MUSEUM OF NOK ART AND CULTURE, NOK

BY

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DEPARTMENT OF ARCHITECTURE
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DECLARATION

I Turaki, Dauda do solemnly declare that this thesis entitled 'Museum of Nok, Art and Culture' is purely an authentic and documentation of the research I conducted through the supervision of the Head, Department of Architecture, Dr. Tukur Sa'ad for the award of the degree of Master of Science in Architecture of the Ahmadu Bello University, Zaria and that it has not been previously presented either wholly or partly for any degree anywhere.

All quotations have been clearly distinguished by quotation marks while the sources of informations equally acknowledged by means of references.

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CERTIFICATION

This thesis entitled MUSEUM OF NOK, ART AND CULTURE by Turaki, Dauda meets the regulations governing the award of the degree of Master of Science in Architecture of Ahmadu Bello University, and is approved for its contribution to knowledge and literary presentation.

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Member, Supervisory Committee — Date

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Dean, Post-Graduate School — Date

DEDICATION

Dedicated to God, the Almighty and to those who believed and trust that it is only through His Grace we live and work to acquired knowledge and the like.

ACKNOWLEDGEMENTS

Without the generous help and advice in diverse ways of many scholars, parents, relations, friends and my class mates this thesis could never have been what it is today. In particular, my special thanks goes to my supervisor, Dr. Tukur Sa'ad Head, Department of Architecture, Ahmadu Bello University, Zaria and the enture academic staff especially Dr. Solanke of the Department who took time and pains to see that this phase of studies come to a successful end.

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It is also an opportunity to express my gratitudes to the Librarians of the Ahmadu Bello University Zaria, in the following sections; Africana (post-graduate) section, Journal Section, Reference Section and the Data Room in the Department of Architecture for their consistant help in finding references for me.

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Special thanks also goes to my mother who gave birth to me and all the step mothers for their moral and financial aids. May God bless you richly.

I will make the greatest mistake if I forget to mention my late grand mother Mrs. Dawo Magaji and my father Turaki Magaji for the blessings I received from them before they passed away from this world.

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Most of all, I thank God for creating me to be what I am today.

MOTIVATION AND INTENTIONS

Archaeological findings of the Nok Culture have produced the ealiest evidence of culture and indeed of man's existence in Nigeria. In broad terms, Nok culture is said to be the oldest culture in Africa dating back to about 2,500 years ago. By geographical distribution, the Nok culture spread over a vast land of about 480 Km by 160 km. It covers South-West of Jos Plateau, North-West of Kagara in the West of Niger State near Abuja and South of Benue it spans to Katsina-Ala in the Tiv land (see figure 1).

From the above analysis; if one should then ask, what is it that has been done in this country about this great historical culture that is well known not only in Nigeria and African Continent but the whole world at large? We find out that the answer to this question is lacking. This is because nothing has been done so far to either promote or encourage the culture. That is why the Ham Festival that usually takes place in April venue at Kwoi during Easter period each year attracts a high population of people from all corners of the world just to come and see the culture that people talk about, but to go back disappointed because nothing is exhibited there other than dances and traditional music which is just a fraction of what makes up the Nok culture. Morever, even there is the need for exhibition and display of artistical

and cultural products where will it be and how? It was due to this carefree attitudes towards our culture that created an access express way for the objects of great cultural heritage found their undisturbed way out to foreign countries.

Another observation is that the coming young generation of the predecessors of the affected culture may like to know and to see for themselves the culture of their ancestors. But it is rather unfortunate that nothing will be forth coming because there is no evidence to buttress it. To arrest this situation, something vital needs to be done to preserve Nok Culture for future history. On the other hand, many youth of today are not aware of the importance of culture in Nigerian society. As such, the common questions amongst them are "What is promoting our culture" or "What are we promoting primitive culture for?

The only remedy to this problem of cultural unawareness can only be achieved when the national development policy allows a perpetual linkage between the past and the present to take its turn by means of a medium in which an effective communication of the said 'Past' and 'Present' is carried out for public appreciation. In an attempt to do that, I dare suggest the setting up of a 'Custodian of Culture' which is the MUSEUM at the site where the culture was first discovered in the

village of Nok to serve as a medium where tourists could be attracted, by so doing, youths (leaders of tomorrow) are educated, reoriented to value highly the importance of art and culture through which the future glory of our beloved nation could be foreseen, because a nation without a past cannot say it has a present nor can it boast of looking forward to a future. After all, museums constitute an invaluable asset to our national psyche and form the backbone of our national ego and must be given a chance, thus enhancing the preservation of our past heritage. This, I believe will help bridge the gap of a long history of neglect of culture in the national scheme of things in this country.

ABSTRACT

This is intended to give a brief, comprehensive summary of the context of the thesis.

Chapter one is the introduction which lead us to what Culture is all about in general and the brief history of Nok Culture. It further on to treat the relief, drainage, geology of the Nok sites in Nigeria while the need to preserve Nok Culture finalized the chapter.

Chapter two on the other hand, examines Museums in general, literature review and case studies of National Museum of western Art, Tokyo, Gallery of Modern Art Turin, National Museum Lagos, National Museum Jos, National Museum Kaduna, and Esie Museum in Irepodun Local Government Area of Kwara state.

Chapter three briefly treats tourism. It examines what tourism is all about, tourism potentials in states affected by Nok Culture. This chapter also gives the relationship between Museums and Tourism in Nigeria. The chapter concluded by treating transport and accommodation for tourists.

Chapter four examines the problems existing in Museum design. These problems include, security against theft, fire and damage. The chapter also treats ventilation, climatic condition control and conservation, circulation, layout of display area and display elements.

Chapter five examines Ham Architecture and the existing infrastructures for reason of design concept adaptation.

Chapter six examines the proposed site for this project. It also discussed the factors affecting the choice of the site, the advantages and disadvantages involve, analysis of the site and the site concept.

The. final chapter (that is chapter seven) gives the summary of the whole design from the early stage to the final stage.

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Chapter 1

INTRODUCTION

1.1 What is Culture?

Culture had in the past been conceived to be what it is not. To many people, culture is a primitive thing and should not occupy any valuable position in our contemporary world. While to others, culture is something main for people of the past and not for the present nor for a generation to come. But the question here is, What really is Culture?

Culture is a form or civilization of certain race or nation and customs associated with it, training, improvement of the mind by education in art, literature and music. On the other hand, the Oxford Advanced Learner's Dictionary look at culture as 'an evidence or state of intellectual development (Arts, Science, Crafts and so on) among a people'. While the conventional sociological meaning of culture is simply "the way of life of a social group or it is that complex whole which includes knowledge, beliefs, arts, morals, law, customs and any capitalities and habits acquired by man as a member of society".

What in effect the above definitions are saying is that culture is never static, it ever changes, hence dynamic in character. In fact, culture differs from

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one society to another and it is a prime determiner of behaviour in any society. Culture embodied values, beliefs, traditions, customs, social change, social organisation, technology and civilization of the community.

Since culture moves as the society moves socially, it means then it is not a primitive thing neither is it for people of the past as a youth of nowadays would look at it.

Andah (1982), therefore called on the attention of Nigerians to the urgent need to arrest the present cultural anomie affecting many African peoples and not only Nigerians. Andah also gave the root cause of the anomie that, it is due to the off shoot of the external influence on our culture which has led to many African countries basing their development programmes on educational and constitutional systems that are alien to our cultural outlook and the end result is an elusion of the real development which should have been based on our own culture.

At least it is understood at this juncture that, culture is the peoples total way of life and therefore for a society to be functionally effective it must express itself in the way it knows best. But it is rather unfortunate that this basic principles of cultural expression is lacking in Nigeria society today.

In Nigeria, there are so many remarkable cultures. Among these are the following; Esie and Ife Cultures obtain from Yoruba tribe, Igbo Culture from Ibo tribe, Oron Culture from Rivers and the Nok Culture which is the focus of this study, its origin is not very certain; but many people like James (1987:7), Byang, H.K. (1975:28) and many others believe that the Culture originated from the ancestors of Ham (Jaba in Hausa) tribe of Southern part of Kaduna State in Northern Nigeria.

The brief history of the above mentioned towns and their cultures are that, Esie for instance in Irepodun Local Government Area of Kwara State, the figurines obtain there are basically stones that are objects of a local cult believe to be made by people who owns the culture some centuries ago. These objects are essentially seated figurines of about 60cm. high, wearing a variety of head dresses to portray the image of those who owns the culture.

Ibo tribe however, are densily populated in the former Eastern Region with a substantial section of them in Awkwa Local Government Area called Igbo on the West Bank of Niger between Benin territory and the river extending from the Ishan, north of the Delta. Among Ibos, Igbo have the most expensive and commendable culture. It was there a group of Bronzes and Brasses of elaborately detailed design were found, which if they were to be sold

out could have fetched a reasonable amount of money for the said local government area.

On the other hand, Ife culture is said to be the most famous and admirable of all Nigerian arts, suplanting even Benin. Its origin, however is still thing of mystry since there is no clear evidence to indicate neither intraneous nor extraneous origin. Some people however, are of the opinion that the culture originated from Upper Egypt while a handful of others are arguing that the origin of it can only be traced from the most Historical Nok culture under the influence of a second burial cult such as that practice at Owo in Eastern Yoruba land. This culture (Ife Culture) is leading in sculptural production in Africa. Most of their carvings bears a mark of religious cult in form of doors, house posts and receptacles. On the other hand the spiritual sculptures includes the god of Lighting, the god of Thunder, the god of Iron and War. The other type of god is that of Creation and Growth with the largest among them having the height of 80 cm.

Further more, Ife Culture has so many remarkable figurines and elaborate shrine furniture from intractable stone such as quartz and granite as well as soapstones. Other figurines excavated that best explains the culture are Cast Bronze, heads and a variety of terracottas, which have some of the features in them like those of the Nok terrattas.

