

32 ARCH  
P

# GREAT ZIMBABWE

## 'MUSEUM'

### NEW BUILDINGS ON THE ZIMBABWE NATIONAL MONUMENT ESTATE

B ARCH THESIS 1981

PAUL MATHIESON

The copyright of this thesis vests in the author. No quotation from it or information derived from it is to be published without full acknowledgement of the source. The thesis is to be used for private study or non-commercial research purposes only.

Published by the University of Cape Town (UCT) in terms of the non-exclusive license granted to UCT by the author.

# Acknowledgements

I would like to express my sincere gratitude to all who have made this thesis possible -

Mr H D Jackson, Executive Director; Mr V P Levey, Public Relations Officer; Mr N Walker, Stone Age Archaeologist; Mr John Thokozane, Inspector of Monuments in the Victoria area - all of the National Museums and Monuments Commission, for their patience, enthusiasm and invaluable assistance.

Mrs Lilian Hodges, past curator of the Zimbabwe National Monument, for her time and enthralling anecdotes.

Mr and Mrs I Martin, for their hospitality and warm home-comings after rain sodden walks through the Gutti enshrouded Ruins.

Karen and Russ Franklin, for their hospitality and just being their jovial, friendly selves.

The Staff of the School of Architecture at the University of Cape Town and my many friends, especially Nick, for their advise, help and encouragement.

Kevin Walsh, my supervisor, for all his invaluable time, encouragement, advice, help and uplifting sense of humour.

My mother and 'in-laws' for their solid support.

In memory of Peregrin and Faramir Took - never forgotten.

Eärendil Took, a funny little feathered friend.

My wife, Carolyn, whose constant inspiration, assistance and support; endless typing and production, etc... etc... has made this possible.

≡≡≡ Pi/Grace  
≡≡≡  
≡≡≡

*Grace - beauty of form - is necessary in any union if it is to be well ordered and pleasing rather than disordered and chaotic.*

Ornament underlines the beauty of the primary form, however it is not the essential or fundamental thing and as such must be used sparingly.

I CHING

# Contents

Introduction	1
Geographical Location	3
Administration of the Great Zimbabwe Ruins	4
Necessity for Forward Planning	7
Site Problems	8
Proposal	9
Entrance Complex	11
Main Interpretative Centre - Site Museum	12
Finance	13
Existing Buildings and Programme Phasing	14
Brief History of Zimbabwe	18
Architecture of the Ruins	21
Technology	23
Search for an African Architecture	24
Design Approach	25
Design Development	26
Bibliography	29

# Introduction

*Great Zimbabwe has, ever since it was brought to the attention of the western world during the late 19th century, been a source of worldwide interest and curiosity.*

*It is the largest and most dramatic ancient site in sub-Saharan Africa. Interest in it has largely been due to the fact that it has been seen as an enigma, an idea perpetuated by the tourist industry.*

## **National Heritage**

*However with the independence of Zimbabwe and an increasing emphasis on African culture and heritage, Great Zimbabwe has a new importance at a political and cultural level. It has become a symbol of African culture and heritage.*

*The strength of Great Zimbabwe as a cultural symbol has led to its adoption as the name of the nation, despite the fact that there were indigenous names for the country prior to European settlement which, according to the experts, would have been more appropriate.*

*The site is undoubtedly of major importance in the pre-history of the country, being the most striking in a pattern of pre-historic settlements that extended over virtually the whole country, giving it archaeological and historical significance.*

*Great Zimbabwe is the keystone of the national heritage.*

## **Tourist Potential**

*The Kyle Recreational Park and Great Zimbabwe Ruins Monument, together, form Zimbabwe's no. 2 tourist attraction after the Victoria Falls.*

*It has been estimated that within the next few years they will become Zimbabwe's main tourist handling area.*

*Tourist traffic having virtually altogether ceased during the war is now, with the advent of peace and Zimbabwe's independence, being strongly encouraged by the Government, once again as one of the country's chief sources of foreign currency.*

*A five star hotel and casino is about to be built on the shores of Lake Kyle where there already exist various hotels, chalets, caravan parks, camping grounds, game park, scenic drives, boating and angling facilities.*

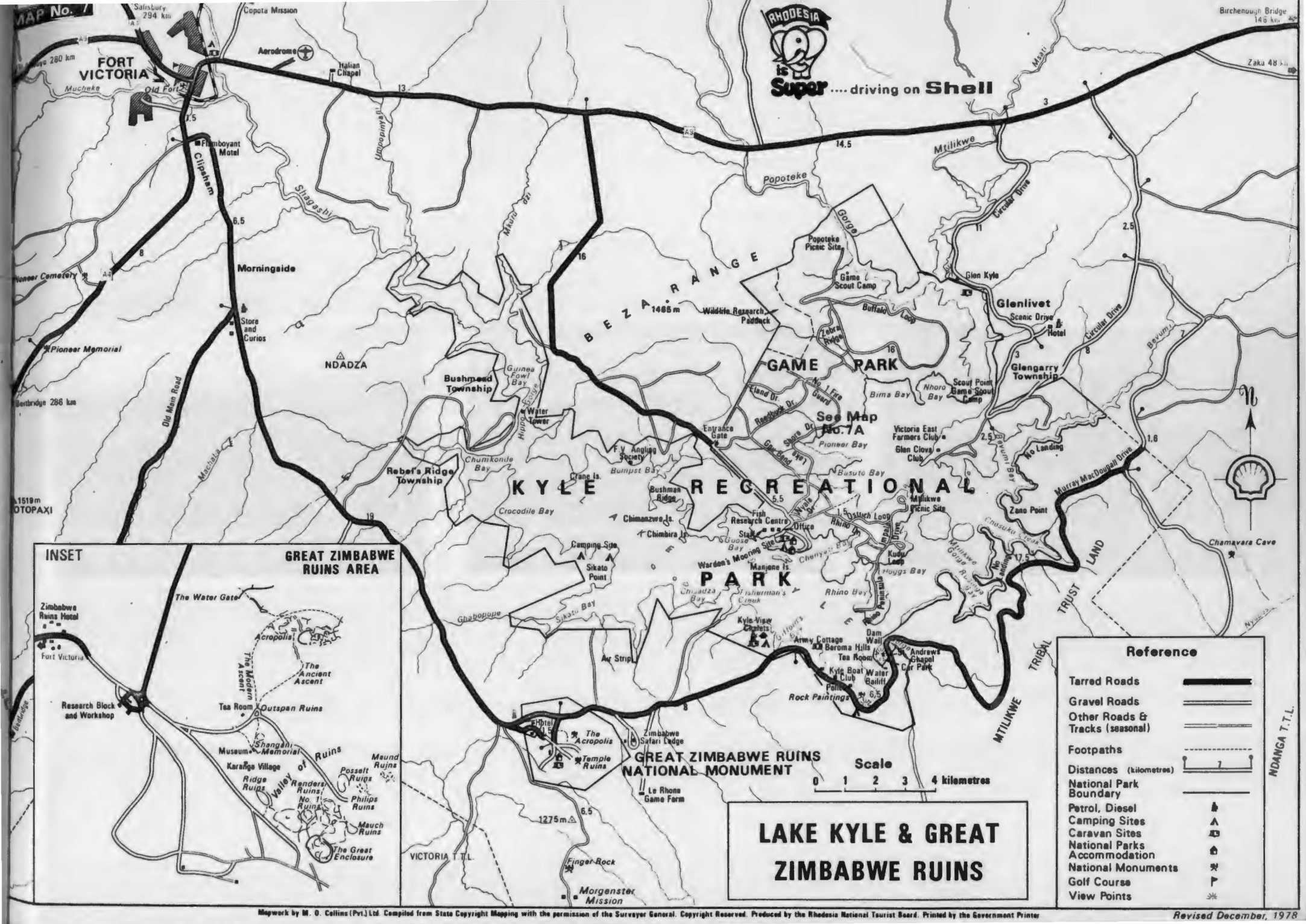
*There are two existing hotels on the periphery of the Great Zimbabwe Monument estate. The Zimbabwe Ruins Hotel was reopened on 20th May 1981 by the Deputy Minister of Information and Tourism, having been bought by Zimbabwe Suns (part of the Southern Suns group, the largest hotel chain in*

Central and Southern Africa), after being enlarged by the addition of two bedroom wings. The Zimbabwe Safari Lodge is also soon to be reopened after the completion of renovations.

This is an indication of the future tourist potential of the area envisaged by private enterprise.

From January until June 1981, there have been 40 000 tourists and 13 000 school children visiting the Great Zimbabwe.

LANE KYLE & GREAT  
ZIMBABWE SAFARI



MAP No. 7

**FORT VICTORIA**  
Mucheke  
Old Fort

Clippanham  
Rimbobant Motel

**Morningside**  
Stores and Curios

Pioneer Memorial

Old Main Road

1519 m  
OTOPAXI

**INSET**

Zimbabwe Ruins Hotel  
Fort Victoria

Research Block and Workshop

Museum

The Great Enclosure

280 km

6.5

13

16

19

1275 m

6.5

6.5

6.5

6.5

14.5

11

16

16

5.5

5.5

6.5

6.5

6.5

6.5

3

2.5

3

2.5

1.8

1.8

1.8

1.8

1.8

1.8

14.5

11

16

16

5.5

5.5

6.5

6.5

6.5

6.5

3

2.5

3

2.5

1.8

1.8

1.8

1.8

1.8

1.8

14.5

11

16

16

5.5

5.5

6.5

6.5

6.5

6.5

3

2.5

3

2.5

1.8

1.8

1.8

1.8

1.8

1.8

14.5

11

16

16

5.5

5.5

6.5

6.5

6.5

6.5

3

2.5

3

2.5

1.8

1.8

1.8

1.8

1.8

1.8

NDADZA

**KYLE**

**PARK**

**REGREATIONAL**

**GAME PARK**

**GREAT ZIMBABWE**

**RUINS AREA**

**NATIONAL MONUMENT**

**LAKE KYLE & GREAT**

**ZIMBABWE RUINS**

**BEZARANGE**

1485 m

**TRUST**

**LAND**

**TRIBAL**

**MILIKWE**

**TRUST**

**LAND**

**TRIBAL**

**LAND**

**Scale**

0 1 2 3 4 kilometres

**Reference**

- Tarred Roads
- Gravel Roads
- Other Roads & Tracks (seasonal)
- Footpaths
- Distances (kilometres)
- National Park Boundary
- Petrol, Diesel
- Camping Sites
- Caravan Sites
- National Parks
- Accommodation
- National Monuments
- Golf Course
- View Points

**Scale**

0 1 2 3 4 kilometres

**LAKE KYLE & GREAT**

**ZIMBABWE RUINS**

**Reference**

- Tarred Roads
- Gravel Roads
- Other Roads & Tracks (seasonal)
- Footpaths
- Distances (kilometres)
- National Park Boundary
- Petrol, Diesel
- Camping Sites
- Caravan Sites
- National Parks
- Accommodation
- National Monuments
- Golf Course
- View Points

**Scale**

0 1 2 3 4 kilometres

**Mapwork by M. O. Collins (Pvt.) Ltd. Compiled from State Copyright Mapping with the permission of the Surveyor General. Copyright Reserved. Produced by the Rhodesia National Tourist Board. Printed by the Government Printer**

**Revised December, 1978**

**NDANGA T.T.L.**



# Geographical Location

## Climate

## Topography

## Vegetation

The latitude of Great Zimbabwe is south 20° 16' 30". The altitude is 1 090m above sea level.

The climate is moderate tropical, the vegetation savannah grassland.

Great Zimbabwe lies on the southern scarp of the 1 300 - 1 650m plateau which forms the watershed between the Zambezi and Limpopo rivers. The site of Great Zimbabwe itself lies very close to the two other ecological zones: the hills immediately to the north form part of one of the 'gold belts' of metamorphic rocks that produce a heavy but very fertile red clay soil, while a few miles south the country descends into drier and more open grasslands that are ideal for cattle.

The scarp itself, formed around Great Zimbabwe by granite kopjes, precipitates moisture from the prevailing south-easterly winds resulting in a higher rainfall here than the surrounding areas. There are many days of light rain and mist throughout the year when the remainder of the country is dry: this weather condition is known locally as Guti.

The light sandy soils between the kopjes support luxuriant woodland and a variety of game. The country around these kopjes is a form of human paradise: it has for centuries attracted human settlement offering seclusion, perennial water, abundant and reliable rainfall for crops, an easily tilled soil and ample timber for building and firewood. It is a cool land free of tsetse flies, healthy for man and cattle.

The vegetation consists typically of msasa, mopani, manula and mahokahoka trees amongst tall elephant grass and short, thick zingesi grass which forms a natural green carpet.

The colours of the landscape range from emerald green through hues of yellowy orange and brown to the orange and brownish grey of the weathered granite outcrops. The countryside has a robust beauty; everchanging romantic views of green fertile valleys between masculine granite outcrops.

Rain falls in the summer months in the form of convectional thunderstorms and cyclonic rain. Fort Victoria, 27km to the north-north-west, has an annual rainfall of 650mm while that of Great Zimbabwe is 820mm due to the Guti.

Summer day temperatures average 25°C and winter, at 18°C. There is a marked daily range, on average, of 14°C.

Winter days are cool and crisp with clear skies - nights are cold and dry. Summer days are warm to hot - they are partly cloudy building up to thunderstorms in the afternoon or evening.



# Administration of the Great Zimbabwe Ruins

During the early years of European occupation of Zimbabwe (then Rhodesia) the ruins were extensively exploited, to such a degree that it became necessary for the B.S.A.P. to form a commission for their protection.

From 1909 to 1936 they fell under the jurisdiction of the Southern Rhodesian Public Works Department. After this time they were entrusted to the Historical Monuments Commission of Southern Rhodesia, which was later to become the National Museums and Monuments Commission, which body administers the ruins at this time.

## **The Zimbabwe National Monument Estate**

The ruins have been declared a national monument and as such are situated on an extensive estate officially named the Zimbabwe National Monument.

Until recently the National Museums and Monuments Commission had control only over the central core of the estate on which the ruins themselves are situated. The remainder was administered by the Department of National Parks and Wildlife.

Many years ago, a servitude on a portion of the estate was granted to an entrepreneur for the purpose of operating a hotel. This land has now become the property of the hotel by prescription. They have recently bought a further portion on which to accommodate staff housing.

The National Museums and Monuments Commission now have control over the entire estate. Their future policy effecting the estate is set out in terms of the National Museums and Monuments Act No. 17 of 1972. (see - Policy : Zimbabwe National Monument).

The principal directions of this policy are:-

- 1) the conservation of the estate and ruins in their natural state, eliminating all aesthetically unsympathetic structures.
- 2) the conservation of all naturally occurring flora and fauna and the elimination of all exotica.
- 3) to provide only interpretative and educational facilities within the estate; overnight accommodation, camping, restaurants, etc. being precluded to the periphery.

This policy endorses the findings of the van Riet Report, 1973, which was conducted as a result of concern for the conservation of the ruins and their environment due to the damage being caused by visitors.

POLICY : ZIMBABWE NATIONAL MONUMENT

POLICY:

1) The Zimbabwe National Monument is set aside for prosperity in terms of the National Museums and Monuments Act No. 17 of 1972 for:

- i) the protection of the ruins, both visible and subterranean for the interest and enjoyment of people of all races;
- ii) the conservation of the natural vegetational associations and the elements thereof, without prejudice to the proper protection of the ruins, so designed as to retain the aesthetic amenities of the environment;
- iii) the conservation of such naturally occurring elements of the fauna as are not prejudicial to the proper protection of the ruins;
- iv) scientific research under professional archaeologists to plans approved by the Board directed to a further understanding of the prehistoric and historic associations of the ruins and the area in general, without prejudice to the proper conservation of the environment;
- v) the provision of such facilities for visitors other than overnight accommodation, camping and caravanning as may conform to the area's primary values in terms of the van Riet Report (1973) as may enhance their enjoyment of their visit, the Board from time to time reviewing visitor pressures against the conservation trends of the area, and, if necessary, limiting the numbers of visitors allowed to enter during a given period;
- vi) the provision of interpretative services for the visitor in the form of museums and site exhibits, interpretive tours and literature dealing with all aspects of the archaeology, the flora and fauna, and other features of the area, without prejudice to the aesthetic amenities of the area;
- vii) the provision of educational services for the training of both amateur and professional archaeologists of all races under the guidance of professional archaeologists in the techniques and processes of the discipline;

viii) that the Board undertake that if for any reason it was required to alter this Policy Statement, such alterations would be made with the concurrence of the Minister of Lands.

