National Committee

MONUMENTS AND SITES
ZIMBABWE

ICOMOS

CONSEJO INTERNACIONAL DE LOS MONUMENTOS Y SITIOS
CONSEIL INTERNATIONAL DES MONUMENTS ET DES SITES
INTERNATIONAL COUNCIL ON MONUMENTS AND SITES

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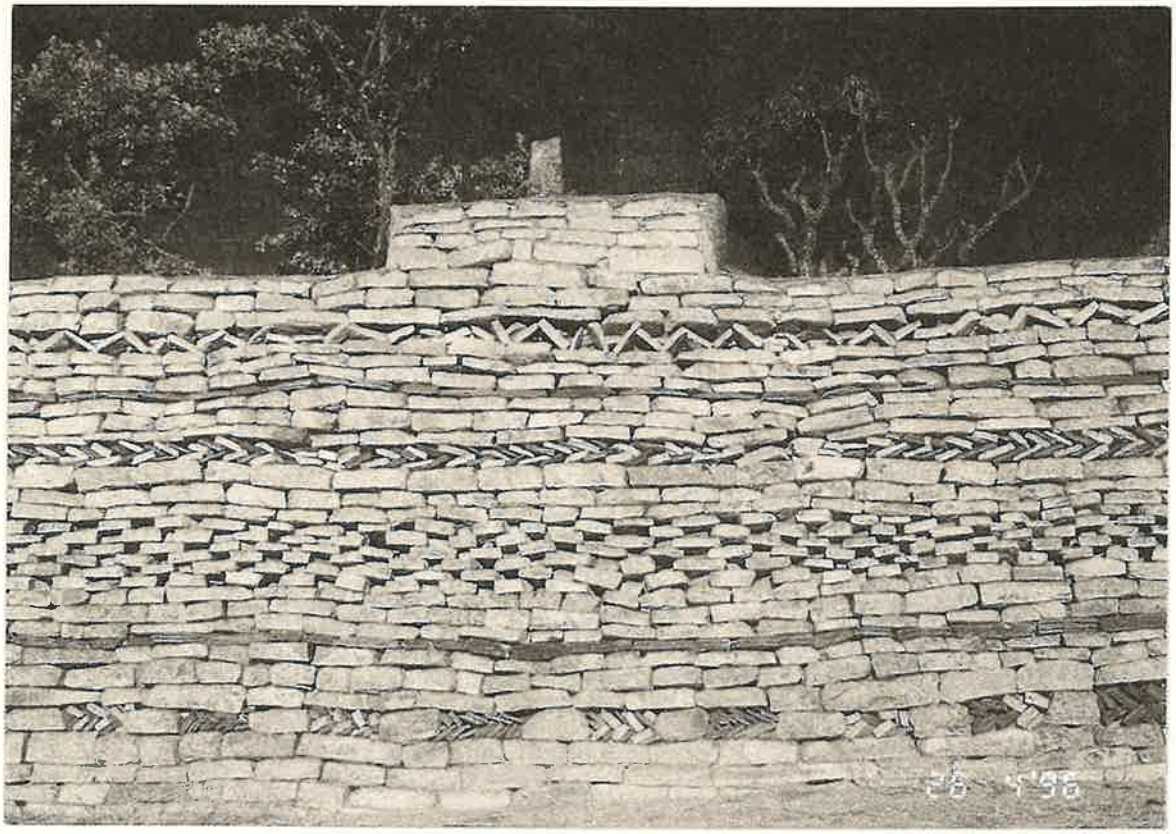

National Committee
11th General Assembly

MONUMENTS AND SITES ZIMBABWE

Consejo Internacional de los Monumentos y Sitios
Conseil International des Monuments et des Sites
International Council on Monuments and Sites

This is one of a new series of ICOMOS
Scientific Publications released on the occasion
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Cover and Frontispiece: Decorated walling at Naletale, restored in the early 1960's by Robinson.

Foreword

Monuments and Sites of Mankind are but the memory of Man. These stand testimony to the life and style of the people through many generations. Sri Lanka is no exception to this characteristic of human nature, as our Monuments and Sites record a continuous history of a people from the 5th Century B.C. to the present day. We are proud that six of our sites have qualified to be among the three hundred and thirty cultural items listed by UNESCO to be World Heritage Monuments.

As chairperson of the Central Cultural Fund which is looking after such a rich heritage of world stature, we are proud to note that the Central Cultural Fund has been able to sponsor the publication of 20 volumes covering the Monuments and Sites of 20 different countries in the five continents of the globe. We believe that by the dissemination of the knowledge concerning the heritage of different peoples, the world will be richer in sharing such experiences that have so far been confined to each nation.

We take this opportunity to congratulate the 6,000 or more members of the International Council of Monuments and Sites (ICOMOS) for their dedicated service to the world and for providing professional guidance to each nation to safeguard their monumental heritage for the sake of generations to come. We also wish the 84 Member States of ICOMOS, every success in their deliberations at the 11th General Assembly of ICOMOS in Sofia, Bulgaria to be held later this year, for which occasion these volumes are being published.

Sirimavo Dias Bandaranaike
Prime Minister
Sri Lanka

Prime Minister's Office,
Sir Ernest de Silva Mawatha,
Colombo 3, Sri Lanka.

17th April, 1996

Avant-propos

Les Monuments et les Sites historiques ont représenté, au cours de l'histoire de l'humanité, la mémoire de l'homme. Ils témoignent de l'existence et du style de vie des peuples à travers les générations. Le Sri Lanka ne fait pas exception à cette caractéristique du genre humain puisque nos monuments et nos sites racontent l'histoire de notre peuple depuis le 5ème siècle av J.-C. jusqu'à nos jours. Nous sommes fiers que 6 de nos sites aient été sélectionnés parmi les 330 articles culturels listés par l'UNESCO comme Monuments du Patrimoine mondial.

En tant que Président du Central Cultural Fund ayant à coeur l'intérêt d'un tel héritage d'importance mondiale, je suis heureuse de savoir qu'il a été possible de patronner la publication de 20 volumes se rapportant aux Monuments et aux Sites de 20 pays différents des 5 continents du globe. Je suis convaincue que c'est grâce à la diffusion des connaissances concernant les héritages culturels des différents peuples que le monde pourra s'enrichir du partage de telles expériences jusqu'alors confinées à chaque pays.

Je saisis cette opportunité pour féliciter les quelque 6 000 membres du Comité International des Monuments et des Sites (ICOMOS) pour leur service dévoué au monde et pour l'assistance professionnelle apportée à chaque nation en vue de la sauvegarde de leurs monuments dans l'intérêt des générations à venir. Je souhaite également aux 84 états membres d'ICOMOS tous les succès dans leurs délibérations lors de la 11ème Assemblée Générale d'ICOMOS à Sofia, Bulgarie, qui se déroulera à la fin de cette année et à l'occasion de laquelle ces livres ont été publiés.

Sirimavo Dias Bandaranaike
Premier Ministre
Sri Lanka

Bureau du Premier Ministre,
Sir Ernest de Silva Mawatha,
Colombo 3, Sri Lanka

17 avril 1996

Preface

Although ICOMOS had its birth in Europe over thirty years ago, it is only now that it has spread to the ends of Africa, America and Asia/Oceania. It has now a membership in 84 countries, and more nations are fast appreciating the professional value of this International Body.

The steadfast effort of ICOMOS is to see that the highest principles of conservation are applied to the Monuments and Sites of the World. It is precisely for this reason that ICOMOS has been able to interest twenty countries in the five continents of the world to record their efforts so that the rest of the world could share their rich experience in the science of conservation.

The organizers of the twenty publications take this opportunity to thank the Editors of these volumes for giving generously of their time and for collaborating in this major exchange of knowledge.

Prof. Lakshman Alwis
President
ICOMOS, Sri Lanka

Ms. Sita Pieris
Editor-in-Chief
ICOMOS, Sri Lanka

Dr. Roland Silva
President
ICOMOS,

Colombo, 17 April 1996

Préface

Bien qu'ICOMOS soit né en Europe il y a un peu plus de 30 ans, c'est seulement maintenant que son action a pu s'étendre aux frontières de l'Afrique, de l'Amérique et de l'Asie/Océanie. Il possède aujourd'hui 84 pays membres et un nombre rapidement croissant de nations rendent hommage à la valeur professionnelle de ce corps international.

Le constant effort soutenu par ICOMOS est celui de veiller au respect des grands principes de conservation des Monuments et des Sites historiques mondiaux. C'est pour cette raison précise qu'ICOMOS a su intéresser 20 pays des 5 continents du globe à prendre notes de leurs efforts pour que le reste du monde puisse partager leurs riches expériences dans le domaine de la science de la conservation.

Les organisateurs des 20 publications saisissent cette opportunité pour remercier les éditeurs des 20 volumes qui ont si généreusement donné de leur temps pour cet échange majeur de connaissances.

Prof. Lakshman Alwis
Président
ICOMOS, Sri Lanka

Mme Sita Pieris
Rédacteur en chef
ICOMOS, Sri Lanka

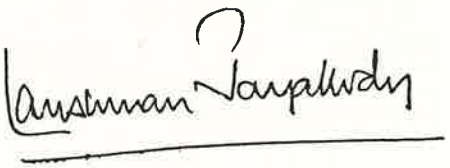
Dr. Roland Silva
Président
ICOMOS

Message

The story of conservation is as old as the civilization of the human race. If ICOMOS has in recent years collated ideologies and codified precepts, it is the research and experiences of man that they have sensitively brought together.

The ancient chronicles of Sri Lanka like the Dipavamsa and the Mahawamsa as well as technical texts like Manjusri's Vastuvidya Sastra are attempts to record unending tales of scientific experience that have enriched the sum and substance of its human tradition. The data of unwritten experience is yet another source that the professionals of today should attempt to glean from traditional craftsman and village elders. These researches would extend from city planning to monastic layouts, to monuments and interiors, to furniture and even to items of regal wear as crowns and the setting of the gems upon such jewellery. These texts and traditions are valuable not only for creation but also for the conservation and safeguarding of their quality through time.

I wish the work of the world body in the conservation of Monuments and Sites every success and congratulate them for this attempt to collate such information from the different ends of the earth.



Lakshman Jayakody
Minister of Cultural and Religious Affairs,

Ministry of Cultural and
Religious Affairs, Sethsiripaya,
Battaramulla, Sri Lanka.

3rd May 1996

Message

Les origines de la conservation sont aussi anciennes que celles de la civilisation humaine. ICOMOS a depuis de récentes années regroupé des théories et codifié des règles de conduite permettant ainsi une approche intelligente des recherches sur l'homme et de ses expériences.

Les anciennes chroniques du Sri Lanka comme celles de Dipavamsa et Mahavamsa ainsi que les textes techniques comme le Vastuvidya Sastra de Manjusri sont des tentatives de récits scientifiques impérissables qui ont enrichi l'ensemble et l'essence même des traditions humaines du pays. Les faits provenant d'histoires qui n'ont pas été écrites forment une autre source d'information que les professionnels d'aujourd'hui devraient essayer de recueillir auprès des artisans traditionnels et des anciens du village. Les recherches s'étendent des plans de villes aux conceptions monastiques, des monuments et intérieurs au mobilier et même aux accessoires vestimentaires comme les couronnes et la disposition des pierres précieuses les ornant. Ces textes et ces traditions sont de grande valeur non seulement pour notre histoire mais aussi pour la conservation et la protection de leurs qualités à travers le temps.

Je tiens à souhaiter aux membres du corps mondial de la conservation des Monuments et des Sites tous les succès dans leurs travaux et je tiens également à les féliciter pour leur effort de collection d'informations en provenance des quatre coins du monde.

Lakshman Jayakody
Ministre des Affaires Culturelles et Religieuses, Sri Lanka

Ministère des Affaires Culturelles
et Religieuses
Sethsiripaya, Battaramulla
Sri Lanka

3 mai 1996

ICOMOS National Committee - Zimbabwe

Zimba-where? Ten years ago when I first visited Canada I shared a seat on a bus travelling from Calgary to Banff. Naturally conversation began with the issue of idently. It was not hard to establish where my colleague came from and prayed it would be the end of the identity crisis. Regrettably, it was not to be. My bus-mate insisted on my revelation and evetually I succumbed. Zimbabwe ws my country of orgin. Of course my mate was well travelled and so his response was quick 'Zimbabwe - I see that is the one that used to be called Zanzibar.' The rest one can figure out. Suffice it say the issue ended when the identity of Zimbabwe reverted to Southern Rhodesia and that too had to be conjured up in relation to South Africa!! The situation was not unique to the non-intelligentsia: it took decades for ICOMOS to locate Zimbabwe from the tail-end of the alphabetical list of countries and only in 1995 was the identity crisis resolved in as far as ICOMOS was concerned.

That being so, it is indeed an honour to contribute to the series 'Twenty Books on Monuments and Sites'. It is even more satisfying to realise that Zimbabwe's contribution enters the stage when for the first time the country is participating in an ICOMOS General Assembly.

Dawson Munjeri
Executive Director
National Museum & Monuments - Zimbabwe

Comite National ICOMOS - Zimbabwe

Zimba-où ? C'était il y a dix ans, lors de ma première visite au Canada. Je partageais une banquette de bus sur la route de Calgary à Banff. Tout naturellement, la conversation s'engagea sur la question de l'identité. Il ne me fut pas difficile d'établir l'origine de mon collègue et je priais que ce soit la fin de la crise d'identité. Ce ne fut malheureusement pas le cas. Mon compagnon de bus insista pour connaître mon pays d'origine et je finis par céder. Je venais du Zimbabwe. Ayant bien sûr déjà beaucoup voyagé, sa réponse fut prompte : " Zimbabwe..., je vois qu'il s'agit du pays autrefois appelé Zanzibar. " On imagine facilement la suite de la conversation. Qu'il suffise de dire que le sujet fut clos après que le Zimbabwe ait été assimilé à l'ancienne Rhodésie du Sud... elle-même évoquée par référence à l'Afrique du Sud !

Cette situation n'était pas réservée à une non élite intellectuelle : il fallut plusieurs dizaines années à ICOMOS pour découvrir le Zimbabwe, placé à la fin de la liste alphabétique des pays du monde, et ce n'est qu'en 1995 que la crise d'identité fut résolue.

Ceci étant, c'est un très grand honneur pour nous de contribuer à la série " Vingt Livres sur les Monuments et Sites ". Le plaisir est plus grand encore de réaliser que la contribution du Zimbabwe en arrive au stade où, pour la première fois, ce pays participe à une Assemblée générale d'ICOMOS.

Dawson Munjeri
Directeur exécutif
Musées et monuments nationaux

Contents

Historical Background

Young indeed the country is in terms of its post-colonial life that can only be dated to 1980.

This fact belies the more pertinent fact the human history of Zimbabwe is traceable to close on 700 000 years ago. A case in point is the rock shelter deposits in the Matopos area which date to the latter part of the Middle Pleistocene (700 000 to 125 000 BP), through to the late Pleistocene (125 000 to 12 000 BP) to the end of the Holocene (12000 BP to the present). (1)

In that long period, the evolution of Zimbabwe has tended to be compartmentalised into the very early part upto BP 12500. Very few if any studies have been carried out on this formative stage. Studies have focused on what is termed the Early Stone Age (ESA) and Late Stone Age (LSA). Implicit in this, is the focus on the technology of stone. Of late, that dichotomy has been reviewed as it does not allow for contacts between ESA and LSA stages. Notwithstanding it has been useful in simplifying research strategies.

Even then it is also pertinent to point out that most research has been concentrated on the LSA particularly, the last 13000 years.

This is because as one researcher has explained, 'the advantages of conducting research into the LSA rather than earlier periods lie in the potential application of Bushman ethnography in model - building, the better preservation of organic matter, rock art with its enraptured belief systems and the greater visibility and accessibility of the material at the top of Stone Age sequence'. (2)

Evident from this scenario is the fact that more studies are needed in this area of Stone Age and earlier periods.

Secondly the term LSA in Southern Africa is associated with the prehistory of the Khoisan peoples (Bushman of hunter-gatherers) because of their association with rock art studies on LSA have tended to be viewed as synonymous with pre-history research. It is not out of context to describe this period, its people and way of life because it constitutes one of the most important heritages of Zimbabwe. Characteristics of the mode of production are hunting and gathering, hence the popular term 'hunter-gatherers'.

Edible plants fell into three categories - fruits and nuts, the easiest to collect, cereals comprising

grass seed; underground storage organs (the most difficult to obtain). worms, fish, reptiles, birds and mammals have been located in almost all settlements.

Settlements were centred around rock shelters; for example all Holocene archaeological occurrences in the Matopos area are associated with rock shelters. Depending on the availability of resources, some sites were more intensively occupied than others The size of settlements also varied accordingly.

The dominance of rock paintings has tended to make the period synonymous with this tradition. Granite is the setting for the paintings and the surface for which they were designed.

The artists chose their working surface with great care. One surface that was particularly favoured was that exposed when the bottom portion of a large boulder had split along horizontal and vertical fracture planes and fallen away from the main mass. This provided a fresh, smooth, vertical surface protected by a horizontal overhang on the parent boulder. For pigments the artists used ironstones or iron oxides such as haematite and magnetite. White pigment was made from Kaolin clays or cruched quartos. Binding agents included fats and blood (3).

There is currently a strong debate on the art itself: the motivation and message of the art. The differences are largely in methodology of interpreting the art: on the one hand is shamas the 'structuralist/ syntax' school. One of the leading proponents of this school, David Lewis-Williams sees it as the work of shamans illustrating their experiences in trances. The other school, sees a clear division between the art of South Africa, in particular Drakensberg paintings where the shaman-hypothesis is based, and that of Zimbabwe. The Zimbabwe art is measured in millennia rather than in centuries and is more varied in subject and treatment. The 'extractive' or 'image / primacy' school, sees Zimbabwean art as a product of rational constructs and visual expressions of ideas and beliefs and not of sensations. (4)

Whatever school, and there may be more, the fact is that on Zimbabwean landscape is a heritage which Garlake aptly sums as the opposite of the great monuments of civilisation. 'They (the paintings) do not proclaim themselves with the bombast of the majesty or military might, soar with the aspirations of temples, churches and cathedrals or cloak death with the vanity of tombs. They (paintings) have to be laboriously searched out; each discovery is unexpected and exciting. They are the work of people whose culture and ways of life and whose perceptions of their world, and the beliefs they developed. They are entirely alien to us.'

In its wake, the Late Stone Age left the Iron Age. The cut off point was less dramatic than what was originally assumed. On some LSA sites, stone artifacts are contemporary with iron artifacts that have been located. There was overlap of

the two periods.

Iron Age is linked with the linguistically distinct Bantu-speaking farmers, that is food producers and agriculturalists. Features also include the introduction of metals as well as purpose - built shelters of pole and *daga* (adope). In Zimbabwe the period commenced about 200 AD. Small beginnings, characterise what is referred to as the Early Iron Age. Smaller households, prevalence of smaller domestic animals, in particular sheep and goats typify the period. Some sites developed into substantive settlements with well-organised socio-economic, religious and political systems. About the 10th and 11th century one such settlement, Great Zimbabwe was involved in both internal and external trade.

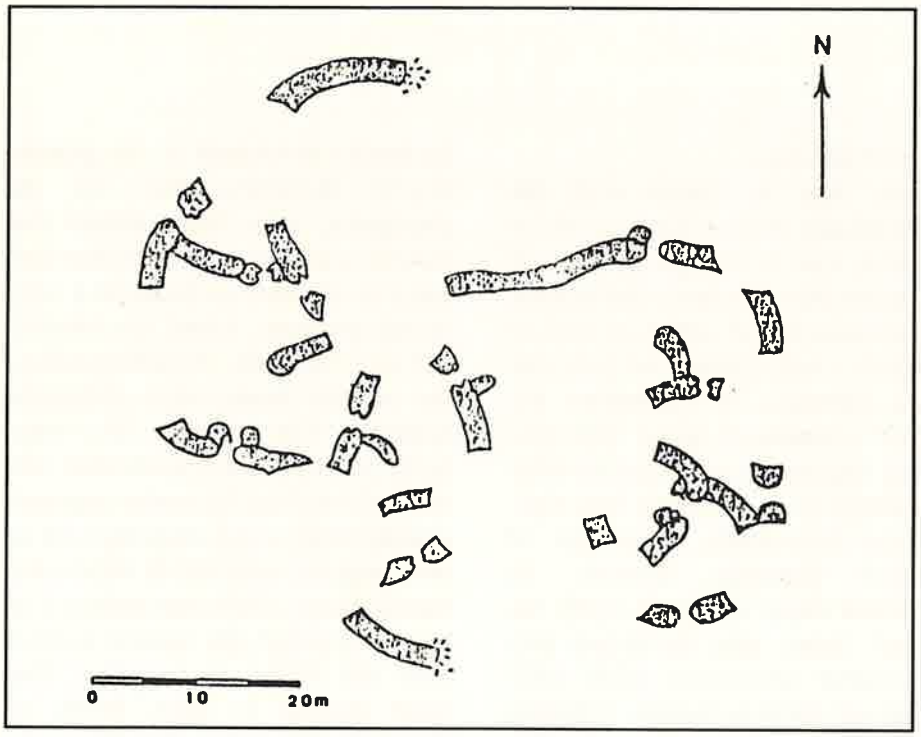
Because it dominated the present Zimbabwe, Eastern Botswana, Mozambique and northern Transvaal (South Africa) the Great Zimbabwe era lasting upto 16th century, requires special mention.

The remaining evidence of this city is scattered over 720 hectares, three hundred kilometres south of Harare. The main features of this World Heritage Site are the series of dry stone walls which once formed the residential area for a population of 20000. These dry stone walls encircled and abutted to dwellings built of thatch and *daga* (as per diagram).

The rise of Great Zimbabwe has been attributed to a number of factors. The total sum effect is that a great state with a very distinct leadership developed at the present World Heritage site. In its emergence, this State utilised the natural, socio-economic, human and cultural resources to establish a very strong economy based on internal and external trade. Notwithstanding, the various facets were delicately balanced. For example the huge herds of cattle that it controlled and was a strong base for power required grazing lands which were depleted in time and this resulted in increasing transhumance. Such transhumance in turn diminished the central control over this important resource. The same applied to other forms of resources like water and firewood. One writer had put it simply, 'In a sense, the seeds of Zimbabwe's ultimate decline may have lain in the reluctance of women to walk increasingly long distances to tend to the fields and cut firewood'. (5) Around mid -15th to 16th centuries Great Zimbabwe was no more.

In its stead appeared successor States, the most powerful, being the Mwenamutapa state on the Northern plateau and the Khami state (Khami is a World Heritage Site). Mwenamutapa state was to last into the early 19th century, albeit with a turbulent history resulting from the advent of the Portuguese.

The Portuguese factor also affected the socio-economic, cultural and political environment. The material culture and the physical heritage could not escape this influence. The series of monuments and sites, in particular trading posts and forts added another layer to the cultural



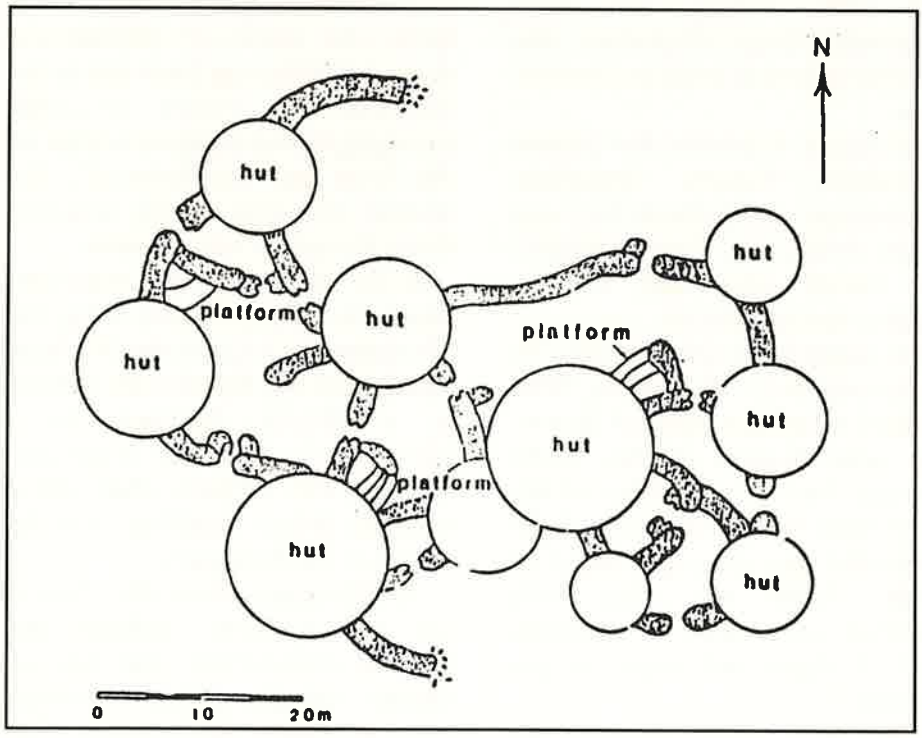


Fig. 1 and 2. Great Zimbabwe: The Maund Ruin.Above, plan of stone walls only. Below, plan of stone walls and daga huts as revealed by excavation. After Garlake (1973)

and physical landscape. This was largely in the Eastern half of Zimbabwe.

In the Western half,the Torwa state lasted until the 17th century after which it succumbed to a palace - type revolution that saw the rise of the Changamire State (1683 - 1830). Before its demise however it had managed to modify the Great Zimbabwe-type architecture. While the dry-stone walling tradition was continued, free standing walls were increasingly replaced by terraced walls as evidenced at Khami Site. Notable changes in styles also took place. The successor Changamire/ Rozvi state equally modified the architectural designs. The highly sophisticated and multifarious designs of DhloDhlo and Naletale sites are typical examples. The most significant contribution of this Rozvi dynasty was the dominance of the Mwari religious cult which has lasted to this day. At its height the deity wielded influence in the whole of Zimbabwe, Eastern Botswana and Northern Transvaal. With its headquarters at Njelele in the Matopos, the cult was not only considered kingmaker and the soul of the nation but also it became synonymous with all forms of life.

In the last analysis, traditions attribute the fall of the Rozvi king (mambo) to the power of Mwari. The story is told of how the king felt so powerful that he could challenge Mwari. He started attacking the various places that Mwari resided in, for example, rocks, grass, groves, pools, birds; but it was in the nature of Mwari that he could change form and abode anytime. Eventually the Mambo was exhausted and ran out of his wits and so became an easy prey for the enemy, the Ndebele who overthrew the Rozvi in 1830s.

The Mwari account illustrates an aspect of the spiritual heritage of Zimbabwe. The traditional religions hold sway - they yield power. There is a hierarchy of ancestral *(midzimu)* , patronal *(mashawe)*, tribal *(mhondoro)* and supreme (Mwari) spirits which transcends and controls nature and people. Thus far from being the *deus otiosus* or *deus remotus,* Moire, controlled the fertility of the country to give rains in time of drought. That is his benevolent side. The malevolent side is illustrated in the Rozvi Mambo story. When land has been polluted through such acts as shedding of blood, incest, breaking of taboos, retribution comes in the form of pests, for example: the army worm of 1994, drought of 1993 - 95, civil strife etc.

In essence, the spiritual heritage is real : it is omnipresent because the cosmos of the living and the dead is one.

The coming of the Ndebele in 1830's did not change this fact, in fact the new arrivals were incorporated into the religious system with Mwari becoming their *Mlimo* - (supreme deity). Except for the smooth blending of the Ndebele religion with the Mwari cult, the arrival of the Ndebele had a traumatic effect on the Zimbabwe plateau. the Ndebele were the by-

product of a revolutionary process referred to as the *mfecane*. In South Africa on the South Eastern coast, internal politics led to mass movements away from that area. Zimbabwe saw two of these movements :- one by Soshangana who occupied the eastern part of the country and Southern Mozambique. The other movement was by Mzilikazi who settled in Western Zimbabwe, near the headquarters of the defeated Rozvi Mambo. the infusion of Nguni language and culture in a Shona country was to change the landscape permanently. It saw the introduction of Ndebele and Shangaan languages; new different customs practices; different political and economic systems; different systems, different settlement patterns and architectural styles etc. In the end, it resulted in the present cultural groups: the Ndebele comprising 20 per cent of the population and the Shona, 79.5 per cent. The cultural and physical landscape now included sites like the Mzilikazi and Lobengula settlements.

Old Bulawayo, the first settlement of Lobengula, the King who succeeded Mzilikazi is one of the most famous historic sites now scheduled for development as a living museum.

It was not long after the arrival of the Ndebele that Europeans followed the northern trail. As early as 1850's traders and hunters had established links with Mzilikazi. These were then followed by the missionaries who set the first mission at Nyati in 1860 - 61. This introduced a new layer on the spiritual landscape - Christianity. The conflict that emerged from this could not be resolved peacefully.

Another breed of Europeans appeared on the scene in 1880 - 90 : the Concession hunters. These were no longer content with trade and religion but they were convinced that ultimate control of the country's resources was their God-given right: they played all the tricks to seize the land. Spearheaeded by the arch-imperialist, Cecil John Rhodes who was later to baptise the country, Rhodesia, in 1890 an armed invasion of the Eastern half of the country took place. The Union Jack was raised at Fort Salisbury in September 1890. Systematically the colonial settlers seized the land and resources of the Shona who were now foreigners in the land of their birth. In their wake missionaries imposed the Christian religion. The effect on communities was equally traumatic. Indentured labour for the mines and farms led to dislocation of families. The very base of Shona existence was challenged.

Using Mashonaland as a base, the settlers now attacked the Ndebele in the West and in 1893 a full Anglo-Ndebele war took place. The result was the defeat of Lobengula and the colonisation of the whole of the country. The scars of that war constitute an important heritage as is shown by the various forts, battle fields, graves that abound. The ruthless alienation of land, the imposed cultural, religions and social systems, forced labour, imposed

taxation compounded by the drought and cattle disease, rinderpest which the Mlimu / Mwari sent in anger finally led to the First War of Liberation in 1896/97 (Chimurenga/ Umvukelo). The traditional spiritual leadership united both the Ndebele and the Shona and for two years the war raged on. The supremacy of the maxim gun and dynamite finally put an end to the heroic struggle. It was a struggle that was to produce heroes like Mbuya Nehanda, Mukwati and Kaguvi (all sprit mediums); Chiefs Makoni, Mashayamombe and Hwata. To this day, post independence street names, hospitals, schools and other institutions bear testimony to the heroism of these men and women. It is a wealth of heritage in its own right.

The dark ages then followed after 1897 as the Coloniser was now in effective control. The land was totally alienated ; the resources were now privy to 5 per cent of the population; the culture and religion was adulterated. On the surface, the majority population was cowed down. Below the surface, the spirit of resistance continued in various passive forms, particularly through trade unions and welfare societies. The first World war but more particularly, the Second World War dynamised this process. The struggle against fascism was a battle against injustice and foreign domination. But what was wrong with that? These were the questions that the White soldiers could not answer their Black counterparts on the battle front. The end of the Second World War ushered in a period of soul-searching and the beginnings of the struggle for freedom. In 1950's and 1960's nationalism took hold and various Nationalist parties were formed. The peaceful politics of the struggle was however doomed following the Unilateral Declaration of Independence by Ian Douglas Smith on 11 November 1965. This led to the armed struggle which ultimately led to the Independence of Zimbabwe on 18 April 1980.

It goes without saying that the history of the struggle in its oral and written forms together with the landmarks, the battles, the battlefields now constitute an invaluable heritage. For National Museums and Monuments this has seen more responsibilities in areas of research and heritage management programmes. The various architectural structures eg. Independence Arch, the Heroes Acres where the heroes of the struggle are laid to rest, are testimony to this.

Conclusion

The diversity of Zimbabwe's tangible and intangible heritage is exposed in this short presentation. The challenges of looking after that heritage are equally apparent. The chapters that follow deal with this diversity as well as the attempts the young nation is making to measure up to this mammoth challenge.

It is evident that victory is only assured when Zimbabwe presents these issues to a wider community of nations. Within the context of ICOMOS, we are optimistic that

victory is certain.

Notes

1. Walker N.J. *Late Pleistocene and Holocene hunter gatherers of the Matopos* Uppsala Studies in African Archaeology. 10. 1995:13
2. Walker, N.J. *Late Pleistocene and Holocene hunter gatherers of Matopos:* 14
3. Garlake, P. *The Hunter's vision : the prehistoric art of Zimbabwe.* London. British Museum Press 1995 : 18 -20
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History of Monuments Legislation in Zimbabwe

Ivan Murambiwa

Treasure hunting spearheaded by the Rhodesia Ancient Ruins Ltd. company, who had been given exclusive rights to dig up ancient ruins for cultural gold, was severely criticised locally and abroad. In reaction to this and as a public relations stint the Southern Rhodesia legislative council hurriedly passed, in 1901, an Ordinance protecting ancient monuments. The Ordinance was designed to outlaw treasure hunting at ancient ruins and it became law in 1902. The spirit of the law was derived from John Lubbock's bills discussed in the British parliament in the late 19th century. The Bills, in a much watered down version became the 1882 British Ancient Monuments Act. As the situation in Southern Rhodesia demanded little debate, for it was more of a public relations exercise, the 1902 Ordinance was more powerful than the 1882 British Act. It protected all ruins and relics predating 1800. the Administrator of the colony, was given extensive powers to acquire any monument or relic upon payment of reasonable monetary compensation. The only exemption was for ancient workings which fell under the 1895 Mines and Minerals Ordinance. Penalties for unauthorised digging at ancient monuments or possession of ancient relics were severe. All persons were obliged to report to the nearest senior government officer, the discovery of ancient monuments and relics. The administrator had powers to appoint days upon which an authorised person could have access to any ancient monument.

The 1902 Ordinance laid the foundation for the country's blanket heritage protection legislation which more closely resembled, and still does, that of the Scandinavian countries than the 1882 British Act.

The 1902 Ordinance was unprecedented in Africa south of the Sahara and is considered quite early by world standards. However from there on South Africa took the lead and Southern Rhodesia started to copy South African solutions. This is true for most Southern Rhodesian legislation and this was largely influenced by the role of the British South African Company in the two countries. In 1911 the mass exportation of rock art objects from South Africa led to the Bushmen and Relics Protection Act No 6. The Southern Rhodesians copied the

solution through the 1912 Ordinance for the Protection of Bushmen relics. South African legislation was changed and improved through first the 1923 Natural Historical and Monument Act No 6 and later through the 1934 Natural and Historical Monuments, Relics and Antiquities Act No. 4.

In order to harmonise its legislation with that of South Africa, Southern Rhodesia came up with the 1936 Monuments and Relics Act which saw the 1902 and 1912 Ordinances being repealed.

The 1936 Act widened the definition of ancient monuments and relics, brought in the concept of proclamations of National Monuments and established an independent body to look after historical and natural monuments. Ancient monuments were defined as any pre-1890 cultural immoveables and relics as any pre-1890 fossils and archaeological objects including rock art. 1890, chosen as the dividing line between history and prehistory is the year Zimbabwe was colonised. The new definition of archaeological material was reinforced by severe penalties for breach. The Act also specified that only those who knowingly contravened the Act would be guilty and this made it difficult to prosecute offenders. Previous and subsequent legislations did not contain that particular restriction. The blanket protection accorded to archaeological material thus depended on potential offenders being aware of the Act's provisions and also being able to distinguish between pre-1890 and post 1890 material.

An important outcome of the 1936 Act was the Commission for the Preservation of Natural, Historical Monuments and Relics, under section 3 of the Act. The new establishment, better known as the Historic Monuments Commission was a parastatal consisting of Commissioners appointed by the Minister of Internal Affairs. All these changes marked the start of a major shift from post-facto protection to an organised programme for the prevention of damage to ancient monuments. This took the form of a monuments inspection programme started in 1946 and an archaeological survey.

In 1972 the Commission merged with National Museums under the National Museums under the National Museums and Monuments Act. This repealed the 1936 Act. The major changes brought about by this new legislation was the transformation of Commissioners into Trustees. The Board of Trustees was given new powers to compulsorily acquire any monuments and relics and monuments related land through a presidential directive.

These are some of the significant aspects of the 1972 Act.

Section 23 - in spite of the Mines and minerals Act (Cap 203),the Board may acquire any fossil/mineral for the purposes of the NMMZ Act. No right to any relic can be acquired by a person taking possession of it unless with the permission of the Board.

Section 24 - the Board may acquire any national monuments/ relic/land in connection with or in the vicinity of a national monument. If agreement cannot be reached with the owner/possessor, the Board may apply to the President for authority to acquire the national monument/ relic/ land. The person affected must submit to the Board his representations to the president, with claims for compensation, within 2 months of being served notice of the Board's intentions to acquire the land/relic.

(10) - the provisions of Parts I and IV of the Land Acquisition Act of 1971 (No 8 of 1971) apply to the payment of compensation.

Section 25 - no excavation of an ancient monument/national monuments is allowed without the permission of the Executive Director, and excavation must comply with conditions set out by him.

