generally the rock paintings are invisible due to the linseed applied in the 1960s.

An assessment of the left side of the cave revealed a host of factors causing deterioration. The first panel of this section is characterised by remains of pigment and few but slightly visible images. There is a cluster of giraffes facing eastwards and a few antelope, all superimposed over a large elephant. To the extreme left side of this panel are three fading red human figures. A linseed oil film is flaking off these paintings. Below this panel is a

small crack probably running deep into the cave. Weathering is also rampant in this section.

The second panel depicts a reddish Giraffe superimposed over several unclear images. Four human figures are identifiable against the evolving whitish background. The whitish background is probably as a result of the after effects of applying linseed oil on the panel. On the extreme right side of this panel is a depiction of a big elephant drawn using the fine line technique. However the elephant's legs are no longer visible due to a combination of natural processes (such as weathering) and after effects of linseed oil. Below this second panel is a wide crack but not very deep. Just as in the first panel linseed oil is flaking off the panel, and films of dust can be seen.

The third panel in this section depicts a large red rhino, but the head and the back are covered by linseed oil. Though the legs are not visible, the general outline is still discernible. However there is a crack below the stomach of the rhino and another crack is ascending into the roof of the cave from its back. A dust problem is also visible in the area.

The central section of the cave is directly opposite the entrance, forming the innermost central part of the cave. It is characterised by four dark patches representing rock paintings obliterated by linseed oil. It is thus difficult to identify any images in this section. All one can see are general outlines of animal figures, especially on the extreme right side of this section. In terms of conservation status, a crack runs from the right side of this section cutting through one of the big dark patches, as well as through another small dark patch. Wasps have colonised this section as evidenced by numerous wasp nests. Also visible is a dark belt indicating that water is slowly flowing down the roof onto the panels. The rest of the area is all dusty and characterised by a whitish background in other sections (probably an after effect of linseed oil). The linseed oil is gradually peeling off the panels, and will probably lead to the recovery of the original paintings, but obviously in an altered state.

The right section of the cave stretches from the central part to the extreme right end. Some sections have paintings while others have nothing. The first section of this area, which is close to the central part of the cave, has got no rock paintings at all. However the surface has lots of dust, and several shallow cracks running from the roof downwards towards the floor.

The second section of this area has numerous rock paintings, but very few images are clearly visible due to general weathering and other processes leading to the deterioration of the panels. Discernible images include red human, animal and abstract figures. But most parts of these animals are missing. There is a crack running in the middle of the panel. Dust is also accumulating on the panel but not as fast as in section A and B. This could be explained by the boulders on the floor of the section which somehow restricts human movement, and rising dust. Black wasps have also colonised this area as evidenced by wasp nests. Charcoal graffiti can be noticed on four places close to the crack in this section.

The third section of this area covers the extreme right side of the cave, of which the boundary is a fence demarcating the entrance of the cave. There are no paintings in this area at all. There is rampant evidence of rain-wash in the form of a dark belt that probably washed away the paintings as the panel in the second section of this area fades into it. Several cracks are noticeable in this section. Lichens (greenish and brownish ones) are gradually colonising this section.

Generally, the roof of the cave has maintained its greyish colour, presumably indicating the original colour of the granite surface before the linseed oil disaster. However the roof has two dark spots, one relatively large probably as a result of fire being lit in the cave, or due to other natural processes relating to the rock itself that require more technical research. However these spots, as well as the wasp nests on the roof, have not interfered with any rock art panel.

Recently (probably 2002) a darkish stuff, which looks like oil was randomly splashed in the cave but did not reach sections with paintings. However this vandalism is confined to the lower levels of the cave except on the right section where the dark dots are about five metres above the ground. The motive of this vandalism is not known.

Generally the rock paintings in the Pomongwe cave are poorly preserved and have been extensively damaged by the linseed oil applied in the 1960s. A lot of dust is accumulating on the panels due to the after effects of this disturbing event as well as increased tourism in the Matobo Hills. Fortunately some of the original paintings are resurfacing after years of disappearance, hence retaining these images permanently is the greatest conservation challenge.

Nature of Problem	**Description of problem**
Human induced problems	• Application of linseed oil (1960s). • Application of other oils recently • Raising of dust by visitors.
Natural Problems	• Water related weathering of the painted rock surface leading to general discolouration and fading of paintings. Salts of efflorescence can be seen on the extreme left and right sides of the cave. • General weathering processes leading to gradual deterioration of the panel. This includes flaking at the bottom of the cave. • Thick films of dust all over the painted area, thereby obliterating paintings.
Bio-deterioration factors	• Wasp nests. • Termite colonising certain sections of the cave.
Signage/Presentation	• There is proper signage along the Matobo Park scenic route and towards the site. • Pomongwe museum is the largest in the Matobo World Heritage site.

2.2 Nswatugi Cave (Map sheet/site number: 2028CB: 1, grid ref: PH534 296)

Nswatugi cave is one of the highly visited rock art sites in the Matobo World Heritage Site. The name Nswatugi means the 'place of the jumping' after the famous paintings at the site. The cave has been inspected many times over the years beginning in the 1960s through to 2002. Unfortunately there are no written reports except references made to the conservation status in several publications over the years. Most of the paintings at the site are very visible from a distance as a result of the different pigments used on the panel.

Conservation Status

The paintings at Nswatugi have not been spared from deterioration but they are still well preserved. There are a host of problems affecting the paintings. Generally, lichens are colonising the rock surface towards the entrance of the cave. Flaking is rampant, and dust is accumulating on the entire panel, but is more pronounced on the bottom levels. Also water flows through an opening on top of the Nswatugi cave, and spreads across the rock face with paintings following several lines of weakness (cracks). This flow has created a multiplicity of rain-wash belts, however most of them are far away from the paintings. The floor of the cave is progressively being affected by surface erosion. The extreme right side of the cave floor is always wet as a result of water that accumulates in that area.

The right side of the cave is characterised by rain-wash and salts of efflorescence, which are gradually obliterating the paintings in this section. On top of this rain-wash belt is a line of weakness (crack) thereby creating a passage for water, and in the long run intensifying water related weathering. This kind of weathering is extending inside the cave towards the giraffe paintings. Some paintings have already been destroyed. General weathering and flaking in particular is very rampant in this section. Wasps have also colonised several sections of this area.

In the central section of the cave, water is flowing down a line of weakness (crack), thereby promoting water related weathering, which is causing obliteration of paintings. There are remnants of clay soil probably as a result of a previous termite mound on the rock surface.

In the left section of the cave weathering has caused deterioration as well as fading of the paintings. There is lot of general discolouration of the pigments in this area.

Nature of Problem	Description of problem
Human induced problems	• Dust raised by visitors. • Splashing of water on paintings during photographic sessions.
Natural Problems	• Water related weathering of the painted rock surface leading to general discolouration and fading of paintings. Salts of efflorescence can be seen on the extreme left and right sides of the cave. • General weathering processes leading to the gradual deterioration of the panel. This includes flaking at the bottom of the cave. • The floor of the cave is progressively being eroded. • Water is flowing through the lines of weakness (cracks) in the cave. • Dust is accumulating on the panel, especially the bottom part of the rock surface.
Bio-deterioration factors	• Wasp nests. • Birds colonising certain sections of the cave, and bird droppings gradually affecting the paintings.
Signage/Presentation	• The site has a small site museum, but the information is outdated and the structure needs revamping. • There is signage to guide visitors to the site along the scenic route of the park.

2.3 White Rhino Cave (Map sheet/site number: 2028BC: 35, grid ref: PH592 353)

White Rhino cave is one of the sites officially open to the public, and is located along the Matobo scenic route. The site faces westwards and is famous for its white rhino paintings and is very accessible. It was last inspected in 1998 during the pilot documentation project sponsored by NORAD under the tripartite agreement among Zimbabwe, Norway and Sri Lanka. During the 1998 inspection Mr Taruvinga noted the natural and biological factors affecting the panel, among them weathering, flaking, rain-wash and wasps colonising some sections of the panel.

The paintings are still visible, especially on the left and extreme right sides, as well as on the lower bottom central section of the boulder. However the following problems were noted during the inspection. This site is very popular with tourists and school children.

Nature of Problem	Description of problem
Human induced problems	• The entrance gate to the cave is damaged. • Some steel rods on top of the entrance gate were vandalised as someone tried to get access into the cave.
Natural Problems	• Water is flowing from the top of the boulder down the panel, thereby obliterating paintings. • Water related weathering is affecting several sections of the panel, including salts of efflorescence. • Flaking is also rampant. • Dust is accumulating on the panel.
Bio-deterioration factors	• Wasps are colonising the roof of the boulder. • Lichens are also colonising the rock face, especially on the extreme sides of the boulder.
Signage/Presentation	• Signage is in place but needs to be repaired and maintained. • A cage fence is in place to protect the entire boulder and the panel. • There is no information panel for the enjoyment of the public.

2.4 Cave of Bees (Map sheet/site number: 2028DA: 72, grid ref: PH576 320)

Cave of Bees is another famous rock art site in Matobo Hills, and was last visited in 1978/79 by Nick Walker. During the same time excavations were carried out in the cave. According to Nick Walker the panel on the left side was very visible.

Currently the panel is in fair condition, and at least 40 individual paintings are identifiable and visible.

Nature of Problem	Description of problem
Human induced problems	• None
Natural Problems	• Water related weathering of the painted rock surface leading to general discolouration and fading. • Salts of efflorescence. • Lichens are slowly colonising the extreme sides of the panel. • Water is flowing beneath the panel along the line of weakness.
Bio-deterioration factors	• Dassie urine flowing over the panel.
Signage/Presentation	• The site does not have any kind of presentation for the enjoyment of the public. • There is no proper signage to guide visitors to the site.

2.5 Bambata Cave (Map sheet/site number: 2028CB: 12, grid ref: PH468 324)

Bambata is one of the most important sites with multiple values covering rock art, Stone Age and Iron Age periods. The site was last visited in 1998 during the Rock Art Documentation Project when it was noted that the panel was in a fairly good condition. The site was extensively excavated in the 1970s'.

Conservation status

The panel is in a good state of preservation as 70% of the paintings are visible and the different colours of pigments are also still identifiable from a distance. On the extreme left side of the cave, flaking is the main problem. It is the area with an excavation trench. As one moves towards the centre dust starts accumulating on the painted surface. The central section of the cave is characterised by flaking and general weathering, while a thick dust film has accumulated below the rock art panel. The right side of the cave is also characterised by flaking, weathering and thick films of dust on the lower levels. The roof of the cave exhibits water related and bio-deterioration problems. The latter includes wasp nests. The floor of the cave s characterised by loose ashy soils as a result of extensive excavations. This is the source of the thick dust film covering the lower levels of the cave. Also there is evidence that people sometimes use the cave, as they are fire places on the floor cave. However graffiti in various forms, but especially scratching is common at Bambata cave, and most of it is placed below the paintings (i.e. on the lower levels). This problem is confined to the central and the extreme right.

Another development to note is that a fire that ravaged part of the Matobo Hills area, especially the area designated as the park, destroyed vegetation at Bambata cave. The vegetation, which used to create a windshield, was completely burnt down, thereby altering the micro-environment of the cave. Also the fence erected at the site was burnt and is no longer as durable as before, and might actually crumble into pieces any time from now.

Nature of Problem	Description of problem
Human induced problems	• Graffiti: scratching
Natural Problems	• Thick films of dust • Flaking and general weathering. • General deterioration of pigments. • Water related weathering along the drip line of the cave, including salts of efflorescence.
Bio-deterioration factors	• Termites are colonising the roof of the cave. • Wasp nests. • Trees and grass growing on the left side of the cave in the excavation pit left by Cran Cooke.
Signage/Presentation	• The site has proper signage along the Bulawayo Kezi road leading to the site, as well as arrows directing visitors to the cave. • However the site does not have any kind of presentation for the enjoyment of the public.

2.6 Ntunjambili Cave (Map sheet/site number: 2028BC: 26, grid ref: PH758 373)

Ntunjambili cave is one of the biggest cave in the Solibini communal area east of Rhodes Matobo National Park. Despite the erection of a protective barbed wire fence around the cave, covering large areas of the hill in which it is found, most of the paintings have been destroyed due to a combination of human, natural and biological factors. Prior to this state, the cave had beautiful panels which were very visible and in a good state of preservation. Today the only visible remains of the rock paintings stretch from the left side of the cave to the mid section. It is on this area that one can identify five places with paintings at different levels visibility due to gradual deterioration.

Conservation status

As stated before, the rock paintings have been gradually destroyed by a combination of human, natural and biological factors. The human factor dominating in this cave is graffiti in most charcoal, chalk, and retracing of paintings with either chalk or charcoal. The graffiti ranges from individual names to thematic issues such as terms used to identify people who produced the art. This vandalism is spread throughout the cave except on the extreme right side. The natural problems include water related weathering, dust, flaking, scaling, exfoliation in certain areas, all operating at various levels due to the micro-environment of the cave. These problems are spread on the painted panels and the roof. On the other hand the biological problems are more severe than at any other site visited. These ranges from goats colonising the cave from time to time, many small animals which favour hilly and cave habitats (among them dassies), and large numbers of birds, which actually breed in the cave taking advantage of the micro-environment. All these problems, occurring simultaneously, have caused much damage to the rock art panel.