Finally, Ham is a minority tribe in Southern part of Kaduna State predominantly occupying the two unusual large Local Government Areas of Kachia and Jema'a. Ham settles between latitudes 9^{o} 20^{1} to $9^{o}.5^{1}$ North of Equator and Longitudes 8^{o} 45' to 8^{o} 15 East of the Prime Meridian. River Gurara (the largest river in the area bisect Hamland into two halfs. One of the halfs is occupying north of the Gurara in Kachia Local Government Area while the other half is lying south of the same river in Jema'a Local Government Area.

The largest town of Ham is Kwoi recorded about 33,750 people in the 1963 census. The area is situated on a plateau in an undulating country side which becomes rugged to the south. The origin of Ham according to 1986 Tuk Ham Cultural Festival Programe, that "Ham tribe belongs to Niger-Congo Linguistic family. The Ham people fall within a sub-group, the Benue-Congo Bantu speaking tribe of West Africa". Another version of the recent findings is saying that "Ham were in all possibility indigenous to the soil of their present site. However, this is not certain". Bikki (1986) also gave another version that "Ham came from North-East Africa (Egypt or Sudan)."

Ham were great tribal warriors as well as good hunters. This claim is evidenced in their present site with villages built round the hills and rocks to serve as natural watch towers for natural surveillance



Plate 1 Ham warriors

To have music without dance is unthinkable, and each situation demands its own dance and dancers. The movements are intricate, and to a large extend predetermined. Each part of the body responds to differe rhythms, and all of it comes together in a flowing whole.

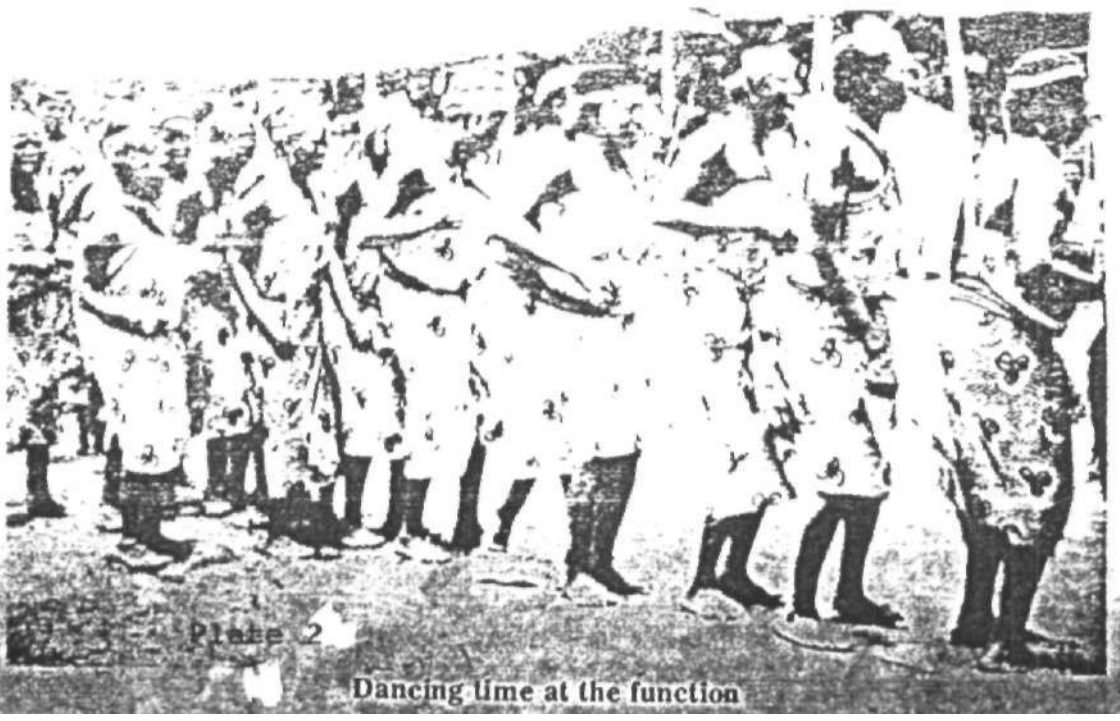


Plate 2 Dancing time at the function

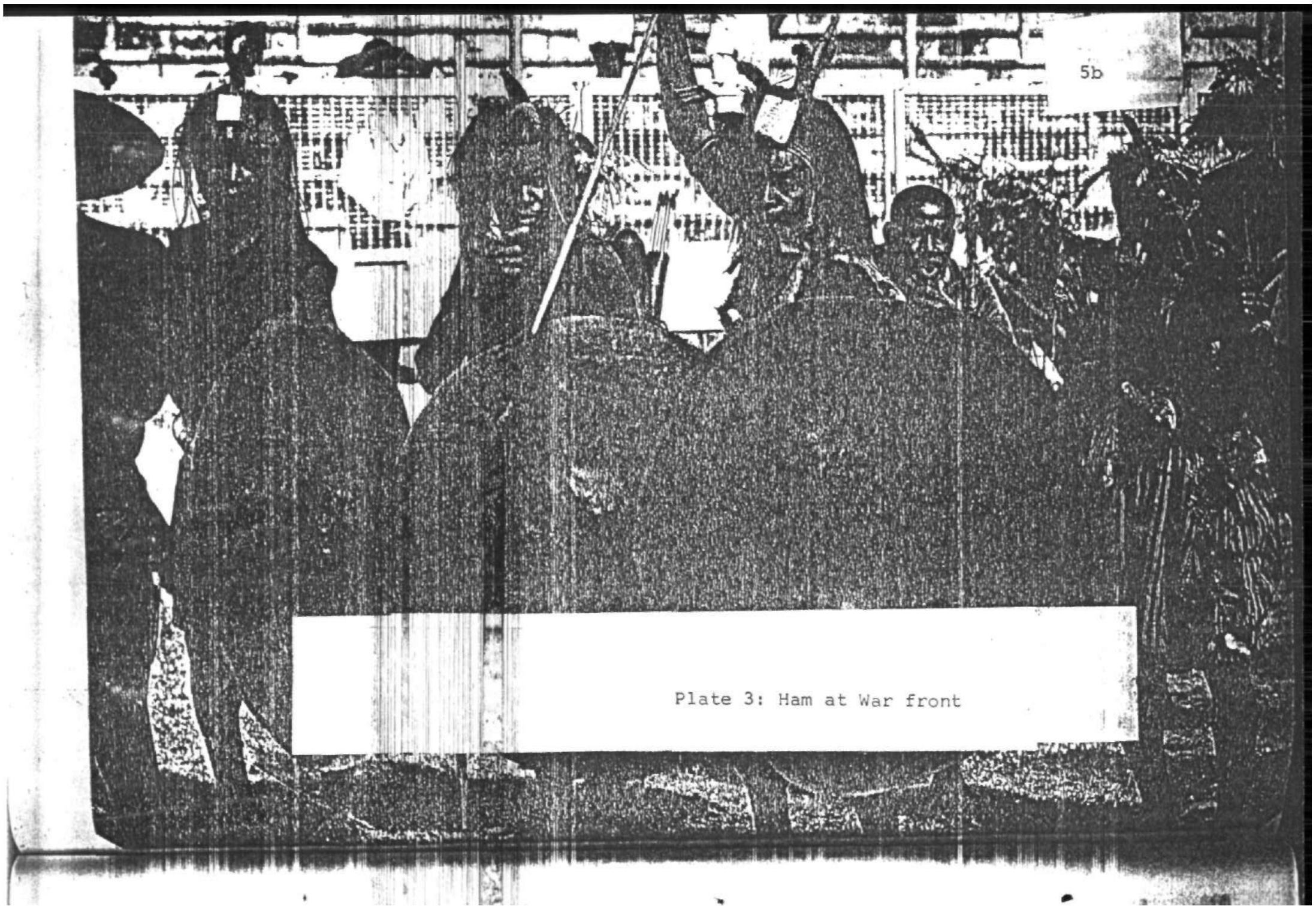


Plate 3: Ham at War front



Nok children awaiting the initiation rite.

Plate 4



The Crowning of Tir Ham.