Sections 26 (1) - it is forbidden to alter, destroy or damage any national monument/ancient monument/relic of part of it, to remove it from its original site or export it from Zimbabwe, without the permission of the Executive Director, and it is necessary to comply with conditions fixed by him, except in terms of the Mines and Minerals Act, where the discoverer has notified the Board as required.

(2) - an application to alter, destroy, damage, remove or export any of the above must include a drawing/ photograph of the monument/ relic and state the precise location, the place to where it is to be moved, and the reason.

Section 27 (1) - The Executive Director must be notified of any proposed alteration/ demolition of a building erected before 1.1.1910, at least 14 days before the alteration/ demolition.

(3) - unless the alteration/demolition is necessary in the interests of safety or if the building presents a risk of damage to surrounding buildings.

Section 28 - if a building has been altered/demolished in terms of Section 27(3), the Executive Director must be notified, with the reasons.

Section 42 - the Board may formulate by-laws, which must be approved by the Minister and published in the Gazette, and may provide penalties of not more than $100 or 3 months imprisonment.

Section 43 - a person contravening sections 24 (11) or 26 (1) of the Act is liable to a fine of up to $2 000 or 5 years imprisonment, or both. A person contravening any other part of the Act is liable to a fine of up to $200 or 6 months imprisonment, or both.

Of particular interest are sections 25,26 and 27 which give extensive legal powers for the protection of all archaeological sites and historic buildings.

Historic buildings defined as buildings erected between 1890 - 1910 had added protection under section 31 of the Regional Town and Country Planning Act of 1976. This section gives local authorities power to serve on a building owner and occupier an order restricting demolition alteration or extension of

a building which is of special architectural merit or historic interest. The local planning authority must notify the NMMZ Director before issuing a demolition permit.

Recently the government came up with an Environmental Policy Document for Environmental Impact Assessment. Efforts are underway to transform the policy document into legislation. Research papers on environmental rights and fairness, Internal conventions and social and cultural values are being produced for incorporation in this environmental legislation. All these efforts will complement the protection capacity of the NMMZ 1972 Act.

National Museums and Monuments is also preparing to table in Parliament amendments to the 1972 Act. The major impact of the proposed amendments is to make it explicitly clear that all commercial land development must carry out archaeological and environmental impact assessments and pay for these.

However, critics have pointed out this is not that necessary as this can be taken to be implied under section 25 and 26 of the present Act. The critics have also pointed out problems with the definition of "commercial developers" and this could exclude many projects whose impact on the nation's archaeology could be negative.

Realising the adequacy of the 1972 Act archaeological practitioners are pushing for the incorporation of the requirements of sections 25, 26 and 27 of the 1972 Act in the planning process so that NMMZ can have full control on matters pertaining to pre development archaeological assessments.

Documenting the Stone Walls of Great Zimbabwe

Edward Matenga

Introduction

Great Zimbabwe was a 13th-15th century town and the largest of 300 Zimbabwe ruins.

The settlement remains of Great Zimbabwe today consist mainly of stone walls forming enclosures and terraces spread over an area 2 km by 1.5 km in extent. In this regard it is necessary to state for comparative purposes that on the African continent Great Zimbabwe ranks second to the Egyptian pyramids in terms of volume of construction stones used. Indeed this makes Great Zimbabwe the most celebrated pre-colonial achievement of the black people.

It is vitally necessary to preserve Great Zimbabwe because it is of priceless value to the people of Zimbabwe. The following are some of the reasons why Great Zimbabwe is on the nation's priority conservation list.

a) Great Zimbabwe was the capital of a state system which evolved among the Shona whose descendants today constitute 90% of the population. So it is perfectly fitting that the site gives its name to the modern nation state, Zimbabwe. The monument is therefore a hallmark of our cultural and political identity.

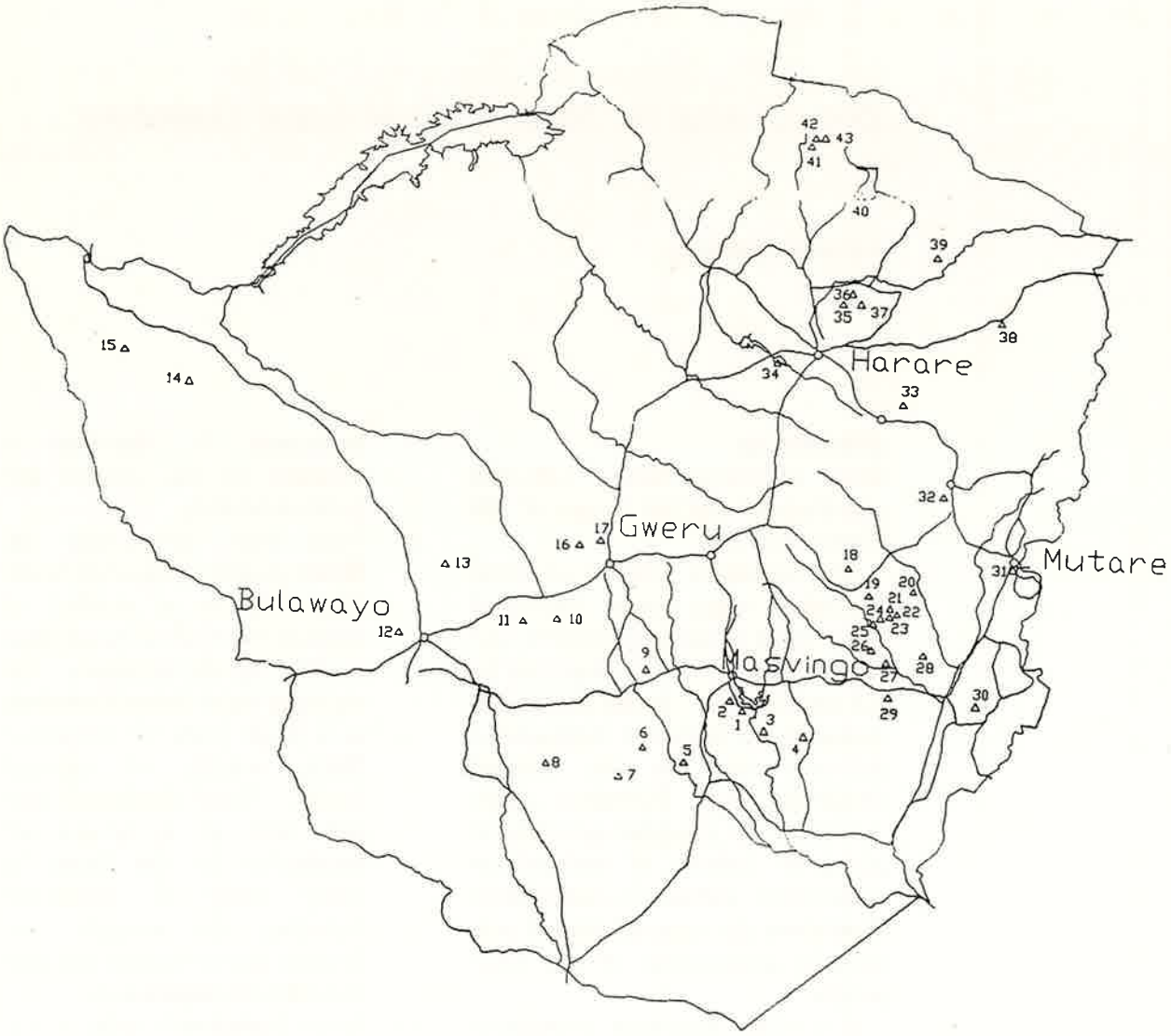
b) From time immemorial the Shona people recognised Great Zimbabwe as a symbol of community wisdom bequeathed to them by the ancestors. On the other hand Great Zimbabwe is a focal point of reciprocal Shona worship of ancestral spirits. Great Zimbabwe was and still is a source of inspiration for the Shona in many fields of endeavour including the struggle two decades ago to redeem our land from British imperialism.

c) Great Zimbabwe is today a very popular tourist and educational resource attracting close to 150 000 local and international visitors annually.

d) On the strength of the above qualifications Great Zimbabwe is a proclaimed national monument under the supreme law of Zimbabwe and a World Heritage Site under the UNESCO World Heritage Convention.

Documentation for Conservation

Keeping a record of the history of



1 Great Zimbabwe, 2 Charumbira, 3 Majiri, 4 Zaka, 5 Chomuruvati, 6 Buhwa, 7 Gorongwe, 8 Chumnungwa, 9 Chamabvepfa, 10 Naletale, 11 Dhlodhlo (Danamombe), 12 Khami, 13 Thabasikamambo (Manyanga), 14 Mtoa, 15 Bambuzi, 16 Regina, 17 Adair Farm, 18 Gombe, 19 Chiwona, 20 Mutauto, 21 Chiurwi, 22 Kagumbudzi, 23 Muchuchu, 24 Matendera, 25 Chironga, 26 Munyikwa, 27 Kubiku, 28 Sazvivi, 29 Chibvumani, 30 Mutema's Grove, 31 Mutare Altar site, 32 Chipadze, 33 Tsindi, 34 Maine Farm, 35 Nhunguza, 36 Chisvingo, 37 Garaubikirwe, 38 Mutoko, 39 Ruanga , 40 Zvongombe, 41 Matanda Achiwawa, 42 Rusvingo rwaKasekete, 43 Mutota.

Fig. 1. Zimbabwe sites (NB. This map does not show all the zimbabwes which have been recorded so far)

the walls is a key step in the conservation and preservation of Great Zimbabwe. The main objectives of documentation is to create a reserve of archival data which can be used by researchers, interested citizens, visitors, and by posterity. We document the steps we take to curate the monument as a permanent record by which we shall be vindicated or otherwise by future generations.

A second major objective is to create a reserve of data which can be used to monitor the condition of walls on a regular basis. The stone walls of Great Zimbabwe are of the type called dry stone walls because they were built without mortar. They are of variable dimensions attaining a maximum height and breadth of 11 m and 6 m respectively. The lack of a binder such as cement means that the walls depend for their stability on gravity and friction. Many factors have been known to be at play to render these walls potentially unstable: vegetation (roots, tree branches, climbers etc), moisture, physical and chemical weathering and animals (humans and baboons). Prior to 1890 these factors (except humans) were particularly important in determining the state of conservation of Great Zimbabwe as the monument was virtually left to nature. Today the upsurge in the number of visitors is becoming a leading cause of damage.

Documentation of walls is done as part of a national conservation strategy for Great Zimbabwe and ensures its continued existence in the face of possible collapse and other forms of deterioration. The present strategy is designed to arrest further deterioration of the walls. The target goal is that all walls which are still standing must continue to stand and those walls which have already collapsed should be left in that state. It is realised that if Great Zimbabwe walls were allowed to collapse and thus reduced to a heap of stones, they obviously lose their tourist value and spiritual essence. On the other hand the existing ruinous state of certain sections of the walls is testimony to the archaeological antiquity of Great Zimbabwe and must be appreciated as part of the long history which the monument has endured.

The following are some of the visual symptoms of wall instability

Bulging - face blocks protruding outwards.

Shearing - one or two blocks displaced outwards.

Splitting - cracking/separation of blocks through several adjacent courses.

Settlement - foundation failure resulting in warping of the wall.

toppling - displacement of stones at the top of the wall.

The ultimate end result of most of these processes/symptoms is *collapse.*

Documentation Methods of Monitoring Wall Stability

1. Colour Coding

Documentation by colour coding is applied on walls where collapse is considered to be imminent. Monitoring techniques unfortunately

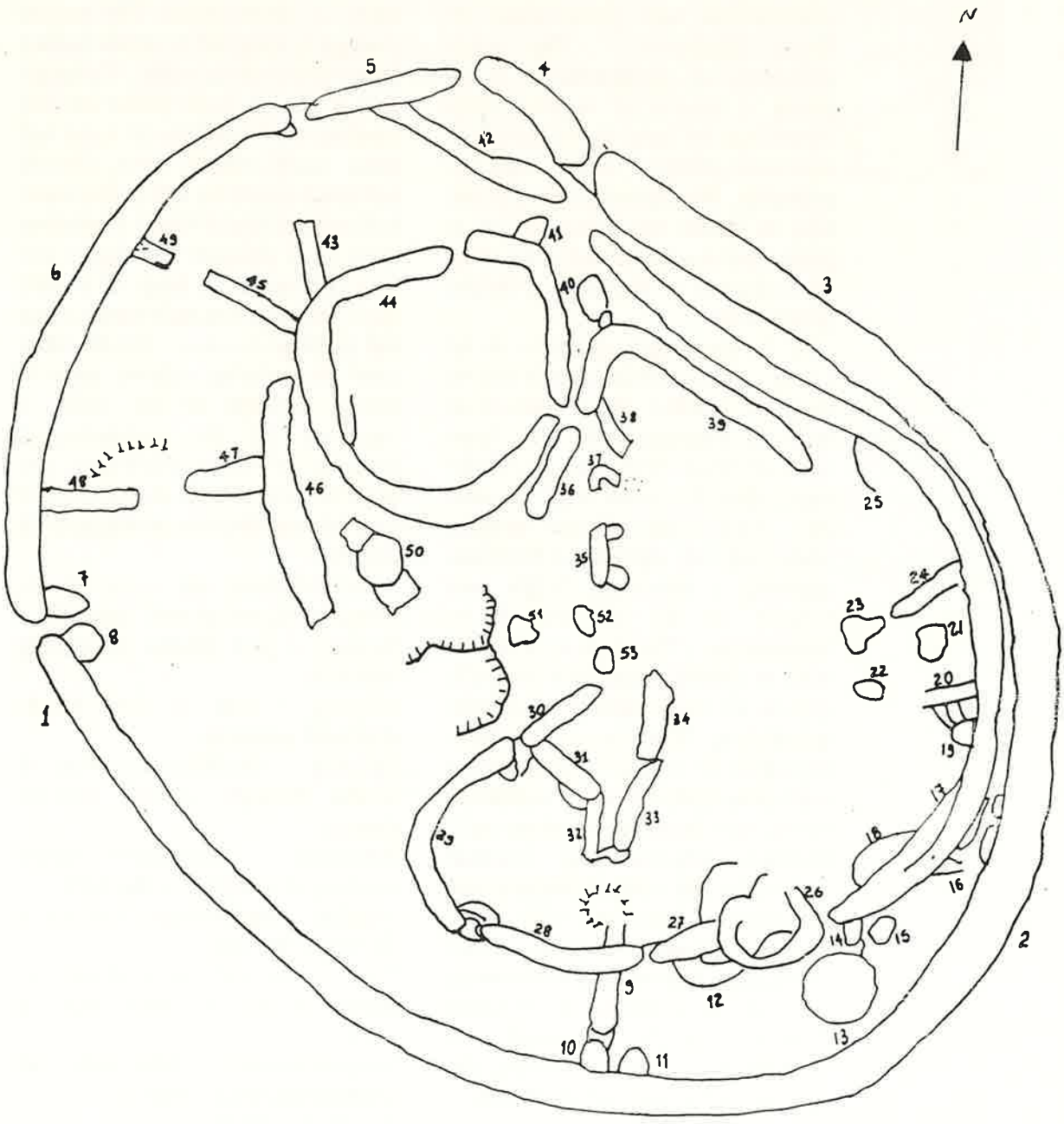


Fig. 2. Plan of the Great Enclosure, Great Zimbabwe with wall numbers.

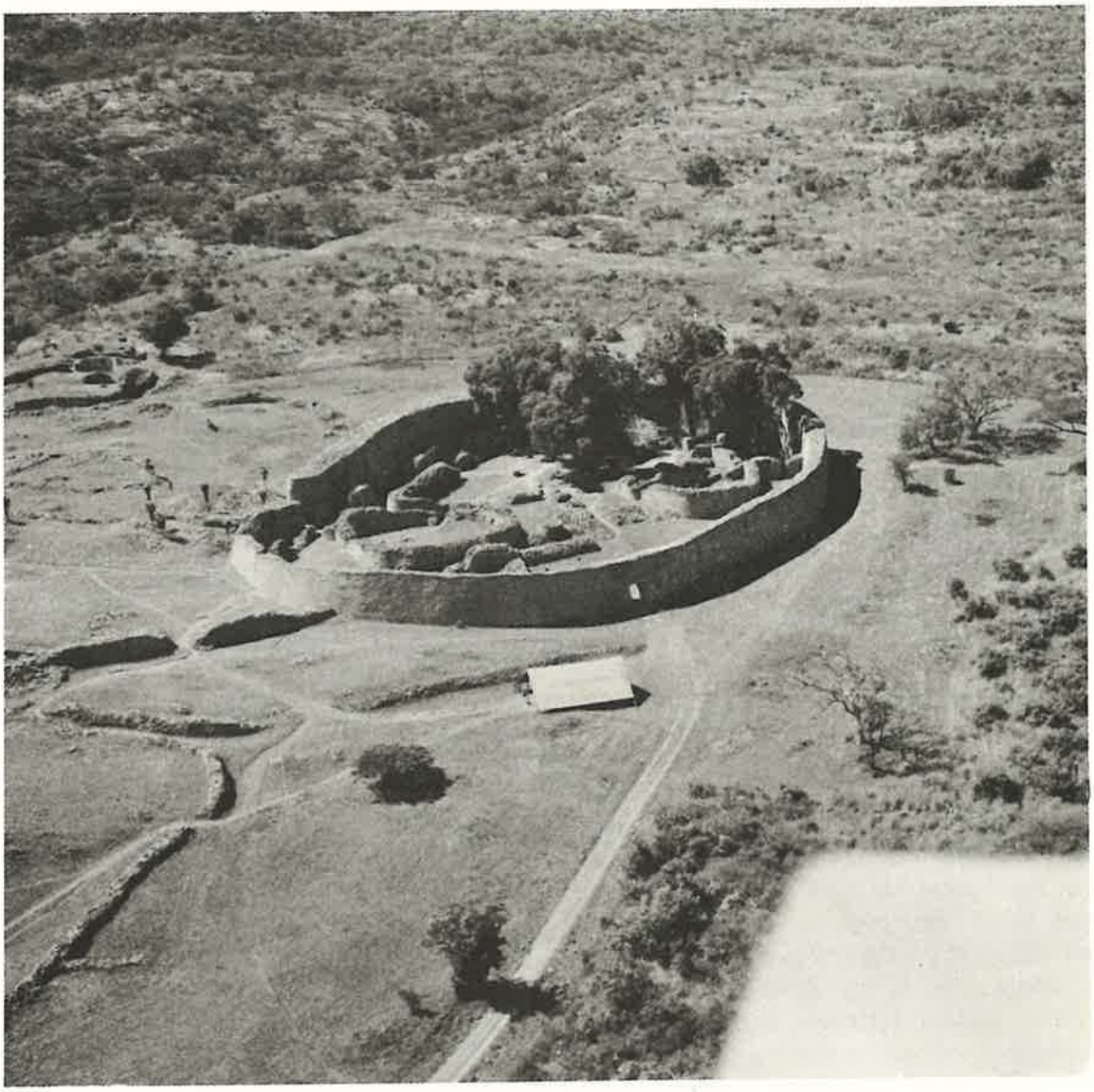


Fig. 3. Great enclosure at Great Zimbabwe

can not predict precisely when a collapse will take place. However when blocks of face stones are numbered with a colour code numbering system, it is possible when a collapse has occurred, to isolate face stone blocks from core stones and set the former back in their original courses.

Eleven different colours are used. Each colour represents a digit with black representing forward slash (/) and separating the course number from the block number. The choice of colours is arbitrary. We use the following:

1. Burnt orange
2. Sky blue
3. Mid Brunswick blue
4. Grey
5. White
6. Sunshine yellow
7. Golden yellow
8. Brown
9. Willow leaf
10. Green/ Black

The colour code is put at the top left hand corner of each face block and from this position you can identify the upper/lower and left/right side of the block. The course number increases from the bottom of the wall upwards using a four digit number, e.g. 0004 (green, green, green, grey) while the block number increases from left to right using a 5 digit number, e.g. 00037 (green, green, green, MD blue, Yellow), in this case the block number is 0004/00037. Usually an arbitrary start off number much larger than one is chosen for the block number, 37 in this case, so that depending on the location of the problem on the wall, should another problem develop to the left and numbering becomes necessary, it will simply be extended leftwards as follows: 0004/00036, 0004/00035, 0004/00033, 0004/00032 and so on.

The colour code numbering system has several advantages: The dot marks do not cause chemical or physical damage to the stones. They are applied with a 10 mm medical syringe. The marks are therefore so small and inconspicuous that they are not visually 'pollutive', and visitors rarely see them. Enamel paint is used, thus the dot marks are removable using concentrated alcohol.

Colour code numbering is cross-checked with photo documentation and results in restoration accuracy rating of between 90 and 100% where a numbered wall has collapsed and 100% accuracy when a wall has been systematically dismantled to correct a problem and then put back.

2. Photography

As I mentioned above colour coding is complemented by photography. We have albums of accessioned photographs which are used for restoration purposes. These photographs are particularly useful in the identification of individual blocks and in ascertaining their relative positions. The photographs are marked with:

Date
Photographer
Angle e.g. taken from the NE
Wall number and aspect e.g. (wall No.1, inside/outside or north facing)

Negative print number

Re-prints of these photographs are taken to the field for comparison where displacement is either suspected or has been detected. Photographs are taken each time a problem is noticed, when a collapse has taken place, during and after restoration.

3. The Demec Strain Gauge

The strain guage monitoring technique was introduced in 1989. This previous instrument measures displacement in one plane to two thousandth of a millimetre (2 microns). The slightest movement can be detected and quantified and expressed in a histogram. The demec strain gauge is used as follows:

At least two small steel discs with pin size holes are stuck with a strong adhesive on the wall, with the straight line between them across the suspected line of displacement. Note that several pairs of discs can be stuck close together on one problem area in order to take several readings. The distance between the pin size holes is set within a range measurable by the strain gauge using a setting bar provided with the strain gauge. The first reading called the zero reading is taken and the atmospheric temperature noted. Thereafter readings are taken weekly, every two weeks, or once a months depending on the gravity of the problem. Temperature is also recorded. The readings are tabulated and movement is calculated and presented as a graph.

The limitations of the strain gauge is that it only measures displacement within a plane., If the blocks were to move together in any direction the strain gauge would not detect such movement.

4. The Wall Register

The wall register is a form on which the conservation history of a wall is summarised. The wall register is accompanied by a plan of the ruins with wall numbers. The monument was divided into areas and the walls in each area numbered from 1 to 100 as the case may be (see example attached). The following information should be of particular interest: the status of the walls e.g. Original walls, Reconstructed walls i.e. walls which were built following the course of ancient but collapsed walls; Restored walls, i.e. walls which collapsed in recent times when photographs and/or colour coding had been taken/done and where during restoration most or all of the face blocks retained their original positions. In this category also falls walls where a collapse was considered to be imminent and the walls were systematically dismantled and restored; Collapsed walls i.e. collapses which occurred in the remote past which are indicated by lines of stone rubble.

The wall register makes reference to the accession register of photographs and any other literature on the history of a particular wall.

Conclusion

The documentation programme for Great Zimbabwe is a pilot and on-going project. What has been

achieved so far at Great Zimbabwe shows that it is effective as a tool for monitoring the conservation state of the monument. It is hoped in the long-term that it could be extended to some of the 300 Zimbabwe ruins in the country.

Site name : GREAT ZIMBABWE
Area : GREAT ENCLOSURE
Wall number : 1 (ONE)
Grid Ref. :
Wall type(s) : FREE STANDING Q-STYLE WALL
No of courses (min/max):

Major problems

Date	Problems detected (bulge, split, void, foundation, collapse	in/out/aspect
1950'S	BULGE was noticed	OUTSIDE
1980's	BULGE resulted in a void, split and Shear	OUTSIDE(ENTRANCE)

Documentation monitoring

Method	Dates	in/out/aspect
Colour coding	06/1995	ROUND ENTRANCE
Demec	10/1989 TO PRESENT	OUT + ROUND ENT.
Photo	1890's TO PRESENT	
Video	1995	

Interventions

Date	Description	Persons
199509	DISMANTLING THE WALL, RESTORING IT WITHOUT THE PROBLEM AND	E MATENGA
199510	RECONSTRUCTION OF THE LINTELLED ENTRANCE	

Notes

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Past and Present Conservation Policy on the Dry Stone Heritage of Zimbabwe.

Webber Ndoro

The impressive Great Zimbabwe National Monument is one of many similar sites scattered in the region between the Limpopo and the Zambezi river. There are more than 250 dry stone walled sites in the region, the famous ones are Danamombe, Nalitale, Khami, Shangagwe in Zimbabwe, Domboshava in Botswana, Manikweni in Mozambique and Thulamela in South Africa. These ancient African Iron Age structures are constructed largely in the rocky granite hills which mainly characterise the landscape in this region. The ruined structures, compose dry stone walls and numerous earthen (daga) structures of varying sizes.

The iron age structures are prototype of settlements found all over southern Africa. The word Zimbabwe is derived from the Shona (a variant of the Bantu language) word zimbabwe meaning houses of stone. The pattern of this Iron Age settlement reflects the socio-economic arrangements and cultural ethos of the African communities during this period. The settlements were constructed over several centuries starting from AD 900 to about AD 1500

Architectural Details

The structures of the Madzibabwe structures, whose architecture is one of the principal cultural identities of the African Iron Age Period, were not built to a plan. They were constructed and altered over many centuries to suit the needs and tests of their occupiers. The design and construction methods of the structures vary considerably, the only consistent factor being the use of stones and daga as building materials. These materials form an integral part of the architectural elements of the Zimbabwe type monuments. the stone and daga structures are curvilinear. This clearly demonstrate that the architecture was indigenous and that no geometrical designs from either the middle east or Asia. were known at this time. The lack of knowledge on the building style from the middle East is further amplified by the fact that the stone structures do not inter-lock, they abate or lean on each other. The architectural development seems to have been a natural response to the development of the site. The symbiotic relationship of the materials, namely granite and

Fig. 1. The National symbol. The Zimbabwe bird. One of the rare stone sculptures from the Madzimbabwe tradition.

Fig. 2. Overview of the Hill complex at Great Zimbabwe - Note the symbiotic relationship between the natural stone and the dry stone walling.

daga, seems to have been a natural progression to blend the landscape and the settlement. The stone walls enclosed and adjoined daga houses to form an integrated unit. Thus one of the major functions of these walls was to screen of and enclose space. No defensive function is apparent on these walls. However the history of warfare during this time is unknown. The stone walls vary in height between 1.5m and 10m and are either free standing or retaining walls. What remains of the daga structures are manly the floors, foundations and sections of house walls. Most of the daga structures only become visible after excavations. The dry-stone walls, synonymous with monuments such as Great Zimbabwe and Naletali, can only be described as the skeleton of the prehistoric monuments. The flesh were the dwelling structures made of clay or daga. Unlike the dry stone walls very few daga structures remain above 'ground. most of the structures are concealed by vegetation. archaeological excavations of these reveals the remains of the prehistoric daga features e.g. the one in the valley at Great Zimbabwe excavated in 1986.

Early Site Conservation Practices

From the beginning of the twentieth century several attempts to preserve the site of Great Zimbabwe were made. Most of the conservation attempts involved the clearing of vegetation and provision of access to the visiting public. The "discovery" of Great Zimbabwe by Carl Mauch, a German explorer in 1871 led to many speculations on the interpretation of the site particularly its origin. (Hall 1987: Kuklick 1991: Mahachi 1991). Some of the conservation problems affecting the monument today emanate from the early attempts to research and interpret the site. Many expeditions were sponsored by the British South Africa Company, their aims being directed on the question of the authorship of the monument. One of the first projects was mounted in 1891 by Theodore Bent who was accompanied by R.W.M. Swan, a cartographer and surveyor. They managed to produce one of the early maps of the monument and this has played an important role in the subsequent documentation of the site. Among other excavation pioneers at Great Zimbabwe was Wiloughby (1893) who extensively dug on the site.

It was however, specifically the question of site management which led to the appointment of the first curator for Great Zimbabwe in 1902, R.N. Hall. He was appointed by the British South Africa Company to undertake "not scientific research but the preservation of the buildings in order to make them more attractive to the tourist (Garlake 1973). However, the early controversies surrounding the origins of the prehistoric settlement led Hall to change his job description. He began to conduct extensive excavations particularly in the Great Enclosure. The belief that dry stone walls were not built by Africans led to his destruction of most of the daga

structures and artifacts which clearly indicated the indigenous origin of the site. Most of the excavated trenches were not backfilled and many of the erosion problems experienced on the site today have their origins in those early investigations. When Randall MacIver (1906) visited the site in 1905 he castigated the amateurish methods of R.N. Hall and his predecessors for having caused much damage to the monument.

In 1909 the first systematic report on how the site was to be managed was drawn up by Masey(1911). This was partly a response to the extensive damage done on the site by R.N. hall. The report was commissioned by the British South Africa Company. Masey's report noted the need to maintain the monument particularly to clear vegetation. He also pointed out the problems which were being caused by tourists and cattle from the nearby communities. His recommendation was that the monument be fenced at least to prevent cattle from coming in. He also noted the need to employ a resident archaeologist to take care of the general preservation work. Masey realised the need to manage the visitors and suggested that a site museum be erected. This would serve to interpret the site to the wider public. Given the times and the general controversies surrounding Great Zimbabwe at the time, Masey's report was quite comprehensive and recommended specific actions to be taken. Apart from general maintenance work his report also suggested that collapsed walls should be restored.

One of the major problem areas on the site of Great Zimbabwe is the rapid erosion of parts of the western enclosure of the Hill Complex. This was triggered off by the well meaning but misinformed conservation recommendations from Masey's report that many of the dry stone walls could be preserved by removing the archaeological and daga remains resting against them. The work was carried out by the Public Works department of Southern Rhodesia (PWD). The excavation was carried out with little consideration for the archaeological or aesthetic appearance of the area. The work was also executed under the assumption that the dry stone walls were the only important component of the monument. As a result daga structures and archaeological artifacts were destroyed. The excavation by the PWD left a huge exposed pit which in a few years had almost doubled its size due to continuous erosion.

Apart from Masey's report, the early years of managing Great Zimbabwe were marked by the absence of any direct intervention on the fabric of the dry stone walls. However, with the appointment of Sgt. Wallace in 1914 as curator of Great Zimbabwe, the face of the monument began to change. Wallace was responsible for a large number of necessary but misguided and inaccurate restorations. Using Masey's 1911 report, he embarked on major restoration of the monument. This marked a departure

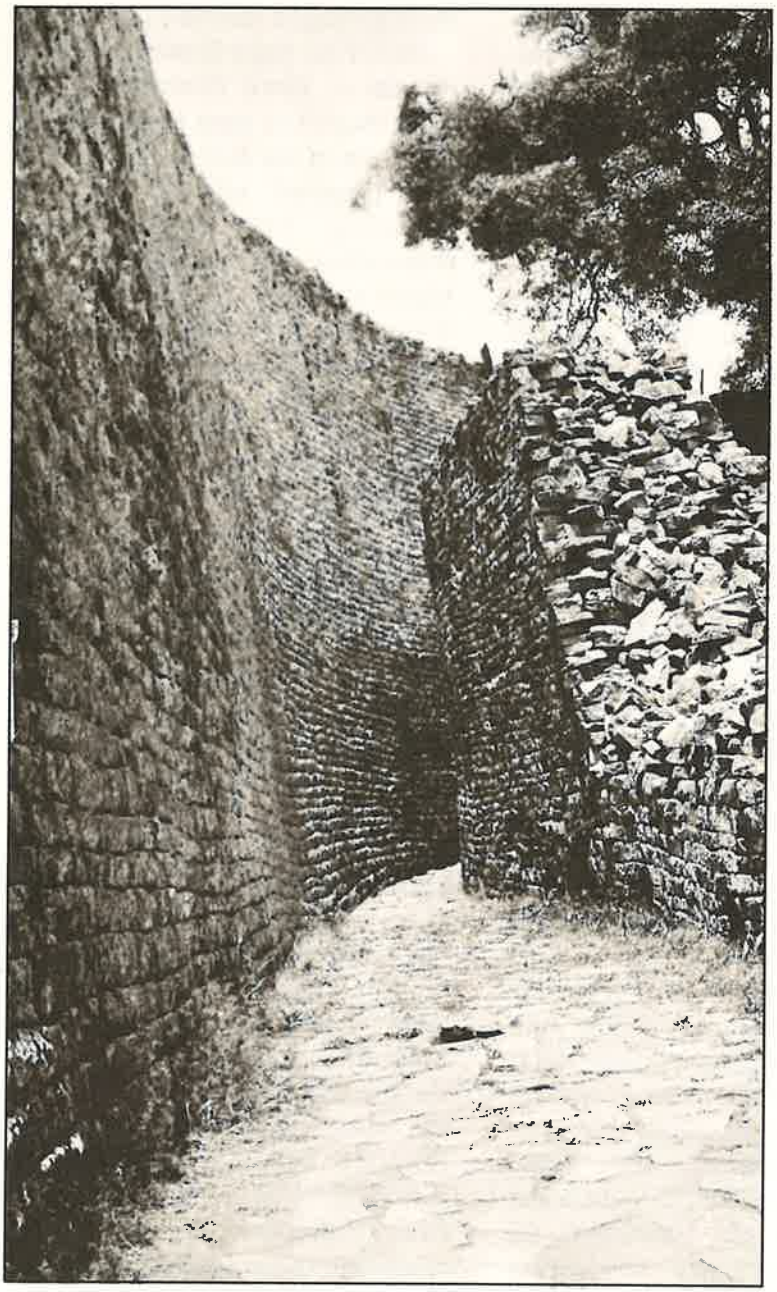

Fig. 3. Parallel passages at Great Zimbabwe

Fig. 4. Entrance steps - note the curvilinear nature of the architectural style

from previous efforts which were mainly directed at finding the origins of the site and also provide access to tourists. From 1914 to 1931 Wallace restored many walls at Great Zimbabwe including the entrances of the Hill Complex as well as those of the Great Enclosure. The restorations were architecturally inaccurate and did not follow any preservation ethics. (Walker and Dickens 1993; Ndoro 1994)

After Wallace, many curators in Zimbabwe carried out unsystematic repairs to collapsed and unstable walls on dry stone ruins. However greater priority was placed on the interpretation of this unique heritage. Many people were coming to such sites as Great Zimbabwe, Khami and Danamombe and these needed more information on such questions as who were the builders of such structures? When were they built? and what do they represent? Major excavations and documentation work were undertaken by Summers, Robinson and Witty in 1958 at Great Zimbabwe. Robinson also carried out excavations at Khami and Peter Garlake later at Nhunguza. These were aimed at establishing the chronostratigraphic sequence of this heritage. Their work has remained the basis of most of the interpretation of the Madzimbabwe tradition. Since the 1960's the interpretation of the archaeology and architecture of these monuments has been the main preoccupation of archaeologists (see Mahachi 191: Sundstrom, 1992: Chipunza, 1994). In the 1960's the top priority for most curators in the country was archaeological research. No clear policy or management plan existed apart from attempts to satisfy research based archaeological questions. The conservation aspects were left to unqualified technicians. The archaeological research did not worry about the long term preservations of these sites. Thus most were not even backfilled. A calculus of all the archaeological and conservation work done at these sites in the past five to six decades indicates that these account for most of the distortion or loss of part of the structures. Even the carbon dating revolution of the 1960's also left a scar on the fabric of such monuments as Great Zimbabwe. This led to the removal of the few wooden structural members on the monument, and this resulted in the collapse of one section of the dry stone structure. These well intended acts that have led to most of the irreparable damage, serve to point out to some of the complications involved in managing archaeological heritage today.

At other sites like Nalitale and Khame several restorations were carried out by Robinson. These mainly utilised concrete. The concrete capping at Nalitale prevented the collapse of large areas of the decorated facades. However, the disadvantage of this was that their aesthetic appearance becomes too artificial. Concrete or cement grouting was used at some sections of Khami, particularly on the hill. Here daga was mixed with cement.

By the 1960s the potential of such sites as Great Zimbabwe to become

Fig. 5. The symbolic conical tower - one of the national symbols from Great Zimbabwe

a major visitor attraction had been realised. By 1928 a hotel had already been built near Great Zimbabwe to cater for the European tourist. The number of visitors was growing each year and soon Great Zimbabwe became the second most popular attraction in the country after the Victoria falls. As a result, visitor facilities such as a site museum, a curio shop and a traditional village were erected. These included lodges for visitors and a car park. At Khami a site museum was also built. Most of the facilities were randomly located and no consideration was given to the archaeological deposits on site. What mattered mostly were the dry stone walls. no respect was given to the archaeology or cultural significance of the site. In any case the visitors were mainly of European origin, who had no cultural affinity with the sites. Part of the monument was even turned into a golf course. To indicate the lack of any proper management the monument at one stage had to be looked after by prisoners who had no formal training in the maintenance of such structures. At Great Zimbabwe management was under National Parks, an organisation whose main concern was wild life rather than cultural property. Even the research archaeologists like Robinson and Summers, who were under the Historic Monuments Commission, operated from the Natural History Museum in Bulawayo, more then 300 kilometers away from the prime site.