AMPLIFICATION OF THE POLICY:

- 2)
  - i) any alteration to, rebuilding of, or any maintenance required by the visible ruins to be carried out under the supervision of a qualified archaeologist;
  - ii) any of the above acts as set out in 2(i) to be carried out with a view to the restoration of the ruins to the stage reflected in the earliest photographs or other records available, where this is consistent with considerations of public safety;
  - iii) any excavation or other archaeological investigations, maintenance or other works of any sort to be carried out in such a manner as to cause the least disturbance to the vegetational associations or the elements thereof and to be under the direction of a qualified archaeologist on the staff of the Board;
  - iv) all structures which may be required for the servicing of the area to be hidden from general view or where this is impossible, e.g. entrance gates, etc., so designed as to conform to the dignity of the National Monument and its environment, the plans and elevations of such structures to have the approval of the Board prior to this erection;
  - v) - In the phasing out of nonconforming items in terms of the van Riet Report (1973) and the agreement reached between the Minister of Lands and the Board of the National Museums and Monuments of Rhodesia (now Zimbabwe) the areas so cleared shall be returned or allowed to return to as natural a state as possible in conformity with sound management and practice;

Provided that any acts under (i), (ii) or (iii) will comply with management plans approved by the Director and in terms of the National Museums and Monuments Act No. 17 of 1972 and that all research and management procedures will be fully recorded and filed in the National Museums and Monuments records.

#### DEVELOPMENT

- 3) 1) all development in the Zimbabwe National Monument will be subject to an integrated plan approved by the Board on the advice of the Director which will lay down the optimum levels of development within the Zimbabwe National Monument or any portion thereof in accordance with the policy. Further installations shall be designed and constructed and all existing constructions modified so as to produce a minimal visual impact against their natural surroundings so that they will harmonize with the atmosphere of the area; and all development shall proceed within the framework of the Policy Statement Item 1 sections (i) - (vii);
- ii) no agencies of private enterprise, such as tour operators, concessionaires, etc. will be permitted to establish premises within the Zimbabwe National Monument, but will be encouraged to operate from areas in closest proximity to it, except that the Board may permit the use of a light refreshment kiosk at the foot of the Acropolis which may be operated by the Board's staff, or by a private agency on such terms and conditions as the Board may determine, for the benefit of visitors;
- iii) the Board will maintain facilities at points within the Zimbabwe National Monument, the siting and design of which will conform to the general development policy and in compliance with the van Riet Report (1973), for the sale of such interpretive material as the Board may deem appropriate or desirable;
- iv) no land will be leased in the Zimbabwe National Monument other than that already leased to the Boy Scouts and the Girl Guides, except with the approval of the Board and

with the concurrence of the Minister of Internal Affairs:

- v) no fences will be allowed to be erected within the perimeter security fence except for the temporary protection of archaeological excavations, or where they are required for reasons of public safety or direction, which devices shall be of a nature conforming with the environment.

27th June, 1975.  
Salisbury

## Necessity for Forward Planning

Prior to 1976 tourist numbers had increased to such an extent that the Board of the National Museums and Monuments Commission were seriously considering taking some form of action to lessen or control the number of visitors to Great Zimbabwe. Numbers decreased after 1976 as a result of the war, providing a temporary respite, but with the advent of Zimbabwe's independence in 1980 and the return of normal tourist traffic, an urgency was once again placed on the need to reassess and control the manner in which tourists visited Great Zimbabwe.

Furthermore, Great Zimbabwe had now attained a new political prestige as the focal point of Zimbabwe's heritage. This led to new attitudes in Government policy being passed down to the National Museums and Monuments Commission. These attitudes placed greater emphasis on education and research of Zimbabwean pre-history and the promotion of the Zimbabwean cultural heritage, while at the same time encouraging the development of the area's tourist potential.

Forward planning for the future development of the Great Zimbabwe estate was now inevitable, providing the opportunity for realising the policy as set out in the National Museums and Monuments Act, responding to the new Government attitudes and the implementation of proposals to cope with the anticipated visitor influx.

The role of Great Zimbabwe was now fourfold:

- 1) Tourist and Recreational - world renowned site of tourist interest.
- 2) Historical - site of pre-historic importance necessitating storage and display of artefacts and buildings related to the ancient Zimbabwean culture.
- 3) Educational - research and dissemination of knowledge to public and students.
- 4) Monumental - cultural symbol; the embodiment of the national heritage into the new Zimbabwean nationalism.

The demands of each facet are:

- 1) Tourist handling facilities to international standards that do not compromise the conservation or the aesthetic quality of the ruins and their environment.
- 2) The provision of appropriate interpretative facilities and site museums.
- 3) To provide the facilities and environment for professional scientific research, and educational facilities for the feedback of knowledge via formal and informal programmes to public and students.
- 4) That future physical development of the site be manifested in such a manner as to be seen to embody the national heritage.

## Site Problems

During the period of control of the outer estate by the Department of National Parks and Wildlife, the immediate vicinity of the ruins had been developed as a recreational area and became largely commercialised. Exotic flora had been introduced and tourist lodges, camping and picnic grounds and ablution blocks built.

As mentioned earlier, the Zimbabwe Ruins Hotel had permanently entrenched itself into the estate by prescription. The hotel site occupies the natural and most dramatic approach to the ruins, precluding this entry point's inclusion into the future planning of the estate by the National Museums and Monuments Commission necessitating an alternative less advantageous entry point to be sought. Adding insult to injury, the natural view below the Hill Ruin had been drained for the purpose of creating a golf course in the vicinity of the hotel.

Not one of the numerous recent structures, save the Karanga styled hut, originally a B.S.A.P. post, are aesthetically sympathetic to the ruins or the natural environment nor are any suitably sited. They generally detract from the natural environment and diminish the drama of the ruins. Where any attempt has been made at deriving a style appropriate to the setting, this has resulted in "kitsch".

In general, the landscaping and provision of facilities have been executed in an inappropriate manner not in keeping with the dignity of the National Monument.

Further problems exist where well meaning past curators have carried out renovations and laid paths (to prevent tourist erosion) in a manner so similar to the original ruins as to cause confusion to the layperson as to what is original and what is not.

# Proposal

## NATIONAL MUSEUMS AND MONUMENTS COMMISSION



In attempting to deal with the problem of excessive tourist concentration at Great Zimbabwe, the National Museums and Monuments Commission had the choice of two alternatives:

- 1) limiting the numbers permitted onto the estate at any one time OR
- 2) devising a system that would deconcentrate and lessen the impact of visitors on the environment.

They chose the second alternative as it would not compromise the tourist potential. This led to a general policy of decentralization on the site.

The idea is to develop every other natural amenity offered by the estate so as to provide a diversity of visitor interest.

The essence of the proposal is to conserve the estate as a non-commercial natural amenity, encouraging commercial development as a fringe activity outside it's border.

Wildlife on the estate is to be encouraged to increase. The vegetation is peculiar to the area in that it is more orientated towards the Eastern Highlands of Zimbabwe and so supports birdlife dissimilar to the more typical surrounding savannah plains. These features are to be emphasised as alternative attractions to visitors to the site. Points of natural scenic beauty on the estate are to be pointed out and made accessible to the public.

It is intended to allow the vegetation surrounding the ruins to return to it's original indigenous state and to reveal the true drama of the ancient buildings by allowing them to be viewed in their natural, unspoilt environment and as near their original condition as possible.

To achieve this, it is proposed to introduce a ring road surrounding the central zone on which the National Museums and Monuments Commission will operate a public transport system for the purpose of conveying visitors to key points on the estate and then out once again having seen all they wish to see. This system will comprise of battery/electric operated tugs, each towing two trailers. Each trailer will accommodate ten persons seated back to back. The tugs will run on a oneway circular route at a frequency of approximately one every five minutes. Drop off points will be situated at key points along the entire route. PUBLIC TOILETS will also be situated regularly along the route and will be aesthetically sympathetic to the environment.

All public vehicles are to be confined to the entry/exit point on the ring road. At this point will occur the ENTRANCE COMPLEX which will house all the major public facilities and transport system maintenance and storage facilities near the perimeter of the estate, out of sight of the ruins, adjacent to the main Fort Victoria/Kyle road.



The MAIN INTERPRETATIVE CENTRE is thought to be best situated in close proximity to the ruins by the National Museums and Monuments Commission. This is so that interpretation may be conducted in context and be most meaningful to the public.

All other facilities are to be located at various points near the perimeter of the estate so as to encourage a more even spread of visitors over the entire estate thus decongesting the central zone.

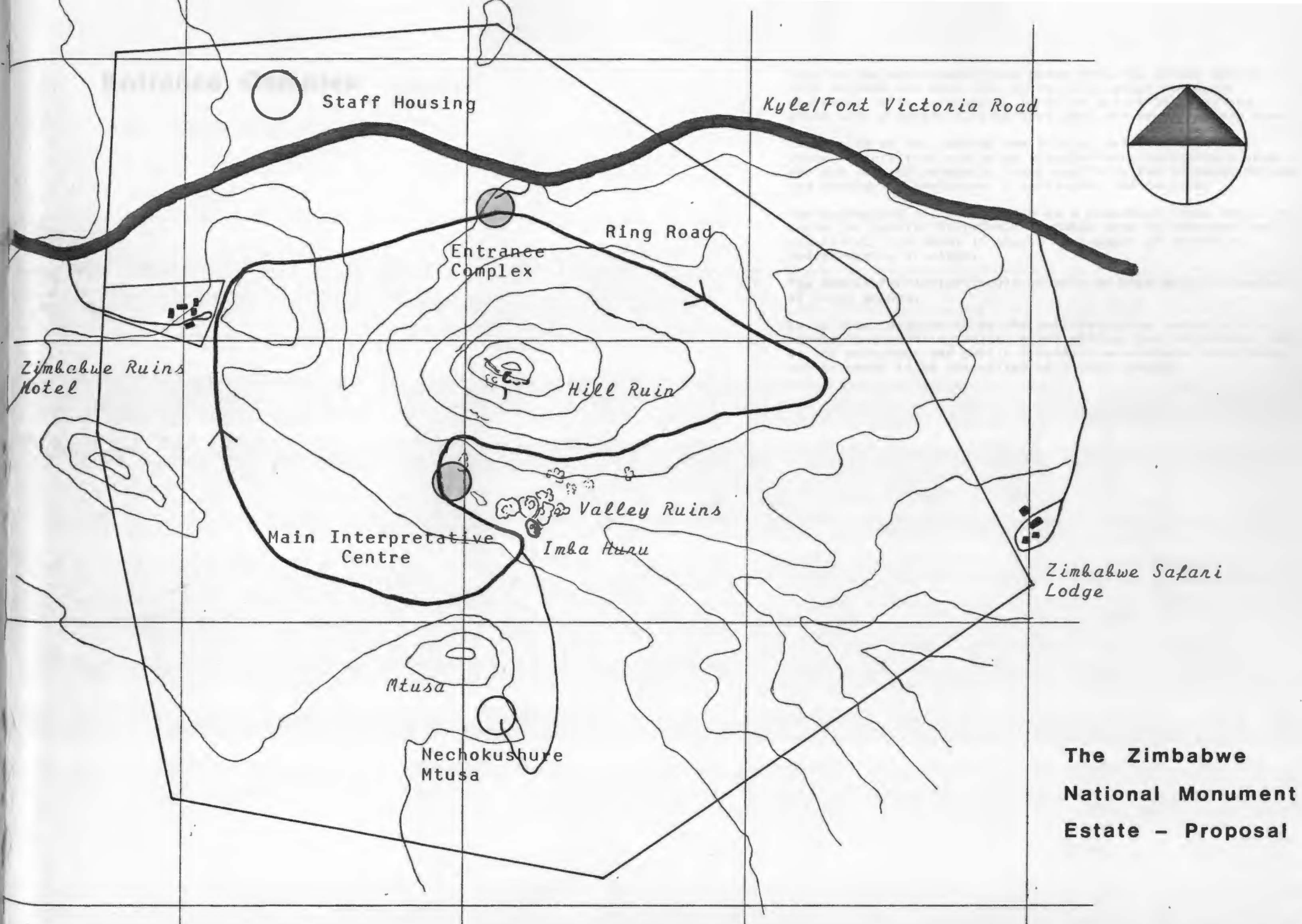
Nature trails, scenic walks, views of Kyle and displays of archaeological interest are to be established at decentralized locations. Up to four villages including Karanga and Ndown, are to be set up at diagonally opposite sites on the estate to demonstrate their 19th century lifestyles and culture.

Accommodation for visiting school children, schools of archaeology or other educational or specialist visiting groups is to be established near the old scout camping site behind Mtusa kopje at NECHOKUSHURE MTUSA.

STAFF HOUSING to accommodate the personnel necessary to administer and maintain the estate will be required. The National Museums and Monuments Commission have suggested that this take the form of a township on a less conspicuous portion of the estate.

Entry from the two hotels on the perimeter of the estate is to be restricted to pedestrian access only. HOTEL ENTRY CONTROL POINTS at these locations are to be established with access to the internal public transport system.

The Zimbabwe National Monument Estate - Proposal



Staff Housing

Kyle/Font Victoria Road

Ring Road

Entrance Complex

Hill Ruin

Valley Ruins

Main Interpretative Centre

Zimbabwe Ruins Motel

Zimbabwe Safari Lodge

Mtusa

Nechokushure Mtusa

**The Zimbabwe National Monument Estate - Proposal**



# Main Interpretative Centre - Site Museum

The function of this complex is to interpret Great Zimbabwe to scholars and the lay public.

It incorporates a site museum, educational and toilet facilities.

The museum is to display a pictorial historical narrative of Great Zimbabwe, artefacts found at Zimbabwe and the famous 'Zimbabwe birds'.

The educational facilities are comprised of an audio/visual lecture theatre and a 'discovery room' where school children may become acquainted with Zimbabwean artefacts by touch.

It is intended to incorporate the Karanga styled hut next to the existing museum as part of the proposed museum.

Because of this and the fact that interpretation is most effective in context, this complex is to be sited unobtrusively in the ruins area, in the vicinity of the Karanga styled hut.

## Stipulations on Design

The National Museums and Monuments Commission have stipulated that the museum environment be totally controlled.

A museum containing ancient artefacts is a form of 'archives' - the presentation of its contents is of prime importance. The display of these artifacts is 'theatrical' - their presentation should be to dramatic effect.

The National Museums and Monuments Commission have indicated that they require the museum to be:

- 1) entirely enclosed with no natural illumination.
- 2) fully air-conditioned with temperature and humidity control.
- 3) spatially non-specific providing maximum flexibility using a strictly rectilinear geometry.

Most forms of lighting are detrimental to the artefacts, due to their ultra violet content - this is true of incandescent, fluorescent and especially sunlight. Manufacturers have been developing forms of fluorescent and tungsten lamps which are especially suited to the illumination of museum interiors and highlighting of displays.

The control of temperature and humidity are crucial to the preservation of ancient artefacts. Excessive temperatures, humidity and stagnant air promote rot and decay.

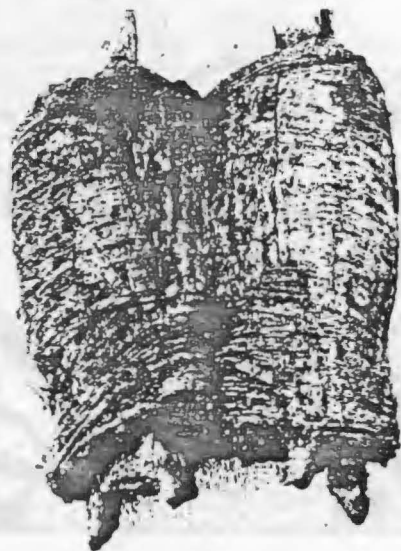
For these reasons the National Museums and Monuments Commission feel that a totally controlled environment should be provided to ensure the preservation of the Zimbabwean artefacts in the national interest.



62 Iron pincers and a drawplate used in drawing wire, the latter pierced to take the extruded metal. These examples were recovered from the Ruins by Hall.

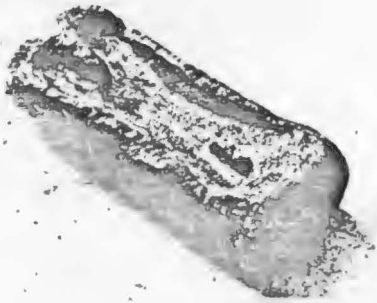


63 Fragments of drawn copper or bronze wire coiled over a fibre or bast core to form ornamental bracelets and anklets.



64 The legs of a young Negroid female, excavated from the seventeenth-century cemetery at Dambarare, encircled by a very considerable quantity of coiled wire of the type shown in Plate 63. As can also be seen, the copper has preserved much of the simple, loosely woven shroud of native cotton.