Plate 5

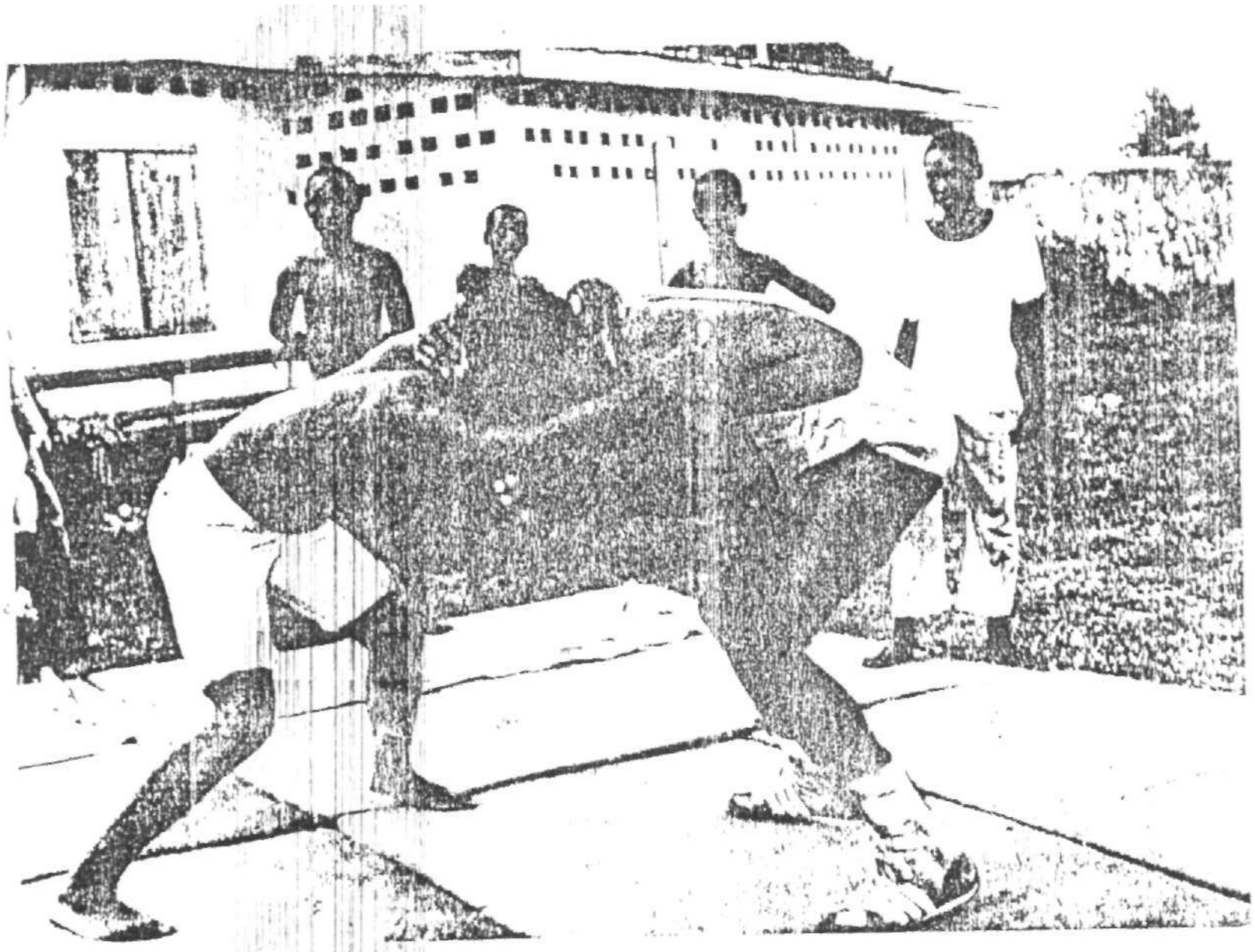


Figure 6 Wrestling Activities.

against their enemies. Nok Village (where the Nok head was excavated in 1943) is the principal Ham cultural centre. At the beginning of the agricultural year, Ham uses elaborate abstract head dresses in their cultural dances to resembles the head-dresses of the Nok Terracotta (see plate 5..)

On the other hand, Ham have their own culture and traditions too. Despite geographical and political boundaries, Ham cultural heritage and traditions are the same in the above mentioned Local Government Areas. Beside their common origin, history and language, most of the other aspects of their cultural festivals (see plate (2), farming methods, Marriage customs, birth dancing and burial ceremonies and occupation like cottage works are the same.

Ham have enumirable various types of customs. But the relevance to this thesis shall however be treated accordingly.

The typical traditional Ham society gives preference to age grouping in whatever activity they find themselves doing, it could be dancing, wrestling and so on (see plates 2 and 6).

The oldest man in each of the Ham compound heads the compound with all family responsibilities under his care. Younger ones greet the elders each morning.

However, before then, the compound head usually goes round to wake up every body in the morning.

1.2 History of Nok Culture

It was an additional historical collections in Nigeria's cultural past when Nok culture was discovered by Fagg, B. at the Jaba Village of Nok in Jema'a Local Government Area of Kaduna State in 1943. However, the culture is wide spread in Nigeria, but the only place where associated material were found to present the life of those that made the figurines discovered is in the Nok Valley. For this reason, as the custom of Archaeologists would warrant them, they then associated the culture with Nok village and the name Nok Culture came into existance.

The origin of people who owns the culture has not come to light clearly. However, further analysis of the materials found shows that the people who made the figurines have an economy and way of life nearly if not quite as advanced as that of the present inhabitants of the place, that is the Jaba people. This in effect shows that the figurine makers must have been the ancestors of Jaba people.

Occupation wise, Nok people of the past were agriculturalist. This is evidence from hoes they used for farming, made of stone and iron. On the other hand,

materials like mortar and pestles made of carved stones were used to grind grains like millet and guinea corn. Nok people were also cattle keepers, though no evidence of cattle bones have been found, but a pottery model of a bloated cow tick has been found.

Cracking of palm kanels on carved stones for oil production was not uncommon.

The other aspect of the occupation is the smelting of iron, stone and iron beads for earplugs, lip-plugs and necklaces. Amongst the Nok products, pottery occupy the largest position, as so many terracottas presenting human figures, animal figures and domestic water basin were found. Others are, wood carvings, musical instruments and hunting implements.

Further more, speculations has been that Nok culture has a connection with that of Ife culture (mentioned in 1.1 above), and even more recent Nigeria art since the Nok figurines and those of Yoruba figurines have marked affinities.

From these facts, it shows then that the exhibits of the Nok Culture must be that of Iron smelting, stone and iron beads, agricultural materials, pottery products, hunting materials, ornamental products, wood and stone carving materials.

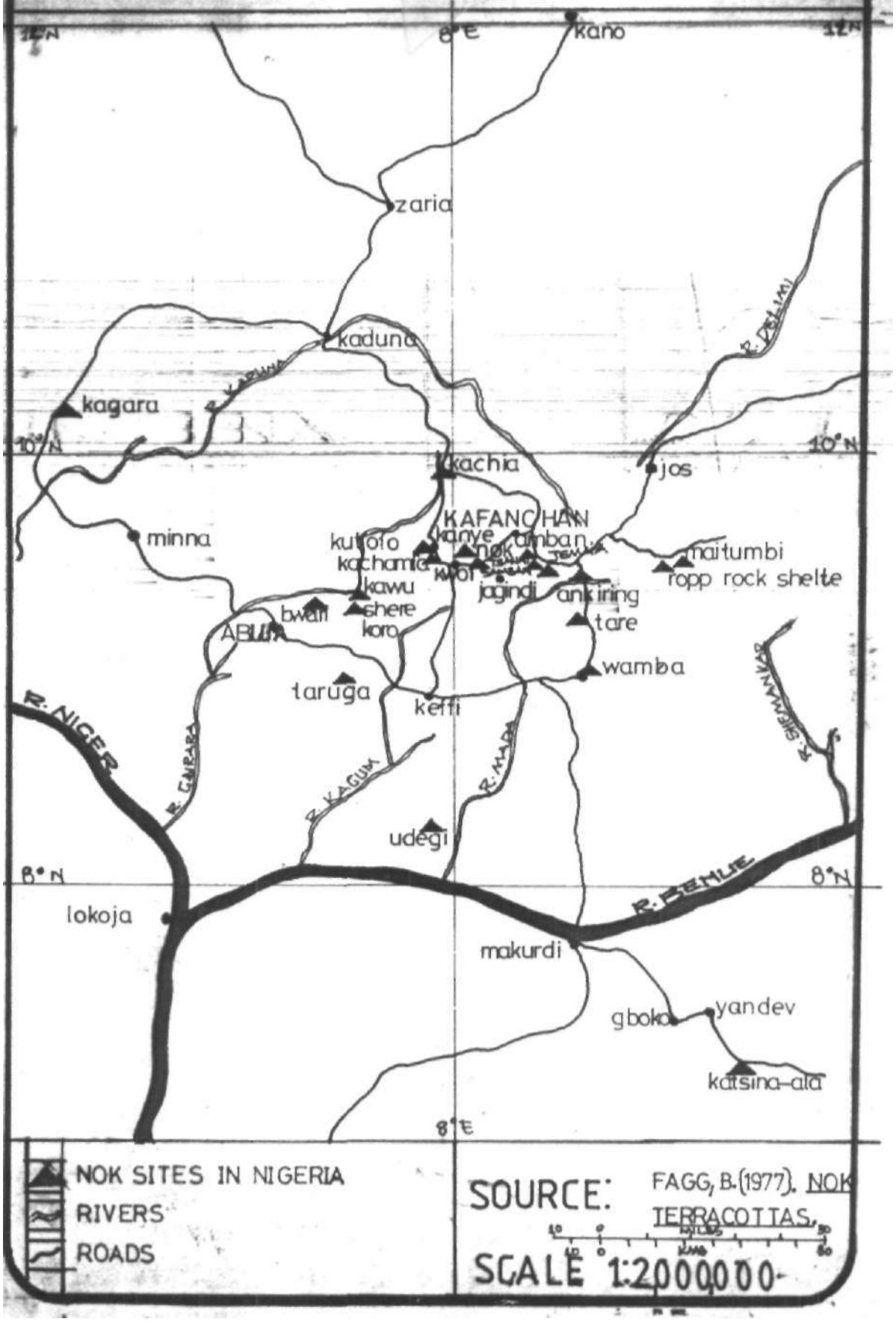
1.3 Archaeological Sites and Location of Nok Culture In Nigeria

Archaeological sites of Nok Culture lies within five states in Nigeria. These states include , Kaduna, Plateau, Benue, Niger States and the Federal Capital Abuja. Each of the sites mentioned above, trunk 'A' roads links them together to help ease the problem of transport from one site to the other.

In Kaduna State for instance, there are about twelve Nok sites all lying within Kachia and Jema'a Local Government Areas. These sites includes, Kachia, Kenye, Katofo, Kuchanfa, Kawu, Shere Koro, Nok, Shamban, Kagoro, Tsauni, Jama'a, Ankiri and Tare . Other states are the Plateau State, in which Maitumbi, Ropp Rock Shelter, Udegi and Wamba sites are located. While Benue has Katsina Ala site in Gboko Local Government, Kagara is another Nok site in Niger State. Near Abuja two sites like Bwari and Taruga are found.

Finally, with the exception of Kagara and Katsina Ala, all other Nok sites are located between latitudes $8^{o}N$ to $10^{o}N$ and longitudes $6^{o}E$ to $10^{o}E$ respectively. Katsina Ala however, is occupying south of latitude $8^{o}N$ while Kagara is in North of Latitude $10^{o}N$. On the other hand, all the other Nok sites with the exception of Katsina Ala are lying north of rivers Niger and Benue.

DISTRIBUTION OF NOK SITES IN NIGERIA



1.4: The Relief, Drainage and Geology of Nok Sites

Basically, the relief within the limit of Nok sites are characterised by high plateaus of undulating hills, rocks and some plains. The peak points between the highest and lowest hills varies from 900 metres to 300 metres high. The most prominent hills that attract a high population of tourists (not recorded) due to existence of the tourism potentials are mostly above 900 metres high. These are Shere Hills and Ropp Rock shelter in Plateau State. While Kaduna State, Kagoro, Nok, Chori Hills are not also left behind. The other attractive hillas a tourism potential is that of Abuja which attract people from the Federal Capital for picnics and other activities.