Roots of Modern Practices

Throughout the world the objective of conservation when dealing with ruined monuments has been to arrest or retard the process of decay. In the case of excavated ruins, the objective is not only to eliminate degeneration but also to rehabilitate the structure into a new environment. The conservation of these ruined monuments presents special problems. Unlike historic buildings in use, the ruined monuments in most cases will have lost some of their structural members. Most no longer have a roof to protect the rest of the structure. Most, like Great Zimbabwe, will have been abandoned for a long time and lack any maintenance. They may also be covered with vegetation and could be structurally unstable. However, the dilemma in dealing with such structures is that their importance and attraction may actually be based on their ruinous state which conjures up romantic and picturesque images. Thus any intervention in the name of conservation to stabilise or clean up the site might be in conflict with long established public views of the site. It was possible to advance the policy of "conserve as found" given the history of the Zimbabwe type sites and the image which people come to associate with the ruined structures such as Great Zimbabwe. However, the dictum "conserve as found" may inhibit reasonable and intelligent presentation of the ruins to the extent of making it meaningless to continue protecting it. Thus restoration of collapsed structures has been an on going exercise from the 1900's. There is even evidence of restoration

by the original builders.

Although the principles of conservation may be universal, the solution for each ruined structure depends on the local situation. The nature of the problem also dictates the practical solutions in many cases. A total understanding of the conservation needs of a prehistoric ruined structure is not easy to get. In most cases one is dealing with material and structures that have stood the test of time. The cultural significance and the sentimental value attached to each monument are also varied. The Venice charter might be easy to follow when dealing with European monuments or the Burro charter with sties in Australia but these are peculiar situations. It can be argued that the management of cultural sites is a long term experiment based on the values we attach to that site and how the general public perceive it (Ndoro, 1994). The values a monument has and the public perceptions are also continuously changing with time.

During the 1976 to 1980 war Zimbabwe (Rhodesia then) Most sites were abandoned due to security reasons. For almost six years no maintenance was carried out on archaeological monuments. Thus the vegetation which had occasionally been cleared did manage to grow and threaten the structural stability of the monuments. However, after independence in 1980 the government viewed such sites as Great Zimbabwe as a major visitor attraction and a source of great National pride. After all, the nation had been named after this great monumental archaeological site. There was therefore need to pay attention to the long term integrity of the monuments. However, there was no infrastructure nor the necessary personnel in the country to ensure this goal.

A major step was made by reopening Great Zimbabwe to the public and providing a skeletal staff to maintain and service the expected visitors. Major publicity campaigns were made and these were given a tremendous boost by the publication of Mufuka's populist guide book to Great Zimbabwe " Zimbabwe(1983) and Peter Garlakes "Great Zimbabwe" Like Wallace before him Mufuka, also turned his attention to the fabric. He unsystematically restored some of the collapsed walls in he valley ruins. These had earlier on been disturbed by early uncontrolled excavations.

UNESCO Contributions

After putting Great Zimbabwe and Khami sites on the World Heritage list in 1982 UNESCO sent a consultant to Zimbabwe to advise National Museums and Monuments on how to preserve these sites and other related monuments. The consultant, Sasson, stressed the desperate condition in which the monument was, particularly the lantana camera plant was causing damage and making access to the monument almost impossible. His report pointed out the need to look beyond the stone walls but also on other archaeological remains like daga structures. The report included

a draft plan of action for the preservation of the monument and other related sites. He also advised on the equipment needed and the training of personnel. Above all, he emphasised the need of continued cyclical maintenance on the site. The importance of Sasson's report was in its comprehensive nature in dealing with the general management problems, interpretation and physical preservation needs.

In 1987, UNESCO commissioned other consultants, Rodrigous, a geologist and Mauelshagen, a photogrammetrist to carry out a specialist evaluation on Great Zimbabwe. Their brief was similar to that of Sasson except that this time the experts were dealing mainly with the fabric of the monument. Their report observed that "there is not a single meter of wall completely free of problems" (Rodrigous and Mauelshagen, 1987). This conclusion was hardly surprising given the background of the two consultants. They both had experience with European historic buildings and the building codes could hardly be applicable to Great Zimbabwe. Here most walls were curvilinear, had no mortar and no foundation. Their recommendations included the setting up of an intervention team to include trained stone masons and the procurement of essential equipment and material. Mauelshagen's section of the report advised the adoption of photogrammetry to monitor the movement of the wall structures. Again the UNESCO report pointed out the need for trained personnel and the need for implementing a maintenance plan on the site. They also advised the need for a research program to identify priorities of intervention and evaluation of possible conservation techniques. At this stage UNESCO made a scholarship available for the training of a photogrammetry technician. The report specifically tried to address the question of the condition of the dry stone walls and it identified the need to document and monitor the structures.

Local Situation

It was on the basis of the Sasson's report that National Museums and Monuments appointed D. Collect and G. Hughes 1986 as resident archaeologists for the monument. Provision was made to establish a team whose main task was to preserve, maintain and manage the archaeological resource. For the first time the brief for the archaeologist at Great Zimbabwe prioritised the preservation of the monument rather than academic archaeological research. The government also undertook to build laboratory facilities to be used for conservation research and teaching purposes. This was largely due to the UNESCO reports and the recommendations of the conservation team. It was however clear to those looking after the heritage that a comprehensive management plan was necessary if the long term preservation of sites was to be achieved. It was along these lines that the first drafts of the Master plan for the Conservation and Development of the Archaeological

Heritage were made(Collect, 1990). The Plan covered all aspects of site management and not just the conservation of the dry stone walling: the resource was much more than that.

It was clear that the conservation of ruined monuments involves not only the physical structures, but also their setting and natural surroundings. The topography profoundly influences the impression a site makes on the viewer. Any serious conservation plan should thus incorporate consideration of the environmental setting. When dealing with ruined monuments there is need for understanding of the structures concerned and its cultural history and historical values because during its life the site may undergo repeated changes and alterations. In this way the ruins become a historical document on which peoples cultural developments are inscribed. Preservation ethics demand that any intervention should respect the historical changes of the structure. This may include the misguided previous restoration work. This is very problematic as the case history of such sites as Great Zimbabwe shows, In this case, earlier restoration and preservation attempts were guided by the early controversies associated with the site. In them the restoration by people like Wallace document the turbulent historiography of Great Zimbabwe. However, we have to realise that first and foremost the monument is a work of art, it bears witness to the technology and craftsmanship of the period when it was made. It is an exhibit of a cultural triumph. Thus, paying reverence to a historic document might distort the intentions of the original builders. This point of view is important when dealing with areas which were deliberately distorted by the earlier restorers who had a deferent interpretation.

Master Plan for Resource Development

The Master plan, developed by the Conservation team at Great Zimbabwe with the help of UNESCO, sets out the framework for planning, implementation, interpretation and future maintenance and conservation needs for the monument. The plan also recognised the problems of managing and conserving such a large archaeological resource. The long term objectives of the plan were:

To preserve and conserve Great Zimbabwe and related monuments, their contents, environs, landscape and structures.

To conserve and preserve Great Zimbabwe and related monuments, as historical, educational, cultural and scientific documents as well as works of art.

To provide access to Great Zimbabwe and related monuments to the visiting public, consistent with the conservation of the sites.

To manage these sites in a way consistent with the conservation and cultural values of the monuments.

The objectives covered two broad problem areas viz. the physical condition of the site and visitor management.

Physical Condition

It was also realised at this stage that whilst Great Zimbabwe was the main target of the site management plans it would also benefit other monuments and archaeological sites in the country. The problems they were facing i.e. lack of maintenance and preservation strategies, were not very different from the ones which Great Zimbabwe was facing. The priorities were set thus:

(a) To identify and understand the preservation and conservation problems at Great Zimbabwe

(b) To set-up a maintenance strategy for Great Zimbabwe and related sites.

(c) To explore relevant, appropriate and locally affordable techniques (For example it was not going to be possible to acquire photogrammetric equipment given the costs of the equipment and the training of the necessary personal).

(d) Need to disseminate the acquired knowledge about conservation and maintenance of sites.

At Great Zimbabwe the physical signs of distress were the numerous wall collapses, the deteriorating daga structures, the extensive land erosion and the decay of the metal artifacts in the museum. The primary problem was to get to the genesis of these symptoms. Documenting the problems was paramount. The plan therefore emphasised the need to know the cultural property and to have detailed plans of the archaeological resource(i.e., a condition survey of the site). The physical deterioration could also be divided into two categories (a) those inherent in the archaeological resource e.g. the natural decay and structural design (b) the exogenous problems e.g. due to vegetation growth or to tourists' activities. Most of the exogenous problems could easily be handled by proper and effective maintenance procedures. An example was the initiated effective control of the innocuous weed Lantana Camera by using the herbicide Tordon 101. The other category was not well understood and there was need to conduct research first before any solutions could be found. It was in line with this that a number of research programs were initiated. Research into the quarrying of dry stone blocks was begun with a view to evaluate the origins of structural weaknesses(Dube, 1990). Another research into the decay of Daga was initiated(Ndoro, 1990: Ndoro and Dube, 1993). Experiments with monitoring the movements of the stone walls using glass wires and survey trilateration were also designed (Nehowa 1990). Various areas of exploration were outlined and tried. These included techniques of conducting condition surveys, inventorying cultural property and terrestrial surveying.

In 1986 a structural monitoring scheme was introduced at Great Zimbabwe as a means of identifying and quantifying areas within the dry stone walls threatened by collapse. Monitoring of the structures at Great Zimbabwe was introduced as an integral part of an overall inspection

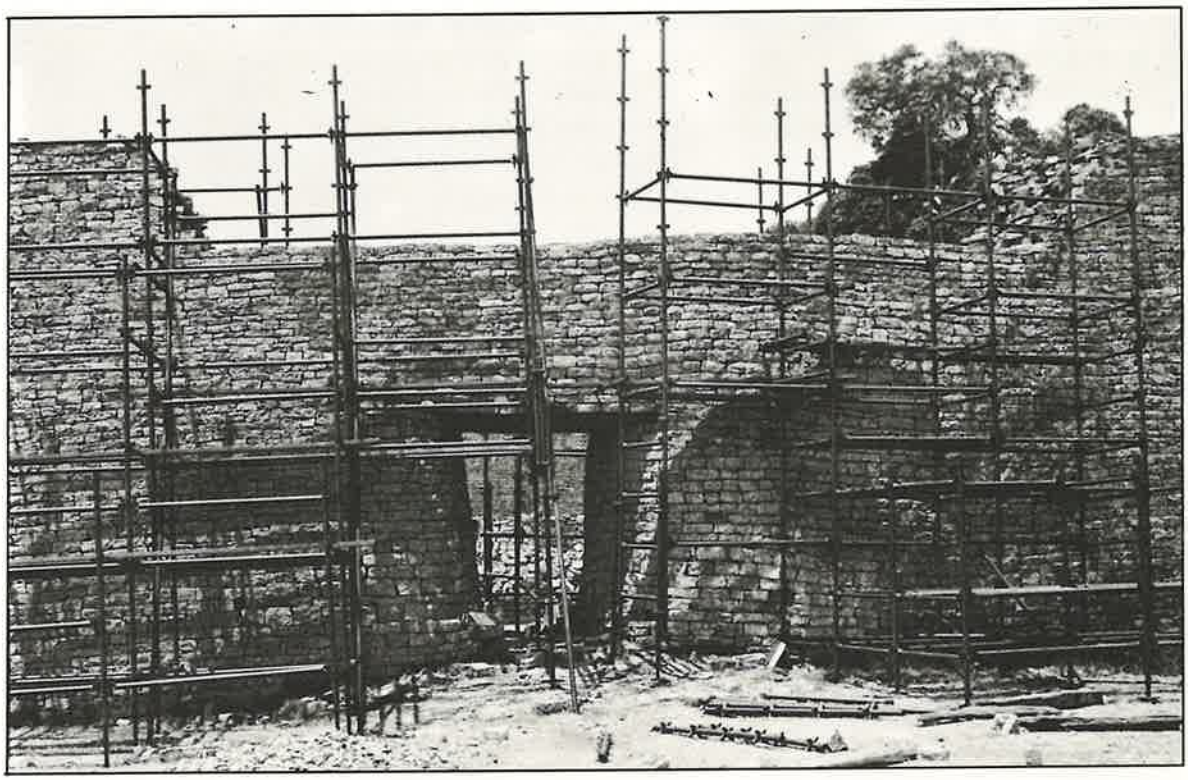

Fig. 6. Modern techniques of restoration 1995 - Restoration of the Great enclosure entrance

to assess the conditions of a site. The Scheme aimed at:

Identifying areas where significant movements and hence structural instability was occurring.

- quantifying the movement and structural instability.
- identifying causes of deterioration
- identifying levels and extent of required corrective intervention measures.

Several methods of monitoring were tried. Old and new photographs were compared in order to identify recent developments. No indication of the current condition of the wall could easily be deciphered by this method. By using principles of Young's Modulus a more promising method using glass wires was introduced to measure in - plane movements, This involved fixing a glass wire across an area where movement was suspected. From the presence or absence of broken wires an evaluation could be made on the structural stability status of the wall. The method was easy to use and did not require much skill to implement. Its disadvantage was that it was not possible to compute the magnitude of the movement. However as indicator of movement the method proved to be effective.

Visitor Management

The Plan recognised that the heritage was a tourist and education attraction and that these did also contribute to its deterioration. For Example, intense pressure on particular sections of the monuments like the Great Enclosure at Great Zimbabwe and at the curio shop could clearly be seen by the amount of erosion. The thousands of feet were unsystematically excavating the site each day. Similar signs could be seen at both Khami and Tsindi. They however, were also a source of income particularly to some of the preservation efforts and to the local community. Some facilities to cater for visitors already existed on site. The Master plan recommended the centralisation of the facilities rather than dispersing them like those that existed on site (fig). Centralisation would provide for more effective control and management of visitor movement. In order to minimise deterioration on the archaeological landscape, specific paths were to be opened and visitors were to be encouraged to use them. These were to provide wider access and spread the load. All service buildings were to be outside the monument except the essential ones. The plan recommended the creation a new visitor centre which could cater for people's needs.

In order to alleviate pressure on some sections of the monument, a house foundation excavated in the valley at Great Zimbabwe was left open. This was then turned in to an exhibition. The valley exhibition of a Great Zimbabwe daga house had the desired effect. Instead of just going to the Great Enclosure people began to explore the valley ruins. The excavation also helped the visitors to interpret the history of Great Zimbabwe. Similar exhibitions were repeated at Tsindi and Danamombe

with the aim of helping the visitors to interpret the heritage. It must be pointed out that at all the sites where the excavations have been left open the clay structures have been deteriorating rapidly. The benefits therefore of opening such areas has to be evaluated in terms of the long term preservation of the structures. It has been suggested that the answer would be to backfill these areas and build replicas for exhibition purposes.

Apart from increasing the number of site exhibitions it was also felt that a more meaningful effort in providing access to the monument to the local community must be made. Most of the museum displays were biased toward the use of technical terminology and were all in English. This left out the majority of the African population in Zimbabwe and the local community around Great Zimbabwe(Ndoro, 1994). An effort to cater to these people had to be made by using indigenous languages in the displays and guide books. It was along these lines that the site museum at Great Zimbabwe and Ziwa had to be reorganised in 1992-3 and for the first time the two major local languages, Shona and Ndebele were introduced. Although it can be argued that this move was more symbolical rather than a practical solution since anybody who can read the two languages must be able to read in English, it was felt that it was a necessary and positive step.

It was recognised that the sites were in a rural community and that its long term preservation could only be insured if the local people were involved. The area around Great Zimbabwe is characterised by some degree of rural poverty and lack of employment and development opportunities. Compared to the rest of the country the area is relatively dry and not much of crop cultivation can be done on the land. The local community over the years has shown a high potential for an indigenous craft industry. The master plan for the site was designed with the aim of incorporating them in the strategy to conserve and manage the site. Before 1980 most of the work on site had nothing to do with the local community.

Any meaningful and lasting conservation strategy will depend on the interest of the indigenous local communities. In order to cater for all these people it was necessary to make an effort to use indigenous languages in guide books and displays. The oral traditions, myths and legends had to find their way into the exhibitions, displays and museums at Great Zimbabwe ruins. This does not just serve the local communities, but also the foreign visitor who is interested in the culture of the area, for it creates that visitor experience that is uniquely African. Displays at Great Zimbabwe and Khami began to make use of local languages.

Besides using local languages the management plan emphasised the need to have imaginative interpretations on several locations on the site. A good example was the display of excavated daga house

foundations at Great Zimbabwe, Tsindi, Danamombe and Khami which began to attract visitors. Here visitors could obtain a good view and an appreciation of the various features which make the monuments. Its opening had the desired effect for it also alleviated pressure on other places.

Some of the problems affecting the sites were due to the clearing of vegetation which led to erosion. This phenomenon was also affecting the communities around Great Zimbabwe. The management plan emphasised the need to include the community in some of the efforts to prevent erosion. The erosion problems could be minimised if the local community could also be aware that trees and soil within the monument could not be randomly removed.

The rural communities were also encouraged to sell curios to the visitors. In this way their income becomes tied to the long term sustenance of the monument.

As part of an educational and a community participation initiative NMMZ began a programme where schools were encouraged to adopt a site for protection. In this programme schools are given sites to maintain and use as educational resources. In return NMMZ rewards for successfully maintained sites. This programme has been popular and will ensure that the young generation will grow with the full knowledge of the importance of preserving the sites.

International Co-operation

The management plan drawn up for the preservation of Great Zimbabwe and related sites exposed some of the inadequacy of NMMZ or deal with some of the basic conservation problems on site. For example no accurate map of the sites existed and their inspection was impossible. There was also a lack of basic equipment even for archaeological work. As in many developing countries, the effort to preserve monuments received vital financial and technical support from many foreign institutions.

In 1988 the Swedish Agency for Research Co-operation (SAREC) made provisions to fund archaeological investigations on the site. It also undertook to train archaeologists and artefact conservation technicians for NMMZ. SAREC further provided equipment for the archaeology laboratory. However, given the previous history of Great Zimbabwe, archaeological work excavations could not be undertaken until solutions to the erosion of previously exposed areas had been found. SAREC"s project understood the conservation requirements of the management plan and therefore decided to use non-destructive archaeological techniques. The project also provided field training to archaeologists on alternative conservation friendly methods of archaeological research. The methods involved use of remote sensing using phosphate and magnetic analyses. One of the major realisations was the fact that

archaeological research was as important as the actual physical preservation of the sites. Thus the training of archaeologist would benefit the overall conservation of the heritage.

In the conservation of the dry stone walls apart from UNESCO consultants, technical co-operation was also provided by the British Overseas Development (ODA). They undertook to fund a joint project between NMMX and Laugh borough University. The project focused on evaluating various methods of monitoring deformations on dry stone structures and identifying the failure mechanism on these walls(Dickens and Walker, 1993). The program went a long way in providing a cheaper method of monitoring the structures using stain gauges. This was a more affordable method of monitoring than the photogrammetric system. Besides the technique is simple and does not require highly trained personal. The project also helped to isolate some of the possible causes of wall collapses. The project was funded for two years and its findings were not very conclusive. NMMZ could not continue with the project for the laboratory facilities and equipment used during the project had been provided by the University of Laugh borough. Thus in 1993 the Buttress entrance and the terrace Path were restored using the original methods. In the same year the hill complex at Khami was restored after the walls had collapsed due to rain. These were followed with other restorations at Tsindi, Naletali and Ziwa. These went a long way in providing the necessary experience in dealing with the conservation of dry stone walling. To ensure an authentic restoration of the stone walls, the wall's face was mapped and each face block colour coded. A more controversial restoration was the 1995 Great Enclosure entrance programme. In the 1920's Wallace had wrongly restored these entrances and the monitoring programme at Great Zimbabwe had shown that one of the entrances had serious stability problems. It was clear that the wall had to be restored. However the question was in which style. No clear documentation existed on the entrances and accounts by early writers were not very clear. The question of the Great Enclosure entrance exposed the major weakness of the techniques which had been used for conservation of the stone walls, i.e. no clear cut philosophical or theoretical framework had been developed. In the past eight years or so what had been developed were the techniques but these had to be based on a sound theoretical conservation philosophy. The Entrance was finally restored in 1995 using a combination of modern techniques and traditional stone masonry. The result was a new creation of which no one can be sure of its originality. The lack of research and the political pressure to restore such an important section of Great Zimbabwe was very much apparent this project. It is hoped that the project will fuel more useful debates on the direction of

conservation of dry stone walling in Zimbabwe and the sub-region. More controversial perhaps was the restoration of Thulamela in South Africa were a whole site was restored without evidence of concrete documentary evidence.

Several international experts including the engineers from Loughborough University recommended the use of consolidates and geogrids as a method to improve the stability of the dry stone walls. These solutions would be good engineering solutions which could reduced the long-term maintenance of the structures. The major problem with this solution is the high cost of importing the material and lack of expertise in applying these in the country. After careful evaluation of the costs and benefits of these solutions it was decided that efforts be directed at the training of traditional stone masons. Thus should need arise some form of anastylosis or reconstruction could be done provided proper documentation had been carried out. Apart from fulfilling conservation principles of using original materials and skills this would also provide employment and skills to the local community. This solution would not depend on foreign currency which is a rare commodity in Third World countries but on labour which happens to be very cheap and easily available.

Donors' Conference

UNESCO and UNDP had always been involved with the preservation of Great Zimbabwe. As indicated, earlier consultants had been sent on two occasions and some of their recommendations were also incorporated into the site management plan for Great Zimbabwe. It was however, realised that inorder to implement most of the required components more funds would be required. The equipment and some of the expertise could not be acquired from within Zimbabwe. UNESCO and UNDP did not have the necessary funds to implement all aspects of the Master plan. In order to marshal human, material and technical support a Donors' Conference was then held. UNESCO and UNDP helped NMMZ to organise and prepare for the donors' Conference that was held in June 1992.

The master Plan was presented to international experts and potential Donors at the a Donors' Conference. The idea of the Donors' Conference was to raise funds and equipment and to raise awareness of donors and technical experts of the need for the preservation of Zimbabwean archaeological sites. The conference emphasised very much the potential economic development which may arise from a better management of the archaeological resources.

Apart from the donations of equipment, the Donors' Conference was more successful in exposing some of the heritage management problems in third world countries like Zimbabwe. Here conservation of the archaeological heritage could easily be seen as a luxury given the other problems of hunger, health and education. The conference managed

to focus on the potential economic and educational benefits if correct measures were taken.

It is too early to evaluate its success or failure, however direct responses have been noted. After the conference, Finland undertook the aerial and photogrammetric survey of the monuments. This resulted in the production of a Digital Terrain Model for the site and provided a base for future planning. The DTM together with the photogrammetric survey provide the base for a detailed condition survey of the site... It will be the base line against which any change can be measured and identify those areas which are priorities for immediate intervention or those which will require maintenance and monitoring in future. From this, proper assessments of conservation needs would be done.

It should be pointed out that the last decade has witnessed a growth in the capacity of NMMZ to preserve Madzibabwe type sites. A basic infrastructure is in the making. Research on conservation issues had led to a greater understanding of the cultural resource being managed. International aid has helped in the training of some personal. Attempts are being made to make displays and interpretations more accessible to all visitors. However, equipment for the basic research remains a problem together with the training of personnel. The training courses should be aimed at imparting knowledge which can be applied immediately. The courses should not be highly specialised but should cover a wide spectrum of site management issues.

Conclusion

Besides the promotion of the site to the public and local community the conservation of ruined monuments like Great Zimbabwe must be based on simple but familiar techniques. These should preferably be derived from the traditional and local conditions of the area. There is need to find appropriate and sympathetic solutions that do not depend on expensive imported high technology. The conservation of monuments is influenced in many ways by our ideas of the contemporary world. Thus in order to present the ruined structures successfully to the public, the strategy of conservation and presentation must be integrated. This needs a multi-disciplinary team to formulate and implement it. The central issue is how to make the monument intelligible and accessible to the public in a way that avoids degrading the very site that people want to see and also bequeath it to the next generation so that they too can have archaeological sites they deserve. As a cultural asset, cultural tourism is one way in which the rural community around Great Zimbabwe and in many other places can begin to develop. It is a sources of income, and in most cases the only feasible source. Besides the local community the tourist industry provides the mush needed funding for the total conservation strategy. However, there is a danger that we may become too concerned with heritage

as a marketable commodity and lose sight of the educational and conservation objectives. Thus a corporate strategy to develop the heritage industry should adopt a code of practice that reconciles the needs of the monument and its environment with those of the public. These must also take into consideration the impact of all this on the local rural community. The future of conservation and heritage management in most developing countries will depend on how these can be seen as enhancing the life and development of the area. Adopting a purely academic view towards the monuments will in the long run lead to neglect of the ruins and ensure that conservation of the cultural heritage is ignored by both the local community and policy makers. This will also mean no funding for conservation projects, which will clearly be given low priority by the central government due to lack of tangible and meaningful benefits to the development of the country.

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Rock Art in Zimbabwe

George Tafirenyika Mvenge

Rock art, previously referred to as Bushmen Paintings is the most ubiquitous art-form not only in Zimbabwe but throughout Southern Africa. It is Africa's oldest known art-form providing numerous insights into the culture and way of life of the Stone-age hunter gatherers and probably some Early Iron age agriculturalists to whom the art is credited.

The art is acknowledged to be the "world's last and greatest undiscovered artistic treasurers (Garlake 1995:7). As such it warrants more attention with respect to research interpretation and conservation than it has received. This presentation will highlight some of the issues facing Cultural Heritage Managers in Zimbabwe as they face the growing challenges to increase public awareness of the richness and diversity of rock art. These include its wide distribution, problems of dating and inadequate information for interpretation. Indeed there is some debate in some quarters as to whether or not it should be called art. Scholars are also determining what insights the art provides for deciphering life ways of the Hunter-gatherer communities of this country and the subregion and more seriously the problems associated with conserving the art.

The rock art sites are distributed mainly along the granite belt of the highveld between the Limpopo and the Zambezi. The granite outcrops are a result of differential erosion and are scattered along the highveld covering central Zimbabwe. Some of the granite outcrops have been exfoliated in ways that encouraged the development of impressive caves and overhanging structures that provided spaces for the artists. Those outcrops that could be painted have some art-form on them. (Fig. 1.)

While almost 4600 rock art sites have been recorded in the National Museums and Monuments archaeological survey, it is still acknowledged that this is a small proportion of the total sites available. The need for more extensive survey remains. In addition it has been determined that public awareness programmes that encourage the public to report sites to the NMMZ also bring results. The awareness programmes have been carried out through the print and electronics media.

The most successful initiative has been presented by the Museum

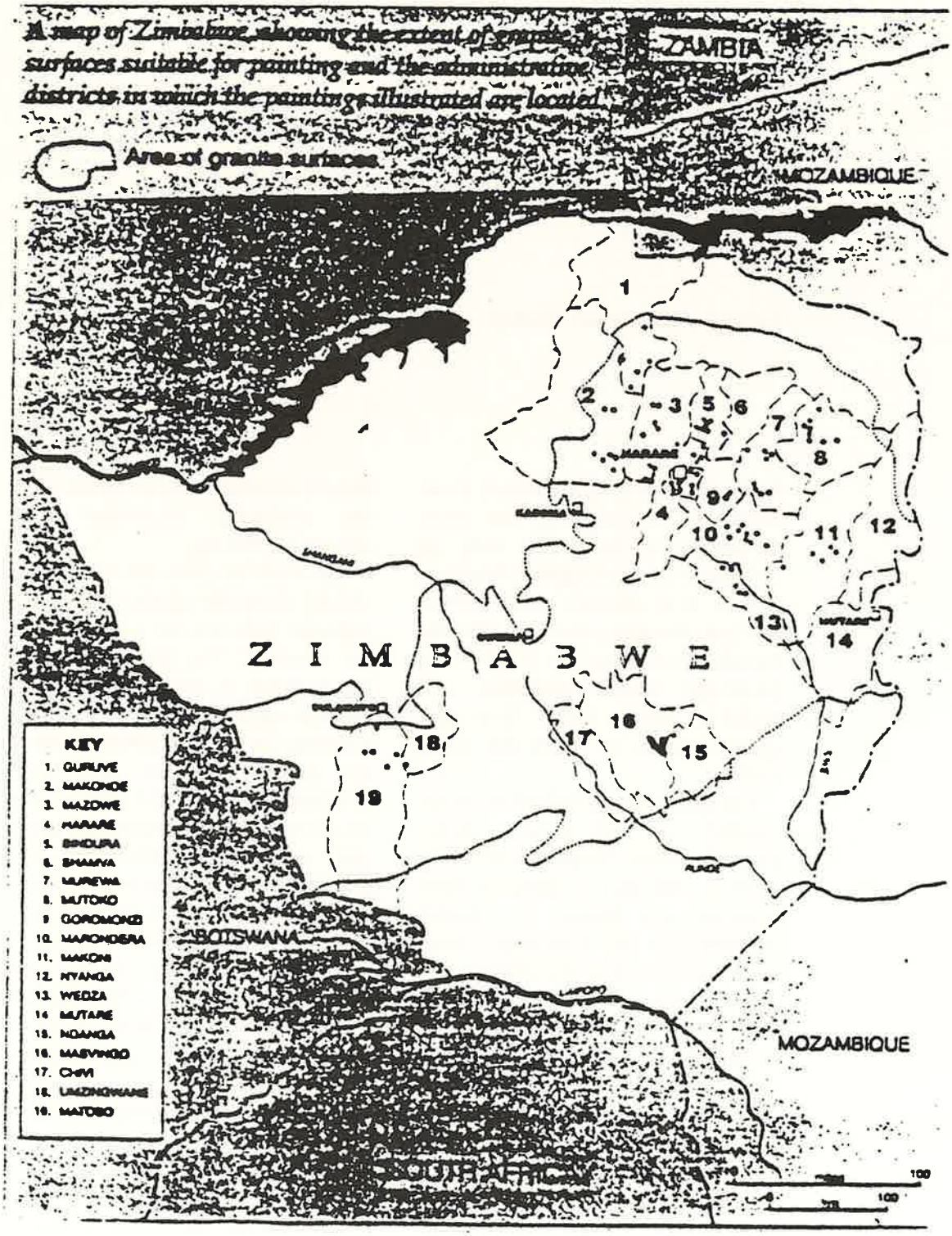
A map of Zimbabwe showing the extent of granite surfaces suitable for painting and the administrative districts in which the paintings illustrated are located
Area of granite surfaces
ZAMBIA
MOZAMBIQUE
ZIMBABWE
BOTSWANA
MOZAMBIQUE
KEY
1. GURUVE
2. MAKONDE
3. MAZOWE
4. HARARE
5. SHOURA
6. SHAMVA
7. MUREWA
8. MUTOKO
9. GOROMONZI
10. MARONDERA
11. MAKONI
12. NYANGA
13. WEDZA
14. MUTARE
15. NDANGA
16. MASVINGO
17. CHIVI
18. UMZINGWANE
19. MATOBO

Fig. 1

Education Service which encourages school children to report the sites and encourages teachers to use the sites as educational resources.

An ardent student of Rock Art, Peter Garlake, has noted that "one of the most appealing qualities of the paintings is that they still exist in the places where they were painted ..... the physical context is essentially the same as it was when the artists were at work and unlike the art of almost every other culture, these paintings cannot be removed to galleries and museums, given a price tag or become subject to the changing fashions of display" (Garlake 1995:16). This puts emphasis on the need for elaborate documenting of the art as a first step in increasing an awareness of its immense cultural and artistic value.

An important aspect in appreciating the style and development of rock art is the need to establish its antiquity. The rock art of Zimbabwe has not yet been dated directly for, although the establishment of some dates is important, scrapping material from the art panels for the purpose of establishing a date will obviously affect the integrity of the art. Indeed for the moment the best evidence for the date of surviving paintings comes from excavations in painted caves and shelters of the Matopos Hill. (Walker 1987:137) Walker's dates for some of the Matopo Caves suggests that they were produced between 13000 to 5000 years ago;

An important aspect in appreciating the style and development of rock art is the need to establish its antiquity. The rock art of Zimbabwe has not yet been dated directly for, although the establishment of some dates is important, scrapping material from the art panels for the purpose of establishing a date will obviously affect the integrity of the art. Indeed for the moment the best evidence for the date of surviving paintings comes from excavations in painted caves and shelters of the Matopos Hill. (Walker 1987: 137) Walker's dates for some of the Matopo Caves suggests that they were produced between 1300 to 5000 years ago; which suggests a greater antiquity for the art than has been generally accepted. Establishing accurate dates is important in itself as it adds to information about the paintings. It is also important for the cultural heritage manager because it helps to determine the durability of the materials used which information is useful in developing appropriate interventions.

The development of appropriate and accurate dating techniques is also important in establishing information to be used in the various interpretable site museums examples of which are Pomongwe and Tswatugi.

The question often asked by visitors to the rock art sites concerns the materials used in making the pigments used in the art. The identification of the material is important in that the information is crucial in appreciating the technological know-how of the artists

and also in determining appropriate methods for conservation oriented intervention. It is generally accepted that for pigments, the artists dug out nodules of various ironstones or iron oxides which they crushed into a powder. Historical records and experiments in South Africa suggested that binding agents could have included animal fats and blood.

Perhaps the most urgent challenge to the NMMZ cultural heritage manager derives from the need to develop appropriate techniques to assist visitors to appreciate the need to stimulate forms of enquiry that should help to interpret the paintings. The range of themes identifiable in the rock art is diverse and perhaps equally diverse are the theories that have been advanced to explain the motivation and meaning of the art.

A History of the interpretation of the rock art is as fascinating as the art itself and the challenge for NMMZ is to stimulate new forms of enquiry or provide a platform for informal and formal exchanges of ideas from which a determined research thrust can develop.

The research thrust being encouraged here would build upon a tradition that has tended to depend largely on insights provided by overseas or external scholars whose premise has been more often than not determined by the intellectual environment obtaining in their own countries. Thus available literature on the rock art in Zimbabwe includes Burkitt's studies which were mainly concerned with establishing the chronology of the art through its association with the stone tools, and Frobenius whose Kulturkreis background encouraged him to use the rock art to advance diffussionist theories which in essence identified the artists or at least their inspiration as deriving from some middle eastern or north African influence.

After Frobenius other contributions to Rock Art studies in Zimbabwe have included Elizabeth Goodwill whose major contribution was a large collection of tracings she made while working at the Harare museum, Cran Cook whose work also supported earlier diffusionism and recently, Peter Garlake whose work has become the standard reference for rock art in Zimbabwe. Garlake's major thesis is that rock art is much more complex a phenomenon than is often acknowledged deserving much closer study.

It is not the intention of this paper to suggest directions for rock art research but just to heed Peter Garlake's call that the art deserves more careful analysis so that advances in understanding something of the paintings, as in understanding a patient's problems are more likely to result from a progressive series of small steps, developing and testing many small hypotheses. (Garlake 1995: 48) While admitting that only very little has been done what follows is some introduction to a very complex phenomenon whose value to human culture is still to be totally appreciated. The presentation will only introduce some of the more well-known images and aspects of the art.

The most dominant images in the art include the human image, that is articulated in "The Hunter, The Gatherer and in patterns showing parents, families and communities; social and psychological images include those that depict dancing, and trances. Other common themes are gods spirits and depictions of theanimal world.

The Hunter does seem to be the dominant figure among the paintings of Zimbabwe. The hunter appears singly or in parties sometimes with up to forty people.

Fig. 2. Two hunters superimposed on a small distendeal figure, squatting above three lines that consistute part of her imagery. Mutoko.

The paintings to suggest that hunting was largely a male dominated activity whilst gathering was in the female domain Statistically women appear far less than men.

Painting of family and community groups also provide information on the range of items that the family and the community carried with it.

Fig. 3. A group of women sit beside their sticks and bags. Mazowe.
Fig. 4. A large group of several families encamped together, Mutoko.

Having introduced some aspects of the rock art in Zimbabwe one has to add that besides the need to continue the documentation research and interpretation of this aspect of the heritage as a vehicle for more elaborate promotion strategies, we also need to appreciate that this heritage is also under constant threat from the natural and human activity a subject that my colleague will deal with later. Indeed while the debate on the meaning and inspiration of the art has been going on, it has been observed from those sites whose condition has been monitored that rock art sites generally are subject to natural threats from tourist related vandalism including graffiti, application of inappropriate restoration methods, illegal fires and indeed some fragile environments are giving way to an increase in visitor ship.

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Conservation of Rock Art in Zimbabwe

Lorraine Swan

Some Problems of Rock Art Conservation in Zimbabwe

The greatest problems for rock art conservation in Zimbabwe currently is the impact by human visitors who, either deliberately or unwittingly, behave in such a way as to cause harm to the paintings. In the past, traditional values and beliefs attributed religious significance to painted caves, helping to preserve them. However these were affected by intensive occupation of southern Africa by Europeans, and have largely been forgotten. Currently in southern Africa many people live in underdeveloped areas, where limited educational facilities have been insufficient to replace traditional values with new appreciation for the importance of historical sites.