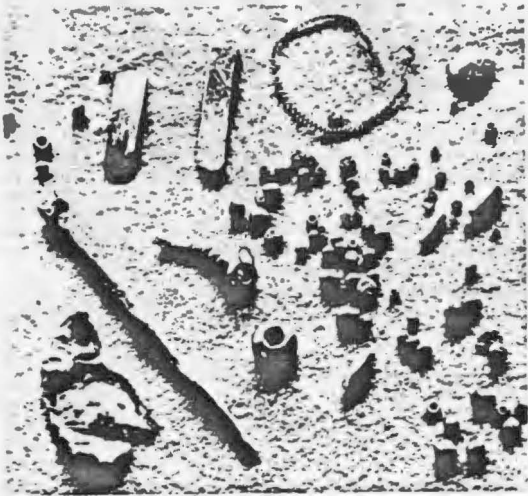




65 A soapstone mould, used in casting copper and found at Great Zimbabwe, showing the shallow shape of the small ingots made there.



66 A selection of metalwork artefacts typical of the Rhodesian Iron Age: top, a large rimmed copper ingot from an Ingombe Ilede site, a smaller ingot like those cast at Great Zimbabwe and three tanged iron arrowheads. Bottom: a gad (used in mining), axe, hoe, knife and tanged foliate spearhead.

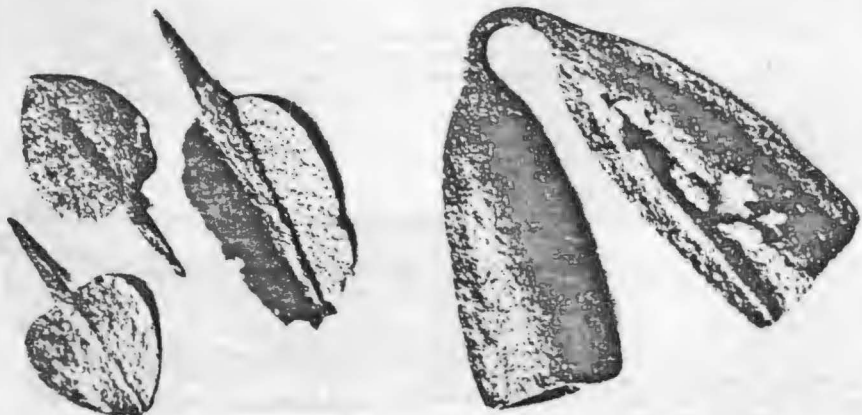


67 A sample of the goldwork found at Great Zimbabwe including drawn, coiled wire, small strip and cast beads and thin sheeting, its edges pierced to take the gold rivets that attached it to a wooden backing.





94 This iron spoon, brought by a trader presumably from the East African coast, was found by Hall in the Renders Ruin in a hoard of miscellaneous trade goods. It is a unique find in a Central African Iron Age context.



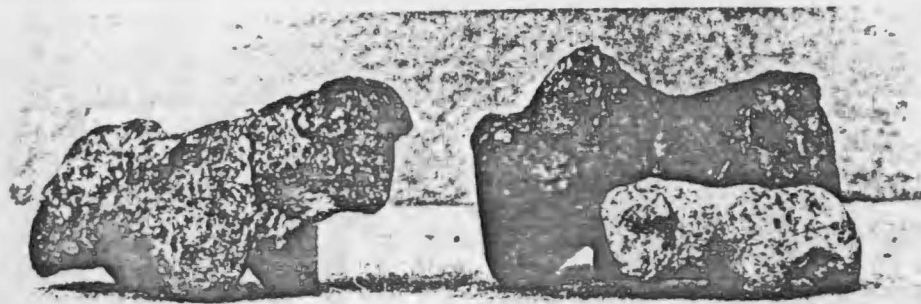
95, 96 *Left*, some of the iron hoes found in a very large assemblage of indigenous metalwork in the Renders Ruin. *Right*, a pair of flange-welded iron gongs from the Renders Ruin hoard, of a type also found with burials at Ingombe Ilede in the Middle Zambezi Valley. Mauch, who made a closely similar find near the Elliptical Building (see Plate 46) considered it to demonstrate that 'a civilized nation must once have lived here'.



92 A zebra, carved on the side of a soapstone dish, in strict profile and showing the same lack of skill or a tradition of naturalistic sculpture as the birds.

93 Further details of the dish shown in Plate 92. It includes, from the left, a baboon, next to what seems to be a dog held on a leash by a human figure. The latter is hurling a spear over a bird in full flight. This frieze is more complex than any other. It was found in 1891 by Bent in a cave in the Eastern Enclosure, where it had probably been hidden by the hunter Posselt two years before.

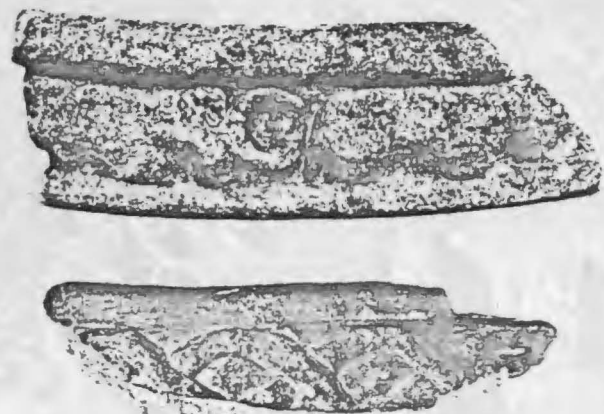




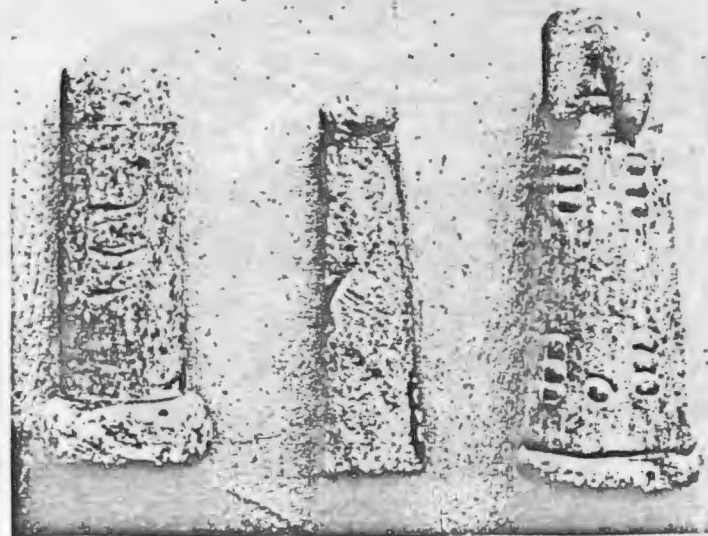
89 The pottery models of humped cattle that have been recovered at Great Zimbabwe are probably all too stylized and stereotyped to be simply children's playthings. All stratified examples were in deposits contemporary with or immediately pre-dating the earliest stone walls.

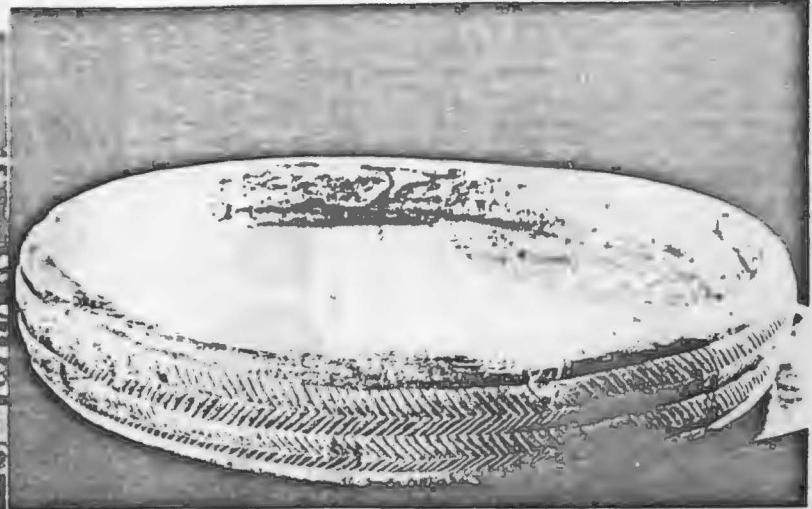
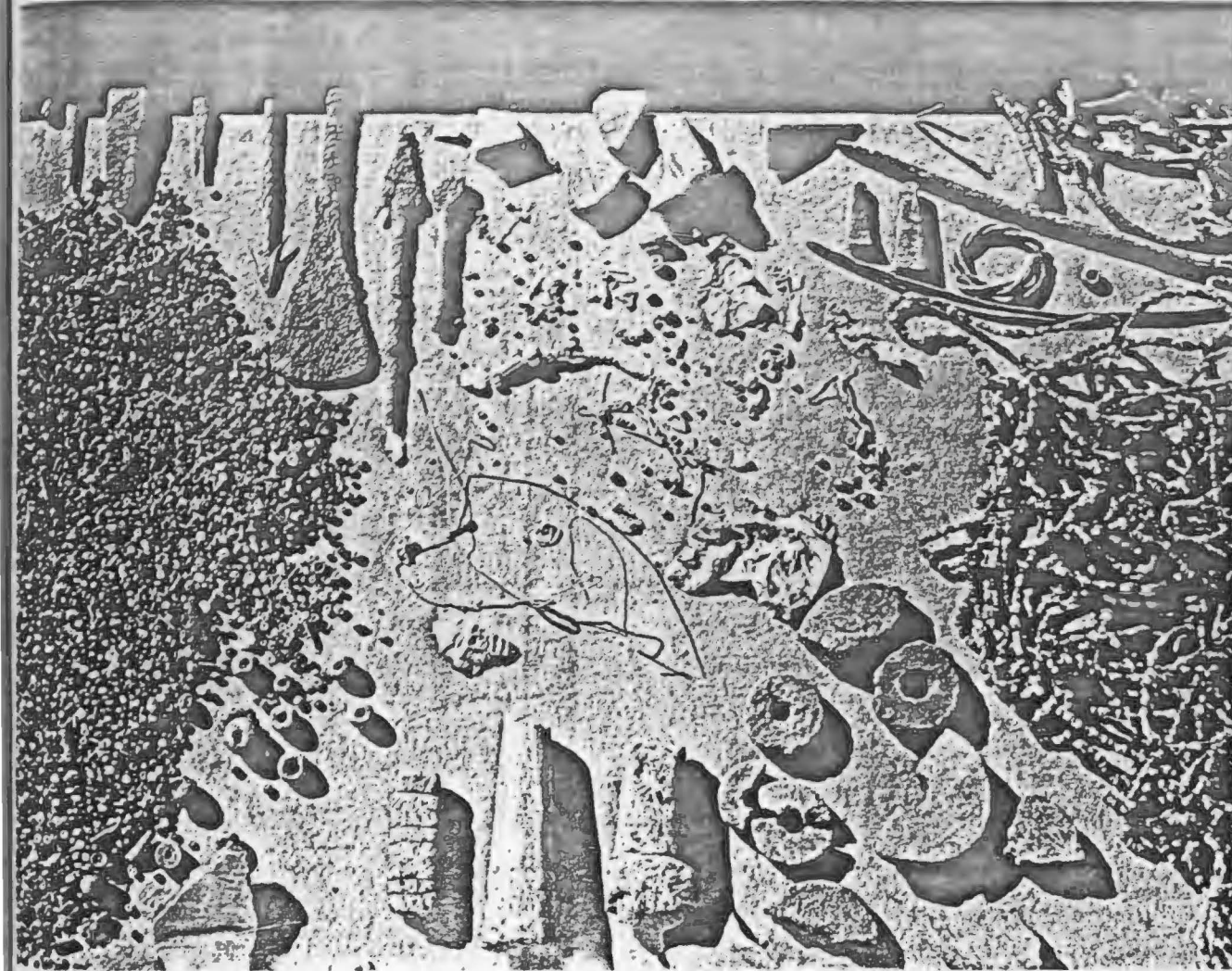


84, 85 Some of the small, carved soapstone figurines found in considerable numbers in certain limited areas of the Ruins. Some are phallic in shape but others, like that with navel and breasts, below on extreme right, are clearly anthropomorphic and closely resemble stylized pottery torsos found in contemporaneous Iron Age contexts elsewhere in Mashonaland.

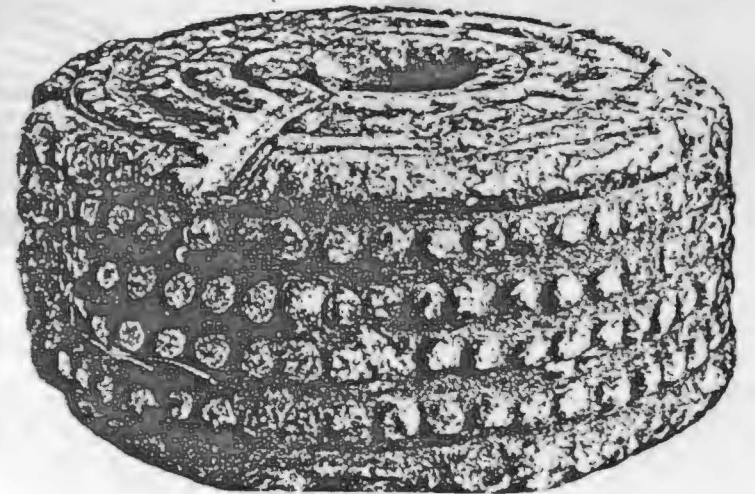


90, 91 Soapstone dishes bearing carved friezes round the sides include one showing cattle with long crescent-shaped horns, left, and another bearing a guilloche motif, below left, found by Caton-Thompson in the Maund Ruin. The latter motif can be paralleled in *daga* mouldings in other stone ruins in Mashonaland and in carved coral bosses in East African mosques. Somewhat similar motifs also appear in Plate 88 and on the Portuguese ring in Plate 110.



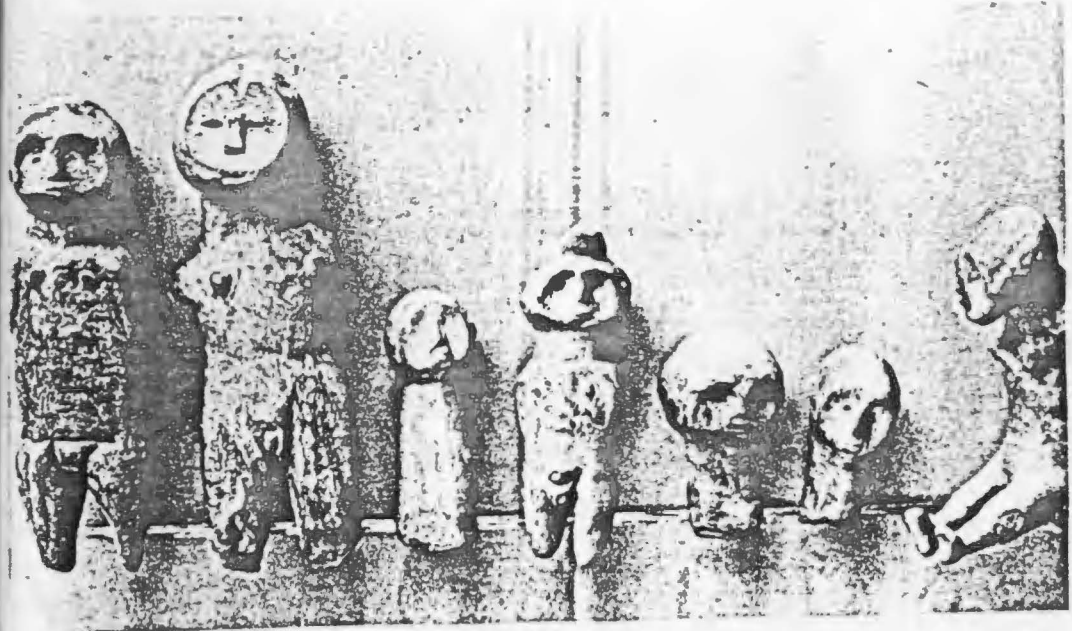


A soapstone bowl from Zimbabwe.



A soapstone cylinder from Zimbabwe.

Figurines from Zimbabwe



# Finance

## Buildings and Programme Phasing

The National Museums and Monuments Commission have an annual vote from Government of Z\$1 million which finances their activities countrywide. This sum covers their running and maintenance costs only, being insufficient to cover the financing of any programmes for future development.