Geology wise, the Nok sites consists of inselbergs and other out crops rocks of various sizes, formed of granite and igneous rocks which are of precambian age. The general outlook of soil, varies in texture from one place to the other. For example, in Kaduna State, where Nok sites are found consists of coarse sandy soil similar in textune to the sites in Plateau State. While in Katsina Ala, the soil is made up of dark grey shalves, sillstone and subordinate limestone. In the case of drainage, apart from the streams and other tributaries within the Nok Sites, the major rivers that runs through the Nok sites are Gurara and

Mada rivers. These two rivers collect water from all other tributaries and finally empty it into Rivers Niger and Benue.

1.4 The Need to Preserve the Nok Culture

Preservation of Nok Culture is necessary for the following reasons.

a. To enable selected objects of the Nok findings to be protected for a long life-time for generations coming behind.

b. It will be made possible for people to be aware of their rich cultural heritage.

c. Since Nok findings possesses objects of exceptional value and quality, in illustrating or interpreting the historical heritage of Nigeria, this call for the need to ascribe national significance to the culture.

d. In preserving the Nok culture, it will serve as an opportunity for other contemporary traditional crafts to be preserved.

e. Nigeria society having undergone multiple changes especially during last century, as a result of contact with colonial era has completely lost interest in its cultural heritage and succumb to external influences on our cultures. Cultural revival is therefore necessary.

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f. For some years back, problems associated with dependence on oil as the only source of revenue for the country, shows that we cannot continue to survive on oil along but on some other sectors too. One of these sectors is tourism. (see the International earnings from tourism in the years between 1970 and 1981 in table 1 below.)

Table 1: Earnings from international tourism in Nigeria

Year	Earnings in ₦ Million	Remarks
1970	4.6	
1974	8.0	Influence of Oil Boom
1975	18.4	Influence of Oil Boom
1976	20.6	
1977	63.0	Influx of visitors during FESTAC
1978	83.63	
1979	95.63	Political era
1980	105.74	" "
1981	115.13	" "

SOURCE: Ministry of Commerce, Kaduna.

Chapter 2

MUSEUMS

2.1: What is a Museum?

Definition of Museum has an increasing difficulty since what it is attempting to achieve has become important than what it is. On the other hand, the increase in new types of Museums, viz.: Technical Museums, Scientific Museums, Agricultural Museums, Ecological Museums and some others throughout the world has in addition strained the traditional definition of Museum to breaking point.

The difficulty in museum definition is witnessed from the several redefinitions that had so far been made by ICOM. In 1971, for example, it was adopted by ICOM that museums should be recognized as "an institution which serves the community, acquires, preserves, makes intelligible and as an essential part of its function, presents to the public the material evidence concerning man and nature. It provides opportunity for study, education and employment." An interval of three years later ICOM officials met again and museum was redefined as "a non-profit-making, permanent institution in service of society and of its development, and open to the public, which acquires, conserves, researches, communicates, and exhibits for purposes of study, education and enjoyment, material evidence of man and his environment."

To comply with this later definition, it was agreed that;

a. Conservation institutes and exhibition galleries permanently maintained by libraries and archive

b. Natural, archacological, and ethnographic sites and historical monuments and sites of a museum nature, for their acquisition, conservation and communication activities.

c. Institutions displaying live specimens, such as botanical and zoological gardens, acquaria vivaria, and so on.

d. Nature reserves

e. Science centres and plamctaria.

In 1968, UNESCO, during its Regional seminar on the educational role of Museums, a similar definition of museums to that of ICOM was adopted to recognize museum as 'a permanent establishment administered in the general interest, for the purpose of preserving, studying enhancing by various means and in particular, of exhibiting to the public for its delectation and instruction groups of objects and specimen of cultural value; artistic, historical, scientific and technological collection, botanical and zoological gardens and acquarism.

From these definitions, it is clear that a much greater range of institutions now has the right to the name 'Museum' than was the case only twenty years ago.

However, not all the museums shared the same view as ICOM itself. To support these view, can only be achieved when one takes a close look across the national museums in this country, except the National Museum, Jos all other museums have little or no connection to the above definitions.

Museums as a custodian of national heritage, both natural and cultural, there importance cannot but be underestimated. Andrew, O. (1987) quoted Architect critic Jane HoltzKay as saying that "Museums are not only worthy setting for priceless art objects, but also as the centrepiece of a national economic revitalization". The emphasis here is that government can invest on museums like any other sector. Much has been said and written about Museums. Amongst those that contributes to this includes, the Director of Museum Archaeology in Barcelona, who put a museum as "a didactic institution which carries out its task of cultural dissemination by audio-visual techniques which are employed in displays areas of various kinds". The Museum of Folk and Ethnology at Thessaloniki (Greece), considered a museum to be 'a place where one displays, scientifically and didactically, objects of works of art which produces for the visitor's conditions in which he is likely to add to his knowledge'. In Cologne, Romisch Germanishes Museum, saw its functions as "providing materials with which our citizens can educate themselves". While Cyprus Museum in Nicofig believes it is there primarily to give educational aspect and make it a research centre.

c. **Industrial Museums;concerned with all kinds of** industrial products.

d. Scientific and Natural history museums, These group of musuems are basically concerned with science.

All these groups of museum were emerged at the end of 19th century. Other types of museums that came into existence later were the technical museums, Botanical museums Agricultural museums, and so many others.

2.2: Literature Review and Case Studies

In Nigeria, museuems are still in there infancy. there existence came into this country through the Federal Department of Antiquities established in 1943 during the tin mining boom. This department was commissioned with the responsibility to take care of objects of antiquties excavated in all different parts of the country. Not until 1952 the department erected buildings in most established cities in the country to house these objects of antiquities.

To avoid repeating architectural problems in the existing museums both within and outside the country,it would be necessary to do a brief analysis of some museums so that this would serve as a base through which a very suitable meseum is designed to attract tourists at Nok and the achaelogical Nok sites at large in Nigeria.

In Budepest, a mesuem is "a cultural institution, performing the tasks of collection research and education". On the other hand, museum could be considered to be 'a cultural and educational centre, reflecting civilizations of a nation'.

Ghana, however, look at museum as;

> "an institution which acquires, preserves and presents materials, to the public, not for profit, but for their information and enjoyment. The museum should take the interest of all sections of its community into consideration, it should highlight some of the current typical subjects in the community, such as agriculture, health and politics. It should not acquire everything, but should encourage the community to cherish its culture".

This definition seems theoretical, because museum can never be everything. Museum definitions seems endless. As such, the author of this piece of work narrows his self to the area of concern, thus, looking at Museum as a building use for the preservation and exhibition of objects of antiquities, where visitors are educated intelligibly. A design environment that poster entertainment, recreation.

Finally, these definitions would be incomplete if the types of museums are not highlighted here.

Basically, there are about four types of museums presently known, and these are:

a. Art Museums; these are museums that are only concerned with work of art.
b. Historical Museums. These types of museums deals with historicalmaterials.

2.2.1 National Museum of western Art, Tokyo

This museum was designed by Le-Corbubier. It is situated within the Ueno Park, Tokyo

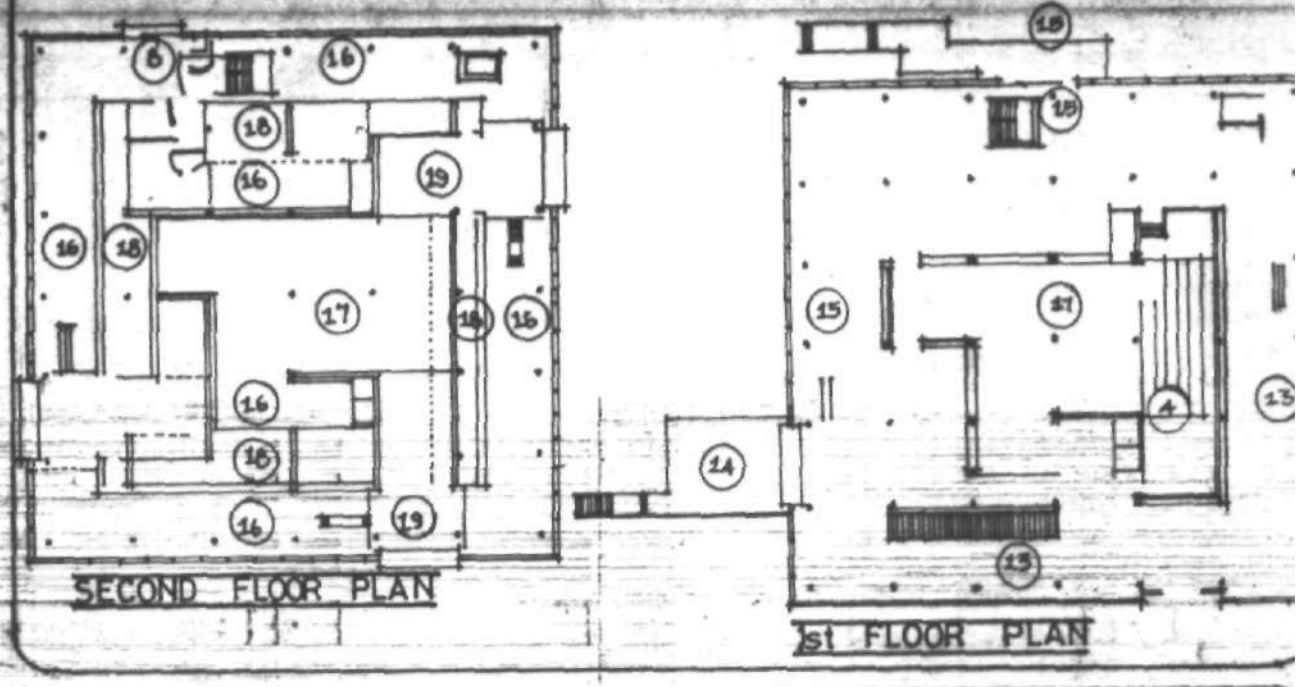
The Museum has a square plan. While the building is constructed of a reinforced concrete structure clad with pre-cast concrete elements.