On the other hand farmers and land owners, although often appreciating the historical significance of paintings, may unknowingly damage paintings by their activities at these sites. One example is a farmer in Zimbabwe who could not understand why paintings on his property had almost completely disappeared during his lifetime. He had been using the site as a base for shooting clay pigeons, and shotgun cartridges may have released nitrates which could have adversely affected the paintings.

In another sense, changing traditional values may have an adverse affect on rock art. Paintings at Chikupo and Chavadzimu have been noticeably chipped within the last 30 years (Garlake, pers. comm.), and paint has recently been chipped from painted figures at Mumurgwe and Ngomakurria (Thorp, per. comm., and personal observation). It has been noted that paint is particularly taken from the knees of human and animal figures, and from figures in dark paint. It is obvious that paint removal is deliberate and not coincidental, because paint around the figures is intact. The paint is said to be used by traditional healers as a cure, including treatment for HIV and AIDS, which could explain the recent increase in this problem. It could be argued that this is a modern cultural use of the paintings and is therefore permissable but the consequences must be weighed. This activity will lead to the disappearance of a great number of paintings.

These problems of visitor impact from farmers and local residents

seem unique in southern Africa and strategies to deal with them must be sought locally. Problems of visitor impact which are experienced on a wide scale include outright vandalism and graffiti, covering up, over painting wetting, dust accumulation, touching, fires, disturbance of the archaeological deposit and possible disturbance of micro-climates. Photographers have sometimes applied water or oil to enhance the brightness of paintings, and this eventually causes dust to adhere to the rock, and accelerates flaking of the rock surface.

In southern Africa, paintings were inadvertently damaged in the past despite their importance, by fires in the shelters and by dust being kicked up on to painted surfaces. This is the case at Domboshava, where fires made every year during traditional rainmaking ceremonies have probably accelerated exfoliation of the painted surfaces. It has been observed that remnants of paintings high out of human reach have almost completely faded or only the lower portions remain. This may be caused by smoke damage, and is a hypothesis which needs to be tested.

Other causes of damage to Zimbabwean paintings are more deliberate. Schoolchildren add graffiti, and groups of the Apostolic Faith sect choose places like painted rock shelters for their nocturnal meetings, but appear to have no regard for the paintings, and their fires have sometimes caused great damage.

There are likely to be numerous, unidentified causes for rock art deterioration. For example, the effects of modern atmospheric pollution has not been considered in the context of Zimbabwe rock art.

In Zimbabwe, improved road networks and availability of strong vehicles in recent years has made many more sites accessible to tourists, where these sites were formerly protected from the impact of tourism by virtue of their remote locations.

A unique problem currently exists in the Matopos Hills where visitors are charged twice, once by the Department of National Parks and Wildlife on entering the park, and again by the NMMZ on visiting publicized rock art sites. Consequently visitors have begun to avoid paying fees to the NMMZ by seeking out less known sites, increasing visitor impact at these. An important dialogue is scheduled to take place between National Parks and the NMMZ.

The NMMZ has its own problems in dealing with rock art conservation. None of the staff of the NMMZ has specific training in this discipline Sometimes staff have cleaned graffiti from paintings without expert advice. Unprofessional cleaning can cause a variety of conservation problems for painted panels. It is hoped that attachment to an institution in South Africa or Australia will be arranged for the curator of Rock Art. Monuments inspectors should be sufficiently qualified to understand and deal with a wide variety of monuments considered as problems.

Furthermore, Monuments inspectors currently have difficulty visiting each national monument once annually, because of financial and transport constraints. Consequently maintenance of rock art sites in Zimbabwe is at less than a minimum level at present.

Current and Proposed Solutions

Conservation methods are either preventive or interventionist. Interventionist methods include cleaning and sealing paintings. These can be disastrous if used improperly and should only be used as a last resort, and only in consultation with a trained conservator who will examine the micro environment of the site before deciding on appropriate action. Such treatments should be tested on an area away from paintings initially; then the treatment must be monitored in order to assess its effectiveness.

Much research and experimentation in Australia has led to some understanding of the effects of various interventionist conservation methods on rock surfaces. These relate to paintings on sandstone, and so are relevant to South Africa, where many paintings are on sandstone. However, the paintings on the Zimbabwean plateau are on granite surfaces, so the rock type is igneous and not sedimentary. Much research by specialists with a knowledge of the geological and chemical factors involved must be undertaken before interventionist methods of conservation should be tried in Zimbabwe.

1. Natural Causes of Deterioration

Construction of drip lines, to divert running water away from painted panels, have advantages and disadvantages. They should only be used after close examination of the conditions at a specific site, for example analysis of the ground water. Materials used for constructing driplines must be chosen carefully, for example cement contains salts which would have a detrimental affect on the rock.

Build up of soluble salts on the rock surface can be removed with poultices of distilled water, and micro flora can be carefully brushed away with a dry bristle brush. However, these solutions present other problems for the conservation of the paintings, and should be used with extreme caution and only where absolutely necessary.

2. Human Causes of Deterioration

Education is an important way of dealing with the problems of visitor impact at rock art sites. The Education Department in the Museum of Human Sciences is currently aiming at a wider audience by teaching the teachers rather than the scholars. In addition, some teaching sessions have recently been held with students from schools located close to rock art monuments, to instill in the schoolchildren an appreciation for the sites.

Archaeological field workers assist the education outreach by incorporating local casual labour in field projects, and using resource persons for site recording. The latter approach has been used successfully

in Chivi, and less so in Mutoko.

The NMMZ's policy of contracting site museums is, of course, another effective way of communicating with the public about the importance of archaeological sites and the need to preserve them. Museums erected at Mutoko, Pomongwe and the forthcoming museum at Domboshava all deal with aspects of rock art. Permanent displays in the galleries of the Museum of Human Sciences need to incorporate more information about rock art, communicated in an effective way, in order to increase visitor awareness and appreciation of Zimbabwe's rock art heritage.

Less known sites should be protected from the impact of tourism by closing access routes and removing sites from maps. Where the NMMZ plans to attract more visitors to specific rock art sites, these may be regarded in part as "sacrificial", and it is essential that development is supported by conservation plans for the paintings. Visitor behaviour at the sites should be observed and assessed before management strategies for visitor control are designed. Cages or fences are unsightly, and they tend to challenge people to break in. In the Zimbabwean experience, fences are stolen unless they are closely monitored.

Boardwalks offer a suitable solution to guiding visitor activities in painted rock shelters. They can be designed to protect the archaeological deposit, to allow photography of the paintings from the most suitable points, to keep the paintings beyond the reach of visitors, and can incorporate information panels and seats at resting points with a view of the paintings.

Research at rock art sites in Australia has showed that visitors respond positively to signs asking them to refrain from certain activities, and warning of laws regulating this. It has also shown that a visitor book at the site tends to deter graffiti. Entrance fees and limited parking facilities can help to reduce the number of visitors, to control visitor pressure. Sale of brochures helps visitors to appreciate the value of a site, in addition to raising revenue. Sale of good quality photographs, slides, postcards and even posters, at reasonable prices, can also deter visitors from leaving designated routes to take their own photographs, and can enhance visitor appreciation of a site. Guides, if properly trained, can be an effective source of information and can help to control visitor activities. However, it is expensive to train and pay guides.

Recording Rock Art

It is not known how many rock art sites exist in Zimbabwe. The Archaeological Survey records currently includes approximately 4600 rock art sites, and more sites are reported every month. There are probably tens of thousands of sites which have yet to be recorded. An apparent concentration of rock art in the Matopos Hills has been shown to be false by other, more recent surveys, which have found dense concentrations of paintings in other

parts of the country and prove that bias is in the survey coverage rather than in real site distribution.

Environmental impact assessment in the wake of modern infrastructural development can be used to prioritize areas for archaeological survey work, and has the advantage of attracting funding from outside the NMMZ. In this regard, rock art sites have been particularly threatened in reçent years since quarrying "black granite" has become a lucrative economic activity. Many unrecorded rock art sites will be lost, and many must already have been lost, due to this industry. The NMMZ Act must be enforced to ensure impact assessment of quarry sites before they are damaged. In addition, the possibility of moving rock art panels should be investigated, so that at least some examples could be brought into museum collections.

One of the priorities in current rock art research is to make accurate and detailed records of rock art panels, especially through photography and tracing. It is impossible to protect the paintings from all sources of damage, and even conservation measures can only prolong their life. Inevitably most will eventually disappear. Consequently it is essential to create an archive of as many paintings as possible for the sake of future research and for the benefit of future generations. A clear illustration of this is the work of Elizabeth Goodwill, who, particularly in the 1930s and 1940s, produced accurate copies of many rock paintings in northern Zimbabwe. Some of these rock paintings have now faded or disappeared, such as those at Makumbe and Epworth, and Mrs Goodwill's copies are a priceless resource, from both scientific and artistic points of view.

The most important methods of recording are photography, photogrammetry and tracing. Much emphasis has been placed on photography, and this is a skill requiring expertise. Snapshots of paintings are not appropriate for research or archival material. The best way to record paintings is to make life-sized tracings of entire panels, such as those produced by Elizabeth Goodwill. This is another skill which require artistic talent as well as training and experience. Some rock art conservators have criticized the use of tracing for recording, arguing that contact between tracing film, drawing instruments and paintings will have detrimental effects on painted surface. On the other hand, as many different types of records as possible should be made in order to provide an adequate archive, because each method has advantages over others, and various methods complement each other.

Tracing has another advantage. Southern African rock art researchers who have developed their ideas the furthest and have achieved the most convincing steps in interpretation to date have spent a great deal of time tracing and studying the paintings. This is the only way to understand aspects of the art such as

juxtaposition and superposition, and to achieve a familiarity with the forms, theme and details which are essential to understanding and interpretation.

It is hoped, in the future, to obtain computer facilities to transfer recorded rock art images in our museum's collections onto digital format. This will enable long term storage in addition to colour enhancement, and analysis of images for research purposes. Meanwhile, slides should at least be transferred into polyethylene storage containers because PVC plastics are damaging, and slides used for lecturing should be kept separately from archival ones.

Very little work has been done in Zimbabwe and there is much that could be done to monitor natural and human causes of deterioration, and to investigate and try to understand the micro environments of painted panels in the Zimbabwean geological context. Until we have a better understanding of the natural causes of decay, preventive measures can be implemented to solve problems of human impact, and this should cope with the larger proportion of the problems. In addition, serious attempts must be made to implement the NMMZ Act for the protection of threatened sites. Rock art conservation is still in an experimental stage worldwide, and there are no conclusive methods. Each situation is different and must be managed individually, and the challenge to begin this work must be met soon in Zimbabwe.

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Archaeological Excavation in Zimbabwe: Past, Present and Future Trends

Paul Mupira

Introduction

This paper aims to give some general information about the practice of archaeology in Zimbabwe, focusing mainly on archaeological excavations. I will begin by giving a brief history of excavations in Zimbabwe, which date back to the late 19th century. Later on I look at the conduct of archaeological excavations in the contemporary context, with specific emphasis on rescue archaeology, analysis and interpretation of excavated sites and material and dissemination of excavation information. It is also argued in this presentation that the development of sound theoretical and methodological frameworks is essential in the retrieval of the past through excavations. The controversy involved in funerary research is scrutinised and the need for guidelines on the treatment of burials and skeletal remains is highlighted.

In the Beginning....To The Recent Past

Archaeological research, particularly excavations, started very late in Zimbabwe like in most other Southern African countries. But developments in the country were similar in most respects to preceding periods elsewhere in the world. The history of archaeology in Zimbabwe began in the late 19th century when some Europeans, especially from Germany and Britain, started to pay attention to the ancient artifacts and monuments found in the country. Most of the individuals who became early collectors had in fact came to the region as explorers with various antiquarian interests. They were curious about "mysterious' ruins, exotic artifacts and local history. Here I will only focus on those explorations that resulted in some major excavations which helped shape the archaeological debate in Zimbabwe.

Significant developments took place soon after the establishment of colonial rule by the British South Africa Company (BSAC) in 1890. During that time there was a lot of speculation about ancient Zimbabwean history, particularly that of Great Zimbabwe, seen as a fabled lost civilization. The magnificence of Great Zimbabwe led to immense interest on the question of who were the ancient Zimbabweans resulting in some bizarre philosophical speculation.

The earliest excavators were little

more than treasure hunters who hastily uncovered and removed considerable amount of antiquities. The excavations of Bent (1892) and R.N. Hall (1902, 1905) in particular should be viewed in this light. Cecil John Rhodes, the leader of the BSAC got fascinated by Great Zimbabwe and commissioned and sponsored the first archaeological expedition to the site. Speculation at that time connected Great Zimbabwe to the Phoenicians and Queen of Sheba of the ancient near east. The expedition led by Theodore Bent was therefore designed to dig for evidence of Phoenician settlement (Hall 1995). With a huge team of unskilled local labourers numbering up to 30 individuals Bent (1892:60) carried out extensive excavations at Great Zimbabwe. His excavations yielded some artifacts that turned out to be of great commercial value, among these several gold objects (Bent 1892a : 124).

These significant finds turned antiquarianism to profit making ventures, culminating in the formation of the Rhodesia Ancient Ruins Limited. The company was given exclusive rights to dig monument sites for treasures. Under this licensed depredation, a number of important monuments and sites such as Dhlo-Dhlo, Nalatale and Khami were vandalised.

Further excavations at Great Zimbabwe were carried out by R.N. Hall, a local journalist turned antiquarian. Between 1902 (the year which Hall was appointed Keeper of Great Zimbabwe) and 1905, Hall extensively dug at Great Zimbabwe with misguided enthusiasm and a casualness that had no respect for method (Hall 1995). Hall, although he was appointed to protect the site from plunder, surprisingly literally destroyed archaeological evidence, which he termed 'Kaffir rubbish', with little regard to preservation.

Scientific excavation was first applied in Zimbabwe in 1905 by David Randall-MacIver who excavated at Great Zimbabwe and other sites like Ziwa, Nyangwe and Dhlodhlo in 1905. He has also been recognized as the founder of modern fieldwork at Great Zimbabwe. In Peter Garlake's assessment Randall-MacIver's approach had been "faultless, his excavations careful, and his assessment of the basic culture of the occupants of Great Zimbabwe unassailable" (Garlake 1973: 78; see also Hall 1995:35).

The other archaeologist who showed a great sense of purpose and discipline in her excavations was Gertrude Caton-Thompson. During her short stay in Zimbabwe in 1929, she concentrated her work on Great Zimbabwe and a few other Zimbabwe tradition sites like Chibvumani, Chiwona, Muchuchu and Matendera. "By carefully excavating deposits, Caton-Thompson was able to classify pottery by its colour, texture and finish, a standard archaeological approach then, as today" (Hall 1990:7). She stressed the need for systematic empiricism resting on a foundation of stratigraphy and unequivocal chronological evidence

(Caton-Thompson 1931:2: see also Hall 1995:36). Such an approach shifted the emphasis from finding objects to deslgning a strategy for an excavation oriented towards solving archaeological problems rather than discovery for its own sake. Later archaeologists largely applied similar precise digging and recording methods.

In a parallel development, the emergence of museums (eg. National Museum in Bulawayo and the Queen Victoria Museum) brought another dimension to the valuation of excavations and artifacts. The value of excavated objects now lay in what was know about their source, the circumstances of their discovery, their cultural association and suspected antiquity. Archaeological excavations were done for their research value and mainly to support the museum's central role of display (Matenga 1991).

Excavators of the 1950s through to early 1970s were mostly concerned with verifying stratigraphic sequences and establishing a radio-carbon chronology for the country through excavations of both stone age and iron age sites. The most notable works are those of Cran Cooke, Roger Summers and Keith Robinson (see Cooke C.K., Summers R. and Robinson K. 1996 a and b). The value of their research lay in establishing and testing the empirical foundation upon which modern interpretations have come to rest (Hall M. 1995:
38). Except at sites such as Great Zimbabwe most of the excavations in the 1960s and 70s were small scale test pit surveys. Most excavators though had no formal archaeological training (they only attended short summer courses eg. at Ranch House College in Harare).

This review would not be complete without commenting on the works of Tom Huffman and Peter Garlake. The two combined facts obtained through systematic excavation and rigorous taxonomic analyses and theoretical frameworks to develop well argued models on important archaeological sties such as Great Zimbabwe. Garlake (1973, 1982) and Huffman (1981, 1982, 1984) offered detailed and competing interpretations of Great Zimbabwe that illustrated the potential application of archaeological theory to an African context.

Current Developments

In the absence of collated databases it is difficult to give precise statistics on how many excavations have been conducted so far in Zimbabwe. However it is estimated that the number of recorded excavations to date stands at about 250 out of a possible 10 000 known archaeological and historical sites. Since 1980 about 50 excavations have been carried out. It is difficult to distinguish which excavations were problem-oriented or rescue/ salvage-oriented from the existing incomplete database. Most of the sites excavated between 1980 and 1996 were carried out by museum and University of Zimbabwe (UZ) archaeologists.

There are no more than 25

archaeologists in Zimbabwe: 12 in museums, 4 at the University of Zimbabwe and probably at least 9 others working privately (I stand to be corrected if my counts are inaccurate).

The reasons for the reduced number of excavations since 1980 are varied. At the attainment of independence in 1980 many white archaeologists left the country. Some of those who were in museums remained for a little while, but when black management took over they also decided to 'retire'. As a result the new museum executives had to begin a new recruitment drive for archaeologists. The task was made difficult in that the single university in the country at that time did not offer archaeology as a subject (although the history department offered a course in prehistory). Between 1984 and 1989 4 Historians were appointed, who obviously needed an orientation in archaeology to develop skills and techniques in archaeological theory and method. At the same time 4 expatriate archaeologists were engaged and partly assisted in the training of the historians. the expatriates who had little knowledge about Zimbabwean archaeology were supposed to direct excavations. Because of this apparent constraint they needed time to acquaint themselves with the archaeology of the country before they could conduct research excavations. The University of Zimbabwe introduced a full archaeology course in 1986 and from 1989 museums started employing cadet curators with academic training in archaeology, but whose horizons in archaeology also needed to be broadened.

The situation has improved tremendously as 67% of museum archaeologists have now acquired Masters degree in archaeology. With these fully qualified archaeologists there appears to be a gradual increase in the number of excavations.

However with the shift in thrust towards conservation management and development of sites since the mid 80s, the increase is not likely to be that significant compared to the 60s and 70s. Most excavations at sites like Great Zimbabwe, Khami and Dhlo Dhlo have been conservation - restoration oriented. Further, because of the past damage through excessive trenching at some monumental sites, there is a deliberate attempt to conserve and preserve what is remaining by limiting excavations. While the National Museums and Monuments of Zimbabwe (NMMZ) is also conserving undisturbed sites, it is encouraging research and excavation of under-studied areas such as the stone age, hunter gatherer and rock art periods.

The concentration on development of specific sites has meant that excavation is mainly for public display. Structures such as houses are exposed so that visitors can view new evidence that has been found, be educated on how archaeology is conducted and enjoy and appreciate what the site has to offer. There are thus some sheltered dhaka structures

at sites such as Ziwa, Great Zimbabwe, Khami, Tsindi, Dhlo Dhlo.

On the other hand the UZ in conjunction NMMZ are carrying out archaeological projects that have resulted in a number of research excavations. This has been made possible by donors such as SAREC and the British Institute in Eastern Africa (BIEA). Four major research projects come to mind: i.e. the just ended Urban Origins project in Northern Mashonaland (SAREC), the recently inaugurated Human Responses to Environmental Change project (SAREC), the on-going Agricultural History and Archaeology of Nyanga Project (BIEA) and a separate Stone Age studies project (Lund University? Sweden; being carried out by K.T Chipunza).

Strategy for the Future

Research Excavations

Today excavations are limited mainly by ever-rising costs. As just noted above most recent large-scale research excavations have been funded by donors. Hence, of necessity there has been partial investigation of many sites. It is clear that besides development oriented excavations where total excavation and exposure is necessary, or where the whole site is threatened with destruction, partial investigation will remain the most cost-effective, time saving and conservation friendly strategy.

This therefore implies that partial excavations must be properly planned to give optimum results. Excessive trenching will mutilate sites and make it difficult to excavate and interpret the site properly in the future. Given the above limitations, it is also important to come up with nationally considered academic priorities before deciding on which sites to dig. This is already being done in the issuing of excavation permits. In order to come up with a sampling strategy that would determine the choice of sites to be dug, it is necessary to have a good data base. Surveys to identify potential sites that may require research excavation are no longer common in museums (although a number have been carried out in pre-development studies and by the University of Zimbabwe).

There is need to look at non-destructive ways of site-examination as well. These include soil sampling for phosphate and magnetic susceptibility tests and coring, which may be used to determine the extent of a site and the depth of deposits without sinking test pits. Although successful tests were carried out at Great Zimbabwe in 1990 these methods have not been applied very often.

The effectiveness of excavations can be enhanced by an inter disciplinary approach to research. The strategy of any large-scale excavation should be a matter for discussion so that a balanced view and all alternative interpretations can be considered. Loosely knit research teams may be formed in which each member of the group pursues his or her own research but contributes to

more general overall goals or an integrated field mission. Good communication and personal contacts with other specialists are important in this respect.

The integrated approach is particularly important where environmental problems are most pressing and where the excavation and research seek the relationship between human cultures and the rest of the ecosystem. The Archaeology and Agricultural History in Nyanga Project directed by R.C. Soper has pursued this team approach to a great extent. The project director is looking at the general theme, S. Chirawu- settlement systems in the lowlands and P. Mupira - demography and environment. In addition a pedologist, historian, ethnographers and biological scientists have been called upon to analyze and interpret the data related to their field. Such team effort is especially necessary for major archaeological sites and historic centres.

Rescue Excavations

The number of rescue excavations in Zimbabwe is generally on the increase. The reason is that there are many large-scale development projects taking place throughout the country. The government has also released a policy document that requires all developers to have environmental impact assessments carried out before development takes place. However, changes to the NMMZ legislation that will force developers to have archaeological impact assessments conducted have still to be tabled before parliament. Despite this short-coming developers are approaching either the NMMZ or UZ to conduct surveys and rescue excavations where necessary because they want to get the EIA requirements right.

Rescue archaeology in Zimbabwe is still not organized. As such sites are often destroyed because there is no good administrative rescue system. Statistics of damage and destruction of sites in the country appear to be non-existent. There is need for archaeologists specializing in rescue excavations and site protection.

Those sites which are to be completely destroyed by development must claim priority for (total) excavation if only they can be attended to in time. This requires planning years in advance of the site's destruction if we are to be able to conduct rescue work in the manner of a research excavation, with the tactics and pace dictated by the archaeologist rather than the developer (Baker 1993 : 141). This desirable situation, with the aid of policy guidelines, should be meaningfully explored for Zimbabwe before we lose more sites. Since the results of total rescue excavations can never be checked subsequently the excavations ought to be more rigorously directed than research excavations. The above can not be said of recent rescue excavations by myself, for example, (Mupira 1996 a & b forthcoming), that admittedly were not well - planned under - funded and conducted over very

limited time periods notwithstanding the potential importance of the sites. (Gwiranenzara Hill ruin is Zimbabwe type ruin and Ballyhooley Hotel - a 19th century hotel). The financial factor can be solved simply by forcing the developer to pay, as is the practice internationally. According to Barker (1993) it is much easier to convince the developer concerned that they should delay development and even contribute funds to the excavation if the rescue excavation is able to reveal the importance of the site and if there are tangible results that can be explained and create interest. The only way to change the status quo is to develop a definite blue-print on pre development impact assessments and rescue excavation. That blue-print coupled with education campaigns will assist archaeologists in influencing the attitudes of developers. farmers, national and local government agencies. There is a need to spread research to lesser known sites as these are the ones that are often threatened.

Publication of Excavation Reports

An important aspect connected with archaeological excavations is making available excavation results to other researchers. It is important that every excavation, particularly large scale ones, be followed by detailed study of the material and publication of the report.

Of late it has tended to take very long to synthesize the results of excavations. The reason partly lies in the staff development programme that has been mentioned earlier on. Also, it appears that curators have too many professional commitments to develop creative ideas. But perhaps the major factor is that the publication network is rather poor and needs to be developed urgently. The main archaeological journals Zimbabwea and Zimbabwean Prehistory, have been published irregularly in recent years. As a result many excavation reports have yet to see the light of the day - in museums most reports only serve to qualify the archaeologist authority to proceed on a field trip to conduct another dig!. This is not an ideal situation as potentially innovative works that may fuel theoretical and methodological debates are 'lacking. Hence there seems to be no significant development of excavation techniques nor improvement in the quality of excavations and theoretical sophistication.

The Need for Recovery and Interpretive Theory

Zimbabwean archaeology is still being carried out largely without reference to the debate about the nature of archaeological theory and practice going on internationally. It appears there is an inverse relationship between the development of theory and the wealth of archaeological data: the more data, the less concern there is with theory. A possible cause of the present scenario is that researchers lack information of recent developments because books and journals are not readily available and are expensive to acquire. Excavations and research thus seem to be fact-gathering

enterprises with little epistemological discussion.

Theoretical frameworks are important as they stress the scientific nature of archaeological research and facilitate more rigorous approaches to excavations and data. Theoretical frameworks also provide the impetus for the development of new areas of research - for example landscape archaeology and environment archaeology. Our concern should not just be the generation of new information or cultural material through excavation, but also sorting the raw data in our collections, re-viewing and re-classifying data excavated in the early days. traditional paradigms on which Zimbabwean prehistory is based can only be challenged strongly if a sound theoretical base is developed.

How can we develop theory suitable to our own context? Certainly we do not have to go through the same theoretical development stages as the Anglo-American archaeologists, to reach a different set of perceptions about the appropriate way to approach the past (Ucko 1995). However perspectives developed by say processual or post processual archaeologists should be useful guiding principles in founding a theoretical conception relevant to our socio-political context. Individual contacts through publication, collaborative venture and exposure to a world experience, for example through conferences, are very important as well in the development of theory.

Burials, Indigenous Traditions and Knowledge

To wind up this discussion I will now turn to a rather controversial issue of burials, and the relevance of indigenous Zimbabwean traditions and knowledge in research excavations. The ethical position of indigenous people regarding the excavation, study, display or storage of skeletal remains has raised highly politicized debates in some countries. The common belief among indigenous people is that excavation and subsequent treatment of skeletal material defiles the remains.

In Zimbabwe we have not been confronted by serious situations like in the Americas and Australia, where indigenous groups have demanded the return of skeletal remains held in various institutions throughout the world for the purpose of giving them a second burial. Archaeologists claim that scrapping excavation of burials, repatriation and subsequent reburial of skeletons will stagnate all archaeological funerary studies. However indigenous cultures like all cultures deserve dignified treatment and proper respect.

It is my contention that the excavation of burials is against the will of Zimbabwean indigenous communities. For if it is a co-belief of the society that the skeleton should be buried and respected, then the freedom of religious expression must overrule legislation and scientific study. Also the last rituals of any individual should be respected: it was the last wishes of the deceased to be buried at those sites (now called

archaeological sites). In my own opinion they must therefore not be interfered with. In cases where a burial is to be destroyed it should be quickly examined in the field and reburied at a safer site within the same locality.

Unlike in the early days where some excavators intentionally sought burials to excavate in an attempt to establish the ancient races of this country, most recent discoveries have been incidental. There is a large collection of excavated skeletal material boxed in storerooms and gathering dust at the Museum of Human Sciences (formerly Queen Victoria Museum). The skeletons have apparently attracted very little interest among black archaeologists because of ethical and moral reasons. My questions is, should we continue removing these burials to museums when it turns out that there is no one interested in them?

There is therefore need for a specific policy on the excavation and treatment of burials and skeletal remains in Zimbabwe. Archaeologists should adjust their ethical code, which tends to put the quest for data first and people's traditional spiritual beliefs second, to integrate the position of indigenous communities on the controversial issue of funerary research. We have tended to start from European concepts of science and ignore African perceptions of archaeological issues. Indigenous values and beliefs should play an important role in the structuring of ethical guidelines on archaeological funerary research. Traditional knowledge input is essential if researchers are to produce a code that captures the indigenous population's point of view.

Conclusion

Early excavators have been condemned for their lack of attention to detail and archaeological method. However one must judge research by the standards of its time; at least there had to be a beginning. Their numerous excavations, discoveries and excavation reports have served and will continue to serve as a firm foundation for future research digs. It behoves us modern archaeologists - with better resources, methods and techniques to strive to achieve even better results from research excavations. Archaeological sites are non-renewable resources, as such, we should not be delatory in our approach to rescue excavations. Archaeological excavations must be based on some theoretical preconception, more appropriately, social theory in our context. The tendency of attaching scientific importance to burials and skeletal materials is against social and spiritual belief systems of the indigenous African population of Zimbabwe. Hence a definite policy on funerary research excavation is necessary.

Towards the Revival of By-Gone Cultures The Case of Old Bulawayo

D. Munjeri et al.

1.INTRODUCTION

In 1991, National Museums and Monuments of Zimbabwe, with the support of UNESCO and UNDP embarked on an exercise to identify sites that had a tourism development potential. This was in the context of formulating a *Masterplan for resource conservation and development.* One such site was Old Bulawayo Monument which had the potential for a 'living history museum', alternatively referred to as 'theme park'. The basis of this assumption was the wealth of documentary evidence including a number of paintings. This, coupled with archaeological investigations, could be used to establish the exact layout of the site. Documentary evidence also meant that it was possible to reconstruct the daily activities that occurred at the site with some accuracy.

The preliminary observations were followed up in 1992/93, when the York Archaeological Trust of the United Kingdom was asked to do a feasibility study on the prospects of the site. The study was unequivocal in its conclusion: the objective was attainable. The exercise would entail: the reconstruction of Old Bulawayo and the neighbouring Jesuit Mission basing it upon archaeological, historical and ethnographic evidence. The exercise would result in the presentation of 'living history' and would result in more tourism. At least 250 jobs would be created on the formal market while a host of others would arise from activities related to crafts, playing role models etc.

The importance of Old Bulawayo lies in its location, history, historic and archaeological evidence: pictorial and archival records.

2. The Site

2.1 Location and Access

Old Bulawayo lies some 16.5 kilometres south-south-east of Bulawayo on the road to Inyorka and Emangeni, which cuts across the site. The road is tarred for the first 7.5 kilometres, but thereafter is a dirt road, although with a relatively good surface.

The Jesuit Mission lies to the south-east of the site of Old Bulawayo. A turn-off from the main road lies 500 metres south of Old Bulawayo, this minor road then heads east for a further 180 metres to reach the Mission. A gate currently bars the entrance to this minor road, but it can be opened to allow motor vehicles direct access to the site.

Currently the only viable mode of transport to the site for the tourist is by private vehicle. The roads are passable by vehicles without four-wheel drive, except during very wet weather.

The site of Old Bulawayo lies on a low, oval, flat-topped hill. To the north a shallow valley separates Old Bulawayo from an adjacent, lower, hill. A stream runs away down this valley, turning to the south-east. To the west, the hill falls away towards another stream running from north to south. To the south of the site is a valley with a stream bed in the bottom running off to the south-east. The streams to the north and south seem to be seasonal. The stream to the east is much more permanent.

The Jesuit Mission lies on a spur of land jutting out from the south-eastern flank of the hill. To the south and west are relatively gentle slopes down to the valleys. To the north is a much steeper slope falling down to a stream bed running almost due east to join with the more permanent stream in that direction.

2.2. History

The Ndebele state in modern day Zimbabwe was founded by Mzilikazi, who led his followers to this region from Natal, a process which was complete by 1840. After the death of Mzilikazi in 1868, and a bloody civil war, Mzilikazi's son Lobengula emerged in 1870 as the new King. He established his capital at Old Bulawayo, calling it Gobulawayo after his grandfather's village in Zululand. The name has been interpreted as the place of slaughter or the place of suffering a reference to the events surrounding Lobengula's accession.

White people were not permitted to enter the Ndebele kingdom before 1854, when through the influence of Robert Moffat this ban was lifted. As early as 1857, Protestant missionaries had penetrated the Ndebele kingdom. In 1859 a mission station was established at Inyati, and in 1870 another station was established at Hope Fountain about 20 kilometres from Old Bulawayo. Traders and hunters had also penetrated the Ndebele Kingdom, and by 1879, when the Jesuit Mission reached Old Bulawayo, there were a number of traders established on the ridge to the south-east of the capital, including James Fairburn, William Tainton, George Martin and A. Greite. It was

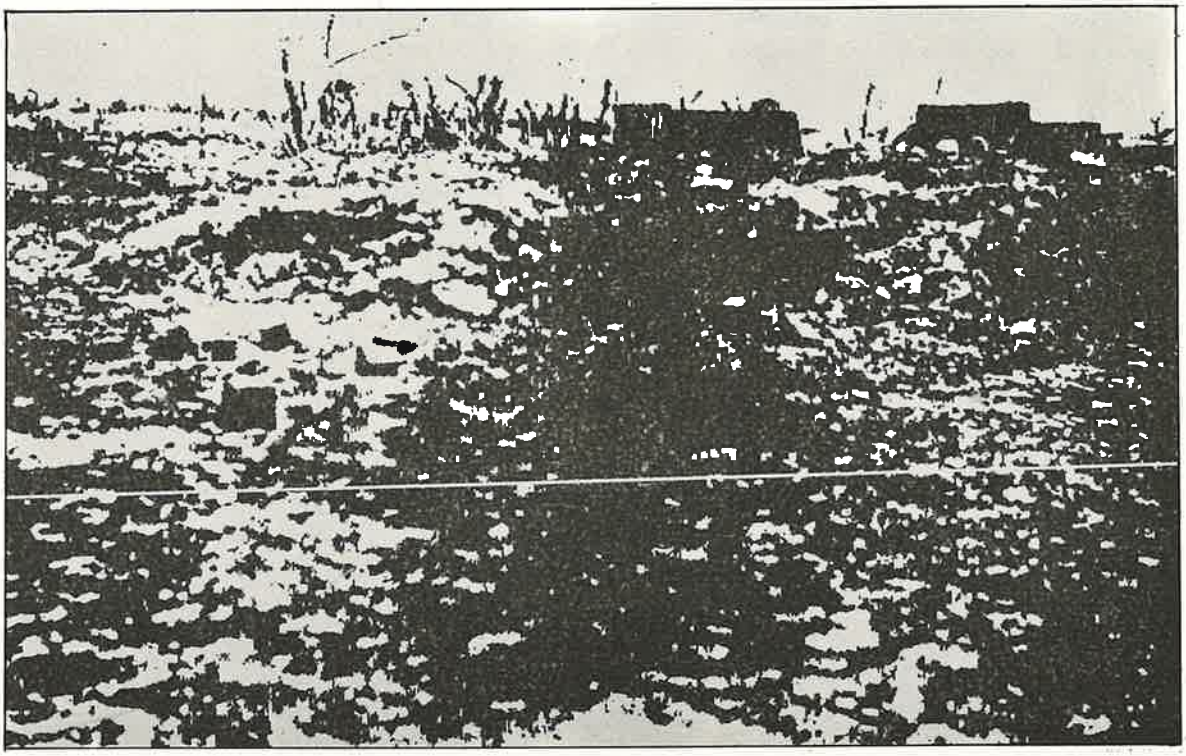


Fig. 1 Bulawayo 1893, following its destruction by fire.

from Greite that the Jesuits bought a house and compound which became their mission station. These were only the latest in a long line of traders established at Old Bulawayo over the years, others included McCabe, Chapman, Dyer and Hartley.

In 1881, Lobengula moved his capital 22.5 kilometres to the north-west, to the site of the present State house at Bulawayo. The reason may have been the environmental degradation caused by the presence of large numbers of people within a comparatively small area over a period of about a decade. It is also possible that the presence of the Jesuit Mission was a contributory factor, it is known that Lobengula refused to allow the conversion of his people.

The site at Old Bulawayo was not completely deserted. The Jesuits maintained their Mission there until 1887, when they moved to Empandeni, and several traders also apparently remained at Old Bulawayo for a time.

After the removal of the Royal capital to the new site, orders were given for the destruction of the old site:

'On the seventh day after the full moon, Makwekwe.. received orders from the king to go back to the old town and burn all the dwellings there which had belonged to the natives. So Makwekwe set about burning the King's palace, the queens' huts, all the buildings in the royal kraal, sheds, coach houses, stables, and even old king Mosilikatsi's waggon'. (Letter from Fr. Croonenberghs, 20th September 1881)

On August 14th 1882 Fr. Prestage described Old Bulawayo as 'in ruins' this is consistent with the aftermath of deliberate destruction. After the burning of Bulawayo in 1893, substantial remains of many huts still survived and were photographed.