Nature of Problem	Description of problem
Human induced problems	• Graffiti: charcoal, chalk, retracing of paintings using either chalk or charcoal. • Animal snares.
Natural Problems	• Water related weathering of the painted rock surface leading to general discolouration and fading of paintings. • Salts of efflorescence along drip line and rain-wash belts further leading to the general destruction of the paintings. • General weathering, which include exfoliation and scaling.
Bio-deterioration factors	• Domestic animal encroachment (especially goats). • Birds breeding and living in the cave, resulting in dense bird droppings, some actually paintings on loose boulders in the cave. • Lichens are slowly colonising several sections of the cave, especially the front part of the cave. • Small animals living in the cave creating urine related deterioration on certain sections with panels.
Signage/Presentation	• The site does not have any kind of presentation for the enjoyment of the public. • There is no proper signage to guide visitors to the site.

2.7 Gulubahwe Cave (Map sheet/site number: 2028DB: 5, grid ref: PH864 221)

Gulubahwe is one of the most attractive caves located in the Gulubahwe Communal area. The cave, which faces eastwards, has a large frieze of panel depicting a large snake. The site was last inspected in 1998 during the Rock Art Documentation Project. The panel was noted to be very visible from a distance including the different pigments used.

Conservation status.

At least 80% of the paintings are still visible from a distance. Most of the pigments used as well as the individual images are still identifiable. Despite this good state of preservation some problems were noted as a result of human, natural and biological factors. Human problems are mainly characterised by graffiti either in the form of charcoal or scratching. However this graffiti is confined to the lower levels of the cave without paintings. Natural factors are the main agents of deterioration at this site. These include water related weathering processes characterised by rain-wash and salts of efflorescence especially on the extreme left and right sides of the cave due to the nature of the drip line. Flaking is also rampant especially on the lower sections of the panel, but pronounced on the extreme left and right sides. The lower levels of the panel are slowly being colonised by dust as a result of both natural process and the traffic that raises films of dust from the gravel road close to the site. Biological factors are mainly wasp nests and goats that occasionally camp in the cave. The roof of the cave has darkish spots, which look like the effects of oil application,

but this requires more technical studies. The vegetation around the site is still intact despite signs of cutting of trees for fuel in the general area of Gulubahwe communal area.

Nature of Problem	Description of problem
Human induced problems	• Graffiti: charcoal and scratching • Removal of part of the barbed fence in front of the cave.
Natural Problems	• Water related weathering of the painted rock surface leading to general discolouration and fading of paintings. Salts of efflorescence can be noticed on the extreme sides of the cave. • Flaking of the rock surface. • Dust accumulation on the lower levels of the cave.
Bio-deterioration factors	• Wasp nests. • Goats occasionally occupy the cave.
Signage/Presentation	• The site does not have any kind of presentation for the enjoyment of the public. • There is no proper signage to guide visitors to the site.

2.8 Sikiti Rock Art Site (Map sheet/site number: 2028DB: 60, grid ref: PH877 273)

Sikiti is one the rare caves with numerous white paintings attributed to early farming communities. The site is located along the Gwanda road, just before Gulubahwe cave, and close to Sikiti Primary School. It is found in a valley along the Nkonfi River. Adventurous visitors who do not fear to venture deep in the valleys found in communal areas, and those who can endure steepy terrain regularly visit the site. Mr Sibindi and Dr Ben Smith (Rock Art Researcher Centre, University of Witwatersrand, South Africa, inspected the site in 1998. According to their observations the panels were in a better state of preservation than at present.

Conservation status

Readily outstanding are the white paintings, which occupy the lower levels of the cave. The majority of these paintings are human and abstract figures. The red paintings are also mainly human figures numbering less than 130. The reddish pigments are slowly being blended into the darkish background created by water related deterioration of the rock surface. Natural factors affecting the panels include water related weathering processes characterised by rain wash belts on the extreme right and left sides of the cave, following the drip line. Flaking is also rampant at the bottom mid section of the cave, while dust accumulation is visible on the entire panel due to the ashy soils in the cave, as well as human action such as camping as evidenced by fire places within the cave. Human factors are mainly graffiti either as charcoal or scratching thereby obliterating white paintings. The content of the graffiti ranges from individual names to obscene language. In other instances original paintings have been retraced, or replicas are drawn juxtaposed to the original. In one section a brownish paint was used in obliterating white paintings. Generally most of the paintings are beyond the reach of the visitors. Biological factors are mainly characterised by wasp nests perched on the red paintings as well as on the roof of the

cave. However the vegetation around the cave is intact, and offers a protective shield to the site.

Nature of Problem	Description of problem
Human induced problems	• Graffiti: charcoal, scratching, and brown paint.
Natural Problems	• Water related weathering of the painted rock surface leading to general discolouration and fading of paintings, including the impact of salts of efflorescence. • General weathering, scaling and flaking of the rock surface especially the bottom mid section of the cave. ▪ Dust is slowly accumulating on the panels.
Bio-deterioration factors	• Wasp nests are over the panels and on the roof of the cave.
Signage/Presentation	• The site does not have any kind of presentation for the enjoyment of the public. • There is no proper signage to guide visitors to the site.

2.9 Silozwane Cave (Map sheet/site number: 2028DA: 1, grid ref: PH6405 183)

Silozwane cave is one of the most popular rock art sites located in communal areas. The site is located in Silozwi area just on the periphery of the national park boundary. The cave has been periodically inspected given its popularity and proximity to the park. The site is characterised by a large frieze, which is still visible from a distance including the pigments. Previous inspections noted the gradual deterioration of the paintings due to natural problems, and the gradual intensification of human factors especially graffiti at the site.

Conservation status

At Silozwane cave there is general fading of the paintings due to natural factors such as weathering in many forms. Also lines of weakness (cracks) stretching from the left side to the right have ensured the intensification of water related weathering processes. The white paintings are also fading compared to the red ones. The floor of the cave is slowly cracking and flaking off. The human induced problems are mainly graffiti in the form of chalk as well as one chiselled one. This is however confined to the lower levels of the cave as well as the extreme left and right sides, which are within easy reach of perpetrators. Also graffiti has been introduced on the floor of the cave. Biological factors include wasp nests, termites and goats which occasionally camp there.

Nature of Problem	Description of problem
Human induced problems	• Graffiti: chalk and chiselled graffiti. • Lighting of fires in the cave resulting in darkish spots on the roof.
Natural Problems	• Water related weathering of the painted rock surface leading to general discolouration and fading of paintings. Salts of efflorescence can be seen on the extreme left and right sides of the cave. • General weathering processes leading to the gradual deterioration of the panel. This includes flaking at the bottom of the cave. • The floor of the cave is cracking. • Water is seeping through the line s of weakness (cracks) in the cave.
Bio-deterioration factors	• Wasp nests. • Termite colonising certain sections of the cave. • Goats occasionally camp in the cave.
Signage/Presentation	• The site does not have any kind of presentation for the enjoyment of the public. • There is no proper signage to guide visitors to the site.

2.10 Mtshelili Valley Rock Art Site (Map sheet/site number: 2028DA: 451, grid ref: PH607 229)

Mtshelili Valley rock art site faces westwards, and was last visited in 1978/79 by Nick Walker and Mr Sibindi. According to Mr Sibindi the paintings were in a fairly good preservation state. The site is very accessible. Today the panel is in a poor state of preservation, with only a few paintings readily discernible, especially on the left side and the upper middle section of the cave. Also several white paintings are still identifiable at this site. This site is not on the list of those officially open to the public.

The following problems were noted at this site:

Nature of Problem	Description of problem
Human induced problems	• Dust accumulation as a result of increased visitorship. • Illegal camping by the Selous Boys Scouts over the years (remnants of scouts' temporary structures can be seen). • Graffiti introduced on paintings i.e. charcoal and chiselled graffiti. • Several fire places indicating habitual occupation of the cave by visitors, poachers etc.
Natural Problems	• Water related weathering of the painted rock surface leading to general discolouration and fading of paintings. • Dust accumulation due to natural processes such as soil formation and weathering processes. • Growth of lichens especially along rain wash belts on the extreme sides of the cave. • Rain wash belts cut across the entire rock art panel thereby causing the obliteration of the rock art panel, and accumulation of salts of efflorescence.
Bio-deterioration factors	• Accumulation of animal waste in the cave. • Bird droppings can be seen on the rock art panel. • Wasps have colonised the roof of the cave, and sometimes these are built on top of the rock art panel.
Signage/Presentation	• The site does not have any kind of presentation for the enjoyment of the public. • There is no proper signage to guide visitors to the site.

ANNEXURE 3

MATOBO HILLS MANAGEMENT PLAN LOGICAL FRAMEWORK ANALYSIS

1. Conservation and Management related issues

Objective	Activities	Performance Indicators	Input Requirements	Implementing Agency	Output
Consolidate the management structure for efficient running of the Matobo Hills	Management Committee Technical Committee Local Communities Formal agreements regarding responsibilities of each tier	Management structures established Formal agreements	Mandate from stakeholder meetings	Management Committee	Establish a three-tier management system for the World Heritage site by March 2005

Objective	Activities	Performance Indicators	Input Requirements	Implementing Agency	Output
Develop capacity to effectively manage the site and maintain its significance as a World Heritage cultural landscape	Staff audit to identify gaps and overlaps arising from integrated management Appoint additional staff Assess training needs and opportunities and identify staff for capacity-building Arrange courses for training and ca Capacity-building ZIPWA to appoint Ecologist, librarian, Technical Assistant NMMZ to appoint Heritage Manager, Zoologist, Historian/ Ethnographer, Technical assistant	Staff audit by March 2005 Additional staff appointed by December 2005 List training and capacity-building opportunities by March 2005 Hold courses between 2005 and 2007 Appoint staff	Assistance from Human Resources departments in key stakeholder organisations Budget for additional staff Assistance from Human Resources departments in key stakeholder departments Budget for courses	HR departments in key stakeholder organisations	Adequate staff to integrate the management of the site by 2007

Objective	Activities	Performance Indicators	Input Requirements	Implementing Agency	Output
Regular inspections to enable corrective action to be taken to maintain the significance of all cultural sites in the Matobo Hills	Establish checklist Routine inspection duties according to checklist by site manager & monuments inspectors Implement appropriate conservation measures	Regular inspection schedule Inspector to produce a monthly report Reports on implementation of conservation measures	-Financial Resources -Motor Vehicles, cycles - conservation materials	NMMZ Site Manager and Inspectors	Inspection programme ready by June 2005 Sites adequately conserved by 2009
Establish high quality manage-ment of selected cultural sites in the World Heritage area	Assess site needs and threats Develop site management plans	Individual site management plans completed and implemented	-Financial Resources -Motor Vehicles, cycles - conservation materials	NMMZ, Site Manager and Inspectors, Local communities	Two site management plans per year between 2005 and 2009
Recognise traditional protection mechanisms for both natural and cultural resources in the World Heritage Area	Liase with traditional leadership and communities to revive and implement where possible traditional ways of conservation Facilitate the appointment of traditional custodians	Adherence to traditional management systems to be mandatory for visitors at selected sites.	-Financial resources -Personnel resources	NMMZ, RDCs, Local community conservation committees	Traditional management systems in place at selected sites by mid 2005
	Design & implement community awareness programmes on the importance of spiritual sites in maintaining the cultural landscape	Cooperation from local communities	-Financial resources -Personnel resources	NMMZ, RDCs, Local community conservation committees	Community awareness programme in place by end 2005

Objective	Activities	Performance Indicators	Input Requirements	Implementing Agency	Output
Monitor illegal activities to maintain biodiversity and the integrity of cultural sites within the Matobo Hills	Increase patrol frequencies within the cultural landscape Adequately equip staff with communication and patrol equipment	Monthly reports on patrol observations Regular evaluations of the observation reports	-Financial resources -Personnel resources -Patrol equipment like radio and communication systems -Deployment vehicles	ZIPWA, RDCs, Local community conservation committees ZRP, Zimbabwe Defence Forces	Reduce incidence of illegal activities by December 2005
	Carry out awareness programmes for local communities and law enforcement agents and the judiciary regarding illegal activities	Cooperation from local communities and law enforcement agents	-Financial resources -Personnel resources	ZIPWA, RDCs, Local community conservation committees and ZRP	More sustainable utilization of natural resources by communiies as well as greater awareness of the significance of the World Heritage site by December 2005
	Review penalties for illegal activities	More appropriate penalties	-Financial resources -Legal resources	ZIPWA, RDCs, ZRP, Ministry of Justice	Penalties adopted and enforced by December 2005
Improve water supply systems for the entire World Heritage site	Rehabilitate boreholes, leaking & silted dams; construct new dams where possible and sink new boreholes	Dams and boreholes rehabilitated and new waterpoints established	-Financial resources -Personnel resources -Equipment	ZIPWA, RDCs, Water Resources Development Ministry	Improved water supply systems by end of 2009
Enforce EIAs for all proposed development projects in the World Heritage Site	Ensure that no development projects are accepted without EIAs approved by the Management Committee Ensure that all developments comply with agreed terms of EIA	EIA report produced for every project Compliance with terms of EIA	-Financial resources -Personnel resources - Liaison with DNR	Management Committee with DNR, NMMZ, ZIPWA	Vigorously enforce EIA compliance on all development projects by end of 2005