These programmes rely on grants usually in the form of foreign aid or donations from international charitable institutions.

Their current estimate for the development programme for Great Zimbabwe is Z\$2 million. They are presently engaged in soliciting finance for this programme from various international sources.

Having to operate on a limited budget, which is not derived from a constant annual income, necessitates the maximization of all the resources that are available to them. These programmes are, as a result, effected in the following ways:

- 1) programmes are of necessity staged over a number of years.
- 2) universities and other similar institutions are relied upon as far as possible for research, design and planning work.
- 3) that programme content be always stringent, efficient and economic.
- 4) that existing facilities, however inadequate, be utilised until their replacement is both possible and justified.

# Existing Buildings and Programme Phasing

There are numerous existing buildings on the Great Zimbabwe National Monument estate, all of which are inappropriate, mainly for aesthetic reasons, in terms of the proposed programme. It is intended to eventually demolish all these buildings but subject to the limited budget the National Museums and Monuments Commission have incorporated them into their programme, gradually replacing them as funds become available.

Many of the buildings were damaged during the war and some of these are at present being renovated for use in the present programme (Phase 1).

## Phase 1

This phase involves the utilisation of existing buildings for whatever purposes they can possibly serve until the construction of new buildings becomes possible.

The existing museum building has been renovated and has been furnished with a fixed display (generally corresponding to 'Display Galleries a) 1 - 3' in the Schedule of Accommodation). This was completed at the end of August 1981 when the museum was reopened to the public.

The Asian lodges are to be renovated and used as lecture rooms for the conduction of audio/visual educational programmes.

The Lodges are to be renovated and used as accommodation for visiting groups.

The chalets are presently accommodating the staff working on Phase 1 of the programme and will be demolished after its completion.

The existing structure at NECHOKUSHURE MTUSA previously used for archaeological spreading is to be reroofed for the same purpose.

The tearoom is not in operation and will not be reopened. The curio shop section of this building is at present utilised for the sale of refreshments, authentic local crafts and publications. This building will be demolished when the proposed ENTRANCE COMPLEX becomes operational.

In addition the existing research / maintenance and storage block retains its current use and the existing staff houses and maintenance staff 'location' are being utilised as staff accommodation.

The old prison block which was sited south of the Great Enclosure, now known as *IMBA HURU*, has already been demolished.

The ablution blocks at the Boy Scouts and Girl Guides camping sites are to be renovated for and then demolished after the World Jamboree 1982.

### Phase 2

This phase involves the implementation of the ring road and public transport system and the building of such sections of the ENTRANCE COMPLEX as are essential to its operation.

These are namely:

Parking  
Control Point  
Public Concourse  
Interpretative Centre  
Curio Shop  
Courier's Office  
Station  
Public Toilets  
Offices  
Public Transport Maintenance and Storage  
(see Schedule of Accommodation).

It also involves the building of appropriate PUBLIC TOILETS at intervals along the ring road, the demolition of the existing toilet blocks and the building of the HOTEL ENTRY CONTROL POINTS.

### Phase 3

This phase involves the final implementation of the proposed programme with the completion of all the new buildings and the demolition of all the remaining existing structures.

Namely:

- \* Completion of the ENTRANCE COMPLEX and demolition of the existing maintenance block and tearoom.
- \* Building of the MAIN INTERPRETATIVE CENTRE and demolishing the existing museum and the Asian lodges.
- \* Building the accommodation at NECHOKUSHURE MTUSA and demolishing the existing lodges and research block.
- \* The establishment of a STAFF HOUSING community and the demolition of the existing staff houses and 'location'.

This is a long term phase staged over a number of years. The sequence and timing of stages will be dependent upon the availability of funds and the priorities of circumstance as the programme proceeds.

The National Museums and Monuments Commission wish to be able to proceed with any stage at any time as the need arises and the funds are available without jeopardizing the integrity of the scheme as a whole.

## SCHEDULE OF ACCOMMODATION

The accommodation is divisible into four sections, each related to individual sites throughout the estate.

### 1 ENTRANCE COMPLEX

#### Parking:

+60 cars, 10 buses - integrated into natural environment.

#### Control point:

ticket window.

#### Public concourse:

entry; movement area around which various associated activities are grouped; not required to be fully enclosed.

#### Interpretative centre:

off concourse; display area and information counter; display of model and posters as introductory briefing of visitors on estate.

#### Courier's office:

tourist officer.

#### Curio shop:

off concourse; display - counter - store (to hold large stock); selling of authentic local crafts and official publications.

Interpretative centre and curio shop are closely associated.

#### Station:

public access point to transport system.

#### Public toilets:

to be accessible to public in entrance complex and externally to large arriving parties, but not to compromise control of public into estate.

This section to be arranged on a oneway circulation system, preferably clockwise (found to be the most satisfactory by National Museums and Monuments) so as not to confuse or hinder the flow of visitors.

#### Restaurant:

operated on franchise basis; to be two tier - formal and informal sections; informal section to open into public outdoor area in form of indigenous garden or terrace; formal section to operate both independently at night and as part of the estate during day; must not compromise control of public into estate; to be fully equipped with kitchens, service areas and toilets to international standards.

#### Offices:

3 offices, one with safe, to accommodate the estate manager, secretary and accountancy officer; incorporating a cleaner/tea room, large store room and staff toilets.

#### Public transport maintenance and storage:

10 maintenance and storage bays, each to house 1 tug and 2 trailers; each bay to have battery recharge unit and gantry for battery exchange; cubicle office - maintenance officer.

#### Workshop:

for the maintenance of all equipment used on estate; to include store rooms, refuelling point and staff toilets.

### 2 MAIN INTERPRETATIVE CENTRE - SITE MUSEUM

#### Entry area:

semi-enclosed zone - arcade or entry court.

#### Foyer:

- entry/exit zone; reception counter; wall information display.

#### Display galleries:

series of fixed displays organised on a clockwise oneway circulation system (found to be most satisfactory by National Museums and Monuments).

a) 1) Time Sequence Gallery - visual representation of each phase of site occupation together with related artefacts.

2) 'Zimbabwe Bird' Gallery - secure, fire-proof zone; recreation of original bird display in terraced enclosure - use of original stones.

3) Artefact Gallery - display of original artefacts found at Great Zimbabwe.

b) Discovery Room - off main sequence of galleries, for children to become acquainted with artefacts by touch; incorporating artefact storeroom.

**Lecture room:**

audio/visual auditorium to accommodate 120; range of use - formal ceremonial occasions to informal gatherings; equipment store.

**Office:**

educational officer - related to lecture room and foyer; staff toilet.

**Public toilet:**

public toilets for vicinity of site combined with toilets for museum complex - internal and external access.

The Karanga style rondavel originally built as the first B.S.A.P. post in Zimbabwe (then Rhodesia), now declared a national monument, is to be incorporated as part of the museum complex, being used to display artefacts and records of early European and Pioneer association with the site.

**3 NECHOKUSHURE MTUSA**

Accommodation for visiting groups.

**Extensive roofed area:**

reroof and possibly add to existing structure (measured drawing); informal gatherings, (archaeological) spreading.

**Communal area:**

possible extension of existing structure - to accommodate informal gatherings, lectures, dining; incorporating minimal cooking facilities and staff toilets.

**Flexible small unit accommodation:**

to house anonymous visitors - school children, schools of archaeology to invited guests and specialists; each to have toilet and minimal cooking facilities; arranged around communal facilities.

**4 STAFF HOUSING**

15 no. Grade 2 staff houses:

estate administration staff, drivers, couriers.

50 no. Grade 3 and 4 staff houses:

estate maintenance staff.

**PUBLIC TOILETS**

At strategic points along ring road - to be aesthetically sympathetic with the natural environment.

**HOTEL ENTRY CONTROL POINTS**

ticket offices and turnstiles - to allow pedestrian access from hotels to transport system.

# Brief History of Great Zimbabwe

A full account of the history of Great Zimbabwe is beyond the scope of this thesis. The following is a summary of literary accounts and discussions with archaeologists and museum personnel.

## INTRODUCTION

Ever since their European discovery by Carl Mauch in 1871 the Zimbabwe Ruins have been the object of many theories and much mystery. Since the beginning of the 16th century, the Portuguese had been aware of their presence due to their explorations along the south east African coast although it is not clear whether they actually visited the site.

## THEORIES

Theories concerning Great Zimbabwe have always been influenced by their value as political propaganda, which has largely obscured a rational approach and contributed to the continued confusion and romantic lore surrounding the ruins and their origin. The potential of the mystery has further been exploited by the tourist industry.

The theories may be divided into Bantu and non-Bantu schools.

The important protagonists of each being -

<u>Bantu</u>	<u>Non-Bantu</u>
Randall-Maciver	Theodore Bent
Miss Caton-Thompson	R N Hall
A Whitty	R Gayre
Peter Garlake	R A Dart
Roger Summers	J E Mullan

## NON-BANTU THEORIES

The non - Bantu theories are the earliest. They arise from the early investigations of Bent and Hall and the Victorian romances concerning the Queen of Sheba and the lost mines of King Solomon which are tied back into Arab and biblical mythology.

These theories deny an African origin by attributing the buildings to an era prior to the Bantu migrations from the north, from the 8th century onwards. They see the phenomena of the widely scattered ruins throughout Botswana, Zimbabwe, Northern Transvaal and Mozambique, including the extensive works at Inyanga, as a whole indicating a developed civilization. They then attempt to find the origins of this civilization variously in the ancient Megalithic, Phoenician, Egyptian and Sabeian civilizations. They attribute its existence to gold and slave trafficking within the ancient Indian Ocean trading block, which operated from 500 BC to the 13th and 14th centuries.

## BANTU THEORY

More recent professionally conducted investigations have slowly been piecing together the currently accepted theory

of an African origin. While a great deal of work is still required to be done, it is mainly filling in of detail. There is enough evidence to irrefutably demonstrate an independent development of African culture in this region. The history is dominated by continuing turbulence and migration of Bantu peoples throughout the region, while cultures and social structures were developing within an overall Iron Age culture.

#### LEOPARD'S KOPJE CULTURE

The culture that ultimately flowered at Great Zimbabwe originated at Leopard's Kopje in Matabeleland. Here early Iron Age peasants had begun to build their huts amongst the granite outcrops that form the hills in this region. They developed a cattle based economy and a definitive style of pottery, iron and copper tools and ornaments. With this developed the beginnings of a stratified society and religious cults. They developed the embryo of a stone building tradition in the form of crude cattle enclosures. This culture began to achieve a dominance in the region as a military and trading power.

#### DEVELOPMENT OF THE GREAT ZIMBABWEAN CULTURE

At approximately 1 000 AD elements from the Leopard's Kopje culture infiltrated the people of the Great Zimbabwe area and a similar culture developed on the kopje where the Hill Ruin is now situated and other related sites. Dramatic changes soon occurred. Great Zimbabwe ceased to be a peasant village becoming the central settlement of an élite who gained control over the community and a labour force that now began to build in stone sufficiently often so as to produce specialised craftsmen.

#### RISE TO PROMINENCE

The culture grew rapidly in prominence. Great Zimbabwe soon became the dominant religious, trading and power centre of the whole region.

Great Zimbabwe's rise seems to be due to a combination of factors -

- \* military power; only significant in the early stages.
- \* important religious centre; provided cohesion, organisation and stratification of society.
- \* geographical location; on southern scarp of plateau providing conditions conducive to life support on the edge of gold mining and cattle grazing regions.
- \* economic control; lies on shortest and most direct route between the Indian Ocean (Arab trade) and the gold mining regions.

It was not alone in its growth. Simultaneously other centres of power were developing along the coast and around the western gold mining regions.

#### STAGES OF DEVELOPMENT

Development took place in two stages analogous to distinct architectural styles.

##### Stage 1

The first stage from the 11th to the 13th centuries, was almost entirely confined to the Hill Ruin. During this period Great Zimbabwe was still smaller than most contemporaneous settlements, including those at Leopard's Kopje.

##### Stage 2

In the second stage from the 13th to the 15th centuries the culture reached its zenith and the settlement spread into the valley. Most of the major building work took place in this period and the society was at the peak of its affluence and power.

#### DECLINE

After this time the culture seems to have been suddenly eclipsed. The major factor in its decline seems to be that it outgrew its Iron Age technical and economic resources. By this time such a large population had been attracted to Great Zimbabwe that it became unable to support itself - the surrounding countryside had been stripped bare. It has been estimated that at its peak the population of Great Zimbabwe was up to 2 500 adults which would have taxed the resources of any Iron Age economy, despite the special advantages of the site of Great Zimbabwe.

#### MONOMATAPA KINGDOM

At this time the ruler and his élite moved to the north-east, close to the Zambezi River. Here the Monomatapa kingdom grew up and achieved dominance over the entire country at a time when the Portuguese were beginning to infiltrate from the east coast.

#### THE ROZWI CULTURE

The Monomatapa kingdom, in turn, eventually collapsed, splitting into smaller kingdoms, out of which the Rozwi culture in the west, what is now Matabeleland, became dominant - equal in prominence to that which Great Zimbabwe had been. The Rozwi still regarded Great Zimbabwe as an important religious centre, frequently visiting it. Their settlements at Khami, Dhlo Dhlo and Naletale reflect the tradition of Great Zimbabwe in their masonry skills, development of decorative motifs and the structures of huts within enclosing stone walls.

The Rozwi were ultimately overthrown and destroyed completely by invading Ngoni armies, offshoots of the Zulu nation - who were to become the Matabele.

#### EUROPEAN OCCUPATION

By the time of European occupation Great Zimbabwe was all but abandoned, inhabited by people of the Karanga tribe ignorant of its past history and significance.

## Lifestyle and Culture of Great Zimbabwe

### STRUCTURE OF SOCIETY

Politically Great Zimbabwe was an oligarchy. The structure of its society was stratified and has been equated to Mediaeval society. The majority of people were peasants, subsistence farmers, dependent primarily on cattle and maize; craftsmen and labourers. They supported an élite, the Paramount or 'Mwari' and his court.

### THE MWARI

The 'Mwari' was a semi-divine personage, who seldom came into contact with the common people. He was god, king and priest. His power was derived both from his monopoly of commerce and his position as a religious leader, whose own health was regarded as a reflection of the condition of the state in general.

A peculiarity of the Great Zimbabwe site is that a cave on the Hill Ruin kopje has an acoustic phenomenon whereby a voice may be distinctly heard throughout the valley below. Folklore tells of how, while the common people were conducting their daily life in the valley a loud voice would ring out relating an oracle, the word of god. This of course was the 'Mwari' talking to his people.

### THE OLIGARCHY

The remainder of the oligarchy were priests, elders, advisors and the wives of the 'Mwari'. The large enclosures were the homes of the 'Mwari' and his élite, the peasants living in huts crowded around these enclosures. The affluence of the élite was derived from trade in gold, copper, pottery, ceramics and beads with neighbouring societies and Arabs from the coast. This affluence seldom affected the common people.

### RELIGION

The religious aspect of the culture was based on ancestor worship, fertility and rain cults. All the phenomena of daily life and the world around them had spirits attributed to them. There were seasonal sacrificial rites to ensure good rains, prosperity and health.

### CRAFTS

Craft skills were well developed including the working of iron, copper and gold; beadwork; pottery; wood and soapstone carving - all of a distinct quality. While the peasants wore loin cloths and simple ornaments of beads and bark, the élite wore simple cotton tunics and were frequently lavishly adorned with beads, skins, copper and gold.

### SYMBOLOLOGY

A limited range of standard motifs and symbols were constantly used, all of which had a religious and cultural significance. The standing stone and the conical tower or cairn had religious and phallic significance, and as such were the symbols of the 'Mwari', the patriarch of the society, always found adorning his

residences. The Zimbabwe bird, symbol of Zimbabwean culture and power, is a development of the standing stone. Gradually the top of the standing stone became adorned by a combination of symbols and motifs which in total summarised and represented Zimbabwean culture and power. The bird with discs, chevron pattern and crocodile is a unique symbol not to be found anywhere else. It can be equated with a royal standard or a national flag. The simple geometric patterns adorning walls, pottery and artefacts all had symbolic meaning - i.e. the chevron pattern; the water of life denoting fertility.

### UNIVERSAL NATURE

It is of interest that these symbols and motifs, developed here quite independently, are of a universal nature. The bird symbol, standing stones, cairns and simple geometric patterns are universal symbols used by developing cultures, with no direct contact, on different continents throughout the world to relate their cultures with the phenomena of the natural world.