2.3. Physical Remains

Of Old Bulawayo very little remains above ground, although a number of surface features can be detected. This evidence, together with surviving pictorial sources and contemporary descriptions, allows a reasonably accurate picture of the site to be pieced together. This material will have to be supplemented by a programme of archaeological investigataion before work on the presentation of the site can be undertaken.

Of the original site only a rectangle 232 metres by 250 metres is in the care of NMMZ; the access road passes through the eastern margin of the site. On the narrow strip to the east of the road, the only visible feature of Old Bulawayo is the indaba tree. The remainder of the physical remains of the site are located on the westernmost block.

Here the most substantial structure is the stone-built wagon house of Lobengula. This still stands to a height of about two metres, and is oriented roughly north-south, with the open end to the south. Close to it, to the west is a long, low hump with a large amount of fired brick scattered around it. This represents the site of Lobengula's house, which

was built in the western style. To the north and south of these European-style buildings are clay hut floors, one to the north and two to the south. Rectangular features to the east and west may be animal pens.

To the east-north-east of this group of hectares in the corner of the protected area are two parallel stone footings arranged in a sinuous curve. To the north-east of them is a circular stone footing with a dividing wall, and to the south west another hut floor. The parallel curved features probably represent one of the entrances to Old Bulawayo.

Rather more survives of the Jesuit Mission, dedicated to the Sacred Heart of Jesus. It has a square compound delimited by a collapsed stone wall. In the centre of the compound, oriented roughly north-south is a rectangular structure, still standing at the northern end to gable height. East of this a collapsed rectangular building abuts the wall of the compound, and in the north-east corner of the compound are the footings or collapsed walls of a third rectangular building.

2.4. Pictorial Sources

There are number of early depictions which are of use in establishing the overall shape and form of Lobengula's capital at Old Bulawayo. No doubt further depictions will come to light during the research phase. Those which we have been able to locate are:

- Gubulawayo 1879. General view by either Fr. Croonenberghs or Fr. Law. Shows the site from the hill to the north-east. The relationship of the Jesuit Mission, the traders' settlement and the royal capital is depicted.
- Lobengula reviewing his troops at Old Bulawayo, 7th January 1879. Probably by Croonenberghs. Shows the interior of the compound, with individual groups of huts encircled by palisades and projecting out into the edge of the compound.
- The Royal enclosure 1879-80. By either Croonenberghs or Law. Shows the royal compound, with the King's brick house, his hut and other huts. No wagon shed is depicted. The positions of the huts correspond very closely with the three hut floors located in the recent survey.
- The Dance of the First Fruits 1879-81. By Croonenberghs. Gives some idea of the scale of the capital. It depicts the central enclosure, encircled by huts, with, in the left background, the rear of the royal brick building and the royal hut. These are enclosed by a low palisade.
- The Royal enclosure. Date unknown. The King's house and wagon shed are depicted encircled by a palisade. Behind the King's house are six Ndebele type huts.
- The Royal enclosure. Date unknown. The King's house - here depicted for the only time without a verandah - with Ndebele huts behind, and the wagon shed to the left. The wagon shed here is a temporary

structure made of wood. This depiction may be earlier than the one above.

- General view of Old Bulawayo, c.1880. By A.A. Anderson. Shows the capital filling the whole of the top of the hill, with the Royal enclosure in the centre, surrounded by a large open space, and surrounded in turn by huts between palisades: the huts spill down the slopes of the hill. The external palisade has an irregular, lobed, effect.
- Greite's house, Old Bulawayo, Dec. 3rd, 1879. By Fr. Law. Shows the house and compound as taken over by the Jesuits. Compares very closely with the modern survey. It shows a central house. An iron store placed in one corner of the compound, and a shed against the far wall of the compound behind the house.
- Sketch of the Jesuit Mission, April 1880. By Croonenberghs. Shows alterations made to the property by the Jesuits. Not seen by us, but mentioned in a letter of Croonenberghs and seen recently by Michael Gelfand.
- Photograph of the Jesuit Mission, date unknown, perhaps late 19th century or early 20th century. Shows the mission after abandonment with the roofs off most of the structures, but with gables and chimney stacks still standing.

In addition to these direct depictions of Old Bulawayo and the Jesuit Mission, there are others which are of use.

- Inside the hut of King Lobengula. A painting by Thomas Baines, and said to be dated 1865. This cannot be correct as Mzilikazi was still King until 1868. Baines was in the Ndebele kingdom between 1869 and 1871, when this picture may have been made, and died in 1875. In any event, it is not clear that this picture represents Old Bulawayo. It does, however, show the interior of an Ndebele type hut, and this is consistent with the early type of huts recorded at Old Bulawayo.
- Bulawayo 1888. By "Matabele" Wilson. A plan of the successor capital to Old Bulawayo. The two settlements seem to have been very similar indeed in plan, so that this plan forms a reasonable guide to the layout of Old Bulawayo.
- European quarters at Bulawayo. Date and source unknown. This could depict either Old Bulawayo, or more probably Bulawayo. A useful guide for the reconstruction of other European houses at Old Bulawayo if this is undertaken.

2.5. Written Descriptions

Although there are many letters written from Old Bulawayo, particularly by the Jesuits, and numerous accounts of visits to the site, there are relatively few helpful descriptions. The most useful are:

- Description of the Royal House and enclosure at Old Bulawayo. Letter from Fr. Depelchin, 31st

Dec. 1879. 'Mr. Grant built for him [Lobengula] a roomy, single-storey house of stone, rather like the Boer houses in the Transvaal.... In front of the king's huts are those of Njina, Lo Bengula's sister, those belonging to the queens, to Makwekwe, the induna of Gubulawayo, etc. etc.

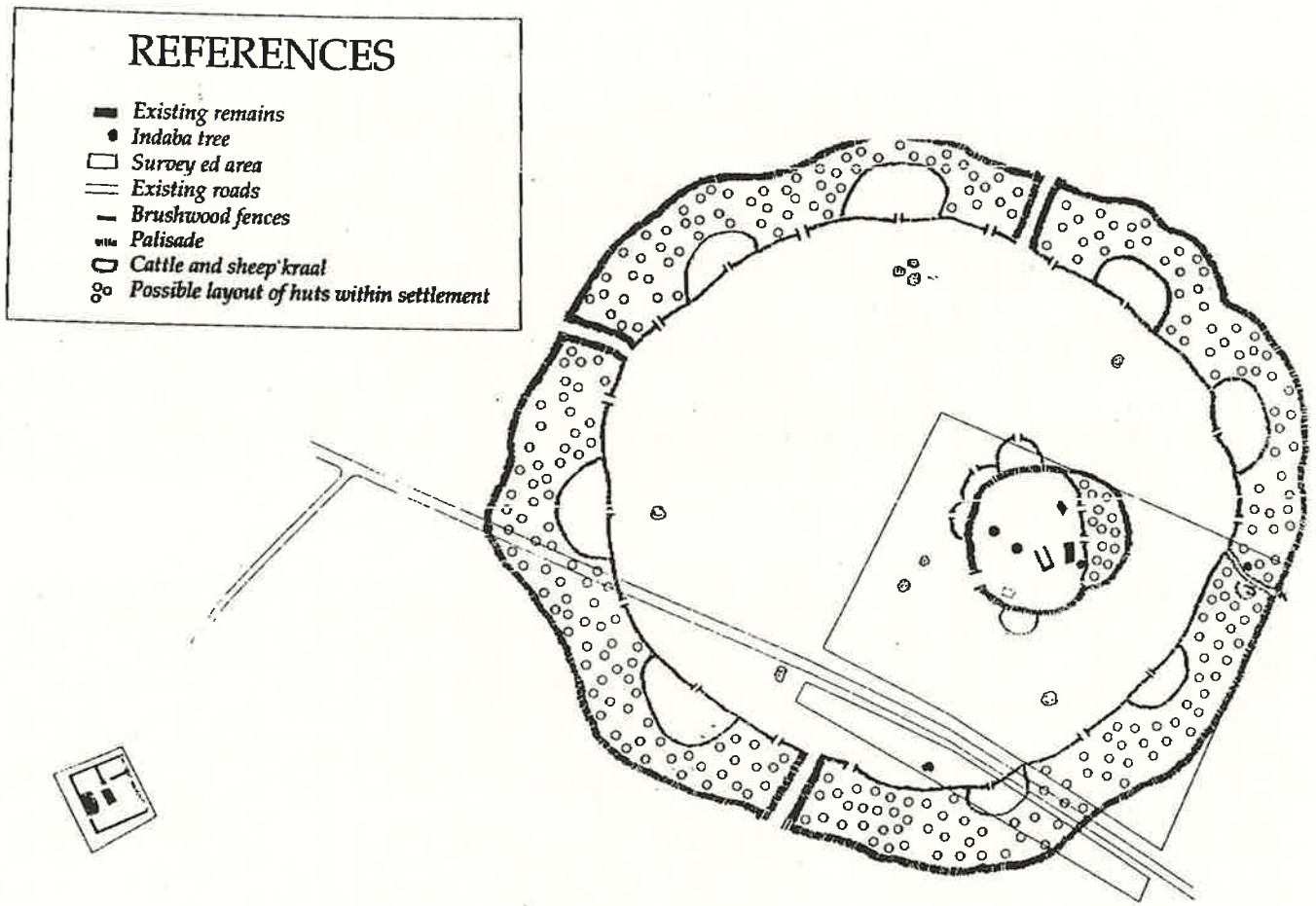
- Description of Old Bulawayo. Letter from Fr. Croonenberghs, 11th January 1880. The plateau of Gubulawayo, about 200m higher than the surrounding plain.... is a rough square with sides more than 100m long... Towards the western side of this square the people's huts are grouped around a huge circular space about 500m in diameter. Within this open space, towards the back, is the isikohlo [the palace] and the thatched huts for princess Njina and the queens. This august group of buildings is hidden behind a high surrounding palisade, and against the outside of this are the huts of Makwekwe, the steward for the capital, those of the royal guards, the madjokas, as well as the king's cattle kraal or enclosure'.
- Description of the Royal house. Letter from Fr. Croonenberghs, 1st March 1881. "Imagine to yourself one of our modest Flemish farmhouses in red brick, covered with a thatched roof. It is on one floor, with a verandah in front supported by four tree trunks. You go first into a hall, or rather a dark, narrow passage from which two small rooms open on each side, their ceilings so low that you can reach them with your hand. The first room on the right is a sort of charnel-house where chunks of raw meat, animal heads, remains of meals, and so on are all piled up indiscriminately.. The second room on the right is a sort of store-room, rather like a second-hand dealer's place, in which old uniforms formerly belonging to Colonial soldiers have gradually become a prey to ants and rats. On the left, a door opens into the throne room. You must take care on entering not to fall over the courtiers squatting on the floor, or the calabashes of beer, or His Majesty's boots and pipes, or the wooden bowls and other household utensils needed for receptions.

  In the middle of the room you can see a heavy table which was formerly a packing case in a heavy transport wagon. Behind the table, in a great leather armchair with its back ornamented by a crown, the Matabele chief is taking his ease'.
- Description of the Jesuit Mission. Letter from Fr. Depelchin, 3rd December 1879. 'This establishment has a large iron store which will afford plenty of accommodation. The house built in stone go three rooms (sic) and has sufficient accommodation to commence our

work'.

- Description of the Jesuit Mission. Letter of Fr. Law, 3rd 1879. 'Above is a sketch of our house at Bulawayo. Under A is the iron house. Under B is a house built of stone and thatched and jutting out from the house in this direction and immediately under B is a kitchen lately built. The main door of the house is hid by the kitchen. And there is another door by the side of the house opposite the iron house. Under C is a good substantial shed for stable etc. The view is from the W.N.W. It is about 500 yards from the kraal'.
- Description of the iron shed at the Jesuit Mission. Diary of Fr. Law December 11th, 1879 'Dimensions of iron house length 35 feet, breadth 15 feet Height 15 feet Height of roof 15f of walls 8(7 inches)'.
- Description of the Jesuit Mission Letter from Fr. Depelchin, 31st December 1879. 'Our property, surrounded by hedges, includes a large, single-storey cottage, constructed of stone..... There are also some sheds and stables in wood and pis. In addition, there is a large store made of sheet iron. We propose to convert this store into a chapel, as it will hold 200 persons with ease. Furthermore we have a garden and a poultry-yard.'.
- Description of the Jesuit Mission. Letter from Fr. Croonenberghs, 28th February 1880. 'Meanwhile Mr. Greite's iron store will serve us as a chapel. It is in a good position close to the entrance of our enclosure.

  Our property in Gubulawayo, about a hectare in extent, is in an excellent situation. We have a court-yard, a grassy meadow, a kitchen garden poultry-run, sheep fold, stable cattle kraal, servant's hut, kitchen, homestead, and also the store which we wish to transform into a chapel'.
- Building works at the Jesuit Mission. Letter of Fr. Croonenberghs, April 1880. 'Next week I begin to build three rooms for R.F. Dewith and the two brothers- after that I begin to build a gothic chapel, then to lay the ground of garden then to build a room for sick people at the entrance'.
- Description of building works at the Jesuit Mission. Letter from Fr. Croonenberghs, 19th May 1880. 'We wish to add a small wing to our dwelling and to build a small chapel... we shall raise.. not a magnificent temple, it must be confessed, but a really substantial chapel'.
- Description of Building works at the Jesuit Mission. Letter from Fr. Croonenberghs, 12th August 1880. 'I have just completed our little chapel... For several reasons we decided to be modest and prudent, so it is not by any means large. From outside it looks like an ordinary house - 20 feet long, 10 feet high, with 3



THE RECONSTRUCTION OF OLD BULAWAYO
(based on the drawings of Lobengula's Kraal 1888 by M.H.M.Stuart)

small windows and a thatched roof.

- Description of the Royal visit to the Jesuit Mission. Letter from Fr. Croonenberghs, November 27th, 1880. Reveals the presence of a photographic studio with camera obscura, and a pharmacy, separated by a curtain from Croonenberghs sleeping area. Croonenberghs slept on a mattress stretched across some packing case. The sanctuary of the chapel is described as follows: 'It is a modest little room, with walls plastered with brown clay, and lit by four windows with glass panes. The altar is in the middle and raised above the floor by a step, along the walls are hung pictures representing the Fourteen Stations of the Cross'.

2.6 The Plan, Size and Extent of Old Bulawayo

From the pictorial evidence it is clear that Lobengula's capital was circular or oval. It consisted of a central Royal enclosure, again roughly circular, surrounded by, but placed off-centre within, a wide open circular area. Beyond this was an encircling band of huts confined between internal and external palisades. Both the inner and outer edges of this band of huts may have been lobed, although the inner palisade was not lobed at Bulawayo. There were entrances into the central area at or near the four cardinal points of the compass.

The Royal enclosure is the only part of the settlement for which there is more detailed evidence. Either the Royal enclosure underwent a number of transformations in quick succession, or some of the sources are grossly inaccurate. It is not possible to establish which without excavation. Assuming that all the depictions and descriptions are more or less accurate, then the following sequence can be suggested;

- The Royal enclosure began in native style consisting of Ndebele type huts within a circular palisade, with a Royal hut for the King, huts for the Queens, and a hut for the King's sister Njina. In about 1876, a European-style house was built for the King by H.Grant.
- At this stage the Royal enclosure had a brick-built house with Ndebele type huts behind it. The brick building had two slightly projecting wings, each with a central window, and a central doorway. The whole was thatched, the roof having hipped ends. Under the eaves, at the front, in the angles of the wings with the central block were dovecots. At this stage there was a temporary wagon house in front of the brick structure, possibly made of poles bent over to form hoopes and thatched. As in all other stages of its existence, the Royal enclosure had a high palisade around it.
- In the next stage, the Ndebele huts still survived behind the brick building. The brick building itself had acquired a verandah. This was apparently

supported on brick piers and may have been formed by simply extending the roof structure. By this stage the wagon house had become a solid structure with exterior walls and a thatched roof with hipped ends - possibly the structure which survives today.

- There then appear to have been further alterations. These seem to have involved the replacement of the Ndebele huts with Shona huts, and in the positions indicated by the three surviving hut floors in the Royal enclosure. The brick building by this stage appears to have acquired a gabled roof, with a verandah only along the front, supported by wooden columns. There are also additional windows. To the right or in front of the brick building was the Royal hut, surrounded by a palisade. The wagon house is missing in the depiction of this stage, but since it would have obscured the brick building, this may be artistic license.

Clearly much more work is required before the veracity of these depictions can be established.

Although the general structure of the capital is clear, it is difficult to estimate its physical dimensions. These are, however, several hints. Firstly, it is clear that the buildings of the Royal enclosure lay near the centre of the capital, and are around 90 metres from the remains of one of the entrance ways. This suggests that the open area in the centre of the capital was not less than 90 metres wide, encircling the Royal enclosure. To the north-east the open area may have been wider, as it seems likely that the indaba tree fell inside, rather than outside the boundary of the settlement.

Jesuit sources record the internal open area as 500 metres across, but this seems to be an exaggeration.

The early Jesuit missionaries record that the 'Kraal' lay 500 yards from their Mission Station, while Fr. Prestage records it as '100 yards from our residence'. These differring figures can be reconciled if, as it seems likely from the context, the early missionaries were referring to the Royal enclosure, while Fr. Prestage was referring to the settlement boundary.

Given these facts, it is clear that the capital covered a much greater area than that currently in the care of NMMZ, stretching well towards the junction with the minor road leading down towards the Jesuit Mission.

Early accounts put the population of the settlement at around 600 people, but it is clear from the ground area the capital covered that it was capable of housing very many more. Presumably the population varied greatly with the presence or absence of the King, and with the annual cycle of tribal ceremonies.

3. Outline of Suggested Attraction

3.1 General Approach

In developing a tourist attraction at Old Bulawayo a number of alternative approaches suggest themselves. They may be summarised as follows:

- The consolidation of the existing remains and the construction of a building with an interpretive display.
- Excavation of part of the site, followed by consolidation, interpretive display and the creation of pathways from area to area.
- Excavation and research followed by partial reconstruction.
- Excavation and research followed by full reconstruction.
- Excavation, research, full reconstruction and the creation of a living attraction, with people recreating life in the capital for the visitor.

In this report the final course of action is the one recommended, on the following grounds:

- It is the course of action which most respects the historical, archaeological and ethnographical evidence, and which is most able to evoke and present the history and culture of the Ndebele.
- It is the course of action most likely to appeal to the visitor, whether they are coming from overseas or are local visitors. Living attractions are always far more appealing than simple reconstructions which can appear very lifeless.
- It is a course of action which makes use of one of the major assets of the region, a pool of relatively well-educated but inexpensive labour. The course of action recommended here is not one which would necessarily be viable in Europe or North America, the Labour costs there are simply too high.
- This is the course of action which most closely corresponds with that advanced in the Old Bulawayo project proposal, and which has been widely discussed and agreed.

This approach will clearly require a much larger area than the present one to be taken into the care of the state. We suggest that the whole of the hill on which the site sits should become public property. In addition, areas in the valley to the north should be acquired for the Visitor Centre, a subject discussed in more detail below.

The creation of a reconstructed and living attraction on the Old Bulawayo site is, however, not a straightforward matter of academic research, followed by scrupulous re-creation. As much thought needs to be put into the handling of the visitors and the infrastructure needed to support the re-creation as into the re-creation itself.

From our experience in creating such attractions, we believe that it is crucial to the success of the project for the visitor to know where they are in time. That is, if they are in the car park or ticketing area, they are in the 20th century, but if they are anywhere within the re-creation, then they are held firmly in the 19th century. Blurring of this ground rule will lead to visitor confusion and rejection.

In the same way the transitions

from the 20th century to the 19th century and back again need very careful management. It must be clear to the visitor what they are doing and why.

3.2. Visitor Approach and Facilities

At present the approach road bisects the site of Old Bulawayo, something which is intolerable if either the physical appearance or the atmosphere of the 19th century settlement are to be recreated. We recommend that this road be re-routed around the hill, either to the east or west. Preferably the road should be taken around the west side of the hill, otherwise the views from the Jesuit Mission may be compromised by looking out over modern traffic. Although traffic movement along this road is not heavy, one vehicle will be enough to break the illusion.

We suggest that the car park and visitor centre is placed to the north-west of the hill on which Old Bulawayo stands, between this new road and the hill itself. These facilities should be screened by tree planting from Old Bulawayo itself. A new spur road, resembling a low grade track will then run up the hill towards the settlement.

3.2.1 Car Parking

An area for the parking of 75 cars, and up to five coaches simultaneously should be developed, with room to increase car parking facilities as and when necessary. The car parking area should be naturalised as far as possible. That is, shaded by trees and well planted with vegetation of small habit around car parking areas. We suggest that visitor facilities are provided on the car parking area, allowing the Visitor Centre to become a zone of transition between the present and the past.

3.2.2 Visitor Facilities

The following facilities will need to be provided in the car parking area:

- toilets
- drinks and light refreshments
- barbecuing areas 044
- picnicking areas
- rubbish disposal facilities

Where it is necessary to build structures to house these facilities, it is recommended that they should be built of natural materials and in a manner to blend in with the environment. They should not, however, attempt to slavishly copy traditional structures. If they do so this will confuse the temporal messages which it is important to convey to the visitor.

3.2.3 Accommodation

As numbers visiting the Theme Park grow, it is sensible to provide accommodation on site. This can be provided at separate levels:

- campsite accommodation with lavatory and washing facilities
- one room randavels, again with communal facilities
- tourist lodges each with all facilities
- standard hotel accommodation

At the moment NMMZ is running camping facilities at Great Zimbabwe and developing tourist lodges and rondavels. It is suggested that the same approach is adopted at Old Bulawayo. If standard hotel

accommodation is required, it is suggested that the high capital cost of such development will place it beyond the means of NMMZ, and this should be left to the private sector.

In the report the Heritage of Zimbabwe - Resource Conservation and Development, it is suggested that visitors might like to stay in the huts of the Theme Parks both at the Shona Village at Great Zimbabwe and at Old Bulawayo. This may well be an additional attraction at Old Bulawayo, but if this facility is offered to visitors, they must remain in period; that is they must stay with a family at Old Bulawayo, eat food prepared in traditional ways and sleep on a sleeping mat, not a mattress. Providing these conditions are met, this may be a useful additional source of revenue.

3.3 Visitor Centre

3.3.1 General Approach

Like the visitor facilities in the car parking zone, the buildings of the visitor Centre should be in natural materials and of traditional style, but of the 20th century.

We suggest splitting the Visitor Centre into three zones, an entrance zone, an exit zone and a service zone. The functioning of these zones is summarised in the accompanying diagram. The facilities of the entrance zone are described here, those of the exit zone at the appropriate place in the storyline.

The entrance zone will provide the following functions:

- ticketing
- orientation
- access to Old Bulawayo

We suggest that the entrance zone takes the form of a sub-circular compound surrounded by a palisade. Within this palisade the various facilities will be provided. The use of such an approach allows there to be constant expectation and surprise, everything is not open and visible for the visitor to take in at a glance.

3.3.2 Ticketing

The ticketing point should be a relatively modern style of structure with space for two ticketing points. Automatic ticket dispensing equipment should be installed for the ease of the staff in this area. That the ticketing area is kept modern in style is important to the design of the following area, the orientation area.

3.3.3 Orientation Experience

The function of the orientation experience is to form a transition between the 20th century and the 19th century. There are many high technology solutions to this problem, but we feel that they are not appropriate to this site, and may present insuperable problems, in terms of maintenance and running costs.

Instead we suggest a sinuous corridor is constructed, folding back on itself. Visitors will be carried back in time by walking through this corridor. In it, changes in building materials, methods of lighting and images will gradually move the visitor from the 20th century to the 19th.

For example, brick and concrete finishes to the corridor will gradually resolve into corrugated iron and

painted wood and then into straw and daga. Lighting will change from modern halogen lamps through paraffin lamps to traditional lighting appropriate to Old Bulawayo. Smells can also be recreated and used to evoke this shift back in time. The system for creating and delivering these are relatively simple and require nothing more than a low power source of electricity.

3.3.4 Access to Old Bulawayo

From the orientation corridor, the visitor will be presented with a choice. Either they can walk up the hill to Old Bulawayo from the visitor centre compound, or they can choose to be driven up.

Of course, it would be wholly inappropriate to use any form of modern transport to carry visitors to the site. We have emphasised the need to hold the experience in period and need not to confuse temporal messages. We, therefore, suggest that replica 19th century ox-drawn wagons are used to transport visitors. This approach has several advantages.

- It introduces the visitor to the pace and nature of 19th century transport in the region
- It is, in itself, an exciting and interesting experience which enhances a visit to Old Bulawayo.
- The drivers of the ox wagons can be trained to introduce the visit to Old Bulawayo, choosing the language they use according to the visitors they are carrying. It is anticipated that an ox wagon will need a team of two to run it.
- This method provides disabled access to the site of Old Bulawayo

A circular route has been devised, taking in the Visitor Centre, Old Bulawayo and the Jesuit Mission and visitor will be able to get on and off the ox wagons at a number of points along this route. Loading and unloading stations will have to be constructed to allow visitors with restricted freedom of movement to use the wagons, but this is a straightforward matter.

It is crucial that the ox wagon operators are in period, that is that they are behaving as if they are in the 19th century, and speaking in the first person. That is they are saying'... you will see this or that', but 'we do this or that'.

3.4 Old Bulawayo

3.4.1 The Hierarchy of Evidence

As noted above, the core of the experience will be the reconstruction of Old Bulawayo itself, and as accurately and authentically as possible. In achieving this end it is crucial to adhere to a hierarchy of evidence which has been discussed in advance, which everyone can accept and which then is rigorously implemented. Different hierarchies of evidence may be appropriate to different elements of the reconstruction.

For example, for the physical layout and apearance of the settlement the hierarchy of evidence, in descending order of usefulness, might be:

- Archaeological evidence.
- Contemporary depictions of the

site and buildings.
- Contemporary descriptions of the site and buildings.
- Traditional knowledge.
- Ethnographic parallels.

For the reconstruction of the social life of the settlement of Old Bulawayo, the hierarchy would be very different, perhaps:
- Traditional knowledge.
- Ethnographic parallels.
- Contemporary descriptions.
- Contemporary depictions.

The accompanying table sets out the areas in which hierarchies of evidence will have to be established, and makes some suggestions as to which evidence should be preferred in what areas. It must be stressed that there is no attempt here to be prescriptive, merely to start the debate.

3.4.2 The Reconstruction

As suggested above, we believe that to undertake anything less than the wholehearted reconstruction of Old Bulawayo will fail. This must include the reconstruction and furnishing of the Royal brick building and wagon shed, and the Royal huts.

It is, however, recognised that Old Bulawayo was a very large settlement, and that to reconstruct and furnish every hut in original detail may be prohibitively expensive. We suggest, therefore, that some areas of the settlement encircling the central area are reconstructed, but are not directly accessible to the public. This will mean that the huts and compounds will have to be built, but that the furnishing of the huts need not be undertaken. These areas can be used to house staff facilities where they will not be visible to the public.

For all areas which are accessible to the public, however, furnishing of the huts will have to be undertaken in detail, so that no discordant 20th century note is introduced to the experience at all. In addition, it is important to ensure that there are cattle, goats and even ostriches in the appropriate kraals and that the whole atmosphere of a living settlement is evoked.

3.4.3 Living History

A living settlement cannot be evoked by simply reconstructing its physical aspects. We suggest that Old Bulawayo is populated. With such a large site, a significant number of people will be required to make it look adequately populated, perhaps as many as 200. . This clearly presents difficulties in terms of the high revenue costs that such a large number of people will inevitably generate.

As with all other staff actually within the experience, those inhabiting Old Bulawayo will have to be costumed in a manner appropriate to the 19th century, with suitable adjustments for the sake of property.

As with the wagon drivers, it is recommended that the inhabitants of Old Bulawayo are in period and address visitors in the first person in explaining how they live. It is not recommended that the experience should be treated in the manner of theatrical performance, with every participant learning a script. Instead

we recommend basing the experience around the cycle of daily life as it was lived in the 19th century, and around the yearly cycle of events and festivals. In this way each member of staff will have a character, but what that character does at any one time will be conditioned by the life they are leading within Old Bulawayo. For example, if it is a meal time they will be eating. Only the role of the King and his family may be much more scripted, indeed they may only be present at Old Bulawayo at certain times of the year.

If this approach is adapted then several things will flow from it.

- If 19th century life is to be adequately reflected, then staff populating Old Bulawayo will have to be cultivating the land round about, or herding cattle and goats, just as their predecessors used to do.
- If the population of Old Bulawayo are farming in the 19th century manner, then only appropriate crops and species of animals can be kept and reared using the techniques of the 19th century.
- It may actually reduce revenue costs considerably, as the produce from the land can become the property of the staff and form part of their package of remuneration.

This approach also has a validity in research terms; that is the impact of 19th century farming techniques on the environment can be monitored over a long period. If this is done it will form a useful part of the debate as to why the Royal capital was moved from Old Bulawayo to Bulawayo.

3.4.4 Participation Experiences

Within the Old Bulawayo experience, the staff inhabiting the settlement will be undertaking a whole range of activities which will be of interest to the visitor. Not only will they be engaging in agriculture , but they will learn to make all the household and consumable items for the settlement, making the whole thing self-sustaining.

Many of these activities will only be suitable for the visitor to watch, and to have the various processes explained to them. Other activities can be participative, that is, the visitor will be able to try them out for themselves. Activities like weaving, potting, playing musical instruments are all things which visitors can try out, and form which visitors can try out and from which they will learn a tremendous amount.

It is very important that the visitor is drawn into the life of the settlement in this positive way. It is the quickest and most effective way for the visitor to learn to appreciate the culture of the region in the 19th century in all its diverse manifestations.

3.5 The Jesuit Mission of the Sacred Hearth

3.5.1 The reconstruction

From the site of Old Bulawayo the visitor will either walk, or take an ox cart to the Jesuit Mission. It is suggested that the Mission is

reconstructed and furnished appropriately for the period. This will ideally necessitate the removal of the monument to the early Jesuits which was erected to commemorate the centenary of their arrival at this site in 1879. It is suggested that it would be appropriate to relocate this memorial to stand next to the realigned road encircling the Theme Park.

There is clearly some difficulty in actually populating the Mission station in the same way as it is intended to populate Old Bulawayo. Int may not be easy to recruit the right people to do the job. However, the faithful reconstruction of the Mission will at least evoke the Lifestyle of the Missionaries. It may be possible to the Mission for refreshment purposes. It is recorded that the missionaries were drinking fruit juices, and these could be dispensed to the visitor, so long as it is done using replicas of 19th century mugs or glasses.

In time it may also be possible to reconstruct the other trading stations which were clustered close to the jesuit Mission.

3.5.2 Visitor Interaction

Given the approach which will have to be taken to the reconstruction and furnishing of the Jesuit Mission, there is very little opportunity for visitor interaction. The best that can be achieved is for the visitor to be taken round the Mission by one of the Jesuit's native staff, who will explain the work of the Jesuits and their relations with the king, it will be assumed that the Jesuit Fathers are away travelling. In this way native attitudes to the Jesuit missionaries can be explained in a natural and inevitable manner.

One other opportunity for interaction is provided by the documented presence at the Mission of a camera obscura. Visitors could be shown this in action, giving them a panoramic view of the surrounding area.

It is suggested that the missionaries' garden be recreated and replanted. This may give the opportunity to see the introduction of new species to the Ndebele kingdom, if this accords with the historical evidence.

3.6 Exit Area

From the Jesuit Mission and the Old Bulawayo settlement, the visitor is able to return to the exit area of the Visitor Centre either on foot or by ox wagon. The exit area will be placed next to the entrance area, and will be treated similarly as a palisaded compound. The ox wagon will unload inside the compound, before passing out into a Service Area and returning to the entrance compound to pick up a new load of visitors. The exit area will house two major activities, the Native Market and European Trading post.

3.6.1 Native Market

In 19th century Old Bulawayo, trading was carried on away from the settlement. The Native Market mirrors that arrangement by providing a compound for this activity. It is envisaged that here goods created in the traditional manner, by those working in Old

Bulawayo, will be sold to visitors. It is suggested that only those working at Old Bulawayo as part of the re-creation have rights to sell crafts in this area. Again this will form part of the remuneration package, cutting the payroll costs of the operation, but at the same time providing a stable and sustainable source of income.

It is essential that everything sold in this market is of authenticated materials and traditional design, and made by traditional methods. For visitors, therefore, there will be a unique range of products available at Old Bulawayo which can be purchased nowhere else.

3.6.2 Trading Post

From the native Market, visitors will exit through a recreated European Trading Post. This will sell a range of replica items dating from the 1870s and 80s. As the visitor moves through the Trading Post, the stock will become more modern and up to date, with the usual souvenirs which the modern tourist will expect, as well as guide books, serious historical and archaeological books, post-cards and T-shirts.

In this way the visitor will be gradually moved towards the 20th century once more, before exiting from the Visitor Centre and heading for the refreshment areas near the car park. If more modern craft items are to be sold anywhere within the park, it is here that they should be sold, not within the Native Market.

4. Visitor Flow

Visitor flow is summarised in the accompanying diagram. The open nature of the site means that there are no special measures which need to be taken to separate visitor flow and to prevent cross-overs.

The only measure which needs to be taken is to separate oxroads from footpaths. This can be achieved by a physical separation of a metre or two. There is little danger, given the slow speed of the oxcarts, of a visitor on foot being injured, but nonetheless every precaution should be taken to prevent such an eventuality.

5. Staffing Levels

The ticketing area will require two staff in order to allow reasonable rest and refreshment periods. Two staff will also be required at the exit side in the Trading Post to deal with sales.

Assuming that there are eight ox wagons, each with two staff on them to help load, unlead, guide and drive, then 16 staff will be required to handle that side of the operation. In addition staff will be required to help change teams, feed and water the oxen during rest periods, and to look after the animals. These functions will probably require an additional two staff, making 18 in all to run the ox wagons.

Within the experience itself, some 200 people will be required to give an air of life and activity. As noted above, it is suggested that these are partially remunerated through the opportunity to farm the land and sell craft works, although this income will probably also have to be supported by a salary. It is possible that large numbers of staff to

populate Old Bulawayo will only be required at the height of the tourist season, but in that case staff will probably have to be paid a direct salary, so that there may be no net saving in pursuing that route.

In addition one member of staff will be required to police the car park and look after the barbecue facilities. If they are run directly by the Theme Park, three to four staff will be required to run the catering. This makes a total of five staff in all in this area. An alternative is to franchise these operations, yielding a guaranteed income to NMMZ, without the need to finance the operations.

If accommodation is provided off site, staffing will depend entirely on its scale and variety. However, assuming that lodges, rondavels and a campsite are all available, not less than five staff and perhaps as many as 10 will be required to run them.

In all the Theme Park will require some 232-7 direct staff, plus the core administrative staff. This would consist of a manager, assistant manager, administrative assistant, secretary and marketing manager, together with five core maintenance/cleaning staff. Some of these posts, most notably that of marketing manager, might be provided as a central service by NMMZ. The total for the site would be of the order of 242-7 staff, therefore.

6. Staff Facilities

In order to permit the effective operation of the site, it is suggested that a staff compound be constructed between the entrance and exit compounds. This will provide office space for the administrative staff, rest facilities and lavatories for other staff, and an area where teams of oxen can be changed, fed and watered. The changing and handling of the oxen could be handled as a more public exercise, visible, as it were, on the 19th century side of the site boundary, and thus form part of the experience.

Similarly, within the main settlement of Old Bulawayo, it is suggested that staff facilities be placed in one of the areas of the settlement which will be closed to visitors. At the least, modern lavatory and washing facilities will be required. It is also suggested that a small first-aid post be located in this area.

If accommodation is provided for visitors off site, then staff accommodation will also be required close by.

7. Support Services

In addition to services provided by its own staff, there will be some recurrent maintenance requirements, particularly in the care of the Visitor Centre, car park and the various access roads and paths. It is envisaged that these will be bought in from outside contractors as and when required.

AN ARCHAEOLOGICAL ASSESSMENT OF OLD BULAWAYO

National Museums and Monuments of Zimbabwe and the Birmingham Field Archaeological Unit (BFAU)

A survey of the site was carried out in December 1993 by a team from National Museums and Monuments of Zimbabwe. This involved extensive survey and mapping of visible surface deposits, including exposed hut flows and the production of a soil colour map for the settlement and the surrounding area. The survey was able to determine the extent of the settlement which appears to be defined by a circular ring of structures, principally clay, hut floors, approximately 500 metres in diameter.

In December 1994, the Birmingham Field Archaeological Unit (BFAU), together with Geophysical Surveys of Bradford and National Museums and Monuments of Zimbabwe carried out a major exercise. The details that follow relate to that exercise.

Settlement

The Commoner Settlement surrounds a 'Central Enclosure', possibly used as a cattle enclosure and military parade ground. Several of the early pictorial representations indicate that the settlement was surrounded by a palisade. A second, less substantial palisade or fence, appears to have separated the right of huts forming the Commoner Settlement from the Central Enclosure.