Objective	Activities	Performance Indicators	Input Requirements	Implementing Agency	Output
Prevent introduction of alien species in the World Heritage Site and remove existing alien species	Improve and enforce measures to prevent introduction of alien species Remove or control alien plant and animal species using manual, chemical and biological methods	Maintain records governing movement, extent and introduction of alien species Invaded areas cleared	-Financial resources -Personnel resources -Equipment	ZIPWA, RDCs, Local community conservation committees	Substantial reduction of alien species in the World Heritage Site by end of 2009
Reduce soil and water losses caused by erosion	Identify and map all badly eroded areas and areas of active erosion Implement effective land use planning in communal areas	Affected areas are identified and prioritised Plans are developed and monitored for land use in communal areas	-Financial resources -Personnel -Mapping equipment	AREX, Management Committee and respective institutions whose areas are affected	Reduced erosion and rehabilitation of degraded areas by end of 2009
	Assess current stock levels and carrying capacity	Livestock records for all properties in the World Heritage site assessed against carrying capacity	-Financial resources -Personnel	AREX, ZIPWA	Report on carrying capacity of the area by December 2006
	Rehabilitate badly eroded areas by filling in gullies, planting suitable species, and constructing brushwood dams	Annual report on areas rehabilitated	-Financial resources -Personnel resources -Equipment	Management Committee, with institutions whose areas are affected	Major degraded areas rehabilitated by 2009
Maintain biodiversity by reducing deforestation caused by cutting of wood for fuel and building	Awareness campaign Planting of depleted species	Increased participation of local communities in conservation programmes	-Financial resources -Personnel resources -Equipment	Management Committee, with institutions in whose areas deforestation is rampant	Significantly reduce deforesta-tion by end of 2009

Objective	Activities	Performance Indicators	Input Requirements	Implementing Agency	Output
	Reinforcement of statutory and traditional laws relating to harvesting of forest species	Record of prosecutions and reports from traditional leaders	-Financial resources -Personnel resources	Management Committee with institutions in whose areas deforestation is rampant	Reduced loss of indigenous plant species in the World Heritage Site by 2007
Control movement of game, livestock and people between communal and protected areas to minimise conflict	Repair and complete fence along the community-Park boundary and fence selected cultural sites outside the National Park	Fences erected	-Financial resources -Personnel resources -Materials	Management Committee & ZIPWA	Fences demarcate selected areas by 2008
Maintain biodiversity and natural and cultural values by reducing fire outbreaks in the World Heritage site	Prepare an integrated fire protection plan	Plan produced by June 2005	Financial resources	Management Committee & all stakeholders	Reduced incidence of fire outbreaks and their area of impact by end of 2009
	Adopt and implement strategies such as early burning and rotational burning	Strategy implemented	-Financial resources -Personnel resources -Fire-fighting equipment	Management Committee & all affected stakeholders	
	Construct and maintain fire guards	Fire guards constructed & maintained in affected areas	-Financial resources -Personnel resources -Equipment	Management Committee & all affected stakeholders	
	Increase enforcement and policing efforts	Increase in patrol frequencies and extent of area covered	-Financial resources -Personnel resources -Patrol equipment	Management Committee & affected stakeholders	
	Procure fire fighting equipment and protective clothing	Equipment purchased	Financial resources	Management Committee and affected stakeholders	
	Train personnel in fire-fighting techniques	Personnel trained	-Financial resources -Personnel resources	Management Committee & all stakeholders	

Objective	Activities	Performance Indicators	Input Requirements	Implementing Agency	Output
	Place fire-warning banners or posters at appropriate points	Banners erected in susceptible areas	Financial resources	Management Committee	
	Implement antifire awareness campaign programmes	Increased participation by communities in affected areas	-Financial resources -Personnel resources	Management Committee & all stakeholders	
Comply with the World Heritage Guidelines and prepare for control of potential disasters	Mobilise & consult all stakeholders	Participation by all stakeholders	Financial resources	Management Committee	Disaster management plan produced by end of 2005
	Prepare a disaster management plan	Management plan produced	Financial resources	Management Committee and all stakeholders	
	Implement disaster management plan & procure radio communication equipment	Improvement in response to disaster calls	-Financial resources -Personnel resources -Appropriate equipment	Management Committee & all stakeholders	

Research and Documentation

Objective	Activities	Performance Indicators	Input Requirements	Implementing Agency	Output
Develop a survey and documentation programme for cultural sites to ensure maintenance of the values of the World Heritage Site	Recruit Heritage Manager & Assistants Formulate research and documentation survey methods	Quarterly reports produced for all survey and documentation activities	-Financial resources -Personnel resources	NMMZ-Heritage manager	A comprehensive record of cultural sites by end of 2009
	Liaise with members of the local community for information on unrecorded sites	Increased number of sites identified & recorded	-Financial resources -Personnel resources - Motor vehicles	Heritage manager, RDCs project officers, Local traditional leadership and elected community representatives	

Objective	Activities	Performance Indicators	Input Requirements	Implementing Agency	Output
	Investigate histories of local communities and interview elderly people	Quarterly reports on findings produced Publication of results	-Financial resources -Personnel e.g. Historians and Ethnographers -Vehicles -Recording equipment	NMMZ-Ethnographers, Oral historians, Local traditional leadership, elected community representatives	Accurately record and publish the history of indigenous communities by end of 2009
	Record intangible heritage of sacred sites	Map showing sacred sites produced Reports on research findings produced	-Financial resources -Personnel resources - Equipment for documentation	NMMZ-Ethnographers, Oral historians, Local traditional leadership, elected community representatives	Record information relating to management of Sacred and cultural sites by end of 2009
	Survey and record rock art sites	Quarterly reports	-Financial resources -Personnel resources -Equipment for documentation	NMMZ, Heritage Manager	Comprehensive record of rock art sites in the World Heritage site by 2009
Develop a biodiversity inventory for the Matobo Hills to ensure maintenance of the values of the World Heritage Site	Recruit ecologists & technical assistants	Appointment relevant personnel	Financial resources	Management Committee, ZIPWA, NMMZ, RDCs, Natural Resources	Comprehensive biodiversity inventories established by end of 2009
	Conduct inventory studies, research and surveys on selected groups of animals and plants	Reports on inventory studies and surveys produced	-Financial resources -Personnel resources -Research, survey equipment, air craft & vehicles	Management Committee, ZIPWA, NMMZ, RDCs, Natural Resources	Commence inventory by December 2005
	Continue with surveys of black eagles, cats, small antelopes, inverte-brates, reptiles and fish	Reports on inventory studies and surveys produced	-Financial resources -Personnel resources -Research, survey equipment, & motor vehicles	Management Committee, ZIPWA, NMMZ, Natural Resources	Continue with surveys to 2009

Objective	Activities	Performance Indicators	Input Requirements	Implementing Agency	Output
	Monitor long term effects of fire, termites, giraffes and rhinos on the structure and function of the ecosystem	Annual reports and publications	-Financial resources -Personnel -Research, survey equipment, & motor vehicles -GIS mapping	ZIPWA ecologists, NMMZ zoologists	Better understanding of the ecosystem of the World Heritage Site by 2009
Make research and documen-tation results on cultural sites and natural resources available and accessible in the World Heritage area	Build a documen-tation centre in National Park Procure archiving and library equipment Procure documents and information Form partnerships with other World Heritage cultural landscapes	Documentation centre built Archiving and library equipment purchased Documents and information accessioned Partnerships formed and MoUs in place with other WH cultural landscapes	Financial resources	ZIPWA Librarian, Heritage manager and assistant	Documentation and research centre, and partnerships established by end of 2009

Tourism and Visitor Management

Objective	Activities	Performance Indicators	Input Requirements	Implementing Agency	Output
Develop an interpretation programme that makes visitors aware of synergy between natural and cultural values in Matobo Hills cultural landscape	Construct interpretation centres Produce brochures, maps, films and videos to orientate visitors	Interpretation centres constructed Brochures and other materials printed and videos made	Financial resources	Management Committee, institutions like ZIPWA, NMMZ, ZTA, RDCs and local communities	Two interpretation centres established by end of 2009
Develop and maintain an efficient road network	Hire or acquire road maintenance equipment Upgrade all existing roads to all-weather Improve road	Equipment hired and acquired Increase in distance of roads upgraded Signs inscribed	Financial resources Equipment	Management Committee to negotiate with ZIPWA, RDCs, Roads Department, DDF	Improved accessibility of all parts of the World Heritage Site by end of 2009 Launch of new road signage by end of 2006

Objective	Activities	Performance Indicators	Input Requirements	Implementing Agency	Output
	signage Sub-contract road maintenance services	Sub-Contracting agreements signed			
Control access to sacred sites to avoid commercializatio n and maintain their integrity, authenticity and significance in the World Heritage area	Local community consultation Production of guidelines and literature relating to appropriate behaviour at sacred and other cultural sites Select custodians & train guides Design and implement visitor awareness programmes	Local community consulted Guidelines printed All guides and custodians will have a copy of the printed guidelines Custodians and trained guides appointed Reduction in visitors trespassing on sacred sites	Financial resources Personnel	NMMZ Heritage Manager, RDCs, ZIPWA, Local traditional leadership and custodians	Mechanisms for controlling access to sacred sites developed and implemented by the end of 2006
Harmonise entry fees to sites open to the public in the Matobo Hills	Work out and agree on an acceptable share ratio	Single entry fee MoU between ZIPWA and NMMZ	Financial resources	Management Committee, ZIPWA, NMMZ	A single entry fee for both ZIPWA and NMMZ established by early 2005
Develop a sustainable marketing strategy and promotional programme focusing on the values of the cultural landscape	Formulate and implement strategy	Implementation of formulated strategy	Financial resources	Management Committee, ZTA, ZCT, ZIPWA, NMMZ, Bulawayo Publicity Association, Bulawayo Business Forum	Develop a publicity and marketing promotion programme by end of 2005
Lobby for Tourism Development Status	Consult with ZTA and Ministry of Environment and Tourism	Status granted	Financial resources	Management Committee, ZTA, ZCT, MET	Tourism Development Status granted by the end of 2005
Develop a diverse product	Improve quality and diversity of	New products and services	Financial resources	Management Committee,	A diverse and unique product

Objective	Activities	Performance Indicators	Input Requirements	Implementing Agency	Output
range unique to the Matobo Hills that embodies the values of the World Heritage Site	existing products	developed	Marketing, advertising and design skills	ZTA, tourism agencies, arts and crafts designers, Mzilikazi Arts and Crafts Centre	range and services by end of 2007

Community Co-operation and Participation

Objective	Activities	Performance Indicators	Input Requirements	Implementing Agency	Output
Create opportunities for local communities to benefit from the World Heritage status of the Matobo Hills	Consult communities and involve them in conservation and management programmes Set up income generating projects to increase benefits to communities	Improvement in level of community participation Increased income generation for local communities	-Financial resources -Personnel resources -project proposals	Management Committee, ZIPWA, NMMZ, RDCs, local traditional leadership and other stakeholders	Increased community participation, involvement and benefits established by end of 2009
Promote interest in local traditions and culture that embody the values of the World Heritage Site, especially among the youth in local communities	Carry out cultural extension education programmes targeting especially the younger generation	Participation of youth in programmes	-Financial resources -Personnel resources	Management Committee, NMMZ and ZIPWA extension and education officers, RDCs, local traditional leadership, local schools	Restore lost interest in local traditions & culture by end of 2009

Matobo Hills (Zimbabwe)

No 306 rev

1. BASIC DATA

State Party: Republic of Zimbabwe

Name of property: Matobo Hills

Location: Matebeleland, South Province

Date received: 19 February 2002

Category of property:

In terms of the categories of cultural property set out in Article 1 of the 1972 World Heritage Convention, this is a *site.* In terms of Operational Guidelines, para 39, this is a *cultural landscape.*

Brief description:

The nominated area exhibits a profusion of distinctive rock landforms rising above the granite shield that covers much of Zimbabwe. The large boulders provide abundant natural rock shelters and collectively exhibit a long association with human occupation from the early Stone Age right through to early historical times, and intermittently since. The rocks also provide a dramatic setting for an outstanding collection of rock paintings.

The densely grouped granite formations have allowed the development of a complex and very specific ecology at Matobo, turning it into a moist and rocky island amidst the semi-arid savannahs of south-western Zimbabwe.

The Matobo hills continue to provide a strong and high-valued focus for the local community through their active use of shrines and sacred places, closely linked to traditional, social and economic activities.

2. THE PROPERTY

Description

The nominated Matobo site covers an area of 2050 km^2, some 35 km south of Bulawayo in south-western Zimbabwe. It is surrounded by a buffer zone of 1050 km^2.