# Architecture of the Ruins

## DETERMINANTS

The architecture of Great Zimbabwe arises out of a combination of various factors -

- \* the builders were a people whose only architectural tradition was that of clay or 'daga' building.
- \* the availability of an abundance of granite which, due to its inherent crystalline structure exfoliated into thin flat slabs of a roughly rectilinear shape, lending itself to wall building.
- \* the rise of an affluent élite and a culture which demanded architectural expression in the form of prestige buildings and a symbology expressive of their world view.
- \* the availability of subserviant peasant labourers and craftsmen.
- \* the feasible possibility that through the growing links with the outside world via Arab trade that the concept of 'putting stone upon stone' or of a 'formalised building' could have been implanted. (The advent of the stone buildings at Great Zimbabwe was simultaneous with the growth of the Arab towns along the south-east African coast).

The result is an independent response of the community to its circumstances and environment.

## DEVELOPMENT OF STONE TECHNOLOGY

The buildings display a continuous development of stone technology from the early buildings on the Hill Ruin kopje, where rough, poorly coursed walls were built in, around and over the granite outcrops to the perfectly coursed and dressed stonework of the valley buildings, built on open flat ground.

## DAGA TRADITION

The plastic forms and detailing always reflect the tradition of a daga building people. Never is any attempt made to articulate junctions; walls always bend and divide to flow continuously into one another. Further to this the interiors of the enclosures were plastered to a dado level with daga, had cement/daga floors and contained daga huts, platforms and seats. Spatially they were entirely plastic; moulded in clay.

## STYLES

Two styles are evident, which reflect the developmental stages of the society.

### Style 1

This style displays squared entrances and entrance steps independent of the walls; the walls built of irregular blocks in uneven and short courses.

### Style 2

This style displays rounded entrances, flanking ambages with vertical slots for single stones, conical towers, stepped

platforms, prepared foundations and curved entrance steps which are continuous with the lower courses of the walls; the walls built of regular dressed blocks in continuous even courses built to a systematic batter.

#### FUNCTION AND USE

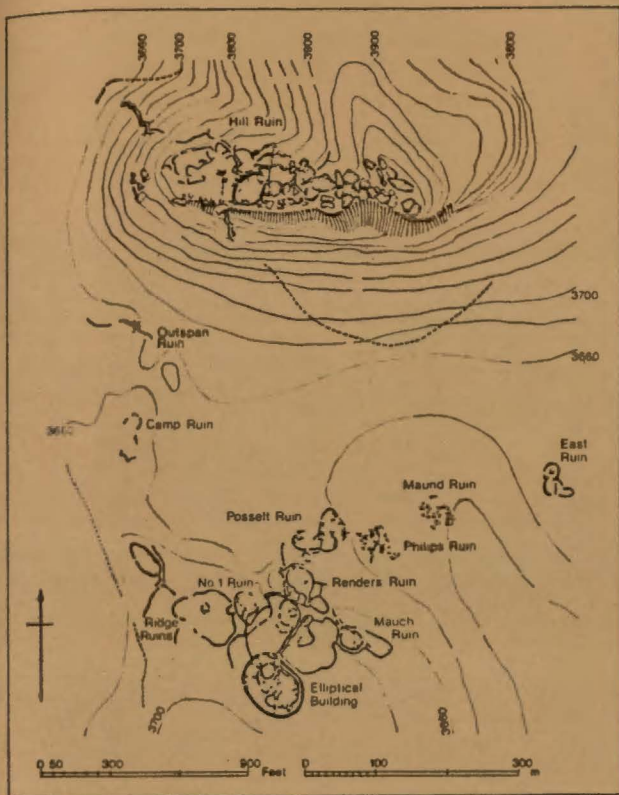
There is little evidence to support military use of these buildings. Any military determinants are confined to the earliest buildings on the hill.

The buildings are purely architectural; they arise out of the needs for privacy and prestige of the élite. The enclosures are agglomerative evolutions from the basic form of the hut. They contained the huts of the 'Mwari', his court and wives. There is no evidence of any other use save elements of religious connotation - for the élite, and especially the 'Mwari' himself, were the only persons directly concerned with religion. For example, the elliptical building evolved from enclosure 1 and was expanded several times in response to growing affluence, prestige and architectural confidence. It housed the wives of the 'Mwari' and attendants - hence its name *Imba Huru* or 'house of the women'. It contains enclosures for the holding of court and religious rites - this section being adorned by the chevron pattern, orientated to the east and the rising sun - fertility and rain. Enclosed or 'secret' passages connect it to the Hill Ruin, where the 'Mwari' lived, so that he could pass unseen by the common people.

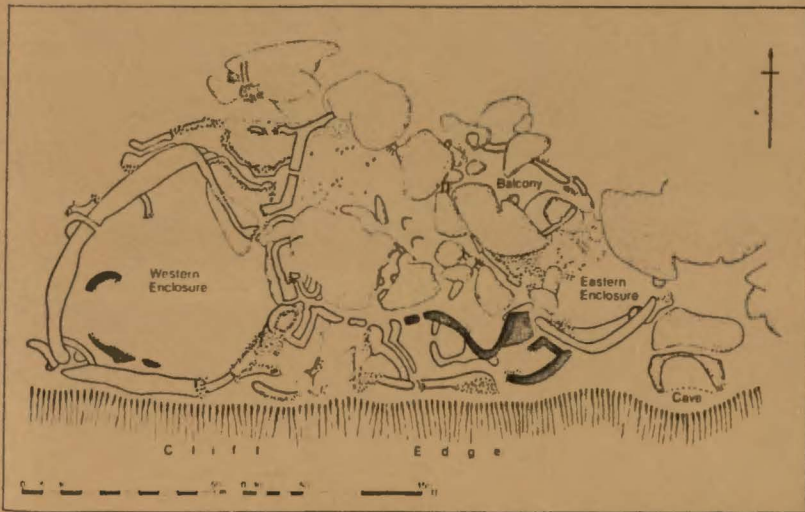
The other valley ruins were the homes of the remainder of the élite. The peasants lived in daga huts crowded around these enclosures, most having stone connecting walls between them forming courtyards for privacy.

#### OTHER FEATURES

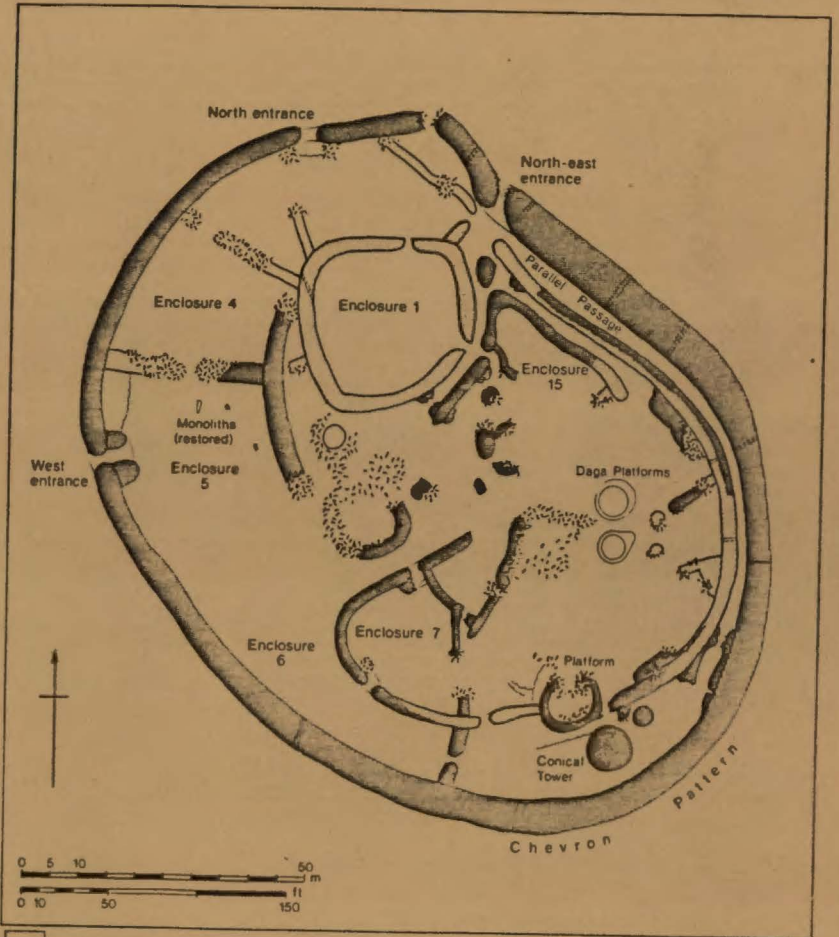
Important features are the emphasis on circulation and thresholds. Nowhere does one enter any enclosure or hut without having to step up and down again. The passages, and especially, the stairways to the Hill Ruin are purely celebrations of movement or circulation. They begin at 'gate houses', every turn is elaborated or decorated and every opportunity taken to dramatise the entire process.



2 Site plan of Great Zimbabwe.



10 Plan of the Hill Ruin, Great Zimbabwe.

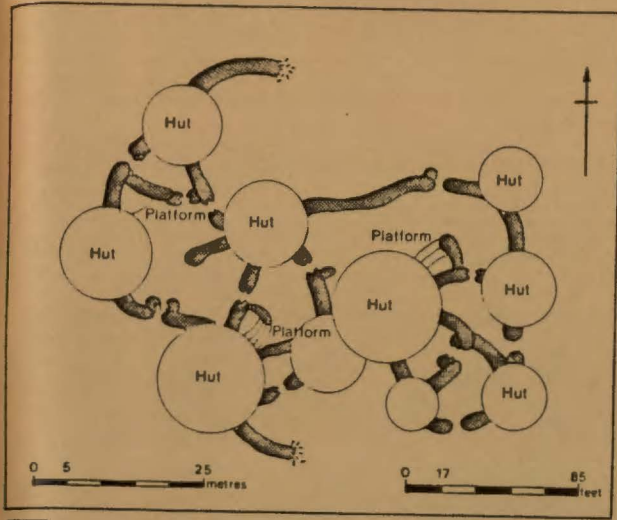





11 Plan of the Elliptical Building, Great Zimbabwe

- Poorly coursed walls
- Regularly coursed, dressed walls
- Uncoursed ruinous or restored walls

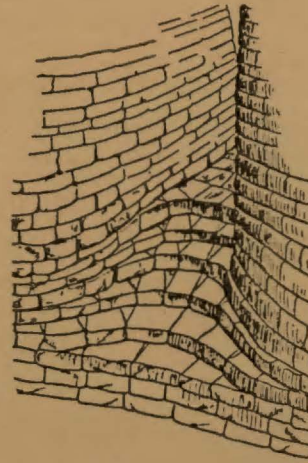
- Poorly coursed walls
- Regularly coursed, dressed walls
- Uncoursed ruinous or restored walls

3 Plan of the Maund Ruin, showing the position of the original daga huts (after Caton-Thompson).

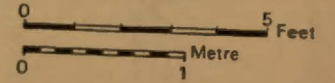
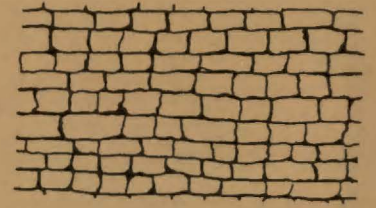


-  Poorly coursed walls
-  Regularly coursed, dressed walls
-  Uncoursed, ruinous or restored walls

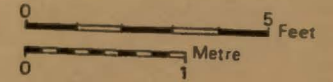
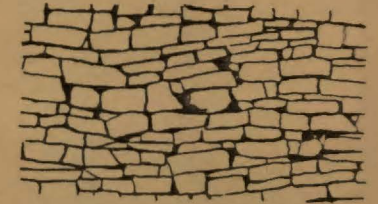
7 The curved steps in the northern entrance to the Elliptical Building (from Caton-Thompson).



4 Regularly coursed and dressed stone walling at Great Zimbabwe (after Whitty).



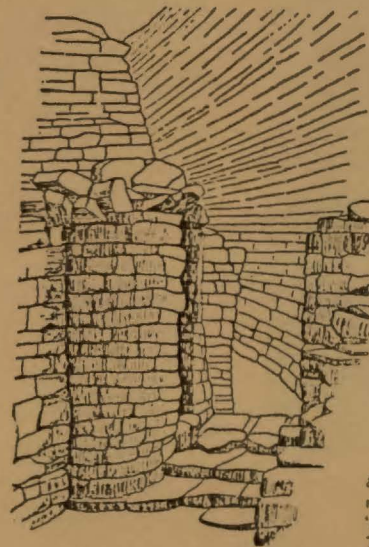
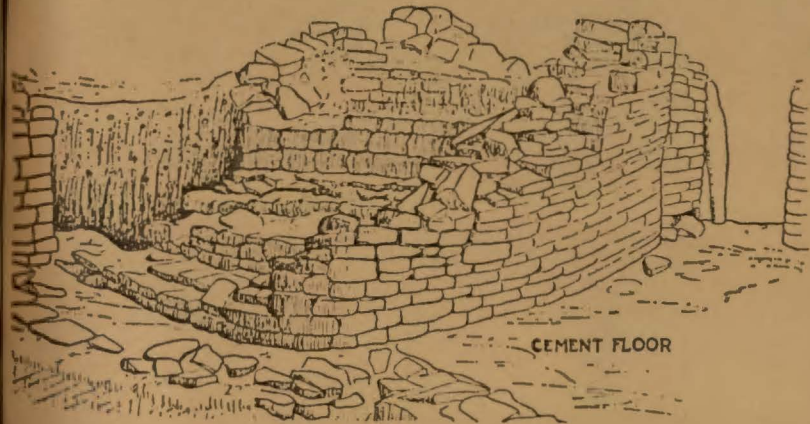
5 Poorly coursed walling at Great Zimbabwe (after Whitty).



6 Uncoursed piled-and-wedged walling at Great Zimbabwe (after Whitty).



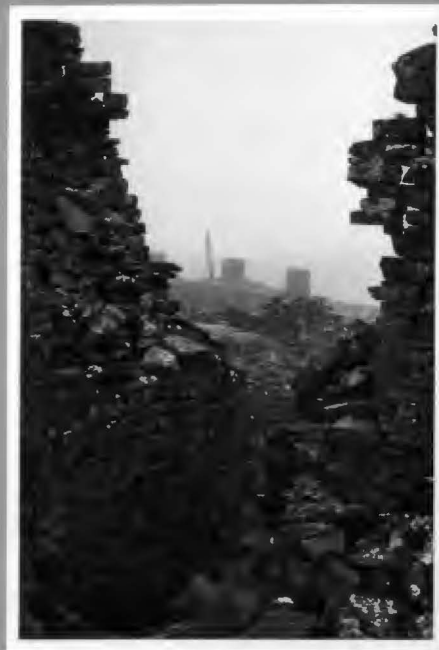
9 A stepped platform in the corner of one of the courtyards in the Maund Ruin (from Caton-Thompson).



8 Bastions, including one with a vertical slot, at the entrance to the 'Parallel Passage' from the Conical Tower (from Caton-Thompson).













# Technology

The building industry has been European dominated and has tended to aim at capital intensity. But as a developing country there is a large labour resource. This has resulted in a mixed capital/labour intensity, the mix being governed by the economics of building scale and location.

The industry is comprised of widely ranging skills from large capital intensive contractors, through smaller partly skilled contractors to semi and unskilled labour.

The introduction of capital intensive techniques has led to the establishment of various industries related to the building industry, i e -

- iron and steel;
- brick and tile;
- cement;
- structural and joinery timber;
- asbestos cement;
- glass;
- etc.

It is safe to predict that in the future the building industry will tend to have a labour intensive bias arising from a need to create job opportunities. At the same time the obvious benefits of home industries and the advantages of a range of cheap standard components cannot be ignored by a developing nation embarking on an extensive economic building programme.

Zimbabwe has an intermediate technology. It requires to use the resources of labour, industry and available techniques to best advantage. Novel applications of standard materials and components to provide economic solutions to the pressing problems of the building industry might be wholly appropriate and necessary.

Fort Victoria, 27km from the site of Great Zimbabwe, is a developing town. It is a regional capital serving an extensive agricultural hinterland and has established light industries. It is well connected by road and rail links.

Although the site is rural it is not divorced from the resources of the country, though its location could incur transport costs. All the standard building materials are readily available in Fort Victoria.