There was very little evidence for surface structures on the north-western side of the settlement, suggesting that this side might have been open (Murambiwa pers comm). This would seem to conflict with early pictorial representations which indicate a closed ring of huts (see for example Fig. 1). An area of stone walling on this side of the settlement, incorporating a narrow passageway, has been identified as an entrance, perhaps for ceremonial use.

Within the Central Enclosure, slightly west of centre, are the visible remains of a group of buildings believed to relate to the Royal Enclosure. These buildings include the remains of a rectangular stone-built building, thought to be Lobengula's wagon shed. The remains of a rectangular brick-built building are believed to be Lobengula's house, although his sister is also said to have occupied a brick-built 'cottage'. In addition there are the visible remains of three clay hut floors and a second rectangular stone building. The function of a number of these structures cannot be determined without archaeological excavation. Within the Central Enclosure, to the north-east of the Royal Enclosure, was the Indaba Tree, under which Lobengula would have sat holding court and dispensing justice.

Approximately 250m to the west of Old Bulawayo lie the remains of a Jesuit Mission occupied between 1879 and 1888. The ruins consist of a square compound, delimited by a collapsed stone wall, containing a central rectangular building, surviving in part to gable height. A number of other outlying sites, including rectangular and circular stone built structures (possibly the former residences of European traders and possibly contemporary with Old Bulawayo), were observed during the survey but not recorded.

A number of written reference to the site were made by early European travellers, traders and Jesuit missionaries. A fairly detailed early description of the settlement is provided by Frederick Hugh Barber in 1875 (Tabler 1960, 102-104). He accurately estimates the size of Old Bulawayo ('about 600 yards in diameter') but questions the contemporary estimates of the population (put at 3000), suggesting it was somewhat less. He also estimates that (in 1877-78) there were usually about 15 to 20 Europeans living at the site. In addition to these written descriptions a number of early pictorial representations exist.

2.2 Assessment objectives

The first objective of the archaeological assessment was to

determine the general character and extent of the surviving archaeology at Old Bulawayo. It therefore included a fieldwork element designed to evaluate in detail the nature, survival, extent and quality of the archaeological evidence, including environmental data, and to test in the field the applicability of different geophysical prospection, survey and analytical techniques. The second objective was to use the results of the fieldwork to refine the outline strategy for archaeological research presented in the feasibility study prepared by the Creative Consultants division of the York Archaeological Trust and NMMZ ('Study 2 - Archaeologial Research').

2.3 Method

The fieldwork comprised two principal phases. Phase 1 comprised a geophysical survey and a brief assessment of the nature of the local environmental conditions and soils, together with the density, character and distribution of surface deposits and artefacts. Phase 2 involved the hand excavation of seven small trial trenches.

Three sample areas were selected for the geophysical survey (Fig. 2). Area A included two of the clay floors visible in the area of the Royal Enclosure. Area B was located in the north-western area of the settlement where no visible surface archaeological features or deposits were recorded during the initial archaeological survey. Area C was located in an area considered fairly typical of the Commoner Settlement and included a number of visible, surface archaeological features (Fig. 4). These included three burnt clay surfaces (3005, 3008, 3009), a ring of stones (3004) and a stone pile (3010). Volume magnetic susceptibility measurements were taken at 1.0m intervals (400 readings per 20m grid) using a Bartington field coil system. Fluxgate gradiometry was carried out using a Geoscan FM36 linked to a STI trigger with readings being logged at 0.5m intervals along 1.0m traverses (800 readings per 20m grid). A detailed description of the methodology employed during the geophysical survey can be found in the Appendix.

The objective of the trial trenches (Fig. 2) was to examine the character of the surviving stratigraphy, to obtain samples of the range of cultural material present in different areas of the setlement, and to examine the character of specific anomalies produced by the geophysical survey. Trench 1 was located close to one of the exposed clay hut floors to the east of Lobengula's house in the Royal Enclosure (Area A). Trenches 2 and 6 were located in the north-western are of the settlement in the area relatively free of archaeological remains (Area B). Trenches 3 and 7 were located in the area of Commoner Settlement (Area C). Trench 4 was located in a midden deposit in the area of the Commoner Settlement, and Trench 5 in a midden deposit in the area of the Royal Enclosure. In each case the archaeological deposits were

excavated to the underlying natural weathered bedrock. Archaeological contexts were recorded on pro-forma record sheets. Significant samples of all deposits were dry sieved, using a variety of mesh sizes, for the recovery of small artefacts. Smaller samples were wet-sieved to test for the survival of charred organic material.

2.4 Results

2.4.1 The Geological and Soils Survey

The locality lies within the area occupied by the Umzingwane Formation of the Upper Greenstones, of Archaean (pre-Cambrian) age (Zimbabwe Geological Series, 1:100,000, 1991). The rocks are heavily metamorphosed sediments and volcanics, and tie in vertically orientated tight folds involving thin layers of contrasting rock types.

The site of Old Bulawayo lies at the boundary of the quartz wacke/lithic arenite and the phyllitic tubidite and tuff units, with bands of metahyodacite/metahyolite, tuff and breccia intercalated. The harder, fine-grained, more mafic shales of the phyllitic group, which are highly fisssile in vertically-orientated planes, form jagged ridges exposed between areas of the paler, softer siliceous silty/sandy rocks.

Soils in the area of Old Bulawayo are mapped, at the scale of the Soil Map of Zimbabwe, as the Siallitic group, Families 4E and 4S of the Zimbabwe Classification System (1:1,000,000 Soil Map of Zimbabwe, Edition 2, 1979; Nyamapfene, 1991): shallow and moderately shallow reddish-brown clays on mafic rocks, mainly shallow relatively silty, sandy loams to clay loams on argillaceous metasediments and metavolcanics.

At the site, soils of both these families occur, with the harder, fine-grained, more iron-rich shales of the phyllitic group giving rise to reddish-brown clays and the softer, coarser more quartz-rich wacke/arenite and hyodacite carrying the paler-coloured sandy and silty loams.

The soils are heavily truncated, to the extent that the hardest rocks are exposed as upstanding outcrops, and their vertically-orientated fissile structure contributes a clitter of angular fragments to the adjacent surfaces. Between and away from these outcrops, the paler silty and sandy soils exhibit much evidence of surface washing and capping, with hard crusts swept bare or carrying drifts of sand and silt.

Termite mounds show that there are areas of red clays underlying the surface soils. An exposure of a deeper profile in the quarried area to the north of the site showed a red clay profile of undetermined depth buried by some 50cm of a very stony deposit derived from outcropping shale on the slope above. The angular stones lay in a matrix of dark brown, 5YR 4/2, soil, with a thin yellowish red, 5YR 4/6, termite-derived soil at the surface and infiltrating among the stones. The colour, 2.5YR-10R 4/6, and the well-developed prismatic structure of the buried profile suggests a probably truncated fersiallitic soil, the relic of ancient, more mature

profiles now largely eroded.

A profile exposed in the newly-dug latrine pit to the north-west of the site showed a complex of soils and rock weathering to a depth of 3m. A thin stony sandy loam overlay a stone line of rounded cobbles. Beneath this, a reddish-brown, 2.5YR 4/4, very stony clay merged down into fragmenting shale, the fragments coated with red clay, 2.5YR 4/4-4/6, and decreasingly oxidised and softened with depth. An abrupt softened rock of another type into the section, showed that the effects of soil development on the coarser, less iron rich rock has involved formation of a deep C horizon.

The extent of erosion is demonstrated by the exposure of the harder rocks as upstanding ridges, by the surface washing of the sandy/silty loams, and by the development of increasing depths of colluvial soil downslope towards the stream valley to the east of the site. A colluvial slope increasingly covers the shale outcrops with pale silty/sandy soil, and merges with the floodplain of the stream. The floodplain is incised to a depth of two to three metres in places, exposing that depth of alluvium.

Implications of Observations on Soils

1. Landscape development - The chronology of soil erosion and development of colluvial and alluvial deposits can be approached through archaeological field survey, to establish dating of sites and their position in relation to surfaces and deposits.

2. Agricultural resources - While the soils are not likely to have shown serious limitations in fertility, the tendency to erosion and capping of the silty/sandy loams would have been a serious problem for cultivation and for seedling emergence. Intensive use for livestock would also promote the erosion of these susceptible soils. Until an erosion chronology is established, which will be possible as part of the more extensive landscape survey proposed, it is not possible to give a reliable assessment of the nature of the soils during and prior to the occupation of the site.

3. Geophysical survey - There are strong variations in the iron content of the different rock types and of the soils formed on them, but to some extent, within the area of the site, the redistribution of soil materials by termite activity and erosion has probably had an homogenizing effect on iron content. In the weathered rocks and the red and reddish brown soils, the predominant iron oxide is haematite, product of a lengthy period of soil development under high temperatures and a seasonally dry climate. Magnetite is reported in the ironstones which form a major component of the phyllitic unit a few kilometres to the north, the south and the east of Old Bulawayo. Ironstone is not mapped at this locality, but the possibility of minor occurrences, with both magnetite and 'limonite' (poorly crystalline hydrous oxides or goethite) cannot be ruled out.

2.4.2 Summary of Geophysical Survey Results

The following is an outline of the results of the geophysical survey. The detailed results, including dot density plots and X-Y traces, are presented in the Appendix.

Area A - 20m x 30m (magnetic susceptibility) and 40m x 60m (fluxgate gradiometry).

The magnetic susceptibility results indicated very high recorded readings associated with the exposed hut floors. This may be the result of increased magnetism caused by fire. Furthermore, very large variations were observed within individual huts suggesting that intensive sampling may identify inter-hut variations.

The greater area covered by the fluxgate gradiometry has helped to provide a better overview of the levels of background magnetic noise. However, few fluxgate gradiometer surveys have been carried in the southern hemisphere and the character of anomalies produced will need to be tested by excavation before confident archaeological interpretations can be made. Despite this, the results of the survey at Old Bulawayo are very promising. Both huts produced magnetic anomalies which were measurable with the gradiometer, although the southern hut was more identifiable than the northern one. A possible gully or slot, perhaps the foundation trench for an enclosure fence, was suggested by an anomaly surrounding the southern hut. There was the hint of a similar feature around the northern hut. A region of strong anomalies in the north-east of the survey area suggested the waste from small-scale industrial activity such as metalworking.

Area B - 15m x 20m

The magnetic susceptibility readings show a distinct lack of any specific localised areas of enhancement. The fluxgate gradiometer also identified few specific anomalies. This would support the view that no structures are surviving intact within the small area investigated. Hoever, the differences in background level compared to Areas A and C might indicate differential usage of the land.

Area C-20m x 20m

The susceptibility coil measured high readings in the areas of the visible hut floors. Three other areas of high readings were recorded which might correspond with other denuded hut floors. The results suggest that the use of the coil to define specific areas of interest will be particularly useful in the total mapping of Old Bulawayo.

There was good correlation between the areas of enhancement identified by the coil and anomalies produced by the gradiometer survey. However, the gradiometer responses are more complex and as such more difficult to interpret at this stage of the project.

2.4.3 The Trial Trenches

Trench 1-5m x 1m (Fig. 3; Plate 13)

This trench was located in the

Royal Enclosure to the east of the wagon shed. It was positioned specifically to test the anomalies in Area A of the geophysical survey.

The upper horizon of weathered bedrock, consisting of compact grey clay and stone rubble (1003), was encountered 0.2m below the present ground surface. This was cut by two archaeological features, a shallow irregular scoop 0.16m deep and 1.6m across (1004), and a narrow, linear, U-shaped gully, 0.4m wide and 0.23m deep (1009). The scoop was filled with stone and clay rubble (1002) and contained numerous small fragments of iron slag and the end of a gun cartridge. The gully was filled with dark greyish brown silty clay (1005) and was associated with four charred wooden stakes (1006-1008 and 1010). The only finds from the gully were three fragments of undecorated pottery, several fragments of animal bone and two glass beads. Both features were sealed by a thin deposit of brown silty clay (1000/1001).

Trench 2 - 8m x 1m

Trench 2 was located in the north-western area of the settlement with little surface evidence for activity. The compact weathered bedrock and clay (2002) was located at a depth of 0.12m. This was overlain by a layer of compact brown clay and angular stones up to 0.06m thick (2001) containing no archaeological finds, and a slightly siltier upper deposit (2000), again no more than 0.6m thick. The only finds from the upper horizon were a few fragments of unburnt animal bone.

Trench 3 - 7m x 1m and 5m x 1m (Fig. 4; Plate 14)

Trench 3, an L-shaped trench, was designed to test specific anomalies detected by the geophysical survey and visible surace features. The compact weathered bedrock and clay (3007) was also located at a depth of 0.12m. In the central area of the trench was an irregular ring of angular stones (3004) defining an area approximately 2.7m in diameter. The stones were up to 0.7m across. Several were set on edge and others had clearly toppled over. They were partially set into and sealed by a compact stony clay rubble (3001/3002/3003). This sealed the remains of a very fragmentary internal clay surface (3006). The only finds were a few fragments of undecorated pottery.

Trench 4 - 4m x 1m

Trench 4 was located in the south-eastern part of an approximately oval-shaped midden in the north-eastern area of the Commoner Settlement. The midden measured approximately 10m north-south and 8m east-west. The upper part of the decayed bedrock was located at a depth of between 0.12 and 0.16m. The midden deposit was slightly deeper at the south-west end, that is towards the central area of the deposit. The midden material itself comprised a light brownish grey ashy deposit and contained a large quantity of animal bone, pottery fragments and glass beads. Other

artefacts recovered included a few fragments of metalwork, bottle glass, the end of a gun cartridge and a stone tool.

Table 1. Quantification of Finds: number of fragments

		Trench Number							
		1	2	3	4	5	6	7	Total
Pottery	Rims	-	-	-	16	11	1	-	28
	Neck/Shoulder	-	-	-	5	1	-	-	6
	Decorated Body	-	-	-	5	1	-	-	6
	Graphite Body	-	-	-		12	13	-	25
	Undecorated Body	17	-	10	137	212	7	1	384
Metal	Gun cartridge	1	-	-	1	2	-	-	4
	Copper Alloy	-	-	-	1	-	-	-	1
	Iron	-	-	-	6	2	-	1	9
	Slag	43	-	-	4	-	-	-	47
Glass	Bottle	7	-	-	10	35	-	-	52
	Window	-	-	-	-	13	-	-	13
	Beads	7	-	-	467	356	-	2	832
Stone	Worked	-	-	-	2	-	-	-	2
Animal	Burnt	6	-	-	197	756	32	-	991
Bone	Unburnt	-	13	-	1189	36	17	-	1255
	Total	81	13	19	2040	1437	70	4	3655

Table 2. Quantification of Pottery and Bone: weight in grams

		Trench Number							
		1	2	3	4	5	6	7	Total
Pottery	Rims	-	-	-	280	40	10	-	330
	Neck/Shoulder	-	-	-	120	20	-	-	140
	Decorated Body	-	-	-	20	10	-	-	30
	Graphite Body	-	-	-	200	140	-	-	340
	Undecorated Body	500	-	240	1540	1820	60	20	4180
	Burnt	20	-	-	240	2440	740	-	3440
Bone	Unburnt	-	80	-	16150	80	160	-	16930
	Total	520	08	240	18550	4550	970	20	24930

Trench 5 - 4m x 1m

Trench 5 was located on the western side of a midden forming a low mound in the Central Enclosure approximately 60m to the east of the wagon shed (see Fig. 2). The excavated portion of the midden was 0.26m deep at its eastern end, towards the centre of the mound, and 0.1m deep at its western end. The midden was composed of a similar light brownish-grey ashy deposit to that of the midden in the Commoner Settlement. The range of artefacts present was also similar, although European imports were better represented. However, it was noticeable that the animal bone was more fragmentary and that a large proportion was burnt. The small finds included the ends of two gun cartridges, several fragments of window glass, an iron 'plate' and a small fragment of polychrome porcelain.

Trench 6 - 5m x 1m (Fig. 4; Plates 15 & 16).

Trench 6 was located 14m to the south-east of Trench 2 in the western area of the Commoner Settlement, where there are few visible surface archaeological deposits. The compact upper horizon of the weathered bedrock was located at a depth of 0.44m. At the south-eastern end of the trench this was overlain by a stone pile (6001) which included a lower grindstone, a flat stone with shallow 'cup marks' on its upper side and a small deposit of animal bone. This stone pile was overlain by a compact, reddish brown clay (6002/6003) and a brown clayey topsoil (6000) which contained a few fragments of undecorated pottery.

Trench 7 - 5m x 1m (Fig. 4)

Trench 7 was located in the north-eastern part of Area C. The compact weathered bedrock was encountered at a depth of 0.12m. This was overlain by an area of compact daga rubble. There was a particular concentration of this rubble in the central area of the trench (7001). A number of larger daga fragments were also visible on the surface immediately to the north and west of the trench. A number of these fragments were faced and it seems likely that they originated from lthe collapsed wall of a building. A couple of glass beads and a single fragment of undecorated pottery were recovered from the trench.

2.4.4 Finds

It was not within the scope of this assessment to undertake a full analysis of the finds recovered from the trial trenches. This must await the full analysis of the assemblages following the main phases of excavation. However, a basic quantification was undertaken and the results are presented in Tables 1 and 2. These give some indication of the range of material present on the site and the relative proportions of the different groups. They also demonstrate that considerable quantities of artefacts can be expected from the middens and relatively small amounts from the occupation areas.

The contrasts between the two middens were particularly interesting. Similar quantities of pottery and glass beads were recovered from the two middens. However, in terms of weight, more than six times as much animal bone was recovered from the 'Commoner' midden (Trench 4) than from the 'Royal' midden (Trench 5), despite the fact that roughly equal quantities of material were excavated. This can perhaps be explained by the high incidence of burnt fragments from the 'Royal' midden, a fact of interest in itself (see Section 2.5).

2.4.5 Preliminary Report on the Faunal Remains

Introduction

The aim of this report is to give a brief assessment of the potential information to be gained from the animal bones from the test excavations.

One of the most important aspects of this site is the potential for interpretation of the animal bone offered by ethnographic, historical and archaeological sources. Although no similar sites have been excavated in Zimbabwe, archaeological studies of Zulu capitals in South Africa (Parkington and Cronin 1978; Whitelaw 1994) are directly relevant to Old Bulawayo because of historical and cultural links between the two regions. Faunal remains have been documented from two nineteenth - century Zulu capitals at Ondini (Watson and Watson 1990) and Mgungundlovu (Plug and Roodt 1990).

Faunal assemblages were recovered from five of the excavated trenches at Old Bulawayo. Sampling from both 'Royal' and 'Commoner' areas of the site offered the opportunity to search for possible evidence of social differentiation in the assemblages. An analysis of the species and skeletal parts represented in the samples has been completed and some of the results are detailed in this report.

The Faunal Remains

This study was carried out using the very limited comparative material available at the Museum of Human Sciences in Harare. This resulted in tentative identifications of wild and non-bovid species which need verification using a more comprehensive collection. The methodology used to analyse the sample is detailed in Thorp (1984). Since all Bov III teeth were identified as cattle teeth, the Bov III size skeletal parts were assumed to come from cattle. Using the same argument, all Bov II size skeletal material is assumed to be sheep/goat.

The total bone assemblage studied was 2,144 fragments, of which 256 (11.9%) were identifiable. On the basis of both MNI and NISP the total sample is dominated by cattle remains (Table3). The MNI in each trench has been calculated on the basis on the most numerous body parts represented, and on the assumption that each midden is a single unit with no meaningful stratigraphy.

The only sample large enough to assess age classes of Bovids using tooth eruption and wear was from Trench 4, in the Commoner Settlement. The MNI was derived by selecting the most numerous teeth from the left or right side of upper and lower jaws in each age class. Both of the sheep/goats were adults, representing classes IV and V according to Voigt's (1983) age classification system. The cattle sample is too small to establish slaughter patterns (Table 4), but the majority of animals represented are over three years old (Age Classes IV and V). A study of Iron Age cattle remains in Zimbabwe (Thorp 1984) showed that older animals, possibly representing natural die off, are generally utilized for food as a strategy to maintain herd size. A much larger sample is necessary to compare herd management strategy at Old Bulawayo with the earlier sites documented by Thorp and material from the Zulu capitals.

Comparisons between the cattle assemblages from Trench 4 in the Commoner Settlement and Trench 5 in the supposed 'Royal' area (Table 5) are extremely tentative because of the small samples available so far, and the burned and highly fragmented condition of the sample from the upper layers of Trench 5. The better preservation of material from Layer 3 in Trench 5 indicates that the potential exists to recover a more informative sample from this

Table 3. Species present at Old Bulawayo, by Number of Identifiable Skeletal Parts (NISP) and Minimum Number of Individuals (MNI) from all Trenches

Trench	Species	NISP	MNI
Trench 1	Unidentifiable	0	0
Trench 2	Unidentifiable	0	0
Trench 4	Cattle	202	8
	Sheep/goat	14	2
	Bov I	7	1
	Dog ?	1	1
Sub-total		224	12
Trench 5	Bov III	18	1
	Bov II	4	1
	Lion ?	1	1
Sub-total		23	3
Trench 6	Unidentifiable	9	0
Total		256	15

Table 4. Cattle Age Classes MNI based on Tooth Wear

Age Class	Total
I	2
II	0
III	1
IV	2
V	3

Table 5. Cattle Skeletal Parts from Trenches 4 and 5

Skeletal Part	Trench 4	Trench 5
Horn core	4	0
Hyoid	3	1
Skull	53	1
Teeth	40	1
Atlas	3	0
Axis	3	0
Vertebra	52	10
Rib	166	33
Scapula	13	0
Humerus	5	0
Radius	2	0
Ulna	2	0
Pelvis	14	1
Femur	4	0
Patella	2	0
Tibia	4	0
Metacarpal	3	0
Metapodial	5	3
Caprpal/Tarsal/Sesomoid	16	1
Phalanx 1	10	0
Phalanx 2	4	0
Phalanx 3	6	1

midden. One of the priorities of future excavation should be the recovery of a larger faunal sample from the 'Royal' midden, as well as from diverse activity areas on the site.

Ethnographic information on distribution of meat cuts among the Zulu indicates that body parts of cattle were distributed according to status and gender (Krige 1974). Head was normally favoured by men and limb bones were an inferior cut. On the basis of the available samples (Table 5), body parts from the torso and limbs are present in Trench 4. Body parts from the head and torso occur in Trench 5, but remains from the limbs are few. However, this could well be due to the small sample size.

Cut and chop marks were evident

on much of the material, particularly ribs. Material from Trenches 2 and 6 was badly weathered compared to bone from the other trenches.

Conclusions

The scope and character of potential information to be gained from faunal remains excavated at Old Bulawayo has been briefly outlined by this study. There is good potential to recover information relating to both social organisation and animal husbandry.

The recovery of adequate faunal samples from middens associated with diverse activity areas and socially differentiated areas on the site will be a priority. An adequate collection of comparative material should be built up with the assistance of the Natural History Museum in Bulawayo. Failing this, identification of species other than domestic bovids will need to be achieved using comparative material in another institution. The Transvaal Museum in South Africa offers this kind of service.

2.5 Discussion

The archaeological assessment has provided detailed information concerning the character of the archaeological deposits at Old Bulawayo. In particular, the preliminary geophysical work has produced results which clearly demonstrate the potential of the techniques applied for providing detailed information concerning buried deposits. Magnetic susceptibility and fluxgate gradiometry should prove useful at two levels. Firstly, at the feature level, by identifying individual remains such as huts, fires and hearths, and fence and palisade lines. Secondly, at the broader intra-site level, by mapping zones of varying activity associated with habitation, industrial and stock/agricultural areas. This will be invaluable in the further refinement of the programme of archaeological excavation at Old Bulawayo, and will assist in the planning of the long-term conservation of those parts of the site which remain unexcavated.

The Royal Enclosure

The geophysical survey in Area A and the excavation of Trench 1 suggest that at least one of the exposed hut floors in the area of the Royal Enclosure is enclosed by a palisade. This would appear to be supported by at least one of the early pictorial representations of the settlement, by Croonenburgs or Law and dated 1879-80, which depicts one of the huts in the Royal Enclosure surrounded by its own palisade. Both this and other early illustrations also suggest a further palisade surrounding the whole of the Royal Enclosure (Plates 9 & 10). Further geophysical survey and excavation should establish the precise location of this structure. The clear identification of the exposed hut floors by both of the geophysical survey techniques applied suggests that it should be possible to predict the location of further buildings prior to excavation.

The relatively small number of artefacts recovered from Trench 1 suggests that the majority of finds will be concentrated in the midden deposits. The shallow scoop (1004) containing fragments of iron slag near the palisade gully in Trench 1 suggests the presence of small-scale industrial activity in the area of the Royal Enclosure.

It is not yet possible to determine the precise form of the huts in the Royal Enclosure. This will require the excavation of larger areas. The early pictorial representations of the enclosure suggest that different types of structure might have been present at different times. It seems possible that beehive structures might have been replaced by cylindrical buildings with conical - shaped roofs towards the end of the life of the settlement. However, it is equally possible that a combination of both beehive and cylindrical structures might have been present at the same time. This is suggested by a depiction of an Ndebele settlement, possibly the immediate predecessor of Old Bulawayo, by Thomas Baines dated 1870 (Wallis 1946, facing page 282). An indication of the internal arrangement of a beehive hut is indicated by another painting by Baines (Wallis 1946, facing page 216).

It is not yet clear whether the nearby midden, partially sampled by Trench 5, lies within the confines of the Royal Enclosure. It seems more likely that it is located outside, in the area of the Central Enclosure. It is possible that this midden may be largely composed of material derived from ceremonial activities taking place within the Central Enclosure. By contrast, the midden excavated in the Commoner Settlement (Trench 4) may be associated with more domestic activiy. This might explain the different treatment of the animal bone prior to deposition.

The Commoner Settlement

The negataive results from the geophysical survey in Area B and from the excavation of Trench 2 appear to support the identification, made during the preliminary survey, of a break in the ring of Commoner Settlement on the western side of Old Bulawayo. However, the identification of a stone pile in Trench 6 suggests that this interpretation should be treated with caution. In particular, the overlying clay in Trench 6 suggests that this area may have experienced a build up of hill wash deposits which might be concealing further evidence for occupation.

The initial archaeological survey had identified the former location of three huts in Area C. The Geophysical survey and trial trenching has suggested the presence of at least two further structures represented by the daga rubble in Trench 7 and the stone ring in Trench 3. The rubble from Trench 7 suggests that at least one of the buildings had daga-faced walls. All with the Royal Enclosure, the precise form and chronological sequence of these buildings can only be determined through the excavation of

larger areas.

2.6 Conclusions

The assessment has clearly demonstrated the potential for further archaeological survey, excavation and research to provide a solid foundation for a faithful reconstruction of Old Bulawayo. In combination with historical and ethnographical research, the archaeological evidence will permit an authentic re-creationof the houses, economy, activities, crafts artefacts and culture of the occupants of Old Bulawayo and the European settlements. In short, the archaeological assessment has reinforced the conclusions of the initial feasibility study that Old Bulawayo has the potential to be a popular, exciting and educational attraction for foreign tourists and Zimbabweans alike.

The assessment has also provided the necessary data to permit a fully-informed, detailed project proposal for the full-scale archaeological research to be prepared, and this forms Part 3 of the report. An important feature of the proposal is the recommendation that the archaeological research. while on a large-scale, need not entail the total excavation of 50% of Old Bulawayo (envisaged in the feasibility study) in order to provide the necessary information for authentic reconstruction. The proposal also provides various options for reconciling the reconstruction of Old Bulawayo with the conservation needs of the site.

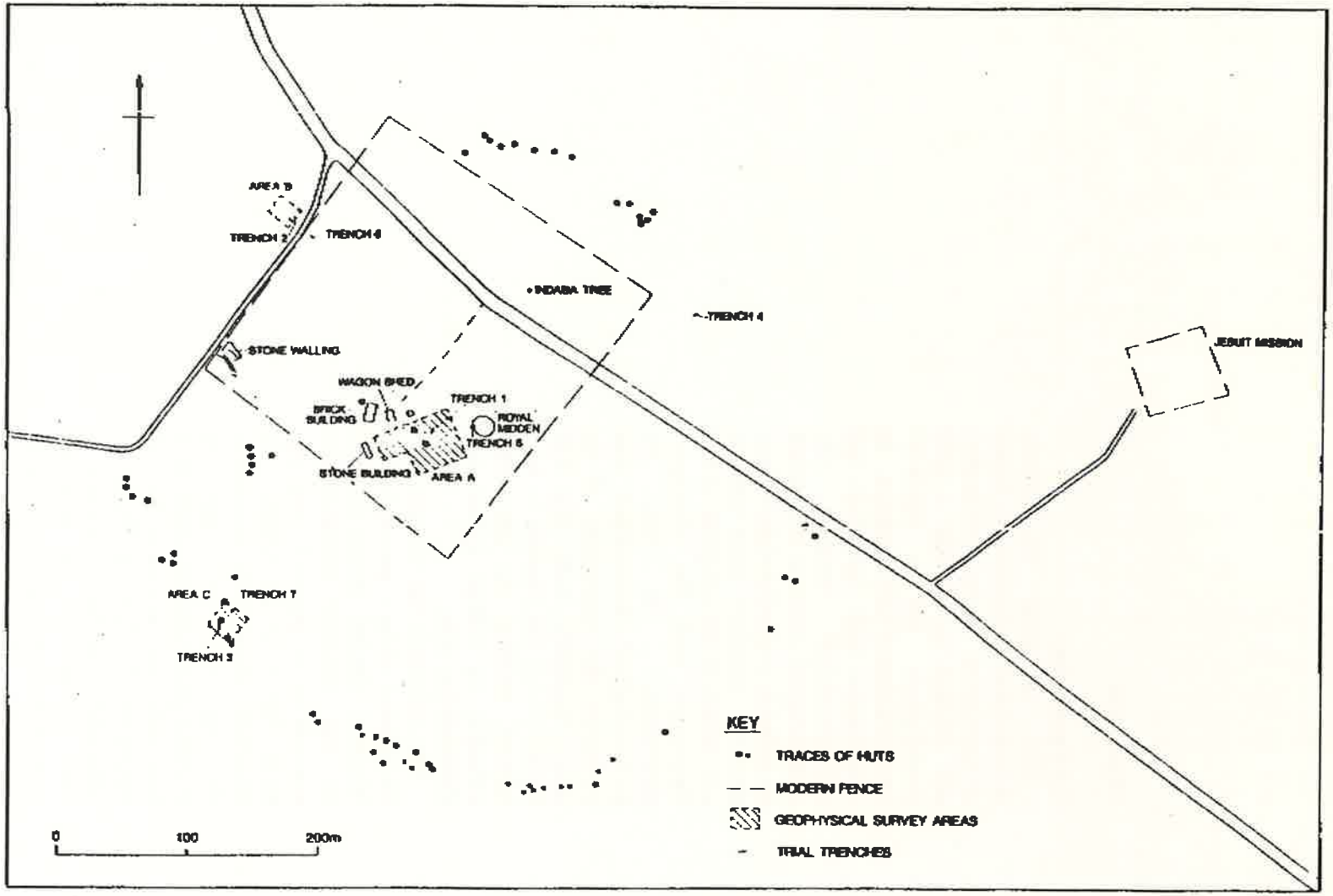


Fig. 2. The Old Bulawayo settlement showing location of major features, geophysical survery areas and trial trenches (partly based on plan by I. Murambiwa, K Chipunza and E Teveredze)

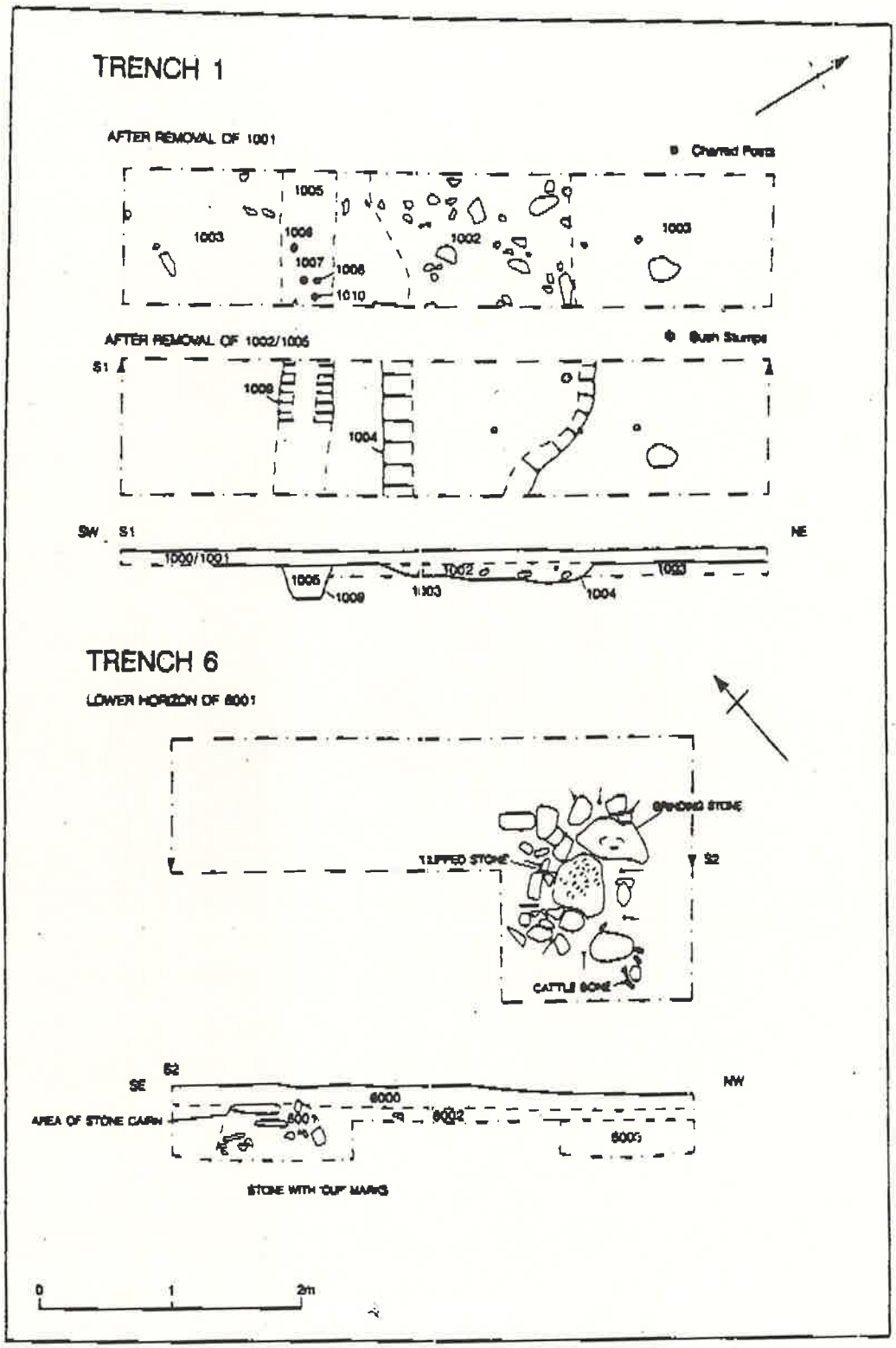


Fig. 3. Plan and sections of Trenches 1 and 6

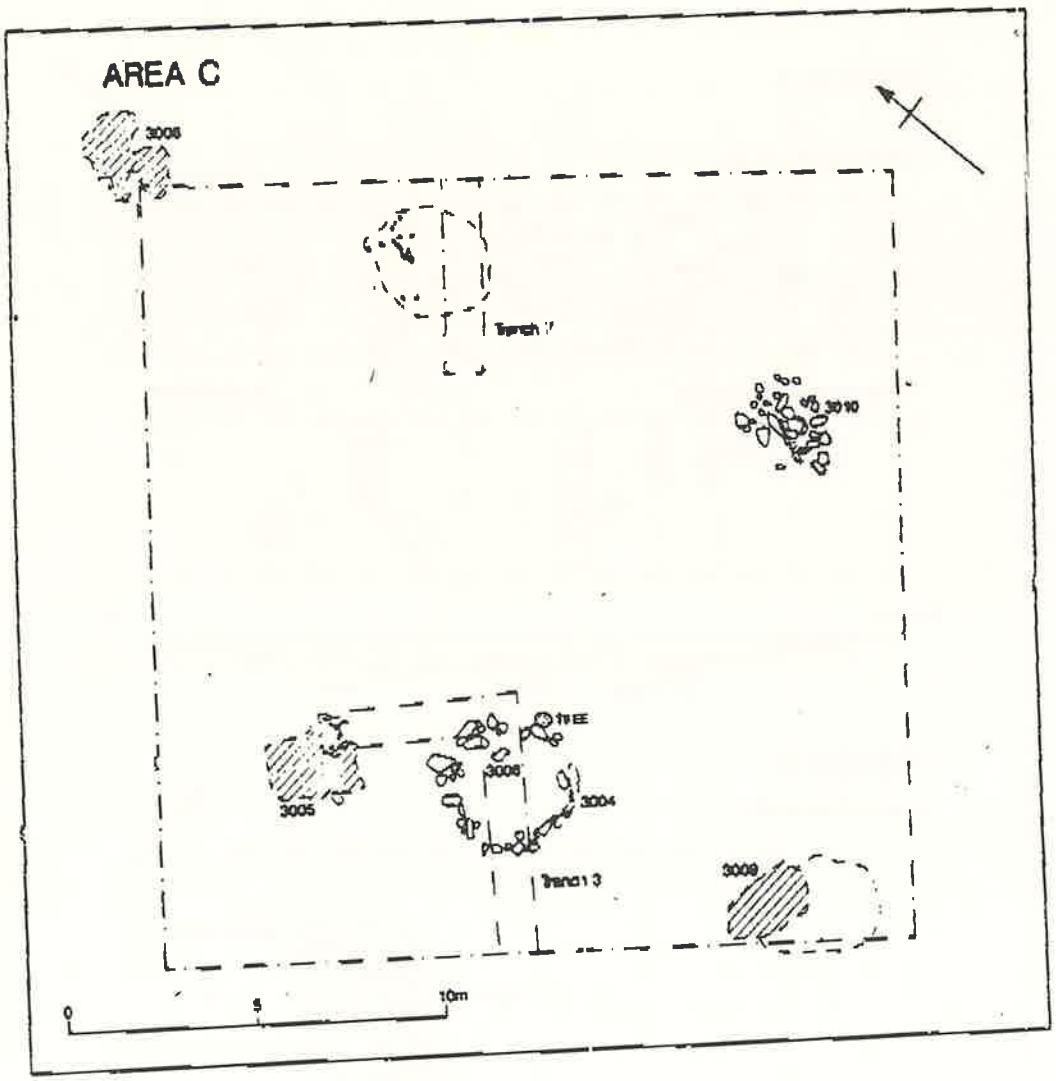


Fig. 4. Area C: main features, area of geophysical survey and trial trenches 3 and 7