The landscape is visually and ecologically distinguished from the surrounding dry savannah. A profusion of distinctive granite landforms, densely packed into a comparatively tight area, rise up to form a sea of hills. Their forms have resulted from the varied composition and alignment of the granite rocks, which responded differently to millions of years of weathering. What remains are inselbergs – large individual vertical rocks, 'kopjes', crenellated ridges, 'dwalas' or hump-backed domes, and what look like randomly heaped boulders.

These extraordinary granite rock formations have exerted a strong presence over the whole area – both in natural and cultural terms.

The discrete and often small sheltered spaces, formed between this dense collection of rocks, have fostered a wide variety of microclimates, allowing the development of an extremely diverse range of habitats. The resulting species rich vegetation has in turn provided much sustenance for a wide range of fauna.

These natural attributes have also been the dynamic focus for people living in the area since the early Stone Age. Within natural caves, and on boulders and cliff faces are found a dramatic corpus of rock art much of it dating from the Stone Age.

What gives Matobo is continuing relevance to local communities today is the strong persistence of indigenous beliefs and practices associated with Matobo as a sacred place – the seat of God, (Mwari/Mwali), the home of ancestral spirits, and the focus for rituals and ceremonies linked to rain, harvest, disease and appeasement of spirits.

Overall the landscape has a strong aesthetic quality – the natural phenomena give the place a dramatic 'natural beauty'. From strategic points on the hills there are far-reaching views over the surrounding landscape. It is easy to see why so many people have imbued this landscape with a special meaning.

Specifically the Matobo Hills nominated cultural landscape includes:

- Rock paintings – a huge corpus of paintings;
- Stone and Iron Age archaeological sites;
- Historical sites from pre-colonial, colonial and post- colonial periods;
- Natural heritage – rock forms, high biodiversity; rare species;
- Living intangible culture associated with the rock forms.

Rock paintings – a huge corpus of paintings: Matobo has perhaps the largest concentrations of rock art sites in southern Africa. The nomination claims that there are 'no less than 3500 rock art sites' in the Matobo Hills. Unfortunately this statement cannot be substantiated. Nevertheless even a more conservative estimate of around 700 known sites – each containing a large number of paintings, perhaps in all totalling 20,000 – give the whole corpus of paintings an enormous significance in terms of size and density.

The paintings are found in caves, and on boulders and cliff faces. Stylistically Matobo is part of a rock art 'region' which stretches from South Africa to Tanzania. The majority of the paintings have been attributed to the Late Stone Age period with some belonging to Iron Age Farming Communities.

Some of the larger caves – with many hundred of paintings – display images of extreme visual beauty – such as the galloping giraffe in the Inanke cave.

The earlier paintings associated with hunting and gathering are mostly executed using a red pigment – red ochre – mixed with an as yet unknown binder. The later paintings associated with farming communities used white pigment from kaolin or quartz. This distinction is common within the stylistic region.

Insufficient quantities of organic material in the pigments, mean that it has not been possible to date the painting directly. Indirect methods – using subject matter and the

presence of pigments in archaeological deposits – suggest that the earliest paintings date back at least 13,000 years.

The subject matter of the paintings is essentially naturalistic interpretations of people, animals and trees. But it is also impressionistic in that many of the paintings distorted body proportions to convey a sense of movement, or size to convey importance. In many sites there are layers of paintings superimposed one on top of the other. Images in the later paintings also appear to display a complex cosmology linked to religious beliefs.

Analysis of the styles has suggested that images changed gradually from outlines to polychromes in the hunter-gatherer paintings. The later paintings of the early farming communities exhibit much less skill, accuracy and precision in comparison to the earlier images.

Several of the caves are open to the public.

Stone and Iron Age archaeological sites: An abundance of archaeological evidence has been amassed from the shelters for the Stone Age and Iron Age periods, which when combined has contributed a great deal to the understanding of pre-colonial history of the region. Bamabati cave – said to be one of the most extensively researched caves in southern Africa – has revealed the oldest decorated piece of stone from Zimbabwe together with what appears to be Stone Age pottery. Elsewhere tools, implements and human remains have been dated to the Middle and Late Stone Age. In many caves Iron Age deposits overlay earlier Stone Age material.

Important features of Iron Age sites are the remains of dry-stone walled enclosures and grain bins.

Historical sites from pre-colonial, colonial and post-colonial periods: Graves of King Mzilikazi who formed the Ndebele nation and Cecil Rhodes who led European settlers into the country are both within the nominated area.

Natural heritage – rock forms, high biodiversity; rare species: The valleys between the rocks contain numerous streams and springs supporting a wide range of flora ranging from lichens, figs and aloes to Brachystegis species, mopane trees and over 100 grass species. At least five plant species are indigenous to the Matobo area (Cyphostemma milleri, Lobelia lobata, Triaspis dumeticola, Maytenus heterophylla puberula and Turrea fischeri eylasii). In addition the area supports a major and significant portion of a further nine species.

Out of 189 mammal species indigenous to Zimbabwe, 88 have been recorded in the Matobo Hills. The area has the highest density of leopards in Zimbabwe. Many other mammals have been re-introduced in recent years such as the white rhinoceros – depicted in cave paintings. About 330 bird species have been recorded, including 40 species of raptors and the highest density of black eagles recorded anywhere in Africa – over 70 pairs nest in the Matobo Hills.

Living intangible culture associated with the rock forms: Matobo is the home of the wide-ranging oracular cult of the high God, Mwali, whose voice is believed to be heard from the rocks. This powerful oracle links the indigenous communities to the hills – where the ancestral spirits live in sacred forest, mountains, caves, hollow trees and pools. Some say these beliefs originated with the Iron Age peoples who inhabited the area and thus there maybe links with the rock art.

The natural granite rock formations have a powerful intangible association with the people who live in the surrounding area. They have become objects of spiritual significance from where people can derive inspiration, fertility, good health and make contact with their ancestral spirits.

Within the Matobo hills, certain places have become known as shrines. Njelei, specifically associated with agricultural rituals, is one of the most important and attracts people form as far as South Africa, Namibia, Botswana and Lesotho. Dulu is visited through out the year by people with illnesses.

The reverence given to the area, along with the rituals associated with visiting, has become a powerful force for its conservation, as despoiling the environment would deprive god and the spirits of a home to live in. There are also taboos in place that operate to keep the natural resources intact. For instance, no one may hunt animals or cut down trees in the sacred forest.

These intangible links are quite without physical evidence and rely for their continuation on communal memory and social practices alone.

History

Evidence for the early history of the area comes from archaeological excavations and from analysis of the rock paintings. These indicate a long and perhaps continuous use of the caves from the Stone Age right through to the early historical period first by hunters and gatherer societies and then by Iron Age settlers practicing agriculture. In the Zimbabwean context the separation between the prehistoric and the historic periods is not clearly defined.

The sites first appear in the records of missionaries, mineral seekers and explorers who document the arrival and establishment of the present Ndebele group of people during the first half of the 19th century under the leadership of the King Mzilikazi. Mhlahlandlela, on the northern fringes of the Matobo Hills, was one of the earliest settlements. The first Bulawayo was established soon after. Around the same time the Nguni people, fleeing Zululand, arrived in the area.

Resistance by the local people to the early colonists is well documented. During confrontations in 1893 and 1896 between Cecil Rhodes and the Ndebele leaders, the Matobo Hills played a pivotal role in providing refuge to local people who derived inspiration from the oracles of the Mwari shrines.

The majority of the area which now forms the Rhodes Matopos National Park was declared a conservancy in 1926.

Management regime

In order to reflect a coherent landscape, encompassing not only the rock paintings and rock batholiths but also the strong social interaction between local people and these tangible aspects, the nomination suggests a boundary that is larger than the Rhodes Matopos National Park. The proposed boundaries cover the areas of two Rural District Councils. This has important implications for management.

Within then nominated area are three types of land ownership:

- The Rhodes Matopos National Park – managed by Department of National Parks and Wildlife Management (Ministry of the Environment) (DNPWLM);
- Communal lands without individual tenure – managed by Matobo and Umzingwane Rural District Councils on behalf of the President and the people of Zimbabwe;
- Privately owned land – with individual tenure.

The National Park is managed by DNPWLM to retain the significance of its natural resources. This department is in the process of being established as an Authority (ie as an independent a statutory body under the Ministry). The management of archaeological and other cultural properties is the responsibility of the National Museums and Monuments (Home Affairs) (NMMZ) irrespective of land tenure. However the ownership and management of shrines and ritual activities is the responsibility of members of the community. The following agencies also have management responsibility within the nominated area: Natural Resources Board, Forestry Authority and the Rhodes Matopos Committee.

Currently there is no body that could coordinate activities within a World Heritage Site and at present there are some grey areas that affect the willingness of one or other party to take responsibility for conservation.

If the State Party is to promote the proposed world heritage site as a cultural landscape, it will be essential to establish an authority with representatives from all the official stakeholders, as well as the resident rural and commercial farmers and the tourism industry.

There is already a precedent for this in Zimbabwe, namely a statutory instrument that was established with assistance from SIDA (Sweden) and JICA (Japan) as a legal entity to manage the Victoria Falls world heritage site. Unfortunately it has not been in operation for a while because of financial constraints.

The Management Plan proposes a management committee for the world heritage site, which will consist of representatives from the key statutory bodies as well as from Chiefs and custodians of the shrines. It would clearly be desirable to try and widen this team to include those suggested above. It is envisaged that the management committee will coordinate management plans generated by stakeholders and encourage the preparation of plans for areas where these currently do not exist.

The management plan is very much a description of the status quo. It does not address the need for research for the area nor how current basic management arrangements can be transformed into conservation practice. For instance there is no mention of the need for research by oral historians and anthropologists into indigenous knowledge and intangible heritage associated with the site. Nor does the plan address how the cultural and natural qualities of the area – addressed separately in the plan – can be drawn together so that the area can be managed as a cultural landscape.

At present environmental impact assessments are not mandatory in Zimbabwe, but the statutory instrument established for Victoria Falls makes them necessary for all development in that world heritage site. A new Environment Bill has been prepared that will make them compulsory throughout the country, but it has not yet been tabled in parliament. When a management authority is established for Matobo Hills, it should therefore address this issue as a matter of urgency.

Legal provision:

Legal protection of the Matobo Hills is achieved through four Acts that govern the cultural and natural heritage and administration of the Rural District Councils. These are the Rural District Councils Act, the Parks and Wild Life Act, The Natural Resources Board Act and the National Museums and Monuments Act.

Resources:

Currently sources of funding for work in the nominated area is channelled through the various bodies that have management responsibility. There is nothing in the nomination or the management plan to indicate any commitment by those authorities to provide extra funding for implementing the Management Plan.

Justification by the State Party (summary)

The Matobo Hills contains both cultural and natural attributes of exceptional aesthetic, scientific and educational significance.

The diverse cultural heritage spans more than 500,000 years with continual settlement over at least 100,000 years, and is reflected in numerous rock art sites, and rock shelters with Stone and Iron Age deposits. Today, the Matobo Hills are revered as the centre of the Mwari religion, the seat of god and ancestral spirits, and where shrines are the focus of communal contact with the spirits.

The area is regarded as a most important sanctuary for birds of prey – particularly the Black Eagle; it possesses a great density of predator species and significant botanical diversity within tree species, grasses and small flowering plants.

3. ICOMOS EVALUATION

Actions by ICOMOS

ICOMOS and IUCN evaluated the property in 1983-84. An ICOMOS mission visited the site in October 2002.

Conservation

Conservation history:

No details are given for this. However a significant body of academic and scientific literature has been generated by the site – as indicated in the extensive bibliographies in the nomination document and the management plan. There is continuing scientific interest in the area.

State of conservation:

No formal text on this is given in the nomination document or the management plan. Conservation programmes begun in the 1990s with help from Norway and Sri Lanka have helped create awareness and develop skills but have been suspended because of the political situation in the country.

Conservation at the moment appears to be re-active and geared to maintenance rather than conservation or preventative conservation work.

The only active research mentioned in the text is on the black eagle monitoring programme, which is run by volunteers. The location and documentation of rock art sites is being done by a volunteer – but currently the information is not being passed to the NMMZ.

Risk analysis:

The management plan includes an analysis of the following threats:

- Population pressure;
- Natural disasters;
- Visitor/tourism pressures;
- Development pressures.

The following additional threat is apparent from the overall text:

- Atrophying of interest in traditional beliefs.

These are considered separately:

Population pressure: A significant increase in people living in the area over the past 100 years has had a negative impact on the environment. Agriculture in some areas has resulted in deforestation; illegal hunting takes place; and uncontrolled burning has damaged vegetation and animals. It is also clear from the management plan that, in spite of this encroachment, the cultivation of the communal lands is failing to provide adequate food for the occupants of the park.

The increasing need for building material for traditional pole and dagga houses is adding to the deforestation problem.

The government's resettlement programme is resettling some farmers from the communal areas and further resettlement is planned. People are being encouraged to use alternative building material for houses – although this will have a negative impact on vernacular architectural traditions.