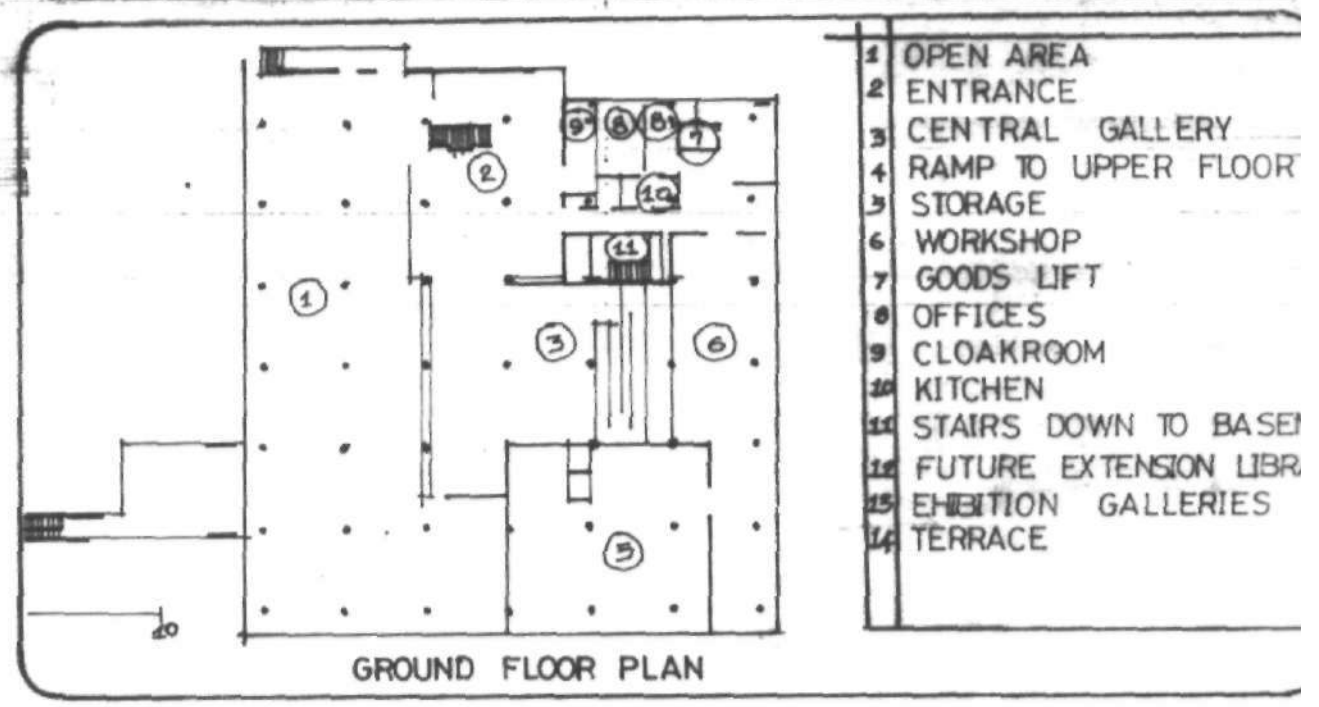
It consists of four galleries turbining about a central space and top-lit by a pyramidal skylight. This make possible to look into the central gallery as one moves around the galleries to ease circulation.

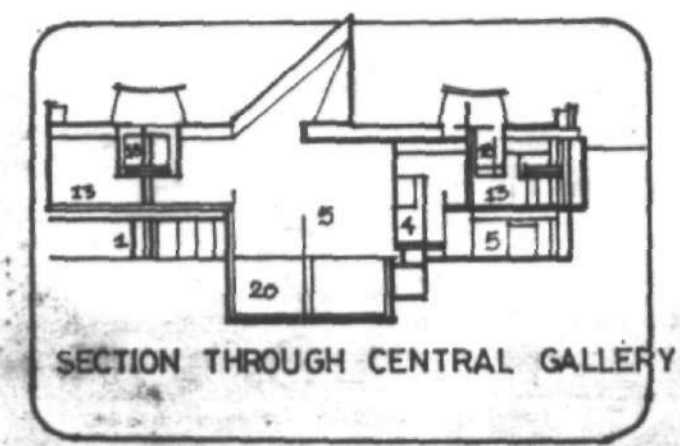
Has a basement floor, used for the housing of air conditioning plant. Stores, however, are on the first floor of the building.

The lighting system is purely natural. Lighting galleries protrude through the roof to allow daylight to get into the galleries through the heat absorbing wire glass of the upper sidelight, and is directed through the diffusing glass below onto walls of the galleries. However, flourescent lighting is use where natural light can not reach. As the case with this museum, having both the reflectors and flourescent light within the lighting gallery has its own disadvantage of being unable to throw light for some distance. It is within a paved square, this have the disadvantage since it will increase heat built-up.

NATIONAL MUSEUM OF WESTERN ART, TOKYO.







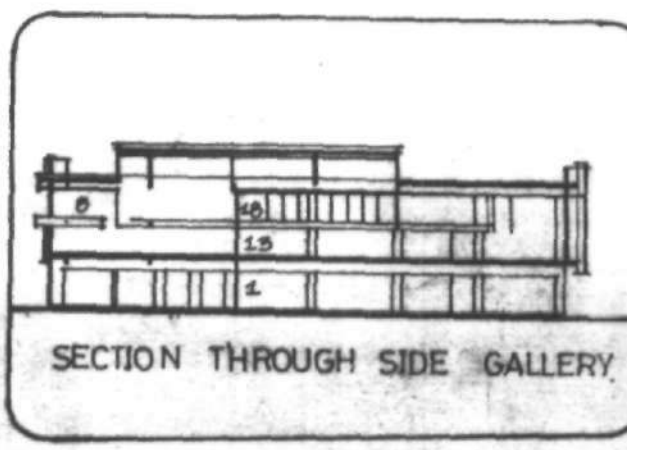


Fig.2

SOURCE:

Appraisals

- Use of heat absorbing glass for lateral lighting reduce effects of ultravoilet lights greatly.
- Located at a purpose site
- Use of sliding panels gives viitors closer look.

Demerits

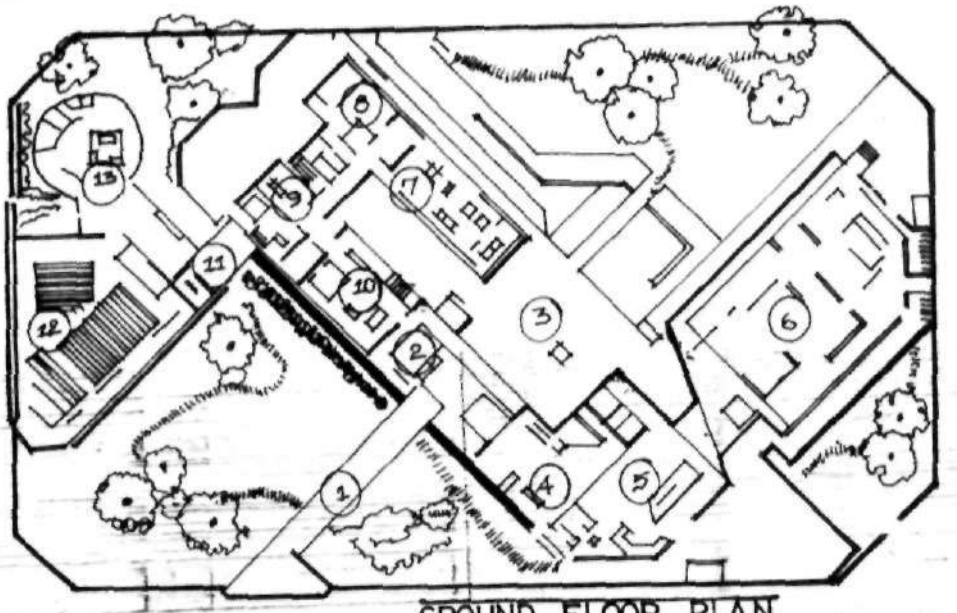
- Artificial lighting of gallery is un-economical
- Top lighting is difficult to maintain and construction of the roof joints is not easy.
- Provision of lighting gallery with flourscent tubes does not give the true picture of the exhibits. Artificial lighting is deceitful.
- Use of air conditioning system is not economical, because it needs a lot of capital.

2.2.2: Gallery of Modern Art, Turin

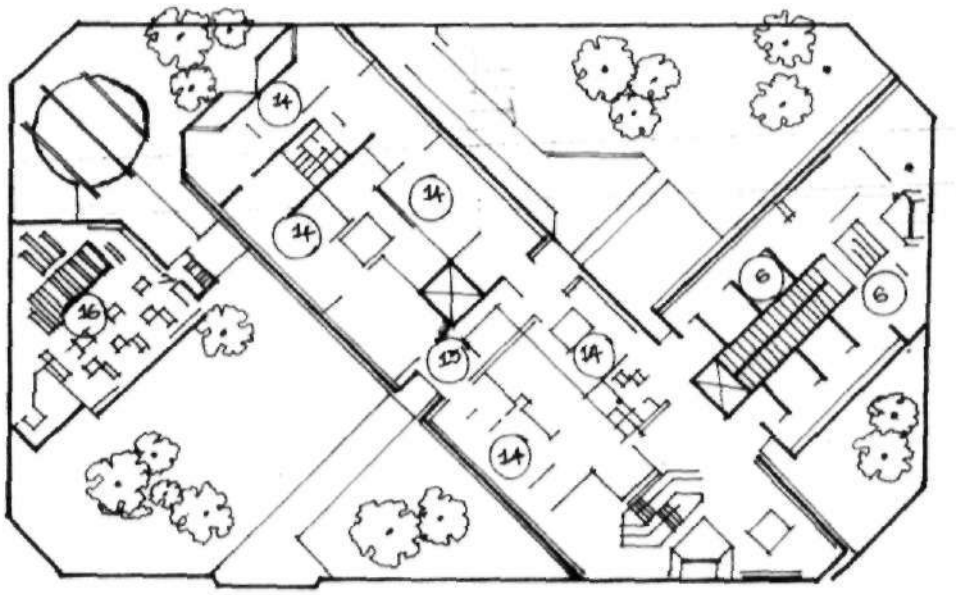
. Figures(3a &3b) are sketches of Modern Art Gallery, Turin. Architects who designed the museum were, Carlo Bassi and Goffredo Bashett. The Museum was opened to public use in 1959. The Gallery is located at the edge of the centre of the town. The Museum is classified into three zones, viz:

- Central Main exhibition hall,
- Smaller wing of temporary exhibition and
- A subsidiary wing containing the library and large lecture room.