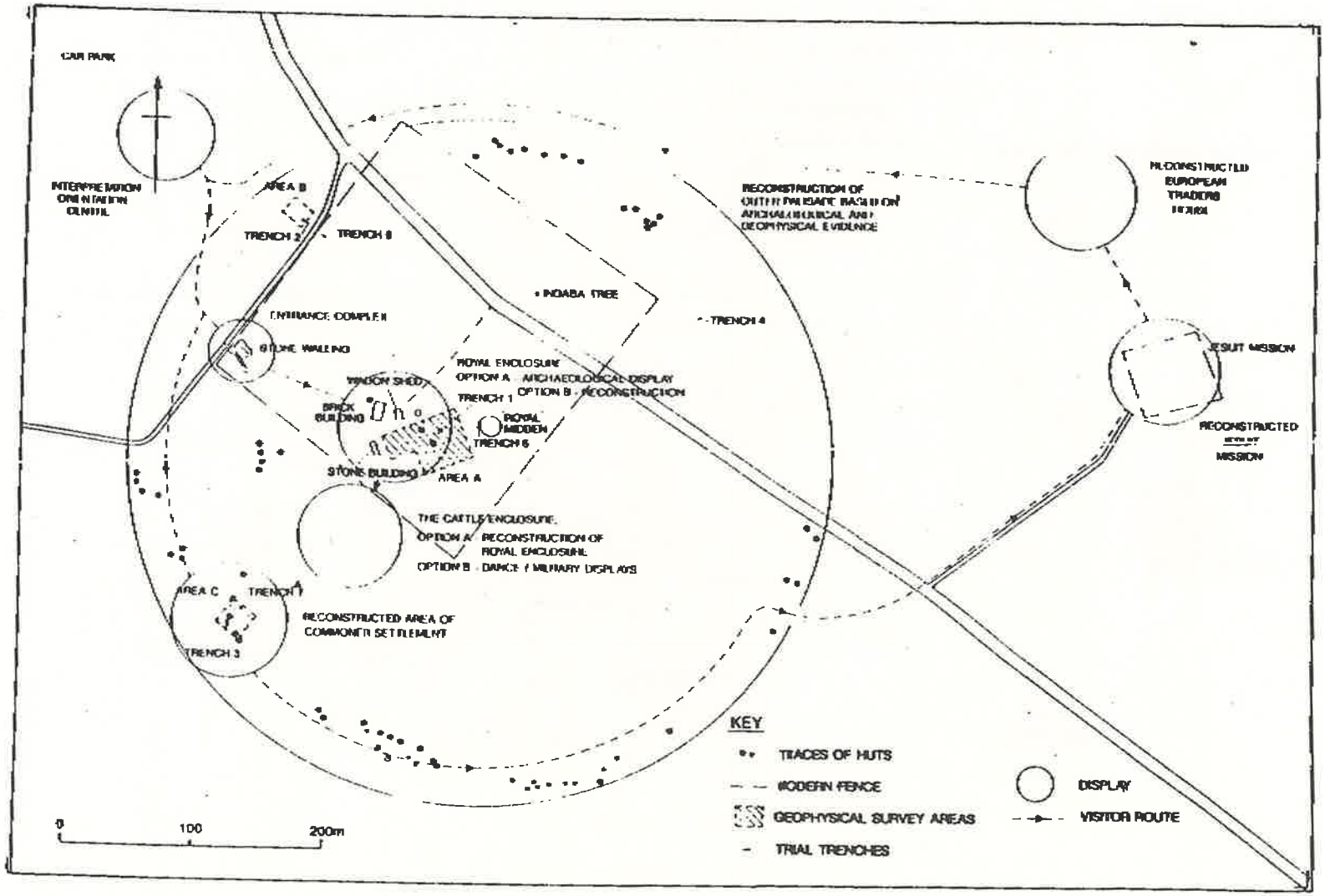


Fig. 5. Suggested layout of visitor attractions at Old Bulawayo.

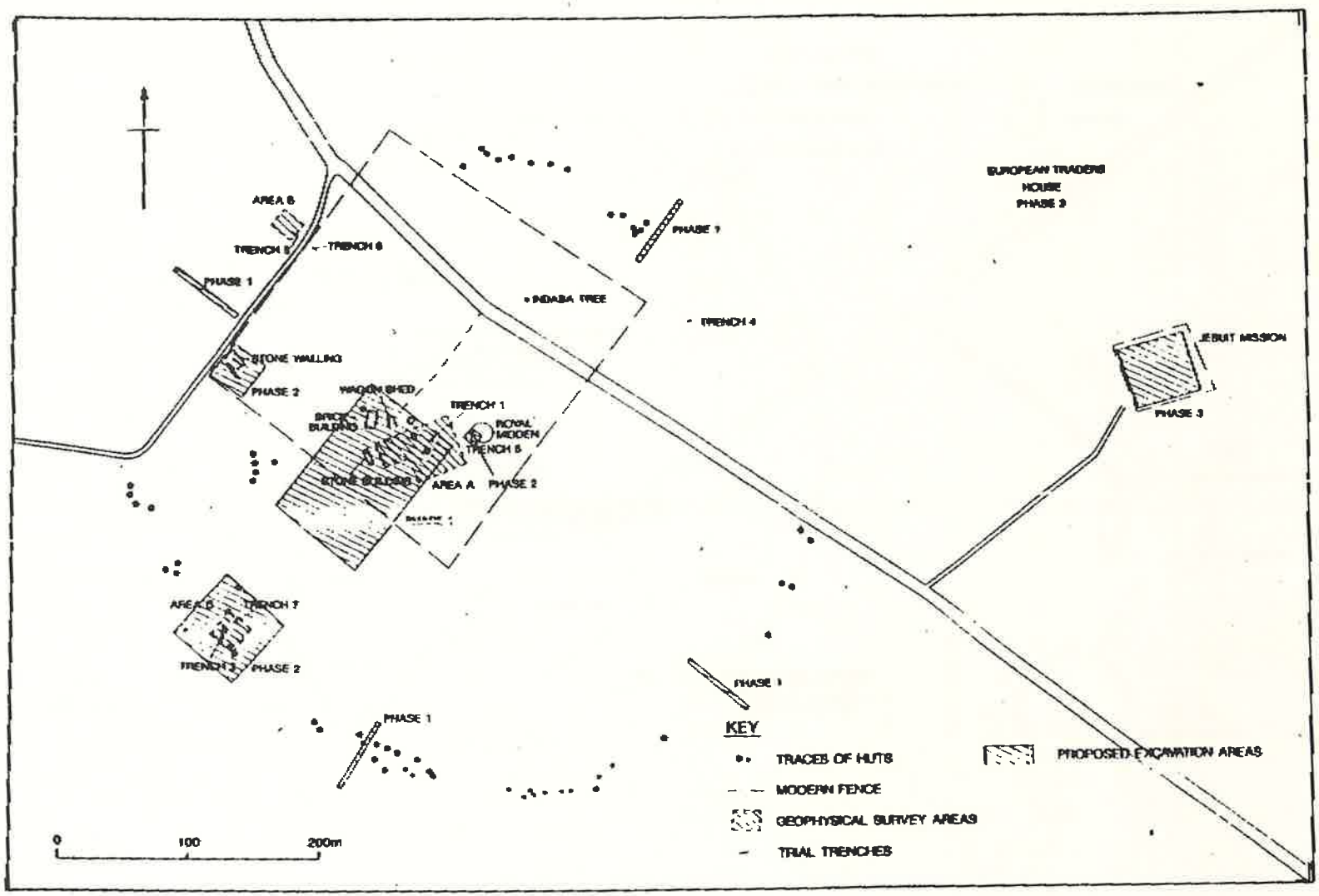


Fig. 6. Location of Proposed excavation areas.

PROJECT PROPOSAL
(Part 3)

3.1 Introduction

The following presents detailed proposals for a three-year programme of archaeological research at Old Bulawayo, involving both survey and excavation. The results of this work will be integrated with historical and ethnographical evidence and used in the development of Old Bulawayo as a Heritage Centre. It is proposed that the archaeological work will itself form part of the attraction and educational resource. A full explanation of the suggested programme for the archaeological research and layout of the site (Fig. 5) is provided in Section 3.7.

In the development of the proposals importance has been given to community participation, maximising employment opportunities for the local population, training and skills transfer (see Sections 3.4 & 3.5).

3.2 Objectives

The principal objective of the archaeological research at Old Bulawayo is to recover information which will assist in the reconstruction and presentation of the monument. This information will complement that provided by historical and ethnographic sources.

Within this overall objective a number of specific academic questions will be addressed:

The spatial organisation of the settlement - Following detailed survey and excavation it should be possible to define distinct activity areas, such as areas reserved for industrial or domestic use or for rubbish disposal. The trial excavations and geophysical survey suggest that it will also be possible to define internal fence lines and boundaries, and to interpret the division and utilization of space within the settlement. It will be of importance to compare the archaeological results with the early historical accounts and pictorial representations, and with the results of excavations on settlements of related types.

Considerable work has recently been undertkenon examining the spatial layout of Zulu military sites in South Africa. These include Mgungundlovu (Parkington and Cronin 1979; Rawlinson 1987 and 1988), Ondini (Rawlinson 1985) and KwaBulawayo (Whitelaw 1993). While there are superficial similarities between these sites and

the organisation of the settlement at Old Bulawayo, there are clearly also considerable differences. Detailed survey and extensive excavation will determine to what extent the layout and buildings at Old Bulawayo conformed with these military centres and the extent of integration between local Kalanga traditions and those of the Ndebele. It will also help determine to what extent Old Bulawayo compares with the spatial structural model devised by Kuper (1980; 1982), subsequently defined as the Bantu cattle pattern by Huffman (1982).

The form and function of individual buildings and structures - Several different types of building are depicted in the various early pictorial representations, and these differences are also hinted at by the archaeological assessment. In particular, there appear to be three distinct hut types which may have functional and/or chronological significance: beehive huts, cylindrical huts with conical roofs, and cylindrical huts with dome-shaped roofs. In addition some huts appear to be associated with stone kerbs (see assessment Trench 7). Other structures recorded during the survey and assessment, such as stone piles and stone rings, are more enigmatic. Further excavation, in combination with ethnographic study, may assist in determining the function of these structures.

The chronological development of the settlement - Despite the short life span of the settlement (only 11 years), it seems likely that there were changes in both the spatial organisation of the settlement and the appearance of individual buildings. For example the historical evidence suggests changes in the appearance of the Royal Enclosure and in particular Lobengula's house. It should be possible to document such changes archaeologically. Although the trial trenches did not suggest any complex stratigraphy in the Commoner Settlement, the possibility of changes in the layout of the settlement or the appearance of buildings cannot be discounted.

Agricultural practices - Historical sources provide a considerable amount of information about Ndebele economy, but tend to be dominated by accounts of cattle raiding. Archaeological data from extensive excavations at Old Bulawayo should allow a more rounded picture of the agricultural economy of the settlement to be reconstructed. The principal archaeological sources relating to agricultural economy will be faunal and botanical remains recovered from middens and possibly also from storage pits. Studies of soil and erosion history in the hinterland of Old Bulawayo are also a potentially valuable source of information.

The faunal assemblage recovered from the midden samples during the assessment is dominated by cattle (Section 2.4.5, above). A similar situation has been identified at Mgungundlovu (Plug and Roodt 1990) and at Ondini (Watson and Watson 1990). However, at Ondini a wide range of other species were

also represented.

Differences in the composition of these assemblages (species represented, age structure, meat cuts) will also provide information relating to the social structure of the settlement and possibly ritual practices. Of particular interest during the assessment was the apparent difference in the treatment of the animal bone prior to deposition in the middens in the different areas of the settlement. Further examination of larger samples will help clarify these initial impressions.

The recovery and study of items of material culture, such as metal tools and grindstones (which are scattered across the site in large numbers), will also contribute to an understanding of agricultural practices.

Of particular interest is the question of storage of agricultural produce. Both crops grown by the inhabitants of Old Bulawayo and grain received as tribute by the king would have required processing and storage. The need for storage facilities would also be necessary for the accumulation of foodstuffs preparatory to major festivals such as the *Inxwala* (first fruits) ceremony, during which the population of Old Bulawayo was swelled by peoples from the outlying district and much feasting and drinking took place, and also as a safeguard against times of drought. At least some storage facilities should be detectable archaeologically; historical sources suggest pits were used for long-term storage of grain and large baskets on platforms for short-term storage (Ncube 1994, 20). Given the known short duration of occupation at Old Bulawayo, large-scale excavation may allow comparisons between storage facilities and estimated resident population.

Craft and industrial activities - A wide range of craft and industrial activities would have been carried out at Old Bulawayo, some of which are described in historical sources. Some of these activities (such as iron working) should be relatively simple to document archaeologically, others (such as basket making) less so. An important aim will be to recover as much information as possible from archaeological sources on the range and character of craft activities, the processes and tools involved, and where within the settlement different activities were carried out. This will be compared with the evidence from historical and ethnographic sources.

Material culture - The assessment has begun to provide some information regarding the character and range of the material culture of the inhabitants of Old Bulwayo. The study of the much larger assemblage which can be anticipated from full-scale excavation will have the potential to address a range of important questions in addition to questions relating to manufacture, crafts and subsistence economy, already mentioned, these will include the problems of ethnicity, status, trade and exchange, ceremonial/ religious activities.

With regard to ethnicity, Old

Bulawayo presents a facinating cultural mix, with many different groups, indigenous and European, represented. It will be important to attempt to determine how this mix is reflected in the material culture patterning, and what differentiations are found in different parts of the site and in different contexts. Of particular interest will be the significance and patterns of use of European trade items and 'gifts' in indigenous contexts on the one hand, and indigenous items in 'European' contexts (e.g. the Jesuit Mission) on the other hand. The 'control' on archaeological interpretation provided by the wealth of historical sources, regarding both the organisation of the Ndebele state and the relationships between the European settlers and the inhabitants of Old Bulawayo, will give this work a significance which goes beyond the Old Bulawayo project, and which will contribute to many of the theoretical concerns of contemporary archaeology.

Social organisation and way of life - all of the studies outlined above will contribute to the ultimate academic goal of the project, which is to achieve as full a picture as possible of the organization of Old Bulawayo and the ways of life of its inhabitants.

While of value in themselves, the academic objectives of the project are also fundamental to the reconstruction of Old Bulawayo as an authentic 'living museum'. It is intended, for example, that craft activities, animal husbandry, and crop cultivation will be carried out as part of the attraction. 'Hands on' participation in these activities will be encouraged, and will be especially relevant to the project's educational goals (activities of this nature always prove very popular with school children, and have no equal as a means of learning about past lifeways).

It is anticipated that artefacts recovered during the excavation will be displayed in the Heritage Centre while replicas will be used in the reconstructed areas of the site, and will also be on sale to visitors.

3.3 Methodology

The proposed archaeological research comprises a number of discrete elements, which are described below. Some of the elements are interdependent, however, and must be carried out in a specific order. The phased approach to the research is described in Section 3.7 (project plan and provisional programme) below. The purpose of the phased approach is not only to facilitate the carrying out of the research in the most logical and cost-effective manner, but also permit the ongoing excavations to become in themselves part of the attraction, once the Heritage Centre has been opened at the end of the first major phase of work.

3.3.1 Vegetation Clearance

The objective of the vegetation clearance is to allow the effective recording of all surface archaeological deposits, and to facilitate the collection of surface artefacts and the carrying out of the geophysical surveys. In order to achieve these

tasks it will be necessary to cut down, and remove from the site, all shrubs and small-to-medium-sized trees from the entire area where settlement deposits have been recorded. This amounts to an area measuring approximately 500m x 600m (see Fig.2). It should not be necessary to remove the larger trees. The level of remaining vegetation coverage should be comparable to that currently being maintained by the National Museums and Monuments in the area of the Royal Enclosure. It will be necessary to maintain the cleared area by regular grass cutting, especially during the rainy season.

3.3.2 Contour, Topographic and Photogrammetric Survey

A contour survey will be undertaken over the whole area of the hill on which Old Bulawayo is located. The topographic survey will build on the initial intra-site survey undertaken by the staff of NMMZ (Fig. 2) by providing a detailed plot of all exposed surface archaeological features at a scale of at least 1:500. It is envisaged that this will cover the whole of the area where settlement deposits have been identified, approximately 600m x 500m. Prior to the detailed survey, it is proposed that a single 20m x 20m grid is laid out across the entire site to be surveyed, with plastic pegs placed at the intersections of grid units. It is suggested that this grid should be aligned within the regional Universal Transverse Mercator (UTM) grid. The basic 20 x 20 units can then be used for the geophysical survey and rapidly sub-divided for the purposes of the intra-site surface survey (see below).

The phtogrammetric survey will involve the complete recording of all standing buildings, including the stone structures associated with the Royal Enclosure, the 'entrance' complex, the Jesuit Mission and the European traders' houses.

3.3.3 Intra-Site Surface Survey

The intra-site surface survey will provide data on the variable distribution of artefacts across the site. This will be used as a guide to the interpretation of economic and social activities within Old Bulawayo. The need for a detailed surface survey is enhanced by the relatively restricted area which can be investigated through archaeological excavation, and the limitation of geophysical survey to the detection of structural data. In the circumstances, a surface survey will be the most cost-effective procedure to provide spatial cultural information across the entire area of Old Bulawayo. Work elsewhere in southern Africa has demostrated the practicality and value of such work (Whitelaw 1993).

The surveys at Mgungundlovu (Rawlinson 1987), Ondini (Rawlinson 1985) and Kwa Bulawayo (Whitelaw 1993), and the field assessment at Bulawayo, suggest that there is a good relatioship betwen the distribution of surface artefacts and original activity areas. In particular, there is likely to be differential distribution of settlement and midden areas, whilst industrial and food-

processing areas may be indicated by concentrations of specific artefact types such as quernstones (Whitelaw 1993, 21). The eroded nature of the site and the shallow stratigraphy indicated by trial excavation also indicates that such a survey exercise would provide important information on the site.

The ability to combine structural and geophyusical data with detail provided by excavation and accurate information on the distribution of portable artefacts across the site is therefore a significant academic tool in the analysis, interpretation and display of Old Bulawayo.

The whole of the area with evidence for settlement activity will be included in the survey. This area, c 500mx600m, is ten times larger than that surveyed at KwaBulawayo by Whitelaw (1993). Consequently, the methodology demands careful consideration.

Although Whitelaw recommended the 2D plotting of all artefacts, the extent of the site at Old Bulawayo and the timescale for work suggests that this is not feasible. The surviving archaeology and field conditions at Old Buylawayo suggest that a grid collection technique would be more appropriate. Although some authors suggest the unity of 5 x 5 metre collection units, most of these surveys have been carried out in temperate arable zones where the concomitant information return has justified such detail (Cogbill and Lane 1985). Elsewhere a 10x10 metre collection unit has been equally successful (Gaffney et al. 1989) and would seem more appropriate for the work at Old Bulawayo. This would involve a total of 3000 collection units across the whole site. Survey will take plae after the ground has been cleared and when ground visibility is highest. The surface survey grid should be nested within that used for the geophysical and topographic survey. Dividing ropes prepared in advance and cut to a 10 metre length can be used to provide rapid sub-divisions of the 20 m x 20m grid units established prior to =the topographic survey (see above).

Each grid unit will be recorded, as it is surveyed, on a pro-forma sheet containing information on the grid reference, the identity of the surveyor and an estimate of surface visibility within each square. The latter should take the form of a figure between 0 and 10:0 indicating totally obscured ground and 10 representing 100% surface visibility. This information can be used later to correct absolute artefact densities by compensating for surface vegetation cover. It will be necessary to take consideratble care during collection as the presence/absence of very small articles such as beads maya be significant (Whitelaw 1993, 20)

Preliminary assessment of the site indicates that artefact density is likely to be relatively low, with the exception of data relating to querns and clay flooring. Whitelaw (1993, 18) reported that the attempts to accurately record the physical position of daga nodules actually prevented the completion of the

KwaBulawayo survey. to minimise processing time and storage requirements, all material including bone fragments but with the exception of quern and floor fragments, will be collected for analysis. Quern and clay floor fragments will be counted in the field using a mechanical hand counter and recorded on the field recording form.

The above procedures will be time consuming. It may be that, resource dependant, only 50 units are surveyed in a day. A minimum of 40 days may this be required for this work, if a single team of 6-10 people are available. Larger teams may be desirable but will requre enhanced supervision.

3.3.4 Micro-Regional Analysis

The original micro-regional survey was carried out primarlity to define the limits of the settlement at Old Bulawayo and to provide a preliminary interpretation of its immediate hinterland. In order to prepare information for detailed interpretation and presentation there is now a need to provide more detailed and accurate data on the distribution of artefacts and structures within the original 2 x 3 kilometre block surveyed by the NMMZ staff. In particular, there is a need to provide quantitative data on off-site artefact discard which may illustrate supplemental activities around Old Byulalwayo, or behaviour related to earlier or later settlement. However, it should be noted that accurate site location is made difficult by the lack of detailed maps and the absence of significant landscape or tenurial boundaries in the area around Old Bulawayo.

Micoro-regional analysis will be carried out at two levels:

Systematic extensive surface survey - Extensive survey will provide basic quantitative data relating to the distribution of artefacts across the landscape. This technique is particularly useful for the definition of 'off-site' activities. For comparative or analytical purposes it is essential that any extensive collection strategy utilised be systematic. Survey will be carried out within a basic hectare unit aligned on the UTM grid. This procedure has the advantage that the grid is permanent and relocatable. Each 100 x 100 metre unit will be subdivided into 4 traverses at 25 metre intervals. Each traverse will be further divided into two 50 metre sections. There will therefore be a total of 8 collection units within each 100 metre square.

Given the difficulties of location within the landscape, basic orientation will be achieved by the establishment of a series of baselines running east-west and north south from the site. In situations where orientation is particularly difficult and where there are no landscape features available for location, the south-west corner of each unit will be located using a hand-held Global Positioning System (GPS) unit. Although such systems are only accurate within 25 metres, the results will be precise enough for this exercise. Intermediate traverses will be laid out using a prismatic compass

and fieldworkers can orient themselves by reference to compasses.

A single team will be composed of a term leader and four assistants. The team leader will be responsible for recording traverses, marking bags and ensuring that assistants change bags at each sub-unit.

Each traverse and sub-unit will be recorded as it is surveyed on a pro-forma sheet containing information on the unit grid reference and sub-unit, the identity of the surveyor, and an estimate of surface visibility within each square. The latter will take the form of a figure between 0 and 10, in the manner described in section 3.3.3. (above), and will be used to correct absolute artefact densities by compensating for surface cover. All cultural items lying within one metre of the traverse will be collected.

The survey area contains six square kilometers or 600 hectare units. a single team of 5 people will take 45-60 days to cover this area. It is recommended that two teams are used.

Site recording - Individual sites, i.e. artefact concentrations and structural remains, will also be recorded in the course of the extensive survey. These will be recorded on pro-forma record sheets containing the following sheets containing the following entries, although not all sections will require completion in the field.

1. A record number derived from a unique project sequence or based on the National Monuments Record sequence.
2. A fourteen figure UTM grid reference recorded using the project GPS.
3. Height above sea level taken from the most detailed topographic map available.
4. The area of site in meters.
5. The legal status of the site.
6. The preservation of the site.
7. Source of damage to sites and assessment of future threats.
8. Site toponym.
9. Date of visit.
10. field surveyors present.
11. Information on local informants.
12. Information on owner or tenant of land.
13. Type of remains (a thesaurus of legitimate terms will be prepared for use by project staff).
14. Site period/s (using thesaurus).
15. Slope.
16. Erosion.
17. Topographical position.
18. Soils (using thesaurus)
19. Land use (using thesaurus).
20. Crops (using thesaurus).
21. Field records - a text description of the site accompanied, where necessary by a sketch plan and photographs. If necessary, 'grid samples' of material may be collected. Photographs taken on site and material collected will be recorded on the form. Detailed information on photographic frames will be recorded separately.
22. Site history - other information on the history of the site, e.g. when discovered or excavated etc.,
23. Site bibliography.

3.3.5. Landscape survey

It is suggested that an assessment of the wider settlement context of the landscape would be useful for interpretation of the site at Old Bulawayo. Given the variable quality of the information currently available in the National Monuments Record, it is advisable that known sites within the region should be re-visited and recorded using the system recommended for sites located during the micro-regional survey. A suitably equipped team of two people could carry out such a limited re-survey. The time commitment for such work would depend on the extent of the larger survey area.

There is a clear general need for improving the current condition of national cultural resource recording (Larsen 1992). It is recommended that NMMZ staff consider the future of the National Monuments Record in the light of experience gained using new technology during the Old Bulawayo project. In fact, the Old Bulawayo survey could be used as a pilot study for a re-appraisal of cultural resource recording strategies. The content of the record should be considered in detail and the potential for integration of the cultural database with graphical environmental databases examined. Depending on the availability of resources this information could be kept on PC-based systems and perhaps manipulated within the PC-ARCINFO databases currently available. If this is the case, discusssion with, ERSI (Harare) indicates that experienced staff capable of providing ARC macro language interfaces are to be found in Harare, and such work could be commissioned locally. Major development of the national archive, however, may ultimately prompt a shift to work station technology and implementation of the fully implemented ARCINFO soft ware on a more powerful (an expensive) UNIX platform.

3.3.6. Soil Survey

Priority will be given to establishment of an erosion chronology. Soil depth and the presence of subsurface horizons will be established by mapping of rock outcrops, auguring and recording distribution and colour of termite mounds. Location of remains of buildings and other archaeological materials; evidence of erosion or build up of soil around them; and study of valley deposits incised by the streams for evidence or artefacts or buildings in stratified relationships, and of buried surfaces or changes in texture and structure of the deposits, will be used to establish the chronology.

During excavation, the context of the archaeology in terms of soil materials and processes of deposition needs to be studied to investigate formation and survival of archaeological features and to contribute to the erosion chronology.

To assess the agricultural potential of the soils in the hinterland of the site, a basic pedagogical study of selected soils is needed, with determination of texture, pH, cation exchange capacity and selected

nutrients. This would have to follow from the erosion/deposition chronology in order to be confident that the soils studied were those available to the occupants of the site. Experimental reconstruction of agriculture would then be based on recorded and current practices appropriate to the soil types involved.

3.3.7 Geophysical Survey

It is envisaged that three eight week seasons will be undertaken. An area of approximately eight hectares will be covered during each season using both magnetic suceptibility sampling and gradiometry. During the magnetic susceptibility survey readings will be taken at 1.0 m intervals using a Bartington field coil system in order to identify hut dwellings, hearths, midden deposits, industrial areas, etc., Some work at closer sampling intervals might be appropriate to investigate the interior of the huts.

The gradiometry survey will be undertaken using a Geoscan FM 36 with STI sample trigger. Readings will be logged at 0.5m intervals across traverses spaced 1.0M apart.

During this period Geophysical Surveys of Bradford would provide initial training to a Zimbabwean archaeologist - to include field methodologies, use of instrumentation and computers, field data processing and software packages etc.,

3.3.8 Excavation

The proposed excavations are divided into three phases, each with a duration of two months (see Fig. 6). The first phase will precede the opening of the Heritage Centre. The second and third phases will be carried out on successive years, each preceding the opening of a further part of the reconstruction. The location and layout of the excavation areas shown on Figure 6 is provisional and may be modified in the light of the results of the intra-site surface survey and geophysical surveys, which will precede the excavations.

Phase 1 Excavations - These will focus on the area of the Royal Enclosure and an adjacent area of the Central Enclosure. Narrow transect excavations on the periphery of the site will also be carried out at this stage, in combination with geophysical survey transects, in order to determine the line of the palisade which enclosed Old Bulawayo. This will enable the reconstruction of this palisade on its original line.

Work on the principal structures in the Royal Enclosure will aim to expose floor surfaces and wall foundations. These structures will only be sample excavated where it becomes essential to fully comprehend their constructional sequence. Following the excavation it will be possible either to consolidate the surviving archaeological remains for presentation purposes or to reconstruct the buildings on their original site. The final decision on the these alternative approaches will be made by the National Museums and Monuments of Zimbabwe. The

excavations will also determine, in conjunction with the preceding geophyscal survey, the position and nature of internal divisions within the Royal Enclosure, and of the palisade or fence which surrounded it. This latter exercise may involve the excavatioan of small sample trenches beyond the area of the main excavation to clarify geophysical survey results.

In addition work will commence on the excavation of the Jesuit Mission. This will comprise the recording and clearance of all superficial deposits and rubble collapses. The objective is to allow for the provisional presentation of the Jesuit Mission prior to its full excavation and reconstruction in Phase 3.

Phase 2 Excavations - These will focus on an area of the Commoner Settlement. It is envisaged that an area of 50 m x 50m, corresponding to approximately 10% of total area of the Commoner Settlement, will be examined. The objective will be to allow for the complete reconstruction, on its original site, of this area of the settlement. In order to facilitate the movement of visitors through the site and back to the Interpretive Centre it is suggested that part of the south-western area of the Commoner Settlement is selected for this investigation.

In addition this phase of the excavations will include the excavation of the stone walled 'ceremonial entrance' on the north-western side of the settlement and more extensive excavation of the 'Royal' midden sampled during the assessment exercise.

Phase 3 Excavations - These will focus on the full excavation of the Jesuit Mission and the excavation of one or more of the European traders' houses. The objective will be to allow for the complete reconstruction on the original sites of selected buildings within the European Settlement.

During the excavations all deposits will be hand excavated and either fully or sample sieved (for small artefacts such as glass beads) using appropriate mesh sizes. All features and deposits will be recorded using pro-forma record cards and a full drawn record will be maintained. Plans will normally be drawn at a scale of 1:20 and sections at a scale of 1:10. Colour slide and black and white photographs will be taken of all features and deposits. All significant deposits will be sampled for charred plant remains.

3.4 Staffing

Project co-ordinators- It is proposed that two project co-ordinators are appointed. It is proposed that one should be the current Monuments co-ordinator for NMMZ (I.Murambiwa) and the other will be the principal archaeological consultant from Birmingham University Field Archaeology Unit (G.Hughes). The project co-ordinators will be responsible for the day to day management and academic control of the project. They will operate within the existing administrative structure of NMMZ, and BUFAU. The manager/co-

director of BUFAU (S. Buteux) will act as management consultant for the project.

Vegetation clearance- A team of twenty temporary contract staff will be recruited from the local community for a period of ten weeks (50 day).

Contour, topographic and photogammetric survey- A team of three will be required for a period of eight weeks (40 days). This team will be jointly led by the photogrammetrist (O.Nehowa) and surveyor (E.Teveredze), both of whom are employees of NMMZ and are based at the Great Zimbabwe Conservation Centre. At least one of these team leaders will be present at any one time during the survey. The project co-ordinators (G. Hughes and I. Murambiwa) will be available for consultation during the course of the survey. The remaining members of the team will consist of two technical assistants currently employed by NMMZ.

Geophysical survey - because of the specialised nature of this work there will need to be a high level of involvement from Geophysical Survey of Bradford (GSB), especially during the initial phases of the project. It is intended that the level of involvement from NMMZ staff will increase during the later phases as experience and knowledge is acquired. During Phase 1 of the project two staff from GSB will be employed on the project for a period of eight weeks (40 days). An additional consultant from GSB will be required during the initial two weeks and final two weeks of Phase 1. The GSB staff will work closely with two employees of NMMZ, at least one of whom will be a regional archaeologist/curator of archaeology. During Phases 2 and 3 it should be possible to reduce the involvment of GSB staff to one individual for two periods of eight weeks (40 days) each.

Landscape, intra-site surface survey and soil survey - This will be led by one of the regional archaeologists employed by NMMZ. Specialist consultation will be provided at the commencement of the survey by Birmingham University Field Archaeology Unit (V. Gaffney). Further specialist assistance will be provided by the environmental consultant from. the University of Birmingham (S. Limbrey). The main core of the team will consist of ten temporary contract staff who will be recruited from the local community for two periods of eight weeks (40 days). In addition, it is intended to invite the participation of volunteers from the Department of History, University of Zimbabwe, local schools and from the local community.

Excavation - The excavation will be led by the principal archaeological consultant from BUFAU (G. Hughes). He will be assisted by at least one supervisor from BUFAU and one from NMMZ, currently employed as a regional archaeologist/ curator of archaeology. In addition a team of 20 site assistants and one illustrator/ draughtsperson will be recruited from the local community

for three periods of eight weeks (40 day) each. Assistance will also be provided by the environmental consultant from the University of Birmingham (S. Limbrey). It is intended to invite the participation of volunteers from the Department of History, University of Zimbabwe, local schools and from the local community during the course of the excavation phases.

Post-survey and post-excavation analysis- The data from the contour, topographic and photogrammetric survey will be processed at the Great Zimbabwe Conservation Centre by staff of NMMZ.

The preliminary data processing from the geophysical survey will be undertaken at Old Bulawayo during the course of the fieldwork and archive copies of the data will be deposited at Great Zimbabwe. The bulk of the post-survey work will initially be carried out in Bradford with the participation of the NMMZ employee undertaking the post-graduate master degree in Archaeological Prospection (see Section 35 below). Geophysical Surveys of Bradford wil prepare the report working closely with the Zimbabwean archaeologist. Further training will be given in the use of geophysical software, data processing, data display options, CAD interpretations, desktop publishing, etc. It is intended that the data from Phases 2 and 3 of the project will be partly processed in Zimbabwe by the (by now qualified NMMZ geophysicist.

The written and graphic data from the landscape and surface survey, the soil survey and from the excavation will be processed at the University of Birmingham by the principal archaeologcal consultant (G.Hughes). Phase I of this work will be undertaken with the assistance of the landscape survey consultant (V Gaffney), the environmental consultant (S. Limbrey) and the employee of NMMZ undertaking the post-grduate diploma course in Computer Applications in Landscape Archaeology (see section 3.5 below). The data from Phase 2 of the landscape/ surface survey will be processed in Zimbabwe by the (by now qualified NMMZ landscape archaeologist.

Study of the principal categories of material culture (pottery, beads, metalwork, glass, etc..,) will be undertaken in Zimbabwe by employees of NMMZ. It is proposed that the study of the faunal remains will be undertaken as part of a post-graduate project at the University of Zimbabwe by an employee of NMMZ and under the possible supervision of G.Pwiti (UZ) and I. Plug (Transvaal Museum).

3.5 Training and Education

Staff training and skills transfer from one of the most important components of the project, and will be of value not just in the successful completion of the Old Bulawayo project but also for the long term future of archaeological fieldwork in Zimbabwe. Numerous staff from NMMZ and students from the University of Zimbabwe will be actively involved in the project and

will gain valuable experience in a wide range of field archaeological techniques relating to both survey and excavation. These skills are of crucial importance in the effective and successful conduct of current and future field work projects. In addition, the project will involve the formal training of NMMZ archaeologists in specific areas of expertise: applied archaeological geophysics and computer-based landscape analysis. Both these fields of study are directly relevant to Zimbabwean archaeology, especially given the increasing demand for pre-development archaeological surveys and environmental impact assessments. It is proposed that employees of NMMZ will undertake post-graduate courses at the University of Bradford (Archaeological Prospection) and at the University of Birmingham (Computer Applications in Landscape Archaeology). Both these periods of study will follow the completion of Phase 1 of the fieldwork and are timed to coincide with the processing of the data at the UK-based institutions. It is intended that the students will participate in the analysis as part of their practical assignments. Brief outlines of the courses are provided below. Detailed prospectuses can be obtained from the institutions concerned.