Overall outreach programmes are encouraging knowledge and understanding of the cultural importance of the area.

Natural disasters: The area is prone to droughts and floods. Every ten years or so cyclones travel inland bringing significant rainfall. The natural vegetation seems to be hardly robust enough to absorb the impact of these extremes and soil erosion is becoming a serious problem.

In order to provide extra water in times of drought, dam building projects have been recommended.

The greatest threat to the environment after population pressure is the introduction of exotic plants. The current threat is from *Lantan camara*, which has established itself in the eastern hills and parts of the national park. The recent introduction of Eucalyptus and Bottlebrush is also a potential threat as is the *Azolla* fern in the Maleme dam. The DNPWLM has strategies to deal with these invasive species in its management plan.

Visitor/tourism pressures: Since the 1980s tourism has grown rapidly with the Matobo National Park recording the second highest number of visitors after Victoria Falls. 100,000 now visit annually. Response to the needs of visitors is coming from the commercial and communal lands –rather than from centralised direction. Increased visitor numbers are beginning to have a slight adverse effect particularly on the rock paintings through dust, graffiti, and illegal spraying of water on the paintings to enhance their appearance for photographs. Illegal cutting of certain tree species to produce carved curios for tourists has also been recorded.

The management plan acknowledges these issues and the need for strategies to better manage visitors to the site as well as for adequate staffing at sites open to the public.

Development pressures: Development pressure comes mainly from the demand for amenities and facilities by visitors. A dense network of new roads, hotels, lodges, camping sites, caravan parks are all beginning to contribute to changes in the appearance of the landscape – although these are yet to be too intrusive.

Atrophying of interest in traditional beliefs: Concern was expressed to the evaluator by elders that younger people did not show much interest in learning and carrying on the traditions. Judging from books such as the one by Terrence Ranger, Voices from the Rocks, there has been a gradual attrition since the late nineteenth century.

Authenticity and integrity

The authenticity and integrity of the Matobo Hills site needs to extend through all its elements: rock paintings, natural heritage; archaeological sites; intangible heritage.

The authenticity of the hunter-gatherer and a few agriculturist rock paintings in the Matobo Hills area has been widely confirmed. The rock paintings survive in situ and are still linked to a landscape that reflects elements of the pastoral and agricultural traditions reflected in painted images. They thus have a high level of authenticity.

Overall the rock paintings are in a fairly good state of preservation. Natural weathering is the main agent of change and although this has made some of the paintings difficult to decipher, the process is part of the relationship between the images and their setting. Further slight damage is being wrought by visitors.

In only one cave are the paintings badly compromised: at Pomongwe Cave, experiments were carried out in the 1920s with linseed oil as a preservative and this has darkened the images.

The archaeological evidence appears to be well protected – both within those caves where large-scale excavations have taken place and elsewhere in caves that could produce further evidence.

During her visit, the evaluator was able to verify the authenticity of the living traditions and intangible heritage associated with the site and which bind the cultural and natural values together.

The custodians and elders at both the shrines visited (Njelele and Dula) estimated that collectively more than a thousand people visit them annually. The casual visitor to Njelele would hardly know its significance without verbal or written explanation because the significance of the place is in the natural features of the rocks and the adjacent

terraces where participants dance, perform rituals, eat and sleep during the 3-week long annual pilgrimage in August. There are no artificial buildings, structures, walls or other traces of human presence, apart from a wooden palisade that demarcates the area beyond which people may not proceed without permission from the ancestral spirits who are consulted by the custodian and the elders.

Comparative evaluation

Similar intangible values to those put forward for Matobo may be argued for the Inyanga region in the east of the Zimbabwe (not yet proposed for world heritage listing, but on the tentative list) where shrines are also still operating. Comparatively speaking, however, Matobo Hills has greater physical integrity and there is evidence that people with a wider range of cultural activities and beliefs have interacted with the landscape over a longer period of time than at Inyanga.

Beyond the borders of Zimbabwe, the closest comparable world heritage site is to the west at Tsodilo where the geological features are similar, but on a much smaller scale. The rock art at Tsodilo is of a different tradition from that at Matobo Hills, and it is much more recent (within the last 2000 years). The intangible heritage of Tsodilo is still part of the living culture, with a shrine visited by local people, but it is again a different tradition from the beliefs practiced at Matobo Hills.

In Namibia, the rock art in the Brandberg (on the tentative list) is comparable in size density, age, quality and tradition to that of Matobo Hills, but the Brandberg lacks the continuity of living traditions.

To the east, the rock art of the Chongoni area in Malawi (currently being prepared for nomination) is closely connected to rituals still being practiced today, but it is an agriculturist tradition, not a hunter-gatherer one.

To the south, the mixed world heritage cultural and natural site at uKhahlamba Drakensberg Park in South Africa shares some similarities with Matobo Hills hunter-gatherer rock paintings, but the geological and environmental setting of the two sites is quite different and uKhahlamba has no comparable living heritage values. The recently nominated Mapungubwe cultural landscape has a much lower density of rock art, only partly resembling the hunter-gatherer paintings in Matobo Hills, and the time period for which it is nominated as a cultural landscape is not well represented at Matobo Hills.

The above reflects a thematic study of the rock art sites in Southern Africa, which was undertaken by ICOMOS in collaboration with members of the South African Rock Art Project (SARAP).

To the north, the rock art of Kasama in Zambia is being prepared for nomination but the paintings and the beliefs surrounding them are much more recent than in the Matobo Hills and as a result the subjects depicted and the styles and techniques used are quite different.

Beyond the African continent, a broad generic similarity can be recognised with places like Uluru-Kata Tjuta National Park and Kakadu National Park in Australia.

The Matobo Hills cultural landscape nomination does not therefore overlap with, or duplicate, any comparable properties in southern Africa or further afield that are on the world heritage or tentative lists. However, it does shares a high-level similarity with several sites that demonstrate strong and sustained intangible spiritual connections between people and the landscape in which they lived, and where there is no tangible evidence to demonstrate these links.

Outstanding universal value

General statement:

The universal value of the Matobo Hills stems from the way people have interacted with, and been inspired by, the dramatic natural rock formations over many millennia. This interaction has produced one of the most outstanding rock art collections in southern Africa; it has also fostered strong religious beliefs, which still play a major role in contemporary local society; and it demonstrates an almost uninterrupted association between man and his environment over the past 100,000 years. The natural qualities of Matobo thus have strong cultural associations.

Evaluation of criteria:

The ***criteria*** selected by Zimbabwe for nomination of the Matobo Hills as a cultural landscape are ***iii*** and ***vi***:

Criterion iii*:* The rich evidence form archaeology and from the rock paintings at Matobo provides evidence to shows that the Matobo Hill have been occupied over a period of at least 500,000 years. Furthermore this evidence provides a very full picture of the lives of foraging societies in the Stone Age and the way agricultural societies eventually came to displace them in the Iron Age.

The Matobo Hills has one of the highest concentrations of rock art in Southern Africa dating back at least 13,000 years. The paintings illustrate evolving artistic styles and also socio-religious beliefs. The whole bears testimony to a rich cultural tradition that has now disappeared.

Criterion vi*:* The Mwari religion which is still practiced in the area, and which may date back to the Iron Age, is the most powerful oracular traditions in southern Africa. The Matobo rocks are seen as the seat of god and of ancestral spirits. Sacred shrines within the hills are places where contact can be made with the spiritual world. The living traditions associated with the shrines represent one of the most powerful intangible traditions in southern Africa and one that could be said to be of universal significance.

Criterion v could also have been selected. What is significant at Matobo is the way communities living in harmony with the surrounding landscape have interacted with the rocky hills of Matobo. This interaction is manifest in the millennia of rock art as well as in the current religious traditions associated with the rocks: these are community responses to a landscape rather than individual ones. Thus the landscape – both its tangible and its intangible heritage – is a reflection of a distinctive culture which stressed the power of the rocks and of the produce from the surrounding natural environment.

4. ICOMOS RECOMMENDATIONS

Recommendation for the future

This is the second nomination for the site. The first nomination in 1983-84 was for a natural site. The value of the rock paintings was acknowledged at the time of the original nomination and also its setting: '…the region, with forests and granite hills, provides an inspiring landscape setting for its outstanding rock art sites.' The nomination was deferred by the Bureau, which noted that it 'lacked justifications for inscription' and 'requested the Zimbabwean authorities to re-submit this nomination defining the cultural and natural criteria justifying this nomination' (SC-84/CONF. 001/9, p. 15).

The current nomination addresses these points and is being submitted under the criteria for cultural landscapes that did not exist at the time of the earlier nomination.

There is no doubt that the Matobo Hills have exerted an influence on the beliefs, rituals, culture, economy and lifestyle of people who have lived in the vicinity for well over 100,000 years. These people have left both tangible and intangible evidence of their attachment to the landscape and many of the natural heritage values that sparked their beliefs are still intact.The nomination puts forward the Matobo Hills as a living cultural landscape where peoples' interaction with the environment has a long time depth, is still thriving and exemplifies a strong local culture.

One has to dig quite deep into the text to justify these points, which does not make the case very plainly. Extra information provided by the evaluator and others has helped to clarify the situation to the extent that ICOMOS should in principle support inscription as a cultural landscape.

However, there are issues connected with the management of that cultural landscape. These stem mostly from the lack of clarity in the text of the cultural and natural qualities of the landscape, and how these are integrated to reflect the dynamic evolution of the whole landscape. Thus the management plan will need to be modified to reflect more integrated thinking and to specify ways in which this thinking can play a proactive role in management. It will also be necessary to find ways to document the significant belief systems in order to try and quantify whether they are declining and, if so, how far and how fast.

A conservation management plan that has more specific detail than the current generic management plan may also be required. This could identify key research and recording issues, to integrate significant information from the natural, cultural and intangible heritage spheres, and to offer strategies for retaining the significance of both the intangible and tangible heritage.

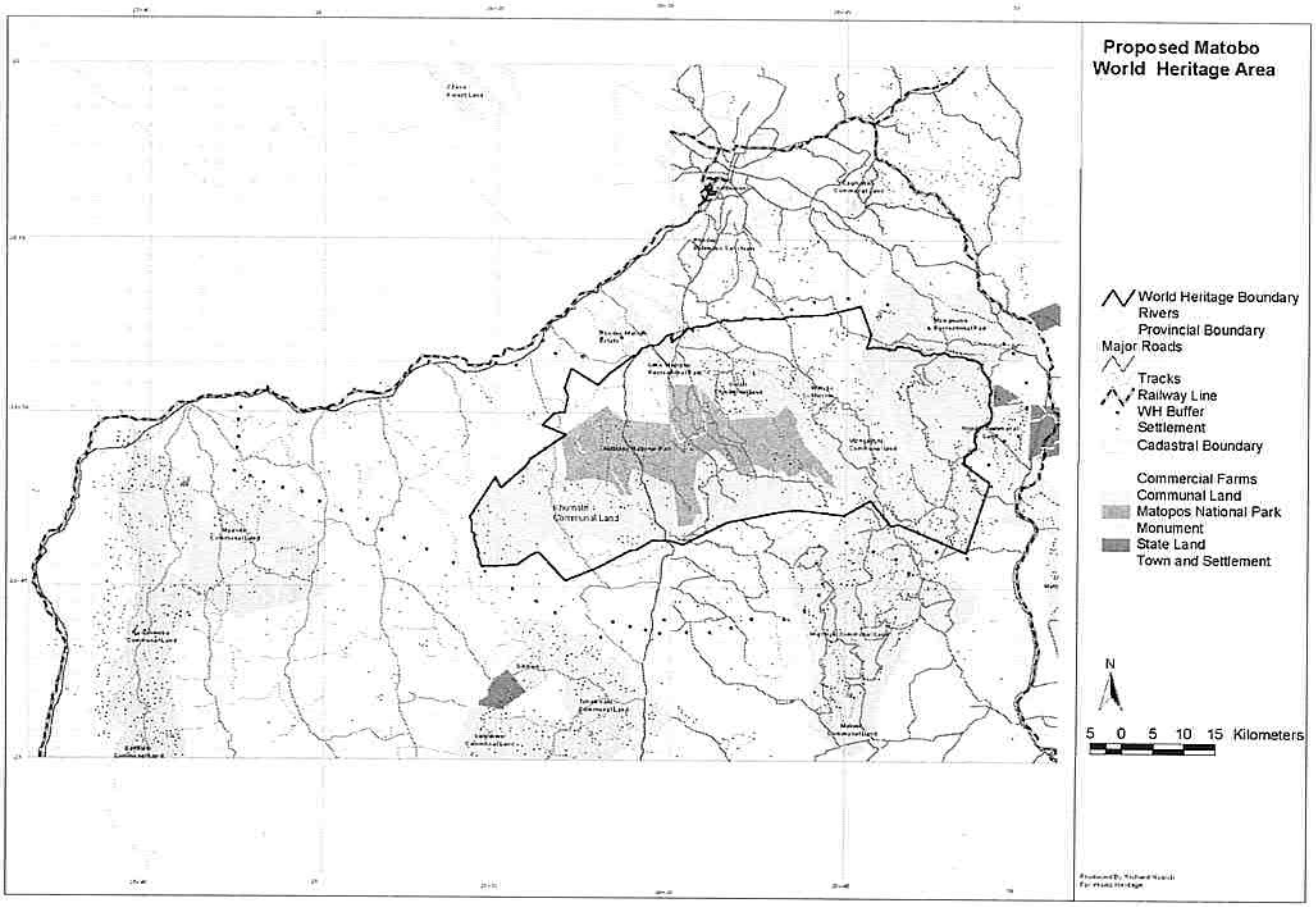
The proposed establishment of the high-level decision-making management authority, with the addition of tourism representatives and oral history specialists, will begin to achieve this integrated thinking.