PLANS. GALLERY OF MODERN ART TURIN



GROUND FLOOR PLAN

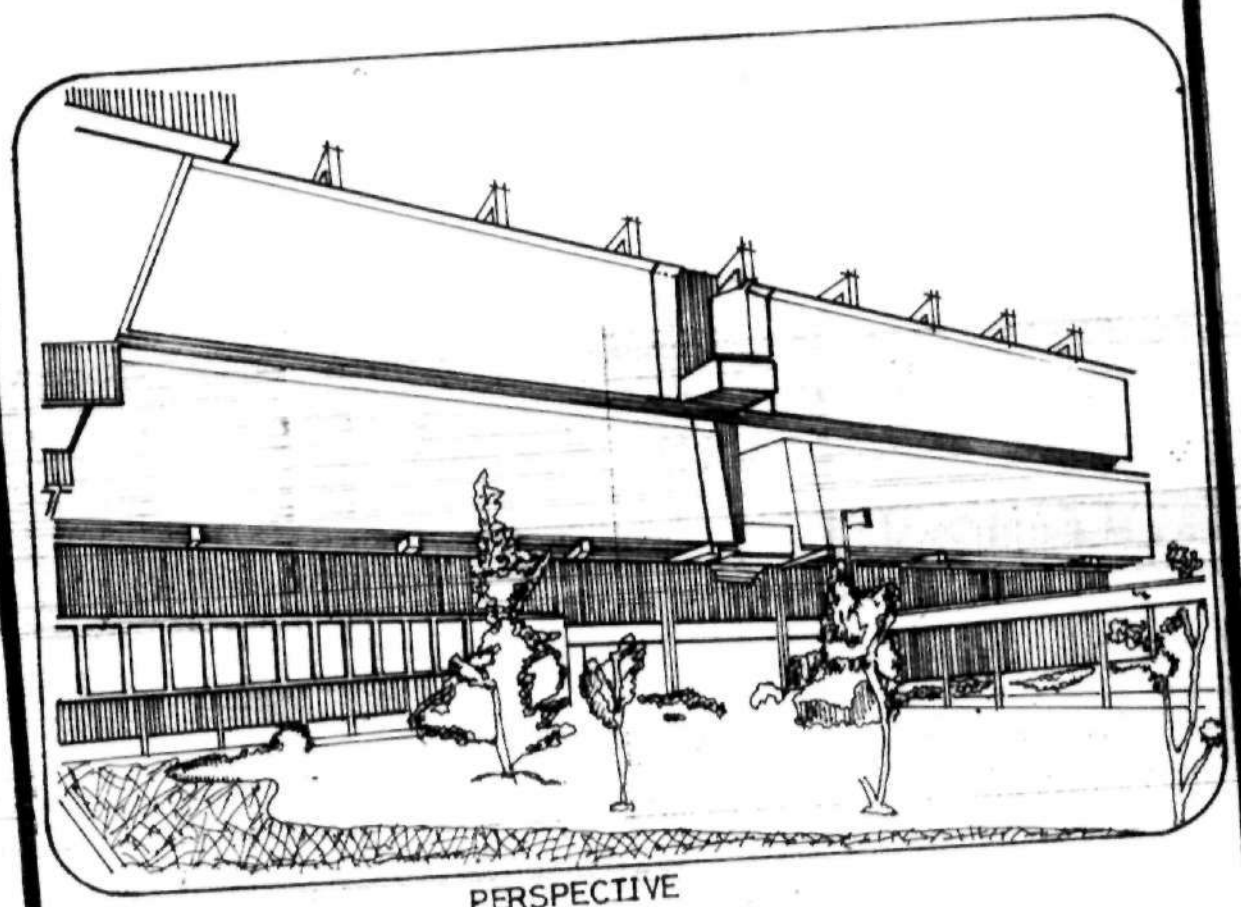


UPPER FLOOR PLAN

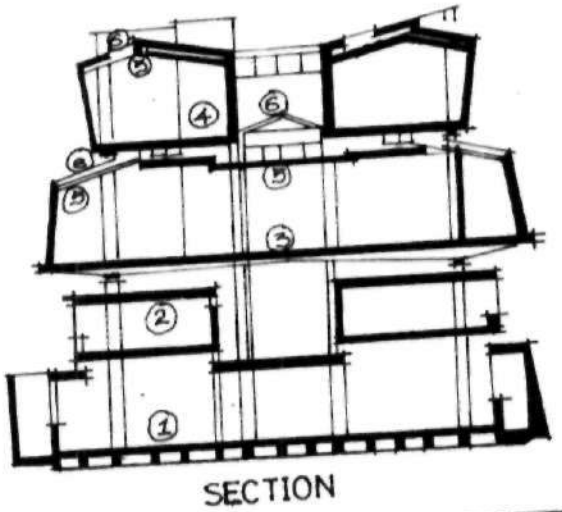
COVERED WAY	LECTURE HALL 2350 SEATS
FOUNTAIN POOL	FOYER TO LECTURE HALL
PORCH	EXHIBITION GALLERY
ENTRANCE	RESTING AREA
MAIN DOUBLE STAIRS	LIBRARY
TEMPORARY EXHITION	
SECRETARY	SOURCE:
FLAT	
CURATOR	
DIRECTOR	
STAIR TO LIBRARY	

Fig.3a

MUSEUM OF MODERN ART TURIN



PERSPECTIVE



SECTION

1 STORAGE
2 OFFICE
3 1st FLOOR GALLERY
4 ACRYLIC DIFFUSSER
5 WIRED GLASS
6 AIR COND. DUCT

Fig. 3b

The Gallery is a single unit building structure, consists of several floors, contilevered at the first floor, with interior walls and a light wall in the middle give sufficient top hight to the exhibition galleries. In the centre of the main exhibition wing, there are glass doors opening, to the balcony.

On the other hand, the gardens are entirely sidelit No top light on this part of the building, it is completely elliminated. with the exception of the north end of the building. The top highting is both natural and artificial. Flourescent tubes provides the source of the artificial light, which is diffused by corregated acrylic sheet.

Appraisal

a. The covered entrance space and the steps to the main entrance, act as the transition zone which help to adapt the eye to different light levels between outside and inside.

b. The balcony intercepts top light, giving a glimpse of the garden, thus acting as a relaxation for the eye.

c. Top lighting at the north end gives sufficient illumination to exhibits.

Demerits

a. General circulation is poor.

b. Toplighting is difficult to clean and maintenance is not easy most especially in developing

countries. Construction of joints against roof leakages is an additional problem.

2.2.3: National Museum, Lagos

Figure (4) illustrates the plans and an approached perspective of Lagos Museum. The museum was designed in 1957, but could not put into full operation until 1960. It is located between Tafawa Balawa square and Awolowo Road, Onikan-Lagos. The Museum is the administrative headquarters of all the museums in Nigeria.

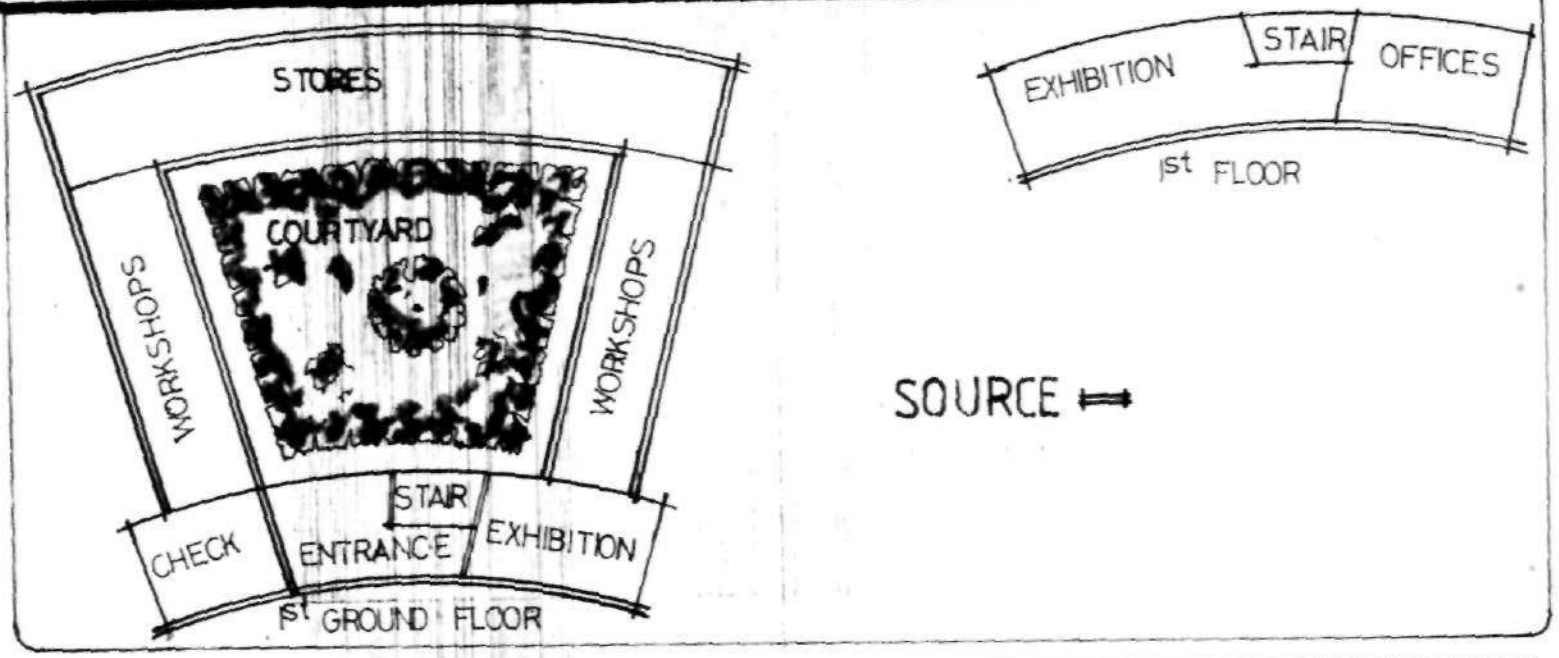
The main exhibition building is planned around a courtyard with the corridor used as the exhibition spaces (with build-in show-cases). There are three main exhibition galleries viz:

i. the Benin Art gallery on the first floor
ii. the Ethnography gallery. While technological and temporary exhibition galleries on the ground floor.