## Search for an African Architecture

*Recently there has been talk and a conscious effort to find an 'African architecture', which may be comparable to the movement towards an American architecture in the late 19th and early 20th centuries, centred around Richardson, Sullivan and Wright.*

*The need is certainly real, but the outcome at this stage is unclear. There is such a multitude of sources and the entire continent so unsettled that it is unlikely that any style can emerge until a new order arises demanding its own unique expression.*

*The vernacular architecture that one is able to draw upon is unable to cope with the new and changing functions and requirements of a developing nation. There has, in addition, been such a ready acceptance of external concepts and influences, because of their obvious advantages, that any reference to the vernacular can only be in spirit and ornamental.*

*The time is now and the nation is moving towards a new future. A different range of determinants is now governing.*

### **The Lesson of Great Zimbabwe**

*Although its people have long since departed, their edifices at Great Zimbabwe remain to be admired by peoples of another era, from a different world. This is because it was a genuine response to its own time - its own 'milieu'.*

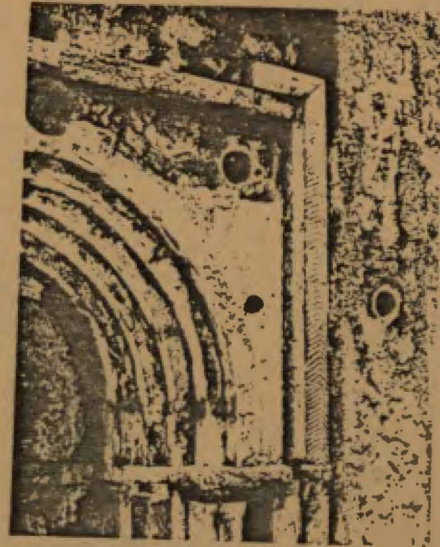
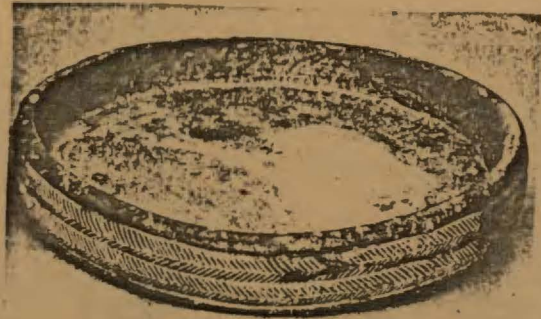
*Architecture has an autonomy that transcends time; these buildings now have no practical use but ordinary humans recognise in them a quality - a quality that can only be described as 'architecture'.*

*Although entirely speculative, in Great Zimbabwe an embryo might be seen as typical of that from which building types, such as the pre-Christian temples and palaces and Islamic buildings, especially those in Africa, developed.*

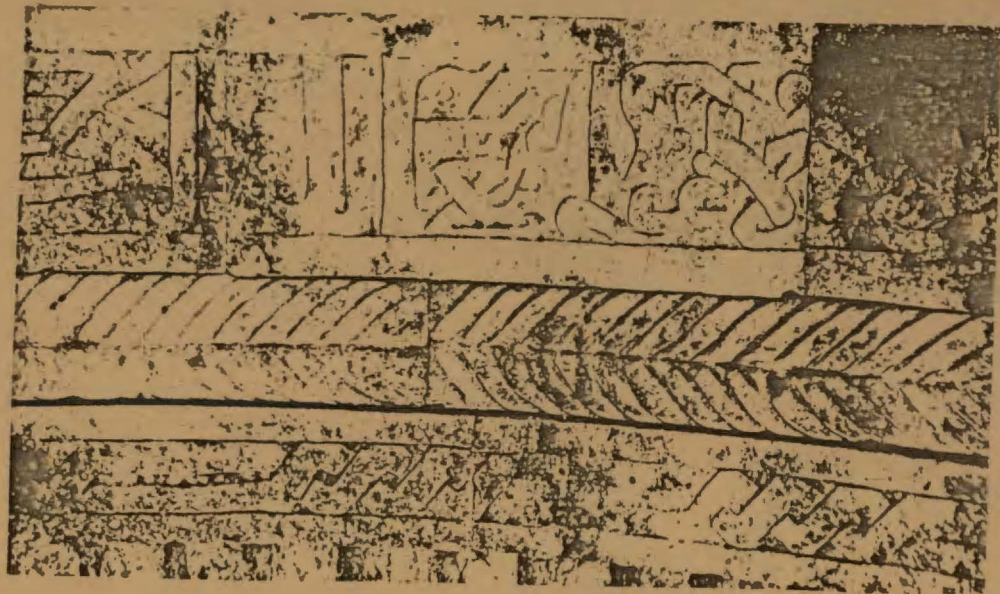
*The elements of tower and lower building with court are present together with the symbolical relations of the secular to the horizontal and the sacred to the vertical - the tower already represents power and other worldliness.*



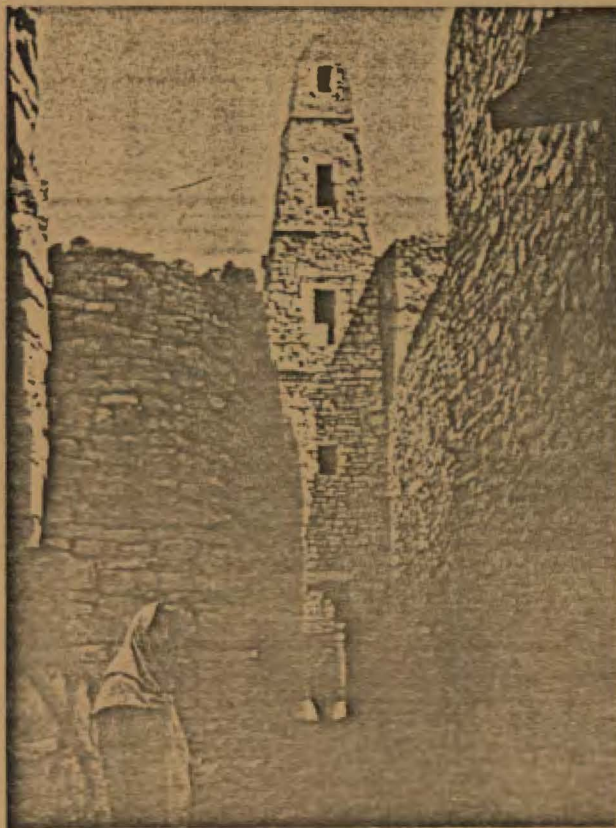
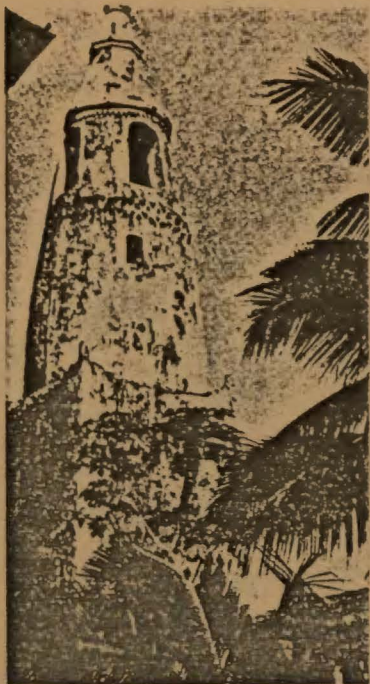
A round tower, showing pattern work in the masonry reminiscent of Zimbabwe. This stone round tower is situated in the fortified village of Bajil in the Tehama, near the Red Sea, Yemen.



86-88 The carved herringbone decoration on several soapstone dishes, including the complete one illustrated, *above left*, can be closely paralleled in the carved coral decoration of the *mihrabs* of many fourteenth- to eighteenth-century mosques on the East African coast such as Gedi, *above*, and Mnarani near Mombasa, *below*.



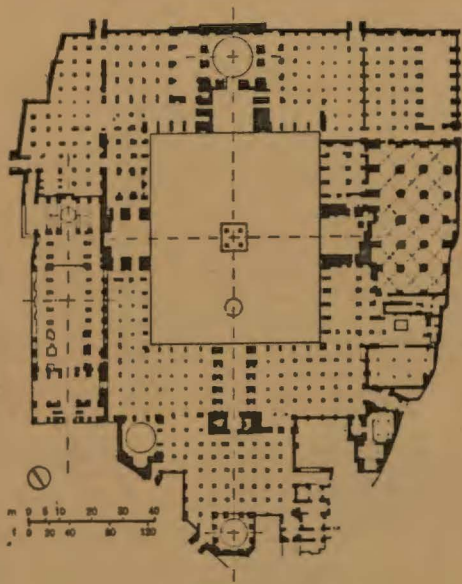
Nineteenth century minaret of the mosque at Malindi-Zanzibar, showing the chevron design.



Megalithic type of building in juxtaposition with a tower, as still to be found in Arabia.

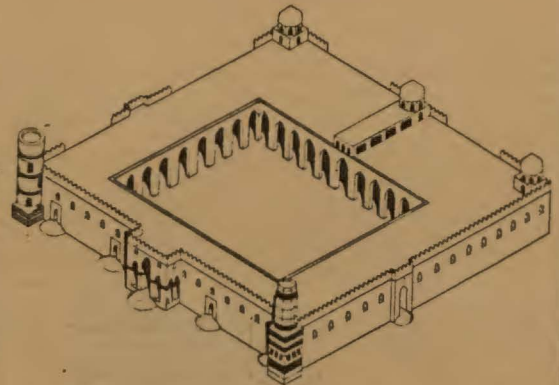
The remains of a round tower of the period of Hammurabi.



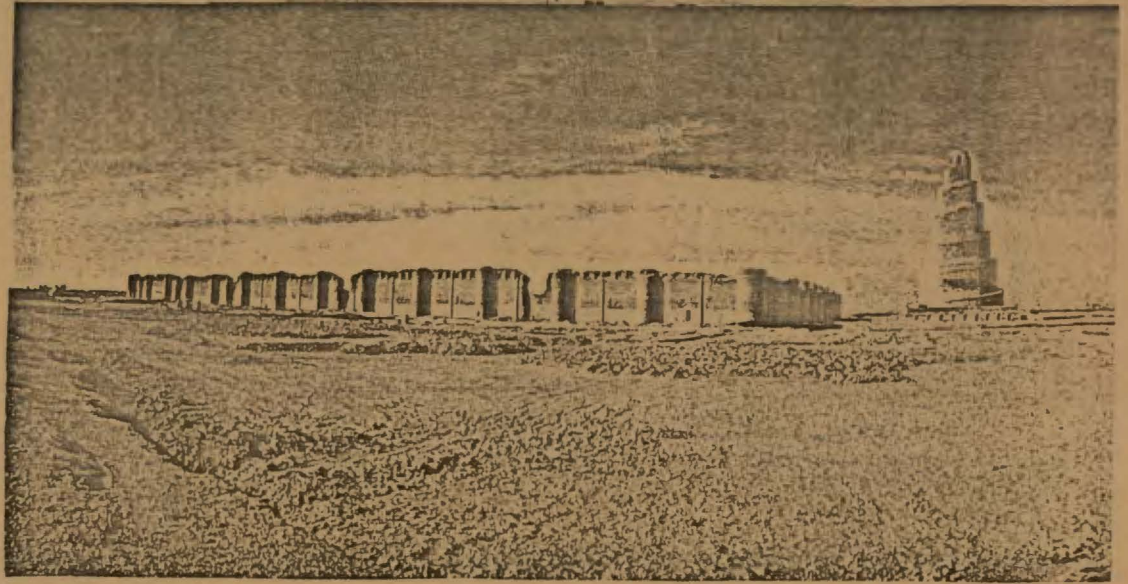
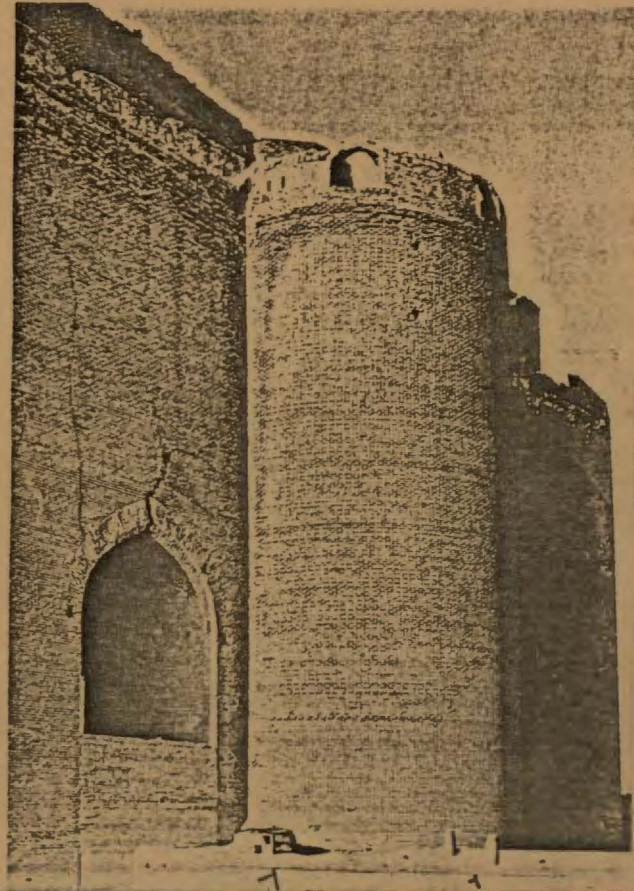


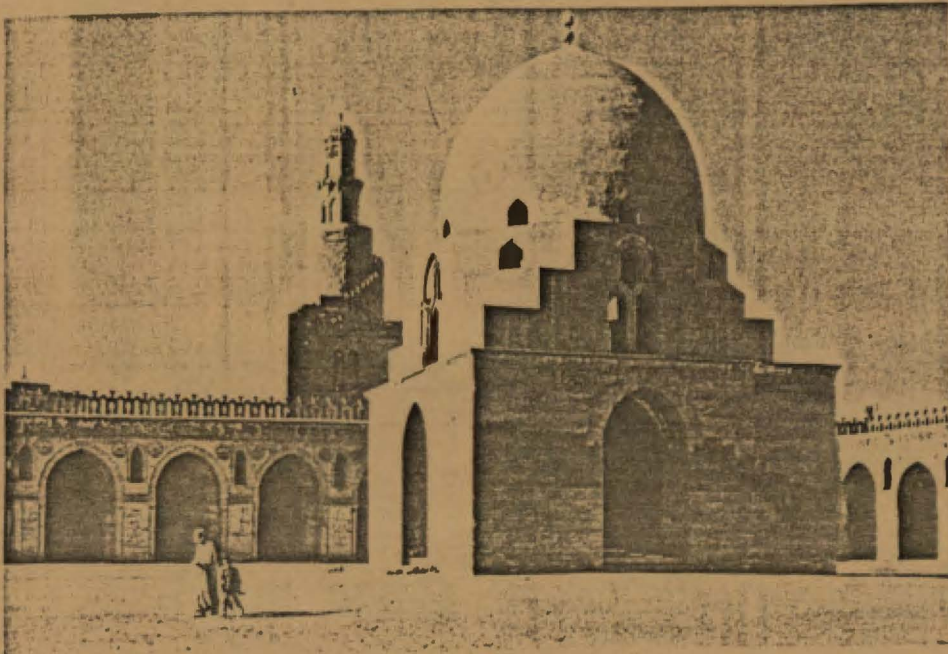
F. Plan of the Masjid-i Jami, Isfahan.

35 **View of the squinch in Malik Shah's dome chamber** in the Masjid i Jami, Isfahan, Iran 1080. This view, showing the link between the square plan of the dome chamber and the circle of the dome, taken from directly below the corner squinch, shows clearly the ingenious and complex way in which the problem of transition was solved. This form of squinch becomes standard in all later Iranian architecture.

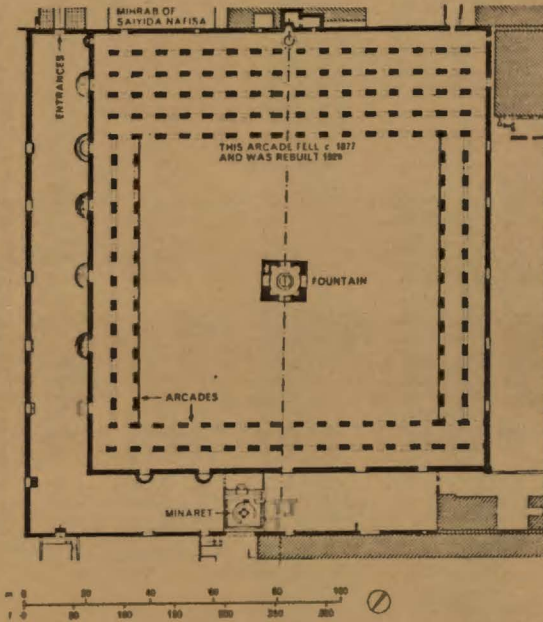


E. **The Mosque of al-Hakim in Cairo, 990-1013.** Reconstruction of the original state (after Creswell). The Mosque of al-Hakim, following a tradition established in Egypt with the Mosque of Ibn Tulun, which in turn was directly derived from Abbasid Iraq (Samarra), is the outstanding example of religious architecture of the Fatimid period. Constructed mainly of stone, but also using brick as a building material, it combines and fuses the various building traditions in Egypt into a new unity. With its large scale, pronounced accent on the façade through a massive central gate-way and corner-tower minarets, the mosque achieved a monumental effect that was typical of Fatimid architecture.