Recommendation with respect to inscription

That this nomination be ***deferred*** to allow the State Party to provide a revised management plan that addresses:

- The integrated management of the site to achieve sustainable development which respects both cultural and natural parameters of a cultural landscape;
- The integration of intangible heritage issues into management and interpretation;
- Acknowledges the need for conservation plans for key aspects of the site.

ICOMOS, March 2003



Map showing the boundaries of the site
Plan de délimitation du site

Les monts Matobo (Zimbabwe)

No 306 rev

1. IDENTIFICATION

État Partie : République du Zimbabwe

Bien proposé : Monts Matobo

Lieu : Matebeleland, Province du Sud

Date de réception : 19 février 2002

Catégorie de bien :

En termes de catégories de biens culturels telles qu'elles sont définies à l'article premier de la Convention du patrimoine mondial de 1972, il s'agit d'un *site.* Aux termes des *Orientations devant guider la mise en œuvre de la Convention du patrimoine mondial*, paragraphe 39, il s'agit d'un *paysage culturel.*

Brève description :

Le bien proposé pour inscription montre une profusion de formes rocheuses remarquables s'élevant au-dessus du bouclier de granite qui couvre la plus grande partie du Zimbabwe. Les grands blocs de roche offrent des abris naturels en abondance et sont collectivement associés à l'occupation humaine depuis le début de l'âge de la pierre jusqu'au début des temps historiques puis de façon intermittente ensuite. Ils sont également un lieu spectaculaire abritant une collection de peintures rupestres exceptionnelles.

Les formations granitiques étroitement groupées ont permis le développement d'un système écologique complexe et très spécifique à Matobo, qui apparaît comme une île rocheuse humide entourée des savanes semi-arides du sud-ouest du Zimbabwe.

Les monts Matobo constituent une forte attraction pour la communauté locale qui utilise toujours les lieux sacrés et les sanctuaires en étroite liaison avec les activités traditionnelles, sociales et économiques.

2. LE BIEN

Description

À 35 km au sud de Bulawayo dans le sud-ouest du Zimbabwe, le site proposé de Matobo couvre une superficie de 2050 km^2. Il est entouré d'une zone tampon de 1050 km^2.

Le paysage se distingue de la savane aride environnante d'un point de vue visuel et d'un point de vue écologique. Des formations rocheuses à profusion, disposées sur une zone relativement restreinte, s'élèvent pour former une multitude de collines. Leurs formes résultent de la variation des alignements et des compositions des couches granitiques qui ont réagi différemment sous l'action de millions d'années d'érosion naturelle. Le paysage est composé d'inselbergs (grands blocs de roches dressées), de « kopjes » (crêtes crénelées), de « dwalas » (dômes bosselés) et de chaos de blocs rocheux.

Ces formations extraordinaires de roches granitiques ont exercé une forte influence sur la totalité de la zone, tant sur le plan naturel que sur le plan culturel.

L'existence d'espaces discrets, abrités et souvent réduits, au milieu de cette riche profusion de roches, a favorisé une grande variété de microclimats, permettant le développement d'habitats extrêmement divers. La végétation, composée d'espèces très variées, a elle-même suscité le développement d'une faune très variée.

Ces qualités naturelles ont constitué un attrait dynamique pour les hommes vivant dans la région depuis le début de l'âge de la pierre. Dans les cavernes naturelles et sur les blocs et les aplombs rocheux, un corpus impressionnant d'art rupestre se déploie, dont une grande partie date de l'âge de la pierre.

Les communautés locales continuent d'entretenir des liens étroits avec les monts Matobo. Cela se matérialise par la persistance des croyances indigènes et des pratiques associées à Matobo, lieu sacré, siège de Dieu, (Mwari/Mwali), maison des esprits ancestraux, lieu de rituels et de cérémonies consacrés à la pluie, aux récoltes, à la maladie et à l'apaisement des esprits.

Globalement, le paysage possède de solides qualités esthétiques. Le phénomène naturel confère au lieu une 'beauté naturelle' impressionnante. À partir de points stratégiques perchés sur les collines s'offrent des vues spectaculaires sur les paysages environnants. On comprend pourquoi tant d'hommes ont attribué à ce paysage des vertus particulières.

Le paysage culturel des monts Matobo proposé pour inscription possède les éléments suivants :

- Peintures rupestres – un important corpus de peintures ;
- Sites archéologiques des âges de la pierre et du fer ;
- Sites historiques des périodes pré-coloniales, coloniales et post-coloniales ;
- Patrimoine naturel – formations rocheuses ; grande biodiversité ; espèces rares ;
- Culture immatérielle vivante associée aux formes rocheuses.

- Peintures rupestres – un important corpus de peintures :

Matobo possède peut-être la plus grande concentration de sites d'art rupestres dans le sud de l'Afrique. Le dossier de proposition d'inscription affirme que les monts Matobo renferment « pas moins de 3 500 sites d'art rupestre », sans malheureusement illustrer cette déclaration. Quoi qu'il en soit, même une estimation plus réservée, qui évalue le nombre de sites connus à environ 700 - chacun contenant un grand nombre de peintures, peut-être 20 000 en tout -

donne au corpus de peintures une importance considérable en taille et en densité.

On trouve des peintures dans les grottes, sur la face arrondie de blocs de roche et sur les aplombs rocheux. D'un point de vue stylistique, Matobo fait partie d'une « région » d'art rupestre qui s'étend de l'Afrique du Sud à la Tanzanie. La majorité des peintures datent de la fin de la période de l'âge de la pierre, certaines ont été réalisées par les communautés agricoles de l'âge du fer.

Parmi les grottes de plus grandes dimensions, certaines comportent plusieurs centaines de peintures d'une extrême beauté visuelle – comme l'image de la girafe au galop dans la grotte Inanke.

Les peintures les plus anciennes, associées à la chasse et à la cueillette, utilisent essentiellement des pigments rouges – ocre rouge – mélangés avec un liant non encore identifié. Les peintures les plus récentes associées aux communautés agricoles utilisent des pigments blancs - kaolin ou quartz. Cette distinction stylistique est valable pour toute la région.

Les quantités insuffisantes de matériaux organiques dans les pigments ne permettent pas la datation directe des peintures. Des méthodes indirectes – utilisant les sujets peints et la présence de pigments dans les gisements archéologiques – suggèrent que les peintures les plus anciennes datent d'au moins 13 000 ans.

Les sujets des peintures sont essentiellement des interprétations naturalistes des hommes, des animaux et des arbres. Il y a également des représentations impressionnistes, de nombreuses peintures déformant les proportions du corps ou faisant varier les proportions et les dimensions des sujets pour donner un sens de mouvement ou d'importance. Dans de nombreux sites des peintures se superposent. Les peintures les plus récentes paraissent aussi montrer une cosmologie complexe liée aux croyances religieuses.

L'analyse des styles suggère que les images peintes par les chasseurs-cueilleurs ont progressivement évolué du simple contour à la polychromie. Les peintures les plus récentes des premières communautés agricoles montrent des talents bien inférieurs et une précision dans le dessin beaucoup moins bonne par comparaison aux images plus anciennes.

Plusieurs de ces grottes sont ouvertes au public.

- Sites archéologiques des âges de la pierre et du fer :

D'abondants vestiges archéologiques ont été collectés dans les abris sous-roche pour les périodes de l'âge de la pierre et de l'âge du fer qui ont beaucoup contribué à comprendre l'histoire pré-coloniale de la région. La grotte Bamabati – une de celles qui ont été les plus fouillées et étudiées dans le sud de l'Afrique – a produit la pierre décorée la plus ancienne trouvée au Zimbabwe avec ce qui semble être de la poterie datant de l'âge de la pierre. Ailleurs, des outils, des ustensiles et des restes humains ont été datés du milieu ou de la fin de l'âge de la pierre. Dans de nombreuses grottes, les gisements de l'âge du fer recouvrent ceux de l'âge de la pierre.

Parmi les vestiges importants de l'âge du fer, on trouve des restes de murs d'enclos de pierres sèches et des silos à grains.

- Sites historiques des périodes pré-coloniales, coloniales et post-coloniales :

Les tombes du roi Mzilikazi, qui forma la nation Ndebele, et de Cecil Rhodes, qui conduisit les colons européens dans le pays, se trouvent dans la zone proposée pour inscription.

- Patrimoine naturel – formations rocheuses ; grande biodiversité ; espèces rares :

Les vallées entre les rochers regorgent de cours d'eau et de torrents qui favorisent la présence d'une flore très diversifiée - lichens, figues et aloès, Brachystegis, Mopaani et plus de 100 espèces d'herbes graminiformes. Au moins cinq espèces de plantes sont indigènes de la région de Matobo (*Cyphostemma milleri, Lobelia lobata, Triaspis dumeticola, Maytenus heterophylla puberula et Turrea fischeri eylasii).* La région abrite aussi neuf autres espèces de plantes.

Parmi les 189 espèces de mammifères indigènes du Zimbabwe, 88 sont présentes dans les monts Matobo. La zone possède la plus grande densité de léopards au Zimbabwe. De nombreux autres mammifères ont été réintroduits ces dernières années, par exemple le rhinocéros blanc – un des sujets peints dans les grottes. Près de 330 espèces d'oiseaux ont été répertoriées, dont 40 espèces d'oiseaux de proie et la plus forte densité d'aigles noirs enregistrée en Afrique, dont plus de 70 couples nichent dans les monts Matobo.

- Culture immatérielle vivante associée aux formes rocheuses :

Matobo connaît une grande variété de cultes divinatoires du grand Dieu, Mwali, dont la voix est entendue dans les roches. Ce puissant oracle lie les communautés indigènes aux collines – les esprits ancestraux vivent dans les forêts, les montagnes, les grottes, les arbres creux et les étangs sacrés. Certains affirment que ces croyances remontent aux hommes de l'âge du fer qui habitèrent dans cette région, de sorte qu'il existe peut-être un lien avec l'art rupestre.

Les hommes qui vivent à proximité entretiennent un lien puissant et immatériel avec les formations naturelles des roches granitiques. Ces dernières sont devenues des objets d'importance spirituelle qui donnent aux hommes la l'inspiration, la fertilité, la santé et le contact avec les esprits ancestraux.

Dans les monts Matobo, certains lieux sont connus pour être des sanctuaires. Njelei, précisément associé aux rituels agricoles, est l'un des plus importants ; il attire la ferveur des hommes venant d'aussi loin que l'Afrique du Sud, la Namibie, le Botswana et le Lesotho. Dulu est visité toute l'année par des malades.

Les rituels et les pèlerinages inspirent aux hommes un profond respect pour ces lieux et la forte volonté de les préserver, car si ce lieu venait à être dégradé, les Dieux et les Esprits perdraient leurs demeures. Des tabous agissent aussi pour conserver intactes les ressources naturelles ; il

est ainsi interdit de chasser des animaux et d'abattre des arbres de la forêt sacrée.

Ces liens immatériels sont invisibles et leur pérennité dépend uniquement de la mémoire collective et des pratiques sociales.

Histoire

Les fouilles archéologiques et l'analyse des peintures rupestres fournissent des témoignages sur les débuts de l'histoire de la région. Ceux-ci indiquent un usage long et peut-être ininterrompu des grottes depuis l'âge de la pierre jusqu'au début des temps historiques, d'abord par les sociétés de chasseurs-cueilleurs puis par une nouvelle population de l'âge du fer qui pratique l'agriculture. Dans le contexte du Zimbabwe, la séparation entre les périodes préhistorique et historique est mal définie.

Les sites d'art rupestre sont d'abord signalés dans les carnets des missionnaires, des chercheurs de minerais et des explorateurs qui relatent l'arrivée et l'installation du groupe Ndebele au cours de la première moitié du XIXe siècle sous la conduite du roi Mzilikazi. Mhlahlandlela, dans les limites nord des monts Matobo, fut l'un des premiers villages. La ville de Bulawayo fut fondée peu après. À peu près à la même époque, les Nguni, fuyant le Zululand, arrivèrent dans la région.

La résistance des populations locales aux premiers colons est bien connue. Pendant les confrontations de 1893 et 1896 entre Cecil Rhodes et les Ndebele, les monts Matobo jouèrent un rôle central en offrant un refuge à la population locale qui fut inspirée par les oracles des sanctuaires Mwari.