MSC by advance study in Archaeological Prospection - (Department of Archaeological Sciences, University of Bradford)- The course provides training in the principles and practice of prospection techniques in archaeology. It provides grduates with a working knowledge of the principal geophysical and geochemical techniques currently available for the detection of hidden archaeological features. It is taught over two 15 week semesters, organised over three academic terms beginning in October. To achieve the MSc it is necesary to complete a dissertation for submission by the end of September. It is intended that this dissertation will be related to some aspect of the Old Bulawayo proejct and probably the second phase of geophysical survey.

Post graduate diploma in Computer Applications in Landscape Archaeology (Department of Ancient History and Archaeology, University of Birmingham) - Computing has become an essential part of archaeological practice. The diploma seeks to provide the student with the necessary competence in archaeological computing through hands-on access to the principal applications and the integration of computer-based skills with specific archaeological projects. It is intended that the principal project on which the student will learn will be analysis of spatial and landscape data from the survey and excavations at Old Bulawayo.

In addition to the formal training for NMMZ staff and university students, the project will provide an invaluable insight into the practice of archaeology for the local community. The employment of local contract staff and the involvement of

voluntary participation from local schools and communities will be of mutual benefit to both the community and the project's archaeological and conservation objectives. In addition to providing short and long term employment, the local community will be able to identify with the Heritage Centre at Old Bulawayo and the wider historical resource. This will be of value in fulfilling the long-term objectives for the conservation of the archaeological heritage (UNESCO 1991). Local knowledge should also assist in the interpretation of specific archaeological features, funds and deposits.

3.6 Resources

Accommodation- It is anticipated that office and storage accommodation for the project will be provided by the Natural History Museum in Bulawayo. Potential on site accommodation could be provided by the Visitor /Administration Centre. It is proposed that private rented accommodation be sought for overseas consultants while in Bulawayo. Hotel accommodation will have to be provided for consultants when in other parts of the country.

Vehicles and transport - It is critical to the success of the project that adequate transport is available, both to transport staff and equipment to and from the site and to carry out the landscape survey effectively. It is proposed that a crew bus (approximately 17/18 seater) is purchased at the beginning of the project. In addition the hire of at least one additional vehicle (preferably a pick-up) will be necessary during the fieldwork phases of the project.

Consumables - A range of consumables will be required. Much of this, such as photographic film and good quality drawing film is difficult or expensive to obtain in Zimbabwe. Consequently, it is recommended that this be purchased in the U.K.

Equipment -The project will require a range of basic equipment such as excavation tools. It is envisaged that this equipment will become the property of the National Museums and Monuments of Zimbabwe following the completion of the project.

The contour and topographic survey - This will require access to a total station and datalogger. It is predicted that this will be an ongoing requirement during the subsequent survey and excavation phases. Consequently it is proposed that suitable equipment is purchased at the commencement of the project.

Computing facilities - The extent and complexity of work will demand aids for the mapping and interpretation of spatial data. Assessment of available computing facilities installed at the Great Zimbabwe Conservation Centre sugggests that the NMMZ is relatively well resourced for this type of work, although there is little experience in the detailed integration of new technology with complex archaeological modelling. The peripherals, plotters, digitizers, etc., available are AUTOCAD and PC-

ARCINFO. The available PC platforms are, however, relatively underpowered for much of this software and it is recommended that at least one more powerful PC with fast, fully implemented 486 or Pentium processor, graphics accelerator, adequate RAM and a large hard disk be purchased for use by the project (see also demands of the geophysical survey). A PC with an adequate specification will allow more efficient use of the available packages. The graphics packages, AUTOCAD and PC-ARCINFO will particularly benefit fom such an upgrade. It is important that NMMZ staff become acquainted with the conceptual and technical problems of applying existing technology to current archaeological problems, and some external training is highly recommended for this purpose (see Section 3.5 above).

Geophysical survey equipment - a range of geophysical survey hardware and software will need to be purchased at the commencement of the proejct. This will include a Geoscan FM36 gradiometer and sample trigger, a Bartington Magnetic Susceptibility system , a portable computer PC 486 DX, a portable printer and Geosoft Geophysical software. It will be necessary to allow 6 month delivery time for the purchase of the gradiometer. In addition to the equipment purchased specifically for the project, further equipment will be provided by GSB during the fieldwork stages.

3.7 Project Plan and Provisional Programme

The essence of the project plan is to closely integrate the archaeological research with the reconstruction of Old Bulawayo while leaving flexibility to adopt alternative strategies to the development and conservation of the site as the overall project progresses. The plan is devised so that the attraction can be developed in three principle stages: first the opening of the Interpretation Centre and the reconstruction of the Royal Enclosure (September 1996); second the opening of the Commoner Settlement (September 1977); and third, the opening of the European Settlement (September 1998). Further stages of development of the attraction, such as the proposed 19th century experimental agricultural centre or further excavation and reconstruction of the Commoner Settlement, could be carried out later as required. The plan is also devised so that from the opening of the first stage in September 1996, the archaeological excavation and research will itself form part of the attraction.

In order to achieve these goals a phased approach has been adopted (see Section 3.7.1 - 'Outline Timetable' and Gantt Chart), each of the first three phases, of approximately one year's duration each, leading to the opening of a further stage of the attraction. The phased approach also allows the projects aim with regard to professional training and skills transfer to be most effectively met.

As a consequence, the level of involvement of British consultants is progressively reduced during the course of the project and that of Zimbabwean personnel correspondingly increased.

Each phase of the archaeological work comprises a survey and geophysical prospection stage preceding, and guiding, the subsequent excavation stage. The excavation stage, in turn, leads directly to the reconstruction of the relevant area of the site. The order of this work follows a logical progression (Fig 5), commencing with the excavation and reconstruction of the Royal Enclosure (Phase 1) followed by part of the Commoner Settlement (Phase 2) and finally the Jesuit Mission and European Settlement (Phase 3). Possible visitor routeways, at the conclusion of the project, are illustrated in Figure 5. These would guide the visitor from the Interpretation Centre, through the Entrance Complex, to the Royal Enclosure and then on to the Commoner Settlement. From the Commoner Settlement there could be two options. The first option could be to walk past the remains of unexcavated huts, out through an eastern entrance in the outer palisade and on to the Jesuit Mission and European Settlement. Alternatively, visitors could return to the Interpretation Centre from the Commoner Settlement and be transported to the Jesuit Mission.

The first phase of the archaeological work, which deals with the most sensitive area of the site, the Royal Enclosure, is designed to allow for two options for the reconstruction of the buildings in the enclosure (Fig.5). Option A involves the conservation and display of the foundations of the buildings within the Royal Enclosure. These buildings would be reconstructed in an adjacent area to the South, which would already have been fully excavated and thus archaeologically 'sterilized'. Option B involves the reconstruction of the buildings of the Royal Enclosure on their original foundations.

It is envisaged that Phases 2 and 3 of the archaeological work could be concurrent with the development of the site infrastructure which might include the provision of many of the features originally suggested in the feasibility study, such as a craft centre, visitor accommodation, and re-routeing and upgrading of the exisiting road. However, it is felt that the design and location for these facilities should not be undertaken until the first phase of the archaeological work has been completed and the results assessed.

3.8 Acknowledgements

The co-ordinators of the assessment were I Murambiwa (NMMZ)and G.Hughes (BUFAU). The field team comprised K. Mkhwananzi, J. Muringaniza, N. Muzarabani, O. Nehowa, K.Ncube, E. Sibindi, L. Swan and E. Teveredze (NMMZ); S.Buteux and Dr. V.Gaffney (BUFAU): J.Gater (GSB); Dr. S.Limbrey (Department of Ancient History and Archaeology,

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REPORT ON GEOLOGICAL SURVEY No. 94/125
OLD BULAWAYO - ZIMBABWE

Work Commissioned by the National Museums and Monuments of Zimbabwe

SITE SUMMARY SHEET

Location and Topography

The site of Old Bulawayo lies approximately 16.5 kilometres south-east of Bulawayo on the road to Inyorka and Emangeni. The site occupies an oval, low hill, with streams flowing, albeit seasonally through the surrounding valleys. At present, although some of the land has been cleared of vegetation, the majority is covered with bushes, shrubs and trees, which vary in height and maturity.

Archaeology

In 1870 Lobengula emerged as the new King of the Ndebele state. He established his capital at Old Bulawayo, and gave it the name Gubulawayo after his grandfather's village in Zululand. However, the site was only occupied for some 11 years, because in 1881 Lobengula moved the capital to the present day site of Bulawayo. Following the re-location, he issued orders for the destruction of the old site and this was carried out by burning the main structures. Documents dating to 1882 refer to the site as being "in ruins" though many huts were reported as surviving the conflagration.

Aims of Survey

To investigate the potential for geophysical techniques in the archaeological assessment of the site of Old Bulawayo being carried out by Birmingham University Field Archaeology Unit (BUFAU). In particular, the initial aim was to use fluxgate gradiometry and topsoil magnetic susceptibility measurements on three different zones of the site.

Summary of Results*

Trial measurements of the topsoil volume magnetic susceptibilty indicated that the technoques can be successfully used to map the location of hut dwellings within the Old Bulawayo site. Increases up to 500% in the readings were observed over some of the intact hut floors. In addition, background levels of topsoil varied from each of the three areas investigated and these may well be archaeologically significant in their own right. However, a much larger spatial sample will be necessary before any wider conclusions can be drawn.

Fluxgate gradiometry identified numerous magnetic anomalies of archaeological interest, though their precise interpretation will be dependent upon the assessment of larger areas of ground. The anomalies are the reverse of those experienced in the northern hemisphere and the full complexity of the responses is not yet fully understood. However, the trial work indicated that strong (negative) anomalies are associated with some of the intact hut floors, and detailed work in the core of the site identified a previously unknown small enclosure surrounding one of the huts. Its existence was confirmed by trial excavation (see BUFAU report).

The results suggest that geophysical techniques could contribute significantly to the archaeological work at Old Bulawayo.

* It is essential that this summary is read in conjunction with the detailed results of the survey.

SURVEY RESULTS

94/125 Old Bulawayo, Zimbabwe

1. Survey Areas and Techniques (Figure I)

1.1 Three small areas. A to C were selected for investigation using fluxgate gradiometry and magnetic susceptibility measurements. Their relative positions are shown in Figure 1 which includes a sketch plan of the site at a scale of 1:2500.

1.2 The survey areas were established and tied in by members of the National Museums and Monuments of Zimbabwe (NMMZ).

1.3 Volume magnetic susceptibility measurements were taken at 1.0 m intervals (400 readings per 20 m grid) using a Bartington field coil system. Flux gate gradimetry was carried out using a Geoscn FM 36 linked to an STI sample trigger with readings being logged at 0.5 m intervals along 10 m travgerses (800 readings per 20 m grid).

2. **Display (Figure 2 - 8)**

2.1 The results are displayed in a variety of formats including dot density plots, X-Y traces and grey/colour images. The scales are indicated on each figure and the display formats are discussed in the *Technical Information*, section at the end of the text.

3. General Considerations - Complicating Factors

3.1 Most of the problems concerned the presence of dense undergrowth and thick vegetation across much of the ground. Where necessary, selected areas were partially cleared, but the remaining trees and in particular the presence of acacia thorns still severely hampered walking. Although such difficulties could be overcome in the very small sample areas reported upon here, the question of the vegetation will have to be resolved before large scale geophysical work can be attempted.

3.2 For successful comparison of magnetic susceptibility measurements it is usually necessasry to have consistent ground conditons across a site, or allowances have to be made for varying vegetation cover. Ideally the instrument's coil should be placed on flat bare soil in order to get a good electrical contact. At Old Bulalwayo bare earth was extensive in parts of the site, but elsewhere, in the areas investigated, the thin, poorly rooted grass could easily be scraped away to provide fairly uniform conditions. The nature of the ground cover will need to be considered carefully in the future use of any field coil.

4. Results

Area A Survey size 20 m by 30 m (magnetic susceptibility) and 40 m by 60 m (maximum, fluxgate gradiometry). This sample was

positioned over two visible hut dwellings in the core area of the site. It was hoped that by taking readings from known features it would be possible to gauge to likely responses from similar remains, perhaps not visible at the surface, elsewhere on the site.

4.1 The magnetic susceptibility results are shown in Figures 2 and 8 which clearly indicate the very high recorded readings associated with the surviving floors of the huts/dwellings. It is believed that three factors may be contributing to the enhanced values;

(I). It is known that compaction of any soil will naturally increase the level of susceptibility when volume measurements are being recorded. The field coil only measures a small volume of soil at the point of contact with the ground, and where the topsoil has been compressed there will be greater concentration of ferricirons compared with untrampled soil.

(2) It has been demonstated in the laboatory (Le Borgne 1955) that fire will result in increased magnetism and thus any fires /hearths within the dwellings will result in localised increases in susceptibility. In this way it should be possible to identify the actual position of any fire within a hut floor (see 4.3) if the site has not been too disturbed.

(3). The destruction of the site of Old Bulawayo by fire will have added significantly to the already localised increased susceptibility associated with the hut floors. Experimental work has demonstrated that when burnt, a wooden funeral pyre will result in significant scorching of the ground and associated localised increases in susceptibility. There is a close analogy between the wooden pyre and the wooden huts of Old Bulawayo (and elsewhere) in the way they will have burnt down and affected the magnetic characteristics of the surfaces on which they orginally stood.

4.2 It is believed that the varying contributory factors described in 4.1 above will account for the differing readings obtained from the two huts within Area A (and for those within Area C see below). The maximum recorded reading for the northerly hut was 675 SI units, compared with 924 for the southern hut. The important difference is that the backkground level of susceptibility in this area is in the range of 50 to 150 SI units and thus the hut floors are easily identifiable. In the light of these results it would appear that the technique is ideally suited to locating and mapping the density of surviving huts.

4.3 Very large variations within the readings were observed when the coil was moved a matter of a few centimetres on the ground of the huts. The actual recorded reading is naturally dependant upon the position of the sampling

point within the floor. It would be interesting to select a few huts and to carry out intensive sampling say at 0.1 or 0.2 m intervals, in order to investigate inter-hut variations. This was beyond the scope of the current exercise.

4.4 Fluxgate gradiometry over a larger area than that used for the magnetic susceptibility work (see Figure 3 and 8) has helped to provide a better overview of the levels of background magnetic noise. However, it will be necessary to survey a much greater zone before the true background magnetic levels can be established. The same is true regarding the interpretation of individual anomalies. Very few fluxgate gradiometer surveys for archaeological purposes have been carried out south of the Equator and to date, considerably less have been published. As a consequence not enough data has yet been collected in order to be confident of the archaeological interpretations of some of the more obscure anomalies. Lying to the south of the Equator the anomalies and the reverse of those found in Europe and the United States, where most archaeological gradiometry has been carried out. In addition, the shape and form of the anomalies is different and it will be necessary to model these responses in order to fully understand the results. Trial excavations following the geophysical work will help significantly in the interpretation of the geophysics not only for Old Bulawayo but also for Zimbabwe and Southern Africa as a whole.

4.5 Despite these complications (4.4) the gradiometer survey over the two huts in Area A has produced some very interesting results. The northern most hut is identifiable in the data, but not as clearly as the southern one. Unfortunately, however, the results of the latter are overshadowed by the erratic anomalies associated with a metal information plaque mounted on a small stone and brick plinth. Strong(negative) anomalies are associated with the fired clay floors. Clearly in these examples the intensity of firing and the size of the features are large enough to produce magnetic anomalies which are measurable with the Gradiometer. It may be that other less substantial huts will not produce such strong magnetic fields, but they should still be identifiable depending upon the levels of background noise.

4.6 Of considerable interest is the identification of an apparent enclosoure fence/ wall surrounding the southern hut. The results suggest the presence of a gully or slot, or perhaps a clay foundation for a wattle and daub fence or similar stock (?) enclosure. There are hints of a

similar arrangement for the northern hut but a larger survey area would be required to verify the exact position.

4.7 In the north-east of the survey area is a region of strong magnetic anomalies which are either indicative of substantial burnt/fired deposits, or possibly waste deposits of small scale industrial activity such as metalworking. Again, a larger survey area is necessary to resolve the interpretation. It is possible that geological conditions are responsible.

4.8 There is a greater degree of magnetic noise in the west and north of the survey, while the south-east appears to be relatively quiet. Some of the noise clearly corresponds to brick debris visible on the ground;elsewhere it is assumed that general occupation debris is responsible for the numerous anomalies.

Area B. Measuring 15 m by 20 m this sample area was targeted to investigate zone thought to be devoid of any structures;

4.9 The magnetic susceptibility readings (figure 4) show a distinct lack of any specific localised areas of enhancement. This would support the view that no structures are surviving intact in the small area investigated. However, it is interesting to note that the background levels are apparently higher than those in Areas A and C (see below). This might indicate some form of past archaeological activity or perhaps differential usage of the land. However, it is difficult to draw any conclusions from such a small sample.

4.10 The fluxgate gradiometer has identified few specific anomalies, but merely an area of increased noise in one half of the survey. A larger survey area will be required to assess whether such responses are archaeologically significant.

Area C.A 20m grid situated in the area of commoner settlement. It partially overlies two known huts on the edges of the grid with a stretch of ground thought to contain one further hut in between.

4.11 The susceptibility coil registered high readings at the edges of the grids where the huts are visible The responses are of a similar strength to those found in the Roya Enclosure (Area A).

4.12 Between these two peaks there are three discrete areas of high readings, one of which is comparable in strength to those associated with the intact hut responses. As such, the highest readings might correspond with a hearth, and the other areas of enhancement with much denuded hut floors. While some burnt clay is visible on the ground in the areas of the high readings, the dusty conditions and variable vegetation cover make the

recognition of any surface features difficult. The results demonstrate that, the use of the coil to define specific acreas of interest will be particularly useful in the total mapping of Old Byulawayo. Subsequent trial excavation of selected areas of different magnetic enhancement will help with their archaeological interpretation.

4.13 The gradiometer survey over the same 20m grid produced several anomalies of archaeological interest. There is good correlation with the areas of enhancement identified by the coil but the gradiometer responses are more complex and as such more difficult to interpret at this stage of the project.

5. Conclusions

5.1 The preliminary geophysical work at Old Bulawayo has produced some exciting results which clearly demonstrate the potential for the techniques in providing a detailed map of the remains at the site.

5.2 Magnetic susceptibility measurements and fluxgate gradiometry should prove useful at two different levels. First, at the feature level, by identifying individual remains like huts, fires and hearths. And second, at the broader intra-site level, by mapping zones of varying activity associated with habitation, industrial and stock/ agricultural areas.

Project Co-ordinator: J Gater
Project Assistants: N Nemcek and A Shields

Acknowledgments

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Reference

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TECHNICAL INFORMATION

The following is a description of the equipment and display formats used in GEOPHYSICAL SURVEYS OF BRADFORD reports. It should be emphasised that whilst all of the display options are regularly used the diagrams sproduced in the final reports are the most suitable to illustrate the data from each site. The choice of diagrams results from the experience and knowledge of the staff of GEOPHYSICAL SURVEYS OF BRADFORD.

All survey reports are prepared and submitted on the basis that whilst they are based on a thorough survey of the site, no responsibility is accepted for any errors or omissions.

Magnetic readings are logged at 0.5 m intervals along one axis in Im traverses giving 800 readings per 20m x 20m grid, unlelss otherwise stated. Resistance readings are logged at 1m intervals giving 400 readings. per 20mx20m grid. The data are then transferred to portable computers and stored on 3.5" floppy discs. Field plots are produced on a portable Hewlett Packard Thinkjet. Further processing is carried out back at base on computers linked to appropriate printers and plotters.

Instrumentation

(a) Fluxgate Gradiometer - Geoscan FM 36

This instrument comprises of two fluxgates mounted vertically apart, at a distance of 500 mm. The gradiometer is carried by hand, with the bottom sensor approximately 100-300 mm from the ground surface. At each survey station, the difference in the magnetic field between the two fluxgates is conventionally measured in nano tesla (Nt) or gamma. The fluxgate gradiometer suppresses any diurnal or regional effects. Generally features up to one metre deep may be detected by this method.

(b) Resistance Meter - Geoscan RM4 or RM15

This measures the electrical resistance of the earth, using a system of four electrodes (two current and two potential). Depending on the arrangement of these electrodes an exact measurement of a specific volume of earth may be acquired. This resistance value may then be used to calculate the earth resistivity . The "Twin Probe" arrangement involves the paring of electrodes (one current and one potential) with one pair remaining in a fixed position. whilst the other measures the resistance variations across a fixed grid. The resistance is measured in Ohms and the calculated resistivity is in Ohm-metres. The resistance method as used for area survey has a depth resolution of approximately -0.75m,

although the nature of the overburden and underlying geology will cause variations in this generality. The technique can be adapted to sample greater depths of earth and can therefore be used to produce vertical "pseudo sections".

(c) Magnetic Susceptibility

Variations in the magnetic susceptibility of subsoils and topsoils occur naturally, but greater enhanced susceptibility can also be a product of increased human/anthropogenic activity. This phenomenon of susceptibility enhancement can therefore be used to provide information about the "level of archaeological activity" associated with a site. It can also be used in a predictive manner to ascertain the suitability of a site for a magnetic survey. The instrument employed for measuring this phenomenon is either a field coil or a laboratory based susceptibility bridge. For the latter 50g soil samples are collected in the field.

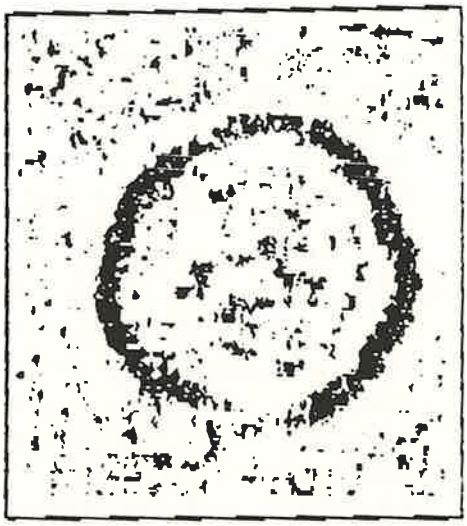
Display Options

The following is a description of the display options used. Unless specifically mentioned in the text it may be assumed that no filtering or smoothing has been used to enhance the data. For any particular report a limited number of display modes may be used.

(a) Dot-Density

In this dispslay, minimum and maximum, cut-off levels are chosen. Any value that is below the minimum, cut-off value will appear white, whilst any value above the

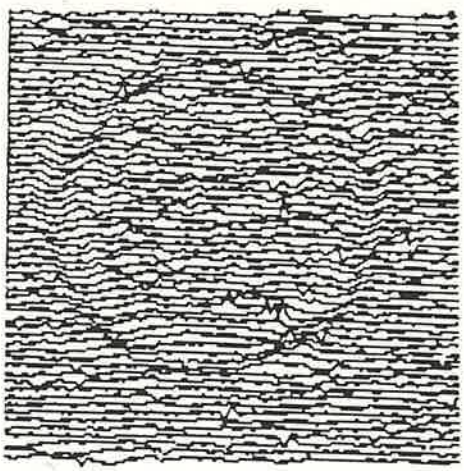
maximum, cut-off value will appear black. Any value that lies between these two cut-off levels will have a specified number of dots depending on the relative position between the two levels. The focus of the display may be changed using different levels and a contrast factor (CF) Usually the CF = 1, producing a linear scale between the cut-off levels. Assessing a lower than normal reading involves the use of an inverse plot. This plot simply reverses the minimum and maximium, values, resulting in the lower values being presented by more dots.



In either representation, each reading is allocated a unique area dependent on its position on the survey grid, within which numbers of dots are randomly placed. The main limitation of this display method is that multiple plots have to be produced in order to view the whole range of the data. It is also difficult to gauge the true strength of any anomaly without looking at the raw data values . This display is much favoured for producing plans of sites, Where positioning of the anomalies and features is important.

(b) X-Y Plot

This involves a line representaion of the data. Each successive row of data is equally incremented in the Y axis, to produce a stacked profile effect. This display may incorporate a hidden-line removal algorithm which blocks out lines behind the major peaks and can aid interpretation. Advantages of this type of display are that it allows the



full range of the data to be viewed and shows the shape of the individual anomalies Results are produced on a flatbed plotter.

(c) Grey-Scale

This format divides a given range of readings into a set number of classes. These classes have a predefined arrangement of dots or shade of grey, the intensity increasing with value. This gives an appearance of a toned or grey scale.

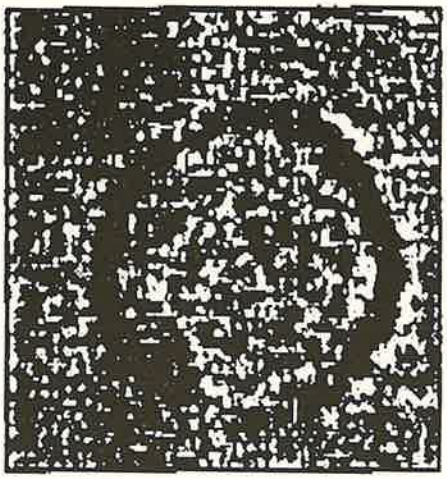
Similar plots can be produced in colour, either using a wide range of colours or by selecting two or three colours to represent positive and negative values. While colour plots can look impresssive and can be used to highlight certain anomalies, grey-scales tend to be more informative.

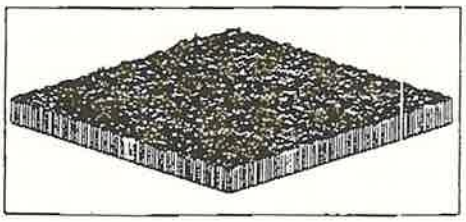
(d) Contour

This display format is commonly used in cartographic displays. Data points of equal value are joined by a contour line. Closely packed contours indicate a sharp gradient. The contours therefore highlight an anomalous region. The range of contours and contour interval are selected manually and display is then generated on the computer screen or plotted directly on a flat bed plotter/inject printer.

(e) D-Mesh

This display joins the data values in both the X and Y axis. The display may be changed by altering the horiontal viewing angle and the angle above the plane. The output may be either colour or black and white. A hidden line option is occassioonalaly used (see (b) above.





5. Prospects

The editorial in the country's Daily, *The Herald* of July 1993, says it all The seal was put when in November 1995, the President of the Republic of Zimbabwe laid the foundation stone at the Old Bulawayo site. Traditional Ndebele ceremonies have already taken place to inaugurate the development programme. None other than two grandsons of Lobengula are custodians of the site.

Tourism Policy in Zimbabwe or the Lack of It

Tafirenyika Masona

As the paper title implies, this brief presentation deals with the issue of tourism policy in Zimbabwe. In doing so the paper first offers a broad working definition a business policy as should exist in an organization of the character of the Zimbabwe Tourist Development Corporation (ZTDC). The ZTDC was established by an Act of Parliament in 1983 to promote tourism in the country and to manage the parastatal's commercial enterprises. In the same section the paper will attempt some justification for a tourism policy in Zimbabwe.

The paper, in the second part, will examine the policy situation in Zimbabwe and will offer some explanation for that scenario. Finally, a characterisation of current trends in tourism development will be made. The attendant impacts of those trends on operations in the tourist industry will be highlighted.

It is perhaps necessary to state from the outset that investigations leading to this paper established that a written tourism policy statement or document does not exist in Zimbabwe. This position was just recently stated by a ZTDC Marketing director (Nyaruwata, S. pers. comm. 1996) and later confirmed by a Senior Research and Development Officer in the same organization (Mandinyenya, pers. comm. 1996). This is not to say no attempts to compile a policy document were made. The writer was informed by the latter officer that several position papers were produced over the years but the matter still awaits final resolution.

The scenario described in the preceding paragraph has somewhat influenced the non-committal nature of this paper.

The Concise English Dictionary (1994 edition, p. 1024) defines policy as "... a course of action or administration recommended or adopted by a party, government, firm, organization or individual". Similarly, A.J.A. Argenti defines business policy as " A general rule or set of rules laid down to guide executives in making decisions, "(Kempner, K (Ed.) 1980 p. 62). Argenti adds that policy statements are usually broad and far-reaching in their effect on the organization. A few such statements may be enough to define the character of an organization completely. To achieve this total delineation, policy

statements usually cover the different aspects of an organization: its objectives, the means by which it is intended to achieve these and the constraints (Kempner, 1980). Constraint here means any action that an organization's executives have decided not to take even though they believe that it might help them to achieve an objective.

Why then is a policy statement necessary for the operations of an organization such as the ZTDC or any other enterprises for that matter?. Firstly, as indicated above the policy statement partly defines the objectives of the organization. consequently policy decisions will indicate the character or nature the organization wishes to adopt. This in turn enables the organization's executives to choose the actions they will take to achieve the stated objectives. These are the strategic decisions. In short the decision as to the organization's objectives must be made first, for otherwise no strategy can be formulated to achieve them. Put in other words, the absence of a policy statement in any organization tends to restrain the activities of the executives.

The position in Zimbabwe was that before majority rule in 1980 the country's major, indeed the only substantial, tourism market was the Republic of South Africa. Following the 1965 Unilateral Declaration of Independence, Rhodesia (now Zimbabwe) was subjected to United Nations economic sanctions which almost completely isolated the country from the international business community. In these circumstances the then Tourism Board may not have been pressurised to formulate a definite tourism policy for the country.

At independence, Zimbabwe opened its borders to the world community at large, and thus anticipated an increased tourism visitorship. It was at this time that idea were first mooted to formulate a clear tourism policy to guide all operators in the industry including the state owned ZTDC and its predecessors.

In 1983 the ZTDC succeeded the Tourism Board. This was a time of general dis - investment in the tourist industry as other investors felt insecure in the wake of a new government and civil disturbance in Matabeleland. It was in response to this dis-investment that the government created the Zimbabwe Tourism Development Corporation, first to acquire properties offered by the those who were dis-investing, and secondly to act as the national tourism organization that would promote tourism in the country. It was at that time ZTDC acquired such properties as the Ambassador Hotel(now New Ambassador) in Harare, the Christmas Pass Hotel in Mutare, the A'Zambezi River Lodge in Victoria Falls and later the Harare Sheraton and the adjoining Harare International Conference Centre. In that haste, no tourism policy document was produced to guide the industry.

When investors realised that there was really nothing to fear from the

new government, and when the ethnic insurgency subsided in western parts of the country they returned to re-invest in the industry only to find a new competitor in the field - the ZTDC. the returnees were very sceptical about the impartiality of the ZTDC as a national tourism marketing and promotional organisation - given that ZTDC was a parastatal with commercial enterprises to manage in the industry. It was argued that the ZTDC would be biased towards government owned properties, leading to an uneven playing field. In these circumstances it became even more difficult to reach an industry - wide consensus around which to build a national tourism policy. But the need still existed to guide tourism development in the country.

The government embarked on two courses of action. It was decided to split the ZTDC into two separate institutions. The Zimbabwe Tourism Authority (ZTA) was to spearhead tourism development and promotion throughout the country. Hopefully, this organisation would be viewed as neutral by the entire tourist industry. Secondly, a new private company, the Zimbabwe Tourism Investment Company (ZTIC) was created to manage the state owned commercial enterprises in the industry. The ZTIC became operational in 1991 while the ZTA was only established in early 1996 following the promulgation of the ZTA Act in 1995. Its mandate is to promote tourism throughout Zimbabwe.

At the same time effort were made to provide some development guidelines for the industry. The underlying philosophy was that Zimbabwe should target high value/low volume tourist markets. Admittedly, this high value/low volume "policy" was not based on results of any comprehensive scientific research to determine the carrying capacity of Zimbabwe's tourist resources (Mandinyenya, op cit). It was however, founded on the understanding that Zimbabwe's tourist industry largely depends on the natural resources - resources which requires a careful balance between exploitation and conservation. A look at Zimbabwe's unique combination of natural attractions lends support to this observation. The attractions include the Victoria Falls (one of the natural wonders of the world), wildlife resources in Gwange, Matusadona, Mana Pools - Chewore and Gonarezhou national parks; and although man made, Lakes Kariba and Mutirikwi depend on a natural resource to offer a wide range of water sports (Zimbabwe Tourism Development Study Vol. 1). From the outset the policy tended to underestimate the role of culture in tourism.

Thus the cautious approach taken by the government in the development of tourism is understandable. It was partly influenced by the concepts that underline eco-tourism which has dramatically captured the attention of many people. The perceived virtue of eco-tourism being that" ..... it is

nature travel that advances conservation and sustainable development efforts" (Boo, E. 1992)

Under this "policy" investors were encouraged to develop high value/low volume facilities at tourist resort sites, all targeted at the high spending or up market tourists.

This philosophy has continued to guide the development of tourist facilities throughout the country over the years to the extent that even the intended low income chalets at Great Zimbabwe (now under Zimsum Hotels management) are priced up beyond the reach of most medium income earners.

Viewed from a different angle the Zimbabwe tourism "policy" guidelines contract some tenets of eco-tourism which emphasise environmentally responsible travel and visition to relatively preserved or natural areas that foster conservation of nature. Any cultural elements present there, has low impact on the environment and *actively involves the local population* (my emphasis) - so that they may share the resultant social economic benefits (Valentine, P. S. 1993). It is also in partial conflict with the recent developments whereby the government is advocating increased indigenous participation in the tourism industry. In a recent statement the Minister of Environment and Tourism declared, "Priority will be given to indigenous people when allocating tour operators licences, granting hunting concessions and the distribution of fishing permits..... The move is part of the government's affirmative action to promote black participation in the tourism and fishing industries" (The Herland, 8 April 1006 - p. 1) The problem is that the vast number of indigenous entrepreneurs usually do not have the necessary capital to put up facilities that satisfy the discerning demands of the high value tourists, This explains why indigenous participation is largely confined to safari and transport operations as opposed to accommodation provision.

The ZTA however believes that there is a niche market for the small entrepreneur. Under such programmes as the Communal Areas Management Programme for Indigenous Resources (CAMPFIRE) indigenous entrepreneurs are encouraged to put up low cost accommodation in areas under their control. But side by side with development, the private sector is establishing wild life conservancies on large commercial farms, replete with accommodation facilities, in competition with the Communal Lands running CAMPFIRE programmes.

The ZTA is also encouraging the small investors to go into joint ventures with more established partners as a way of increasing indigenous participation in tourism.

Another recent and important development is that the tourism industry in Zimbabwe has finally decided to market Zimbabwe as an eco-tourism destination as opposed to the previous stance of a high value/low volume centre, The industry has in the same vein

accepted the wisdom of stimulating and developing the domestic market for the long term survival of the industry. The fall in foreign visitor numbers in the mid 80s caused by the dissident problems partly warmed the hearts of the investors towards the domestic market. A growing domestic market should also provide a safe market niche for the small entrepreneur.

On its part ZTA is determined to do the marketing on behalf of the whole industry, including the small scale operators who should whole strive to satisfy the domestic market - which has been largely ignored.

To strengthen the domestic market the ZTA's strategy is to inculcate a culture of travelling and site seeing among the school going ages. To this end tourism has been introduced as a geography topic in the secondary school curriculum. The Hotel School in Bulawayo is going to be upgraded to provide quality training facilities for the industry.

Finally, from 1996 the University of Zimbabwe will be offering undergraduate and post-graduate programmes in tourism.

Thus a definite pattern is imaging whereby the market has been segmented. On the domestic market the focus for service provision will be the low spenders. On the regional and international fronts, the ZTA marketing effort will target the upmarket/low volume tourists. These developments augur well for the formulation of a national tourism policy for Zimbabwe.

The ZTA is also moving towards dismantling the two-tier pricing system that has attracted adverse comments from some foreign visitors and local operators. The thrust is to achieve a single rate system for the whole industry with an agreed discounted rate for the domestic tourist upon production of proof of local residence.

In conclusion, it should be noted that although there exists no policy document/statements in Zimbabwe there has always been some guidelines to direct tourism development in the country. Admittedly, they were limited in scope and tended to constrain the activities of the executives of the national tourism organisations.

Definite patterns are now emerging which should be easy to consolidate into a national tourism policy. There is however need to consult widely and incorporate the views of the majority of stakeholder in the industry. One notes with a degree of sadness the exclusion of organisations such as National Museums and Monuments from the recently constituted Board of Directors of the Zimbabwe Tourism Authority. This is in spite of the fact that NMMZ are the statutory custodians of the country's cultural, historical and natural heritage which include such tourist attractions as the Victoria Falls and Great Zimbabwe.

Acknowledgements

1. Mr. S. Nyaruwata (ZTA)
2. Mr. Mandinyenya (ZTA)

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