Exhibits are mostly display behind glass, with lighting system purely artificial, with little or no natural lighting.

A craft village is integrated into the site, which houses craftsmen such as weavers, beadmakers, 'suya' roasters, goldsmithing. A craftshop is also located very close to the craft village, near which one can find the Museum kitchen (Restaurant and Bar) which provide drinks and meals of different Nigerian dishes.

PLANS & PERSPECTIVE



SOURCE ⟹

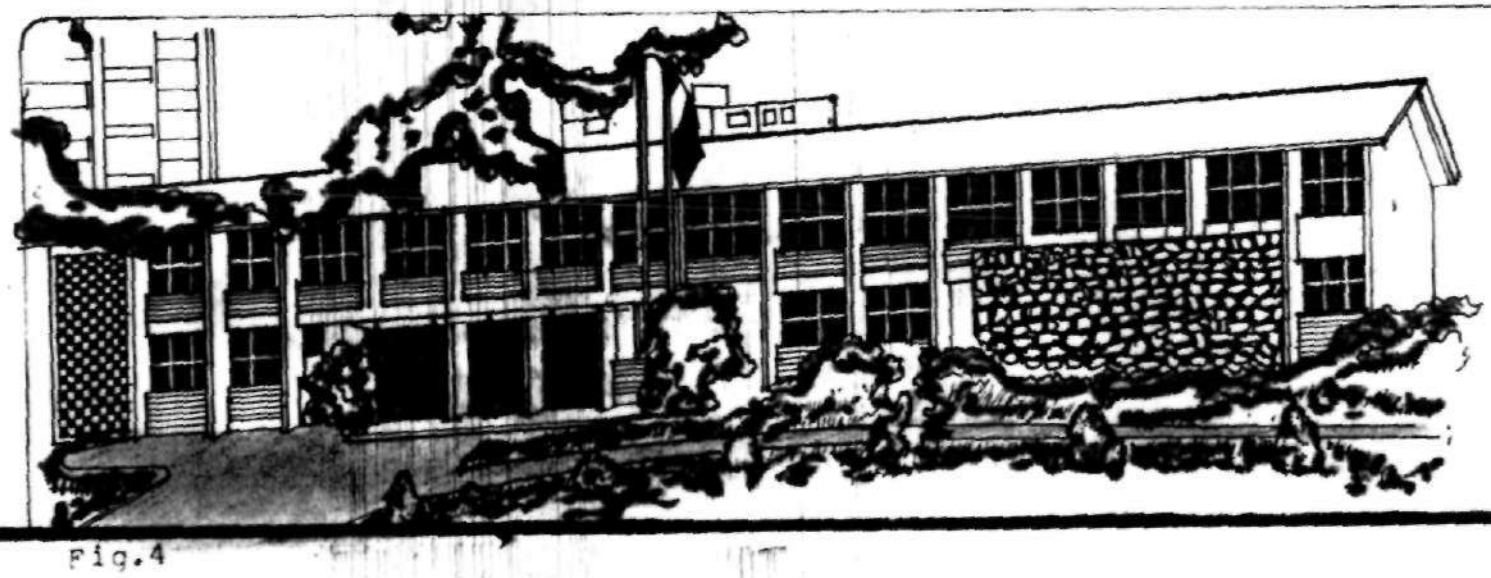


Fig.4

Artistical performance occationally carried out in this kitchen.

During long vocation, museum organises programmes for school children, but the programmes fails because of the lack of staff.

Other facilities found in the museum are good workshops, laboratories, dark rooms, storage spaces and research facilities including an African Library.

The old building is being expanded with a tall block for stores, lecture halls and a reference library. The museum produces a good number of post cards of art work and some film strips too, which are on display at the entrance hall.

Appraisals

a. The entrance hall depicts a museum environment, as one sees a lot of exhibits on entering.

b. The layout of the whole complex is very functional.

c. The construction is light and airy, which offers good ventilation.

d. There is a good security network, and separate public and staff entrance.

e. The craft village and the Museum kitchen pull people into the complex.

Demerits

a. The museum building is not different from any office building in appearance.

b. The exhibits are crowded in galleries with no viewing sequence.

c. Too many objects are put in storage, this will however reduce by the time the new tall building block is completed.

d. The general circulation within the Museum complex is poor, as there is no definite circulation pattern.

2.2.4: National Museum, Jos

Jos Museum is the first purposed built museum in Nigeria. It was formerly the administrative headquater of all the National Museums in Nigeria. The headquarter was later moved to Lagos. This Museum was opened to public use in 1952. It is sited inside Jos township and occupying a large chunch of land. The favourable climate and topographic conditions made it a major tourist attraction centre. The Jos Museum attracted about 64,418 visitors during the first year of its opening. This Museum was planned with the prime objective of securing the preservation of Archaeological material unearthed during the mining excercise. It is primarily a research musuem and installations were devoted primarily to physical preservation and storage.

The Museum has so many plases, these includes, the Centre for Museum Studies, Bindary and Auditorium, Library, offices, exhibition Galleries, stores, laboratories, Zoo, and MOTNA (see figure 5a and 5b).

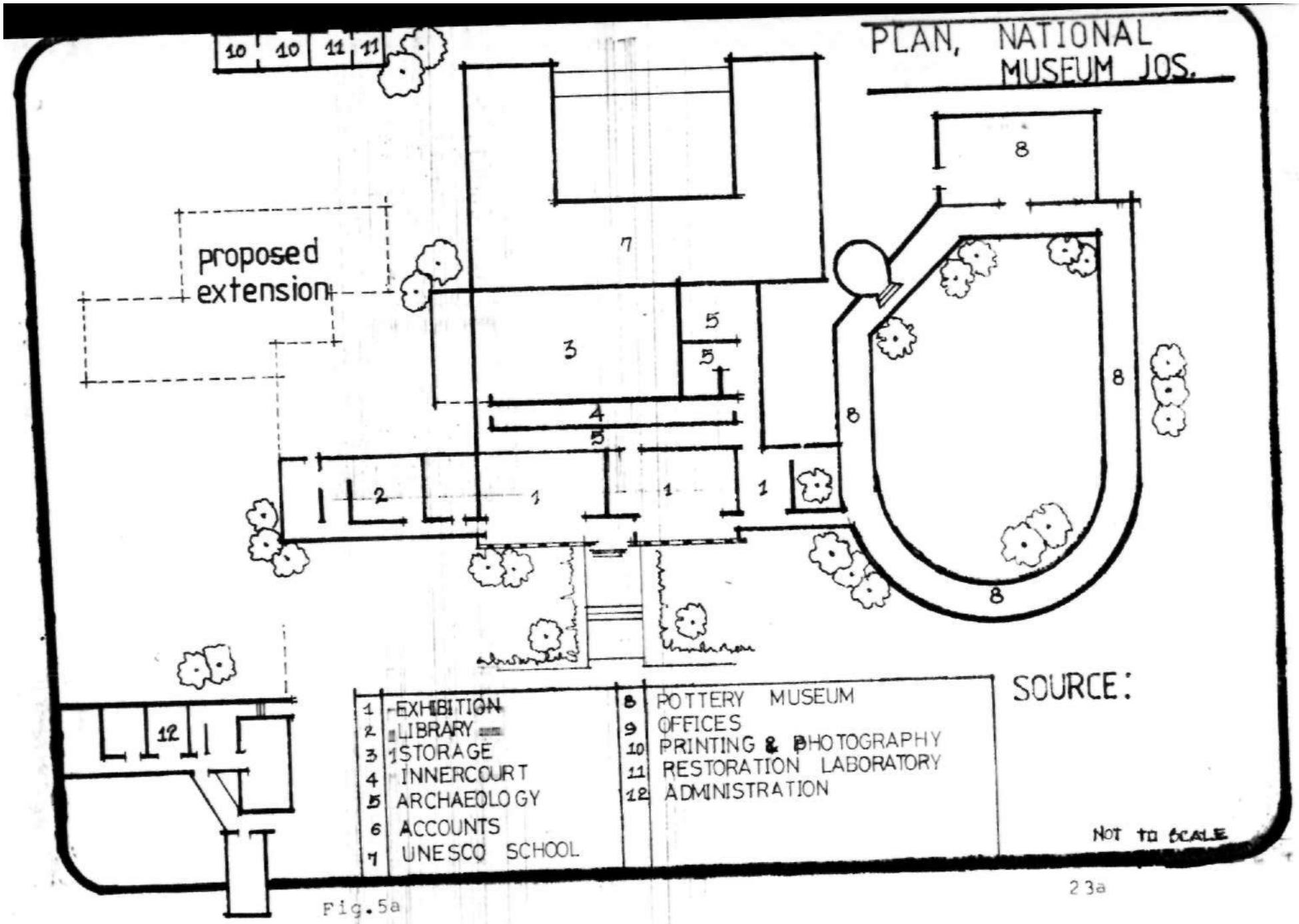
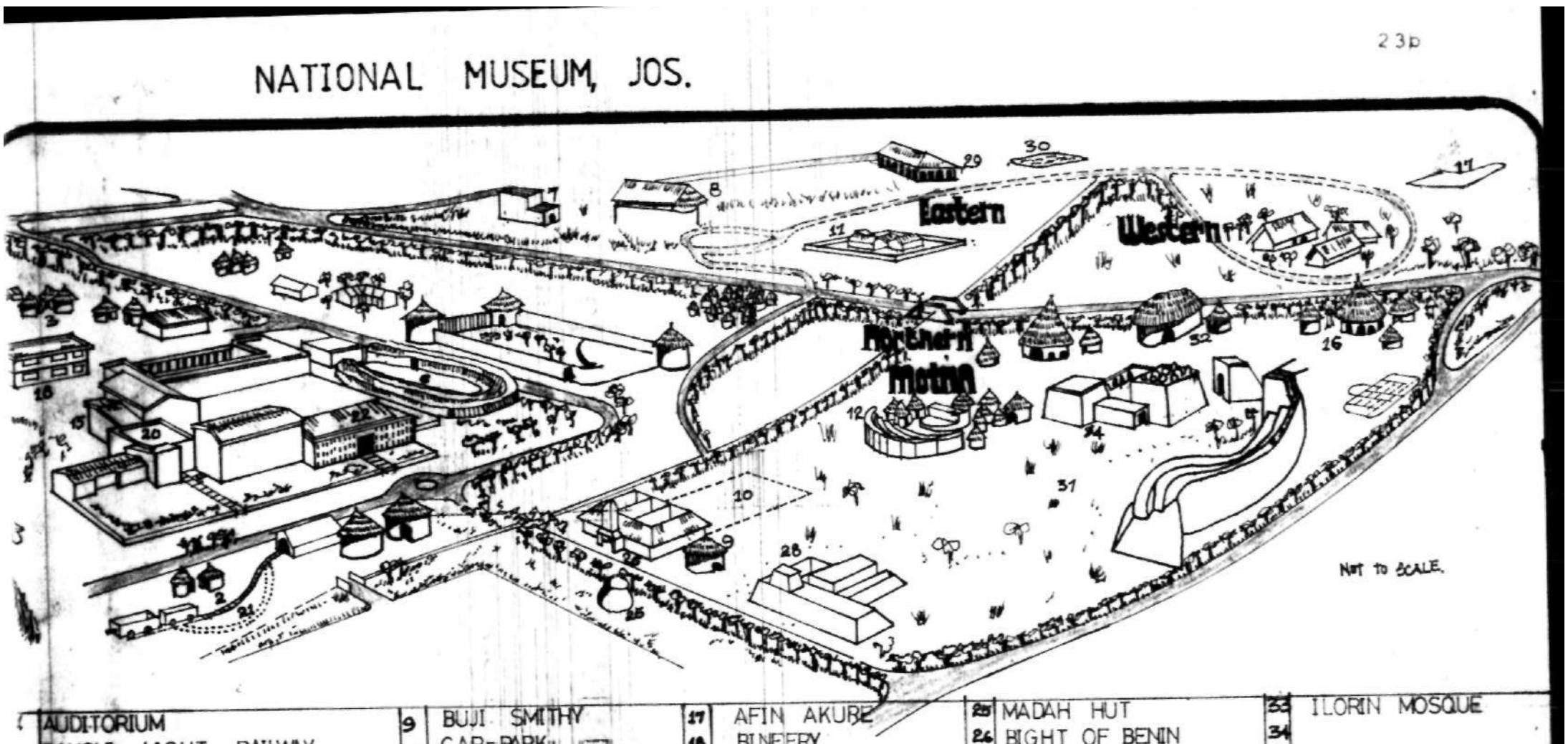