La plus grande partie de la région, qui forme désormais le parc national Rhodes Matopos, fut déclarée zone de conservation naturelle en 1926.

Politique de gestion

Pour donner une image cohérente du paysage qui intègre non seulement les peintures rupestres et les batholites mais aussi les fortes interactions sociales entre les populations locales et les caractéristiques immatérielles, la proposition suggère d'établir une limite plus vaste que celle du parc national Rhodes Matopo. Les délimitations proposées couvrent deux conseils de district ruraux, ce qui entraîne des implications importantes au niveau de la gestion.

Dans la zone proposée pour inscription, il existe trois types de propriétés :

- le parc national Rhodes Matopo – géré par le service de gestion des Parcs nationaux, de la faune et de la flore (ministère de l'Environnement) (le DNPWLM) ;

- des terres communales gérées par les Conseils des districts ruraux de Matopo et Umzingwane pour le compte du Président et du peuple du Zimbabwe ;

- des terres privées – gérées par des personnes privées.

Le parc national est géré par le DNPWLM qui a pour mission de préserver la valeur de ses ressources naturelles. Ce service doit devenir une administration unique, indépendante et statutaire placée sous l'autorité du ministère. La gestion des biens archéologiques et des autres biens culturels est placée sous la responsabilité des Musées et monuments nationaux (NMMZ) (Affaires intérieures), quel que soit le type de propriété. Toutefois, la propriété et la gestion des sanctuaires et des activités rituelles sont placées sous la responsabilité des membres de la communauté. Les agences suivantes ont aussi des responsabilités de gestion dans la zone proposée pour inscription : le Bureau des ressources naturelles, le Service des forêts et le Comité Rhodes Matopo.

Actuellement, aucun organe ne coordonne les activités à l'intérieur du site proposé pour inscription ; quelques zones grises sont gérées selon la volonté de l'une ou l'autre des parties à endosser la responsabilité de la conservation.

Si l'État partie propose le site pour inscription sur la Liste du patrimoine mondial en tant que paysage culturel, il sera primordial de créer une autorité composée de représentants de toutes les parties prenantes officielles, des fermiers, des habitants des campagnes environnantes et de l'industrie du tourisme.

Il existe un précédent de ce type au Zimbabwe, à savoir la création d'un organe statutaire, avec l'aide de la Suède (SIDA) et du Japon (JICA), qui a endossé le rôle d'entité légale chargée de la gestion du site du patrimoine mondial des chutes Victoria. Malheureusement, cette entité ne fonctionne plus depuis un moment en raison de restrictions financières.

Le plan de gestion propose un comité de gestion pour le site du patrimoine mondial qui consistera en une assemblée composée des représentants des organes statutaires principaux ainsi que des chefs et des gardiens des sanctuaires. Il serait souhaitable d'élargir cette équipe pour inclure les participants et parties prenantes cités plus haut. Il est envisagé que le comité de gestion coordonne des plans de gestion préparés par les parties prenantes et encourage la préparation de plans pour les zones qui n'en ont pas.

Le plan de gestion actuel est essentiellement une description de l'état existant. Il ne traite ni de la nécessité de procéder à des recherches sur la zone, ni de la manière d'adjoindre des pratiques prudentes aux modes de gestion de base actuels. Ainsi n'est-il fait aucune mention de la recherche entreprise par des anthropologues et des historiens spécialistes des traditions orales sur les savoirs indigènes et sur le patrimoine immatériel associé au site. Le plan n'indique pas non plus comment rassembler les qualités culturelles et naturelles – traitées séparément dans le plan – afin que la zone puisse être gérée en tant que paysage culturel.

Actuellement, les études d'impact sur l'environnement ne sont pas obligatoires au Zimbabwe mais l'instrument statutaire constitué pour les chutes Victoria les rendait nécessaires pour tout développement dans ce site du patrimoine mondial. Une nouvelle loi sur l'environnement a été préparée qui les rendra obligatoires dans tout le pays mais elle n'a pas encore été présentée au Parlement.

Lorsqu'un organe de gestion sera créé pour les monts Matobo, il devra traiter cette question en priorité.

Dispositions légales :

Quatre lois, qui gouvernent le patrimoine culturel et naturel et l'administration des conseils des districts ruraux, garantissent la protection juridique des monts Matobo : la loi sur les conseils de districts urbains, la loi sur les parcs naturels, la faune et la flore, la loi sur le Bureau des ressources naturelles et la loi sur les musées et les monuments nationaux.

Ressources :

Actuellement, le financement des travaux dans la zone du bien proposé pour inscription est distribué par les divers organismes qui ont une responsabilité de gestion. Rien n'indique dans le plan de gestion que ces organismes ont une quelconque obligation de fournir des fonds supplémentaires pour permettre l'application du plan.

Justification émanant de l'État partie (résumé)

Les monts Matobo possèdent des qualités à la fois culturelles et naturelles d'une valeur éducative, scientifique et esthétique exceptionnelle.

Le patrimoine culturel concerne une période de plus de 500 000 ans, avec une occupation humaine continue d'au moins 100 000 ans, comme le constate l'étude des nombreux sites d'art rupestre et d'abris recelant des gisements de l'âge de la pierre et de l'âge du fer. Aujourd'hui, les monts Matobo sont consacrés à la religion Mwari ; ils sont le siège de ce Dieu et des esprits ancestraux ; les sanctuaires sont le lieu de contact de la communauté des hommes avec les esprits.

La zone est considérée comme un refuge de la plus haute importance pour les oiseaux de proie – en particulier l'aigle noir ; elle possède une grande densité d'espèces prédatrices et une grande diversité botanique pour trois espèces, les herbes et les petites plantes à fleurs.

3. ÉVALUATION DE L'ICOMOS

Actions de l'ICOMOS

L'ICOMOS et l'UICN ont évalué le bien en 1983-1984. Une mission d'expertise de l'ICOMOS a visité le site en octobre 2002.

Conservation

Historique de la conservation :

Aucun détail n'est donné concernant ce sujet. Toutefois, un corpus important d'ouvrages scientifiques a été produit sur ce site – comme l'indiquent les volumineuses bibliographies du dossier de proposition d'inscription et du plan de gestion. L'intérêt scientifique pour le site ne tarit pas.

État de conservation :

Aucun texte formel n'est fourni dans le dossier de proposition d'inscription ou le plan de gestion. Des programmes de conservation, initiés dans les années 1990 avec l'aide de la Norvège et du Sri Lanka, ont contribué à susciter une prise de conscience et développé des compétences, mais ils ont été suspendus en raison de la situation politique du pays.

Actuellement, la conservation semble plutôt être d'ordre réactif, et orientée vers l'entretien plutôt que la conservation ou les travaux de conservation préventive.

La seule recherche active mentionnée porte sur le programme de surveillance de l'aigle noir, qui est mené par des bénévoles. La localisation et la documentation sur les sites d'art rupestre sont réalisées par un bénévole – mais actuellement l'information n'est pas transmise aux Musées et monuments nationaux (NMMZ).

Analyse des risques :

Le plan de gestion comporte l'analyse des risques suivants :

- Pression de la population
- Catastrophes naturelles
- Pression des visiteurs/ du tourisme
- Pression du développement

Le risque suivant ressort du dossier :

- Désintérêt pour les croyances traditionnelles.

Les thèmes mentionnés sont étudiés individuellement :

- Pression de la population :

Une augmentation importante de la population vivant dans la zone depuis 100 ans a eut un impact négatif sur l'environnement. L'agriculture dans certaines zones est contraire aux efforts de reboisement ; la chasse illégale est pratiquée ; les brûlis incontrôlés portent tort à la faune et à la flore. Il ressort aussi du plan de gestion que, malgré ces empiètements, l'agriculture locale ne suffit à nourrir les habitants du parc.

Le besoin croissant de matériaux de construction pour les maisons pole et dagga traditionnelles ajoute au problème de déforestation.

Le programme gouvernemental d'implantation de la population permet de réinstaller quelques fermiers hors de la zone communale ; d'autres actions de ce type sont attendues. On encourage l'utilisation d'autres matériaux pour la construction des maisons – bien que cela ait un impact négatif sur les traditions architecturales vernaculaires.

Certains programmes encouragent la connaissance et la compréhension de l'importance culturelle de la région.

- Catastrophes naturelles :

La région est sujette à la sécheresse et aux inondations. Environ tous les dix ans, des cyclones traversent les terres

et apportent des pluies diluviennes. La végétation naturelle semble à peine assez robuste pour résister à l'impact de ces extrêmes et l'érosion du sol pose un problème grave.

Pour fournir de l'eau en temps de sécheresse, des projets de construction de barrage ont été recommandés.

La plus grande menace qui pèse sur l'environnement après la pression de la population est l'introduction de plantes exotiques. Le risque actuel provient du lantanier (*Lantan camara)* qui s'est acclimaté dans les collines orientales et certaines parties du parc national. L'introduction récente de l'eucalyptus et de l'hystrix étalé constitue également une menace potentielle, de même que la fougère *Azolla* dans le barrage Maleme. Le DNPWLM décrit des stratégies pour lutter contre ces espèces envahissantes dans son plan de gestion.

- Pression des visiteurs et du tourisme :

Depuis les années 1980, le tourisme s'est développé rapidement dans le parc national Matopo, enregistrant le deuxième chiffre de visiteurs après les chutes Victoria, avec 100 000 visites annuelles. À défaut d'une direction centrale du site, la satisfaction des besoins des visiteurs est pourvue par des initiatives commerciales et communales. L'augmentation du nombre des visiteurs commence à produire de légers effets néfastes, en particulier sur les peintures rupestres - poussière, graffitis et aspersion d'eau pour améliorer l'aspect des peintures sur les photographies. On remarque aussi la coupe illégale de certaines espèces d'arbres pour produire des objets sculptés pour les touristes.

Le plan de gestion reconnaît ces problèmes et la nécessité de concevoir des stratégies pour mieux gérer les visiteurs et de placer un personnel suffisant sur les sites ouverts au public.

- Pression du développement :

La pression du développement provient essentiellement de la demande des visiteurs pour plus de confort et d'équipements. La densification des infrastructures routières et hôtelières et des capacités d'hébergement (auberges, camping, caravaning), quoi qu'elle ne soit pas encore gênante, commence à modifier le paysage.

- Désintérêt pour les croyances traditionnelles :

L'expert parti en mission rapporte une inquiétude exprimée par les anciens qui constatent que les plus jeunes se détournent des traditions. À en juger par des livres comme celui de Terrence Ranger, *Voices from the Rocks (les voix des rochers)*, ce phénomène est apparu progressivement dès la fin du XIXe siècle.

Authenticité et intégrité

L'authenticité et l'intégrité du site des monts Matobo doit concerner tous les éléments : peintures rupestres, patrimoine naturel, sites archéologiques, patrimoine immatériel.

L'authenticité des peintures rupestres des chasseurs-cueilleurs et des populations d'agriculteurs dans les monts Matobo est amplement confirmée. Les peintures rupestres persistent *in situ* et sont toujours liées à un paysage qui renvoie à des éléments de traditions pastorales et agricoles. Elles ont donc un haut degré d'authenticité.

Globalement, les peintures rupestres sont en assez bon état de conservation. La dégradation naturelle est la principale cause de modification ; bien qu'elle entraîne une difficulté d'interprétation de certaines peintures, elle fait partie de la relation entre les images et leur environnement. Les visiteurs contribuent aussi à certains légers dommages.

Les peintures sont fortement compromises dans une seule grotte. En effet, dans la grotte Pomongwe, des expériences ont été menées dans les années 1920 avec de l'huile de lin comme agent de conservation et cela a eu pour effet d'assombrir les images.

Les vestiges archéologiques semblent bien préservés dans les grottes, autant dans celles où des fouilles à grande échelle ont été réalisées que dans celles qui sont susceptibles de produire de futures découvertes.

Pendant sa visite, l'expert a vérifié l'authenticité des traditions vivantes et du patrimoine immatériel associés au site, qui établit le lien entre les valeurs culturelles et les valeurs naturelles.

Les gardiens et les anciens des deux sanctuaires visités (Njelele et Dula) estiment que plus de mille personnes visitent ces lieux chaque année. Le visiteur égaré à Njelele ne saurait en comprendre l'importance sans explications verbales et écrites parce que la valeur de ce lieu se trouve dans les caractéristiques naturelles des rochers et des terrasses adjacentes où les pèlerins participent aux cérémonies annuelles qui se déroulent pendant trois semaines au mois d'août, accompagnées de danses, de rituels et de repas. Dans ce lieu, il n'y a aucune construction, aucune structure bâtie, aucun mur ou autres traces de présence humaine, hormis une palissade en bois pour démarquer la ligne que l'on ne peut franchir sans l'autorisation des esprits ancestraux qui sont consultés par le gardien et les anciens.

Évaluation comparative

Des valeurs immatérielles similaires à celles de Matobo existent dans la région d'Inyanga à l'est du Zimbabwe (ce site n'est pas encore proposé pour inscription sur la Liste du patrimoine mondial, mais il est inscrit sur la liste indicative) où des sanctuaires sont encore utilisés. Comparativement, les monts Matobo possèdent toutefois une intégrité physique bien plus grande et il est prouvé que les populations entretiennent, en interaction avec le paysage, des activités culturelles et des croyances bien plus riches et depuis bien plus longtemps qu'à Inyanga.