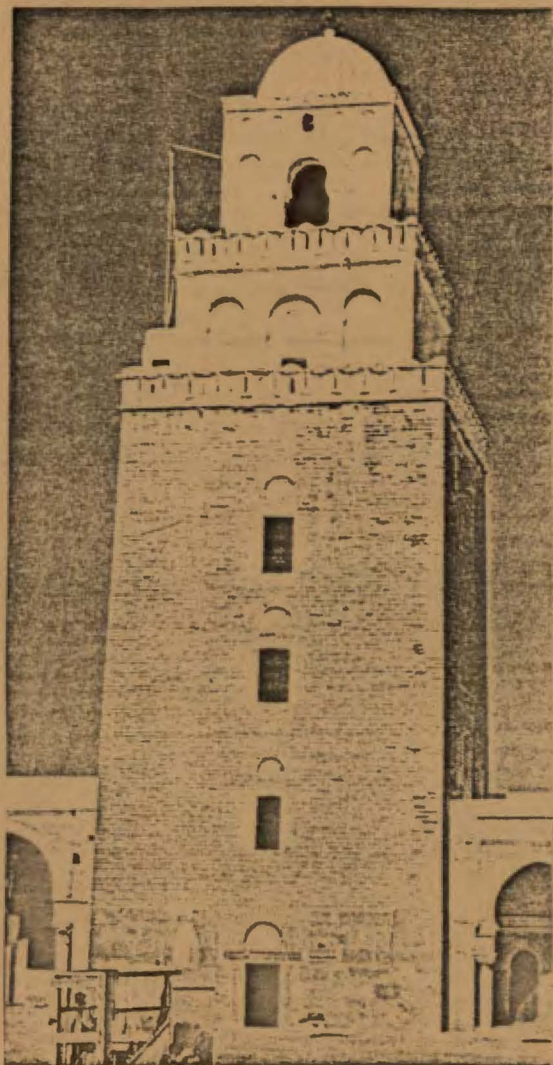




19. Mosque of Ahmad ibn Tulun, Cairo. 876-879. The mosque adopts the principles of building construction brought to Egypt by Ibn Tulun from Iraq. Brick piers and plasterwork, both alien to Egyptian architectural tradition are used and in the



C. Plan of the Mosque of Ibn Tulun, Cairo.



10 **Minaret of the Great Mosque of Kairouan, Tunisia.** 9th century. The huge square tower, built in three sections with a small crowning cupola, is one of the oldest minarets to have come down to us. In plan and general design it may well derive from Syrian church towers.



21 **The Gunbad-i-Kabus, Iran.** 1006-7. This building, which is over 200 feet (61 metres) high, was intended not so much as a mausoleum, (although the King did intend to have his sarcophagus placed inside the tower), as for a symbol of political power. Highly abstract in form, and with a plain brick surface, the building contrasts strongly with the usually small, elaborately decorated tombs or victory towers then common to both Central Asia and Iran.

## Design Approach

*The concept of a public museum, for the posterity of a nation is a relatively new European idea in the spirit of the Enlightenment of the post French revolutionary era. Since this time the museum has become a tradition and entrenched itself integrally as an essential part in the culture of all modern nations.*

*Nikolaus Pevsner states that "... the ideal of the museum as a monument in its own right has been replaced by the ideal of the museum as the perfect place to show, enjoy and study works of art (or of history or of science)".*

*At Great Zimbabwe the ancient buildings are the chief exhibit. The entire estate is in effect a 'museum'. The new buildings should reinforce this concept. The entrance complex is effectively the museum entrance and the other buildings are parts of or exhibits in a museum.*

*To achieve this there must be a basic respect for the dignity of the Monument and its natural environment. Recognition must be given to the existing agglomerative and aggregational processes on the site. The architecture should be autonomous - a genuine response to their place and time.*

## Design Development

*In the course of design development problems were found with aspects of the National Museums and Monuments Commission's proposal.*

- 1) The insignificance of the entrance complex site as an 'entry point' and the process of transportation from behind the Hill Ruin kopje, around and through the back of the site seemed lacking in an appropriate 'sense of entrance'.*
- 2) The disposition of functions between the entrance complex and main interpretative centre presented a programmatic difficulty in providing an emphasis. They are too evenly balanced, neither having enough programme content to create a complex of enough significance to justify its existence.*

*This led to a search for an appropriate process of entry and an adjustment of programme disposition so as to both reinforce the process of entry and the concept of a 'museum estate'.*

*By weighting one complex more heavily and minimising the other a significant relationship can be developed between the two, becoming the basis of the process of entrance. This seems especially relevant in view of the emphasis put on processional entrance and threshold by the builders of ancient Zimbabwe.*

*My own attitude is that the pedestrian experience of the Ruins is the most appropriate and therefore on entering one should have the choice of taking transport to a more central point or embarking on a meaningful pedestrian route.*

*In addition I found the stipulations that the museum be totally enclosed and environmentally controlled to be inappropriate in the circumstances of Great Zimbabwe. It seems that the National Museums and Monuments Commission might be persuaded to accept the use of natural control methods if they can be shown to be equal if not better than artificial systems. Should it be possible to attain satisfactory natural environmental control this would achieve significantly lower initial capital and long term operating costs, while being wholly preferable.*

*"No space, architecturally, is a space unless it has natural light... the blues would be one thing one day; the blues would be another thing another day, depending on the character of the light. Nothing static, nothing static as an electric bulb, which can only give you one lota of the character of light. So the museum has as many moods as there are moments in time, and never as long as the museum remains as a building will there be a single day like the other." LOUIS KHAN*

*The concept of a totally enclosed museum is an eccentricity of our scientific age. Nikolaus Pevsner says "... there is a recent American vogue to make museums windowless. The arguments are that electric light is calculable and even, whereas, daylight is not. The argument on the other side is that fluctuation of light is a good thing resulting in larger*

life for the works (displays)..."

The opportunity of displaying the Zimbabwean artefacts in the same light, below the same sun under which they were created is too great an opportunity to be passed up.

### Materials

There is abundant stone available in the form of heaps of collected rubble from the ruins and exfoliated stone from the surrounding area.

There is also a great quantity of timber from the exotic trees, including gum plantations, all of which are to be removed. These are all free and available on site and as such might as well be utilised.

One may also draw on the ancient architecture and culture. Daga, the traditional building material, now developed into brick. The interweaving of daga and stone - an interaction of free brick and stone walls supporting light roofs, constructed of timber, clad with iron or copper - iron gates and screens. (The weathering of copper has such perfect aesthetic qualities).

Thatch has environmental problems - security and fire - prohibiting its use on the museum. It also has an aesthetic problem - that is to avoid the 'safari lodge' image.

There is, also, the full range of (cheap) standard materials readily available in Fort Victoria.

These buildings; somehow, want to be part of the developing third world, but also, somehow, a little special, responsive to their particular circumstances, taking cognisance of the significance of this place.

### Entrance Complex

On examination the present entrance running north/south from the Main Kyle Road through the valley adjacent to the Hill Ruin kopje provides an appropriate 'sense of entrance'.

The proposed museum site is satisfactory. It is central to the ruins, while being unobtrusive and allowing views of Imba Huru and the Hill Ruin - providing the opportunity for making reference and instilling a 'sense of place'.

The crossing of the ancient route from the Hill Ruin down the north west stairway and across the Causeway (ancient vlei crossing) with the existing entrance road provides a node point which strongly recommends itself as an appropriate site for the entrance complex. Two possibilities exist -

- 1) entrance complex cutting the road and becoming the control and interchange point from private transport to internal transport or pedestrian route.
- 2) an elaboration of 1) moving the entrance complex along the pedestrian axis away from the Hill Ruin to higher ground on the adjacent kopje commanding views of the Hill Ruin across the valley and Lake Kyle and the range of hills to the north (see diagram). This would involve bringing a new road access around the back of this kopje. This might provide a more dramatic entry into the site and a more advantageous site for the restaurant, but could only be justified if the major emphasis is placed on the entrance complex.

Any complex sited in the vicinity of the junction between the traditional entrance (through the Zimbabwe Ruins Hotel) and the existing entrance would be an imposition (in full view from Hill Ruin) without the advantages that the proposed museum site has.

So it seems that the appropriate process of entrance is -

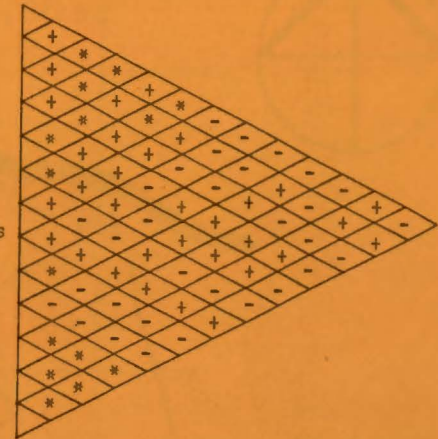
- 1) entry point (first threshold) at movement node (mentioned above) and embarkation from here.
- 2) across Causeway to Hill Ruin and on to other ruins and museum.
- 3) by transportation to museum (second threshold); centrally situated access point to Ruins.
- 4) further transportation to other points within the estate to the discretion of the National Museums and Monuments Commission. (Obviously one can continue to walk to any point on the estate).

The only problem remaining is where to place the emphasis. The entrance may be reduced to a 'gate' while the museum developed into an elaborate complex or the museum may be minimised and the entrance complex elaborated to become the major emphasis.

Obviously any variation within these extremes is possible - the right balance must be found. But they cannot be equally balanced and thereby cancel each other out; they should be counterbalanced so that they complement each other.

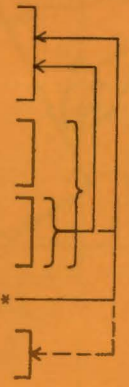
### COMPATIBILITY CHART

Parking  
 Courier's Office  
 Control Point  
 Information  
 Shop  
 Restaurant  
 Administration Offices  
 Transport Maintenance  
 Workshops  
 Museum  
 Lecture Theatre  
 Discovery Room  
 Education Officer



\* compatible  
 + semi-compatible  
 - incompatible

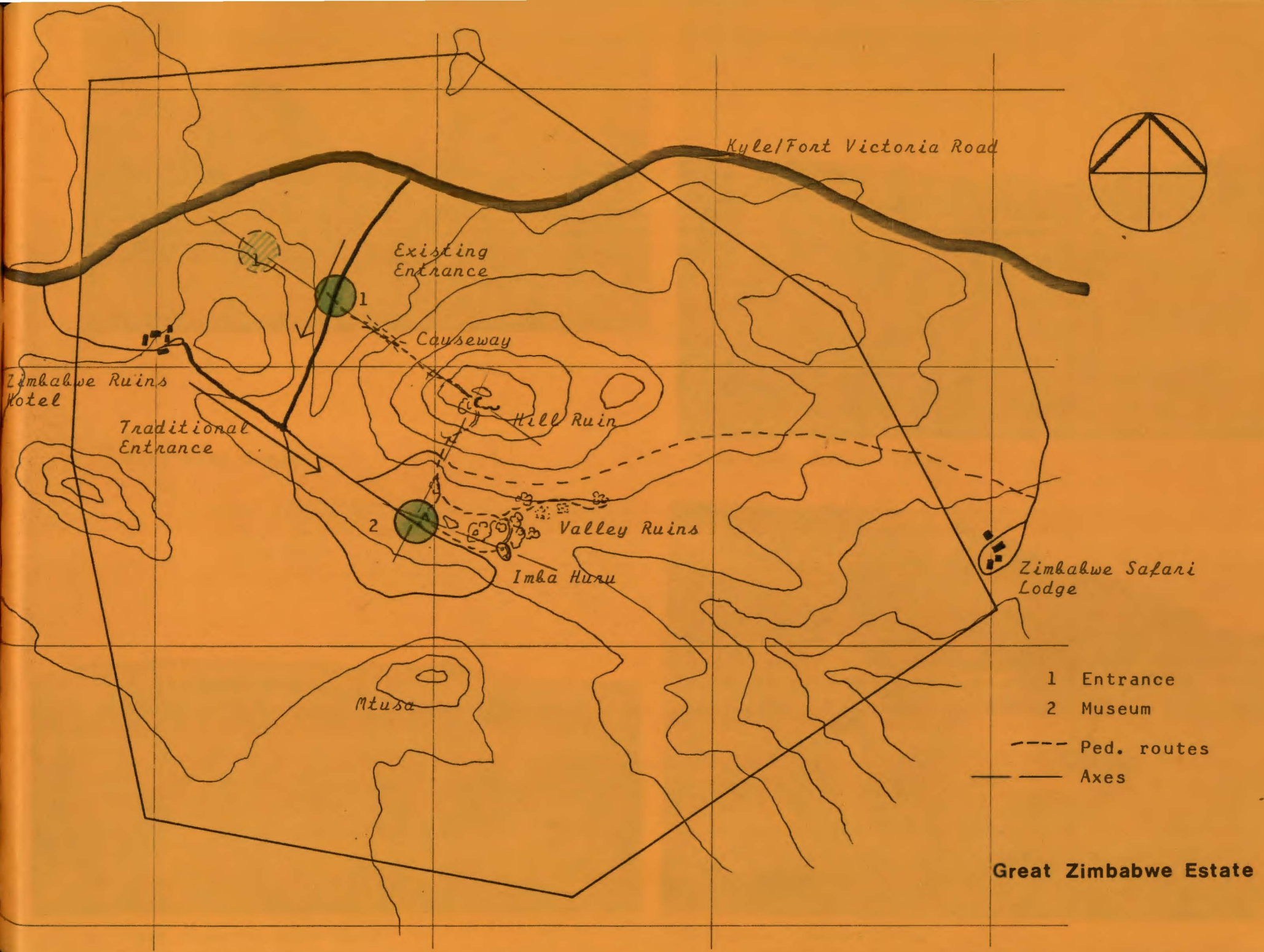
Museum \*  
 Lecture Theatre \*  
 Discovery Room  
 Education Officer  
 Parking  
 Restaurant \*  
 Control Point  
 Information  
 Courier's Office  
 Shop  
 Administration Offices \*  
 Transport Maintenance  
 Workshops



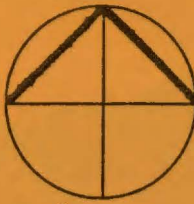
\* substantial architectural elements

It seems that the transport maintenance and workshops form a service unit requiring to be independent of the public buildings, best situated separately and unobtrusively in the vicinity of the entrance.

The remainder of the functions form themselves into groups with enough flexibility to allow for some manipulation.