Hors des frontières du Zimbabwe, le site du patrimoine mondial comparable le plus proche se trouve à l'ouest, à Tsodilo, où les caractéristiques géologiques sont similaires, mais à une échelle beaucoup moins importante. L'art rupestre à Tsodilo appartient à une tradition différente de celle des monts Matobo, et date d'une époque bien plus récente (2000 ans). Le patrimoine immatériel de Tsodilo fait aussi partie d'une culture vivante, avec un sanctuaire visité par les populations locales, mais il s'agit d'une

tradition et de croyances différentes de celles qui se pratiquent dans les monts Matobo.

En Namibie, l'art rupestre de Brandberg (inscrit sur la liste indicative) est comparable à celui des monts Matobo en densité, en ancienneté, en qualité et en traditions, mais le site de Brandberg ne possède pas la continuité des traditions vivantes.

À l'est, l'art rupestre de la région de Chongoni au Malawi (proposition d'inscription actuellement en préparation) est étroitement lié aux rituels encore pratiqués aujourd'hui, mais la tradition est celle d'un peuple d'agriculteurs et non pas de chasseurs-cueilleurs.

Au sud, le site mixte culturel et naturel d'uKhahlamba / parc du Drakensberg en Afrique du Sud partage quelques caractéristiques avec les peintures rupestres des chasseurs-cueilleurs des monts Matobo, mais l'environnement et les caractéristiques géologiques des deux sites sont très différents et uKhahlamba n'a pas de valeur comparable de patrimoine vivant. Le paysage culturel du Mapungubwe, récemment proposé pour inscription, possède une densité beaucoup plus faible d'art rupestre, qui ne ressemble que partiellement aux peintures des chasseurs-cueilleurs des monts Matobo ; de plus, la période pour laquelle ce site est proposé en tant que paysage culturel n'est pas bien représentée dans les monts Matobo.

Ce qui précède correspond à une étude thématique des sites d'art rupestre dans le sud de l'Afrique, qui a été entreprise par l'ICOMOS en collaboration avec les membres du SARAP, le Projet d'art rupestre du sud de l'Afrique.

Au nord, la proposition d'inscription de l'art rupestre de Kasama en Zambie est en préparation, mais les peintures et les croyances qui les entourent sont beaucoup plus récentes que celles des monts Matobo ; il en résulte que les sujets représentés et les styles et techniques utilisés sont très différents.

Hors du continent africain, on peut noter des ressemblances avec des sites comme les parcs nationaux d'Uluru-Kata Tjuta et de Kakadu en Australie.

La proposition d'inscription du paysage culturel des monts Matobo ne fait donc pas double emploi avec des biens comparables dans le sud de l'Afrique ou des régions plus lointaines déjà inscrits sur la Liste du patrimoine mondial ou sur des listes indicatives. En revanche, elle présente un haut degré de ressemblance avec plusieurs sites qui ont des liens spirituels immatériels forts et durables avec les populations locales, sans toutefois posséder de preuves matérielles qui démontrent ces liens.

Valeur universelle exceptionnelle

Déclaration générale :

La valeur universelle des monts Matobo provient de ce que les hommes ont eu une interaction et ont été inspirés par les formations rocheuses naturelles spectaculaires sur de nombreux millénaires. Cette interaction a produit l'une des collections d'art rupestre les plus remarquables du sud de l'Afrique ; elle a aussi suscité de fortes croyances religieuses qui jouent encore un rôle majeur dans la société locale contemporaine ; elle prouve une association quasi ininterrompue entre l'homme et son environnement au cours des derniers 100 000 ans. Les qualités naturelles de Matobo possèdent donc de fortes associations culturelles.

Évaluation des critères :

Les critères retenus par le Zimbabwe pour proposer les monts Matobo en tant que paysage culturel sont les critères iii et vi :

Critère iii : Les riches témoignages apportés par l'art rupestre et les fouilles archéologiques de Matobo montrent que le site a été occupé pendant au moins 500 000 ans. Ces témoignages révèlent aussi la vie des hommes des sociétés de cueilleurs chasseurs de l'âge de la pierre et la manière dont les hommes de l'âge du fer leur ont succédé.

Les monts Matobo possèdent une des plus fortes densités d'art rupestre dans le sud de l'Afrique remontant à au moins 13 000 ans. Les peintures illustrent l'évolution des styles artistiques et des croyances socio-religieuses. L'ensemble apporte le témoignage d'une riche tradition culturelle qui a maintenant disparu.

Critère vi : La religion Mwari, qui est encore pratiquée dans la région et qui date probablement de l'âge du fer, compte parmi les traditions divinatoires les plus puissantes du sud de l'Afrique. Les rochers de Matobo étant considérés comme le siège de Dieu et des esprits ancestraux. Les sanctuaires sacrés dans les monts sont des lieux où les hommes entrent en contact avec le monde des esprits. Les traditions de divination encore vivantes et associées aux sanctuaires comptent parmi les traditions immatérielles les plus puissantes du sud de l'Afrique.

Critère v : Le critère v aurait aussi pu être retenu. L'important à Matobo est la manière dont les communautés vivant en harmonie avec le paysage environnant ont interagi avec les collines rocheuses Matobo. Cette interaction se manifeste par les milliers de peintures rupestres ainsi que par les traditions religieuses actuelles qui sont associées aux roches : ce sont des réponses communautaires, et non pas individuelles, à un paysage. Ce dernier est donc à la fois matériel et immatériel, car il est le reflet d'une culture originale qui fait ressortir le pouvoir des roches et des éléments de l'environnement naturel.

4. RECOMMANDATIONS DE L'ICOMOS

Recommandations pour le futur

Il s'agit de la deuxième proposition d'inscription pour le site. La première (1983-1984) portait sur un site naturel. La valeur des peintures rupestres fut reconnue à l'époque de la première proposition d'inscription, de même que leur environnement : « …la région, avec ses collines granitiques couvertes de forêts, offre un paysage plein d'inspiration pour les sites d'art rupestre exceptionnels ». L'examen de la proposition fut différé par le Bureau, qui nota qu'il « manquait des justifications pour l'inscription » et « demanda à l'État partie de soumettre de nouveau cette proposition d'inscription en définissant les critères naturels et culturels justifiantcelle-ci » (SC-84/CONF. 001/9, p. 15).

Aujourd'hui, la proposition d'inscription traite ces points et elle est soumise sur la base des critères de paysage culturel qui n'existait pas au moment de la première proposition.

Il ne fait aucun doute que les monts Matobo ont influencé les croyances, les rituels, la culture, l'économie et le style de vie des peuples qui, pendant plus de 100 000 ans, vécurent dans leur voisinage. Ces peuples ont laissé des preuves matérielles et immatérielles de leur attachement au paysage, et un grand nombre des valeurs du patrimoine naturel qui donnèrent naissance à leur croyance sont encore intactes.

La proposition d'inscription met en exergue l'aspect « paysage culturel vivant » des monts Matobo, où l'interaction des hommes avec leur environnement est ancrée dans le passé, toujours florissante et la preuve vivante d'une culture locale forte.

Le texte de la proposition d'inscription manque néanmoins d'arguments convaincants. Des informations complémentaires fournies par l'expert et d'autres personnes ont aidé à clarifier la situation de manière que l'ICOMOS puisse soutenir l'inscription du site en tant que paysage culturel.

Restent les problèmes soulevés par la gestion du paysage culturel, qui proviennent principalement du manque de clarté du texte concernant les qualités naturelles et culturelles du paysage et la manière dont ces dernières sont intégrées pour refléter l'évolution dynamique du paysage dans sa totalité. Le plan de gestion aura donc besoin d'être modifié pour prendre en compte une pensée plus globale et pour définir des moyens par lesquels cette pensée peut jouer un rôle proactif dans la gestion. Il faudra aussi trouver des moyens de faire des recherches sur les systèmes de croyance importants afin d'évaluer dans quelle mesure ces croyances sont sur le déclin, et si elles le sont, à quelle vitesse.

Il conviendrait peut-être aussi de fournir un plan de gestion qui soit plus spécifiquement détaillé que le plan de gestion actuel. Le nouveau plan pourrait identifier les domaines d'investigation et de recherche clés, recueillir des informations importantes sur les patrimoines culturels, naturels et immatériels, et proposer des stratégies capables de conserver la valeur des patrimoines matériels et immatériels.

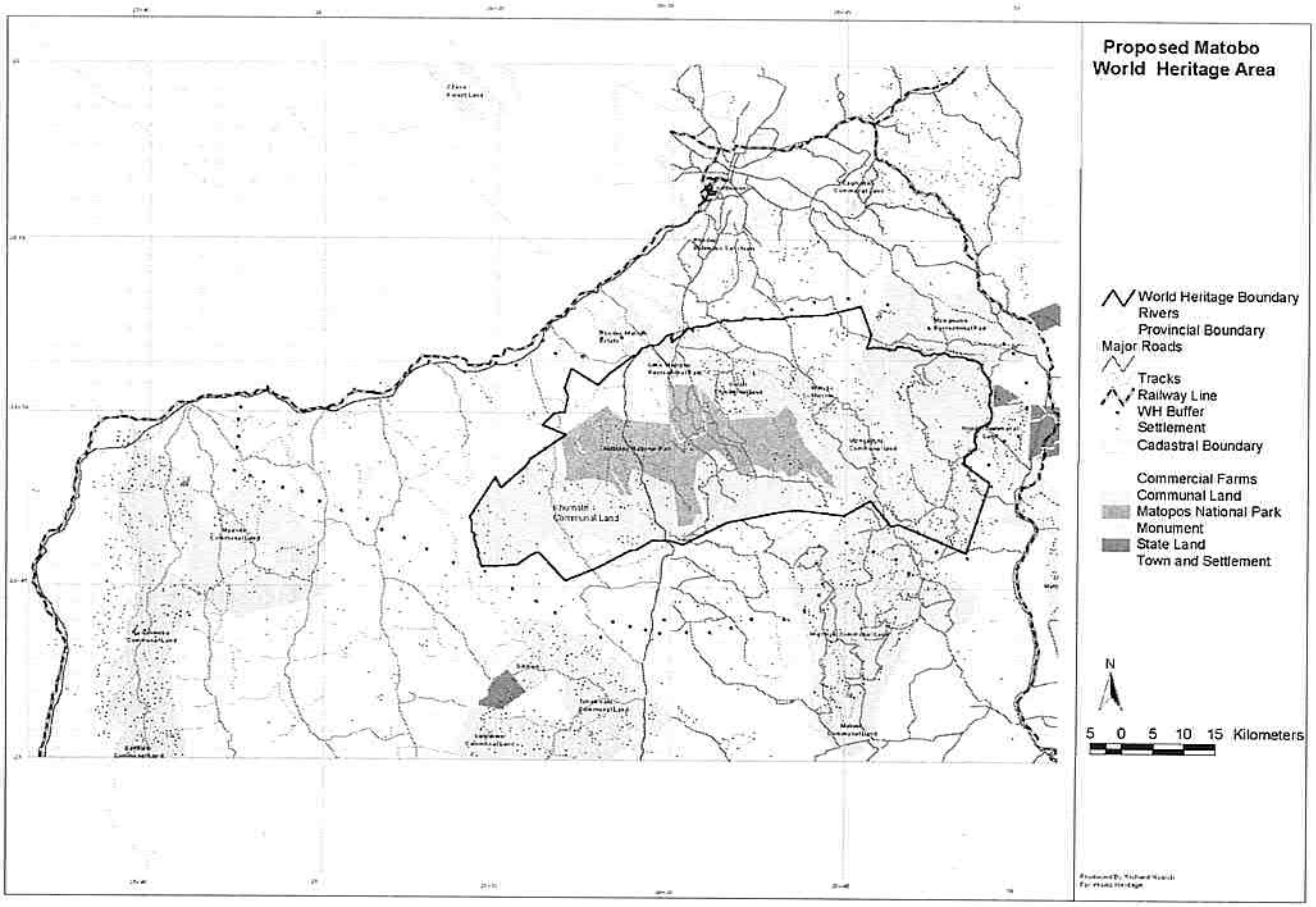
L'établissement d'une autorité de gestion de haut niveau, et la collaboration de représentants du tourisme et de spécialistes de l'histoire orale permettront de réaliser cette pensée intégrée.

Recommandation concernant l'inscription

Que l'examen de ce bien soit ***différé*** pour permettre à l'État partie de fournir un plan de gestion révisé qui traite :

- la question de la gestion intégrée du site afin d'assurer un développement durable qui respecte les paramètres culturels et naturels d'un paysage culturel ;
- l'intégration des questions de patrimoine immatériel dans la gestion et l'interprétation ;
- la nécessité de concevoir un plan de conservation pour les principales caractéristiques du site.

ICOMOS, mars 2003



Map showing the boundaries of the site
Plan de délimitation du site