Kyle/Fort Victoria Road



Existing Entrance

1

Causeway

Hill Ruin

Traditional Entrance

2

Valley Ruins

Imba Huru

Zimbabwe Safari Lodge

Mtusa

1 Entrance

2 Museum

--- Ped. routes

— Axes

**Great Zimbabwe Estate**



*Hill Ruin Kopje*



*View down Entry Valley*



*View towards Lake Kyle*



*Entrance Complex Site*



MUSEUM SITE

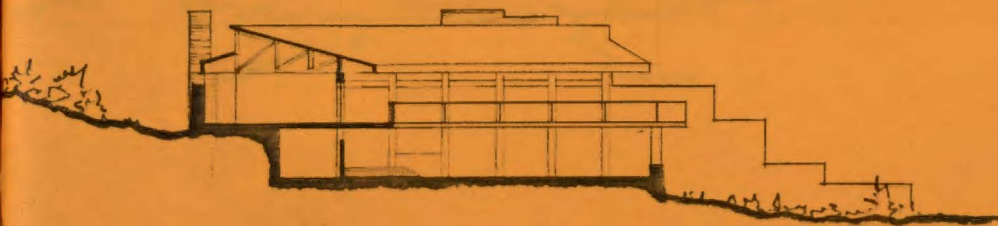




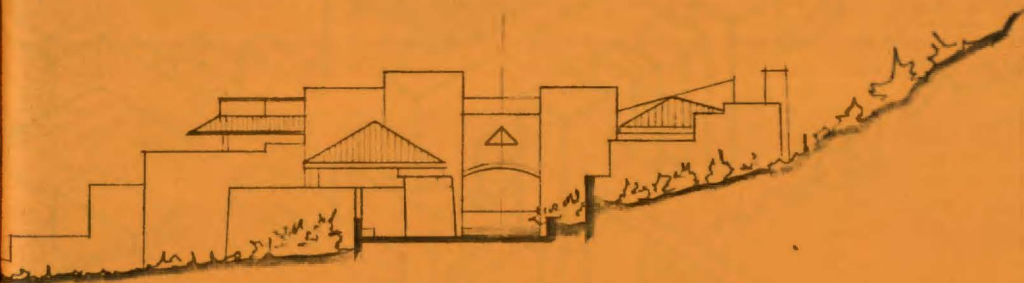
Upper Plan

Lower Plan

POSSIBLE ENTRANCE COMPLEX

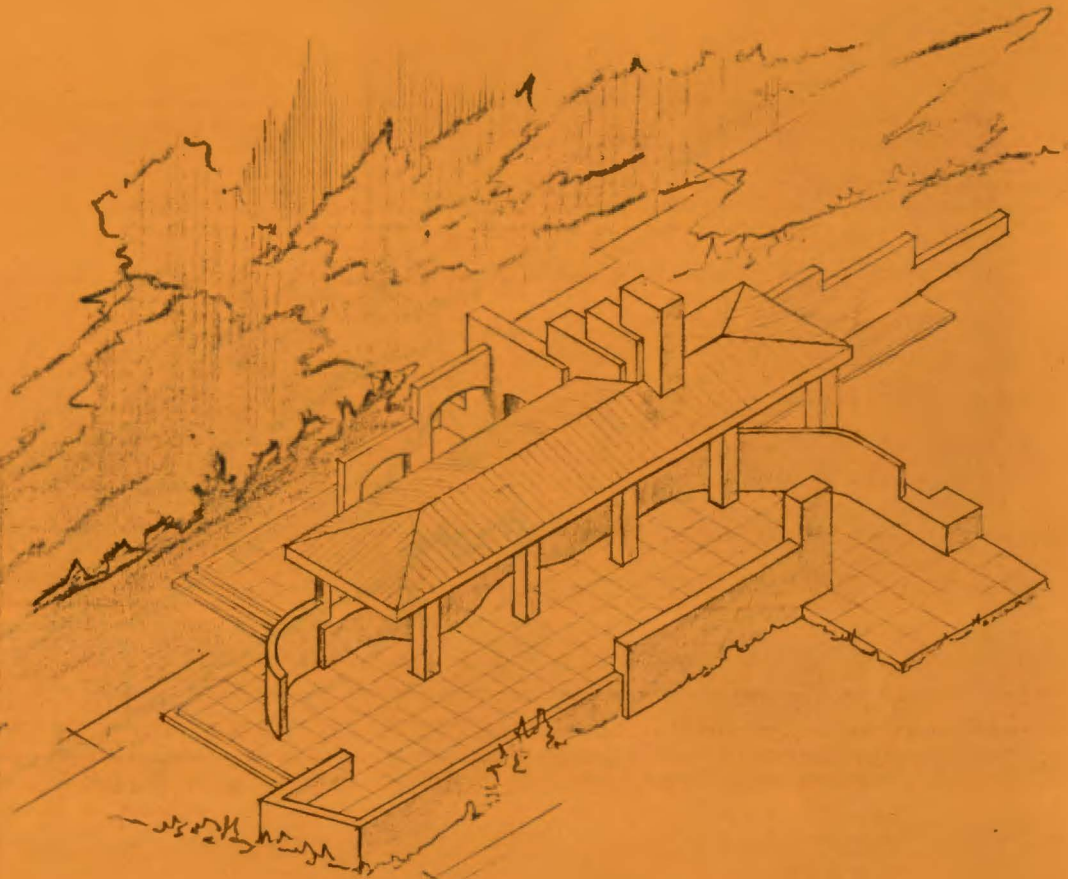


Section

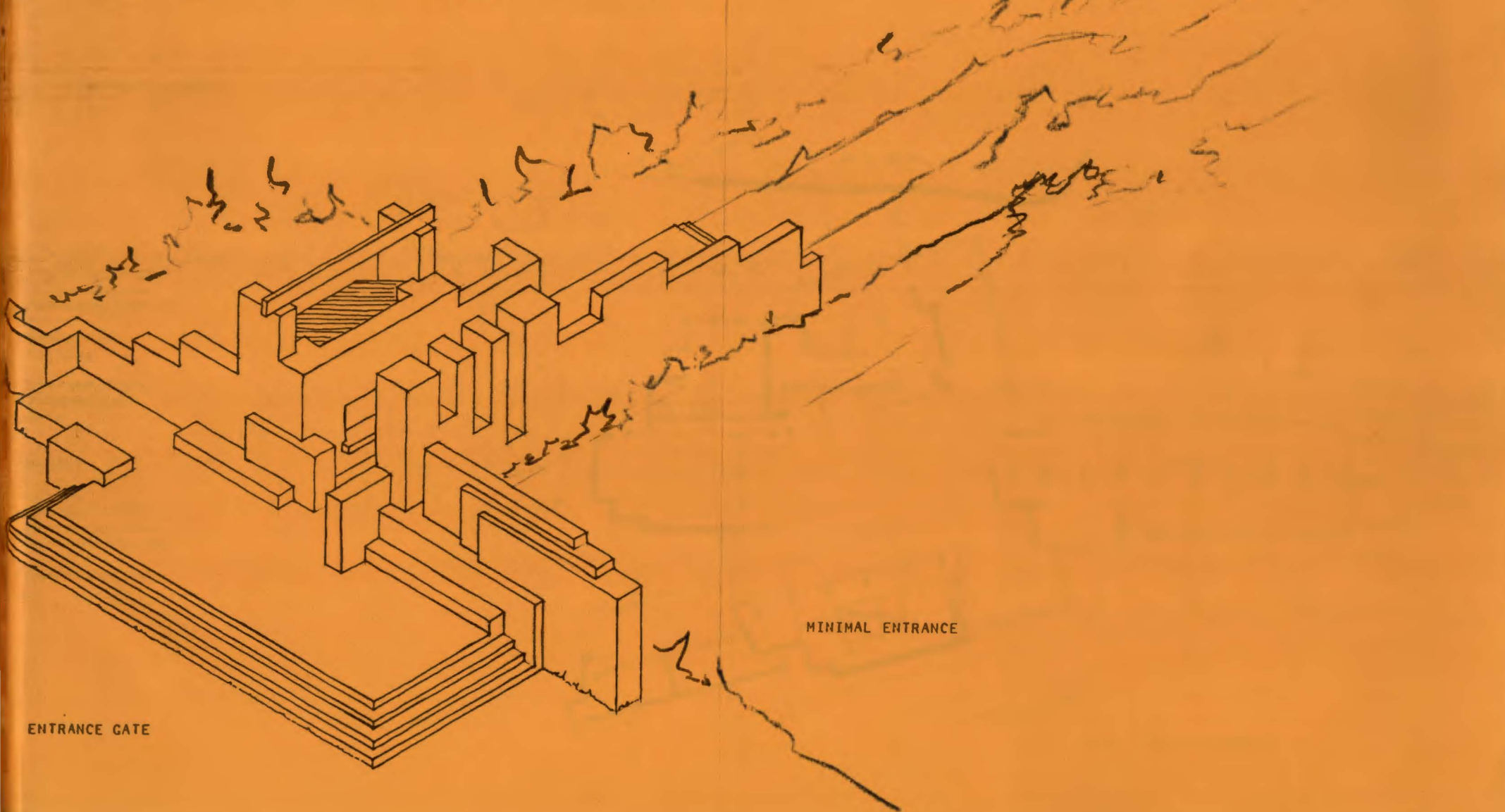
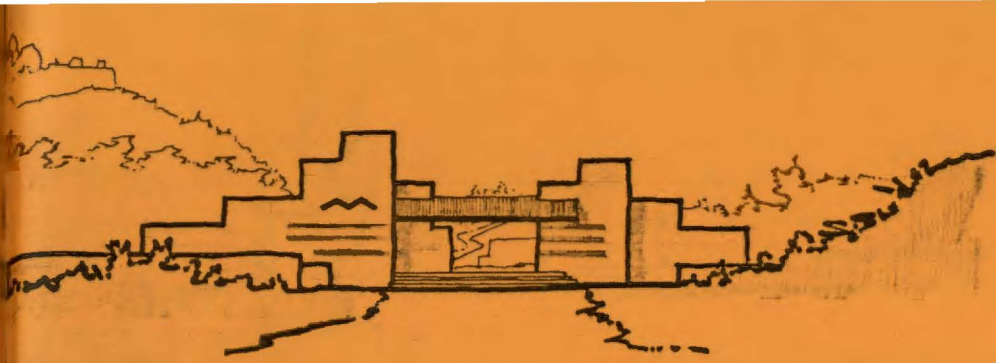


Elevation

ENTRANCE COMPLEX

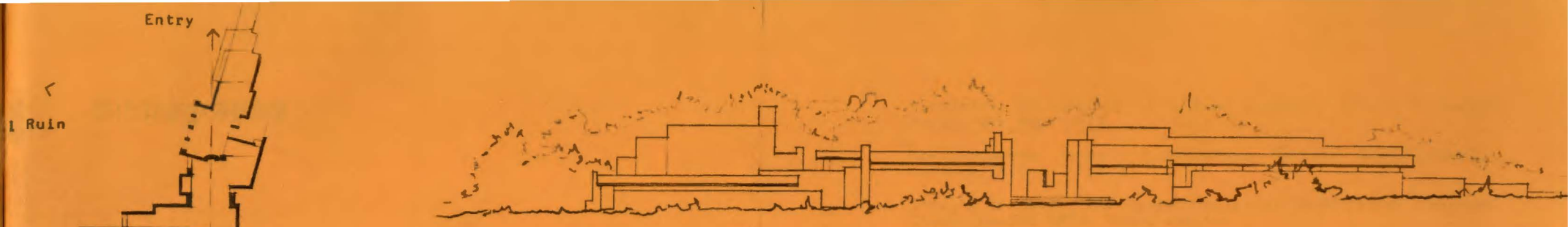


MINIMAL MUSEUM

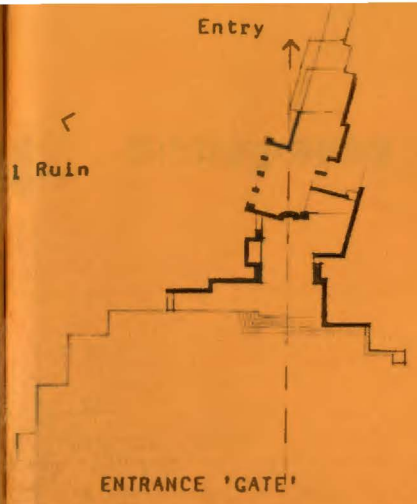


ENTRANCE GATE

MINIMAL ENTRANCE



ELEVATION



ENTRANCE 'GATE'

Hill Ruin

**FINAL PROGRAM**

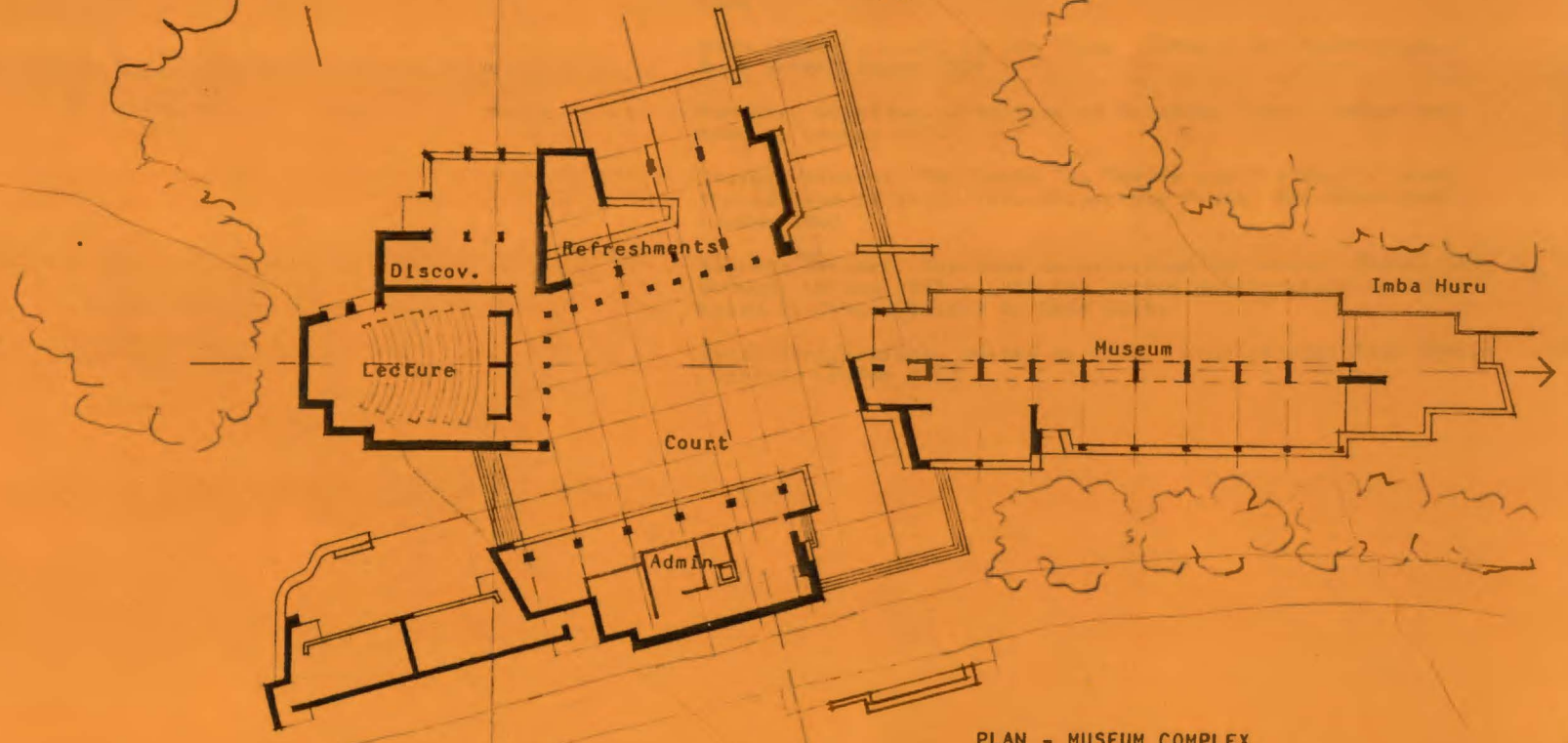
**ENTRANCE COMPLEX**

- Restaurant
- Parking
- Entrance Gate
- Information
- Shop

**MUSEUM**

- Museum
- Lecture theatre
- Discovery room
- Refreshments Bar

**Administration**



PLAN - MUSEUM COMPLEX

## Bibliography

- Alexander, Christopher *A Pattern Language* Oxford University Press, New York 1977
- Aloi, Roberto *Musei - Architettura - Tecnica* Ulrico Hoepli Editore, Milano 1962
- Bent, J Theodore *The Ruined Cities of Mashonaland* Longmans Green, London 1896. Third edition
- Brawne, Michael *Neue Museen* Verlag Gerd Hatje, Stuttgart 1965
- Fry, Maxwell and Drew, Jane *Tropical Architecture in the Humid Zone* B T Batsford Limited, London 1965
- Garlake, Peter S *Great Zimbabwe* Thames and Hudson, London 1973 - from the series *New Aspects of Antiquity* edited by Sir Mortimer Wheeler
- Gayre, R of Gayre *The Origin of the Zimbabwean Civilisation* Galaxie Press, Salisbury 1972
- Grube, Ernst J *The World of Islam* McGraw-Hill, New York 1966
- Khan Louis I *Light is the Theme* Kimbell Art Foundation, Fort Worth, Texas 1975
- Pevsner, Nikolaus *A History of Building Types* Thames and Hudson, London 1976
- Scully, Vincent *The Earth The Temple and The Gods - Greek Sacred Architecture* Yale University Press, New Haven and London 1962
- Werner, Speiser *Oriental Architecture in Colour* Thames and Hudson, London 1965 - from the series *Architecture of the World in Colour* edited by Bodo Cichy
- World Architecture* edited by Trewin Copplestone; Paul Hamlyn Limited, London 1963