PLAN, NATIONAL MUSEUM JOS.
proposed extension
10
10
11
11
12
1 EXHIBITION
2 LIBRARY
3 STORAGE
4 INNERCOURT
5 ARCHAEOLOGY
6 ACCOUNTS
7 UNESCO SCHOOL
8 POTTERY MUSEUM
9 OFFICES
10 PRINTING & PHOTOGRAPHY
11 RESTORATION LABORATORY
12 ADMINISTRATION
SOURCE:
NOT TO SCALE

Fig.5a

NATIONAL MUSEUM, JOS.



1	AUDITORIUM	9	BUJI SMITHY	17	AFIN AKURE	25	MADAH HUT
2	BAUCHI LIGHT RAILWAY	10	CAR-PARK	18	BINEERY	26	BIGHT OF BENIN
3	CENTRE FOR MUSEUM STUDIES	11	NIMO COMPOUND	19	LABORATORY	27	RUKUBA COMPOUND
4	OFFICES	12	AMPHI THEATRE	20	LIBRARY	28	KATSINA PALACE
5	ETHNOGRAPHY	13	PATEGI COMPOUND	21	GARDEN	29	OWERRI HOUSE
6	ZOO	14	ZARIA FRIDAY MOSQUE	22	GALLERY	30	OTTAPIA HOUSE
7	AWKA TOWER	15	KANO WALLS	23	MUSEUM SHOP	31	ABUJA PALACE
8	ONITSHA COMPOUND	16	TIV COMPOUND	24	CHILDREN MUSEUM	32	ILE ORISA IKIRE
						33	ILORIN MOSQUE
						34	
						35	POTTERY

SOURCE:

Fig.5b

Most of the exhibits at the galleries are textile, terracottas. Masks, pottery materials and so on. The other group of exhibits and ethnographic materials which include, carvings, customs, agricultural implements, hunting implements, and musical instruments.

Laboratory is also provided for the treatment of artifacts before they are display or stored. This laboratory also serve for rebuilding broking objects and chemical preservation of objects, treatment against fungi and insect attack, treatment of metallic objects against impurities and rusting.

The library is used mainly by staff of the museum, visitors, students of the UNESCO School and research fellows:

Animals of different species are kept in the Zoological garden naturally. Visitors are charged before they are allow into this part of the museum. While graneries within the zoo served the dual purposes of display as well as store of food for the animals

Another section of the museum is the museum of Transport and Mining. There, the Bauchi Light Railway and some examples of various rail engines, cars and lorries are displayed.

UNESCO school is also sited within the museum complex. The Museum like any other specialised institution needs a body of trained man power to carry out its functions. In 1951, a museum technician was sent to Jos to train Nigerian Museum technicians. Not until

1963, the UNESCO training school make a joint venture between the United Nations and the Nigerian Government was opened to take over from all French and English speaking countries.

The Archaeological unit research throughout the federation to study the ancient things, that is, remains of pre-historic times. It is this department that make us to be boastful of our cultural heritage in black Africa.

MOTNA, on the other hand, is an open air museum that contain many of the most important samples of Nigerian architecture in the form of full scale replicas. The basic reasons for the creation of MOTNA, are to preserve for posterity the great achievements of Nigerian architects and their architecture which is one of the basic elements of every nations heritage. Samples of this traditional architecture include the following, viz: Kano City Wall, Zaria Mosque, Katsina Gates, Rukuba coumpound, Tiv compound, Ohafia Ndi Ezera Temple, Afin Akure Palace, Pategi Compound, Abuja Palace and Katsina Palace. Near to this traditional architectural Museum is an outstanding, well articulated traditional Palace of Benin, popularly known as the "BIGHT OF BENIN'.(Restaurant)

Rukuba, is a local tribe from the north-east of Jos. Their compound have a small reception hut at the entrance. Inside, graineriesare built off the ground on stone and loam posts. outside the compound is a small shrine place on a large boulder.

Materials for building consits of prepared building Loam (Sand and clay mixed with straw and water) and also some stone, particularly in the fence wall. The huts however have completely domed interiors with thatch roof serving most as a device to prevent erossion of the roof by rain.

Ndi Ezera Temple is a meeting house in Igbo land. The building have characteristics of low loam walls, steep thatched roofs, often with varendah. Posts directly support the roof which walls act as space enclosure.
Afin Akure is a royal residence of a Yoruba Oba. This is usually the most impressive part of any Yoruba town and occupies far by largest land area. It has the most imposing architecture and being an embodiment of the Yoruba courtyards of great variety in sizes, each surrounded by a roofed varendah and small rooms. The roofs are thatched. The strongest architectural quality of the Afin is the large open spaces and the relationship between these and their diverse character.

Other architectural features within the complex includes, elaborately carved varendah posts and doors which are typical of Yoruba art.

Pategi compound is a typical presentation of the ancient Nupe Emirate of Pategi. It has characteristics of circular entrance forms, ring of over 90 carved parts inside. Thatch grasses are the roofing material. The floors are plastered with mosaic stones, selected pieces of broken pottery and the circular pattern of tiles.
Tiv Compound is a typical reception room or the "Ate" of Tiv people in Benue State. Roof is constructed of bamboo poles and covered with thick layers of rich

thatch grass. The walls are built of coil of materials, thus making a smaller surface area to be hoated by the sun.

Zaria Mosque on the other hand, is a replica of the original Zaria Mosque designed and built by Babban Gwani Mikaila and probably representing the high point of Hausa architecture.

The complex is consists of a main hall for worship, the Sharia or Alikali's court, Abhotion chambers and the entrance lobbies at the perimeter wall. Has characteristic of massive columns to support a large diameter dome.

Building materials include loam reinforced with azara which is free from termite attack. Walls are generally made up of regular courses of tubali, long-shape sun-baked bricks. Roofs are carried by masterly use of pillars, walls, bracketted arches and horizontal beams.

Appraisals

a. There is a good security network
b. The MOTNA offers visitors the different architectural styles in Nigeria.
c. The facilities on the site include (UNESCO, MOTNA, Zoo and Craft Village satisfied recreational and educational facilities.
d. Good use of natural light, which help in reducing costs.

Demerits

a. Concentration of exhibits within one hall without partitioning makes view boring..
b. The Bight of Benin which is the museum kitchen, is too far from main exhibition, thus allowing

people to come and go out of .it without having a look at exhibition: People should have been forced to this place(exhibition galleries.)

c. Exhibits in the galleries last for long without changes. The same exhibits are seeing by visitors no matter how many number of visits is paid to the galleries by visitors.

d. Use of air-conditioning as the only source of ventilation maintain a constant climatic condition, but create the problem of cost and when there is problem of power failure, the artifacts are left at the mercy of decay due to heat.

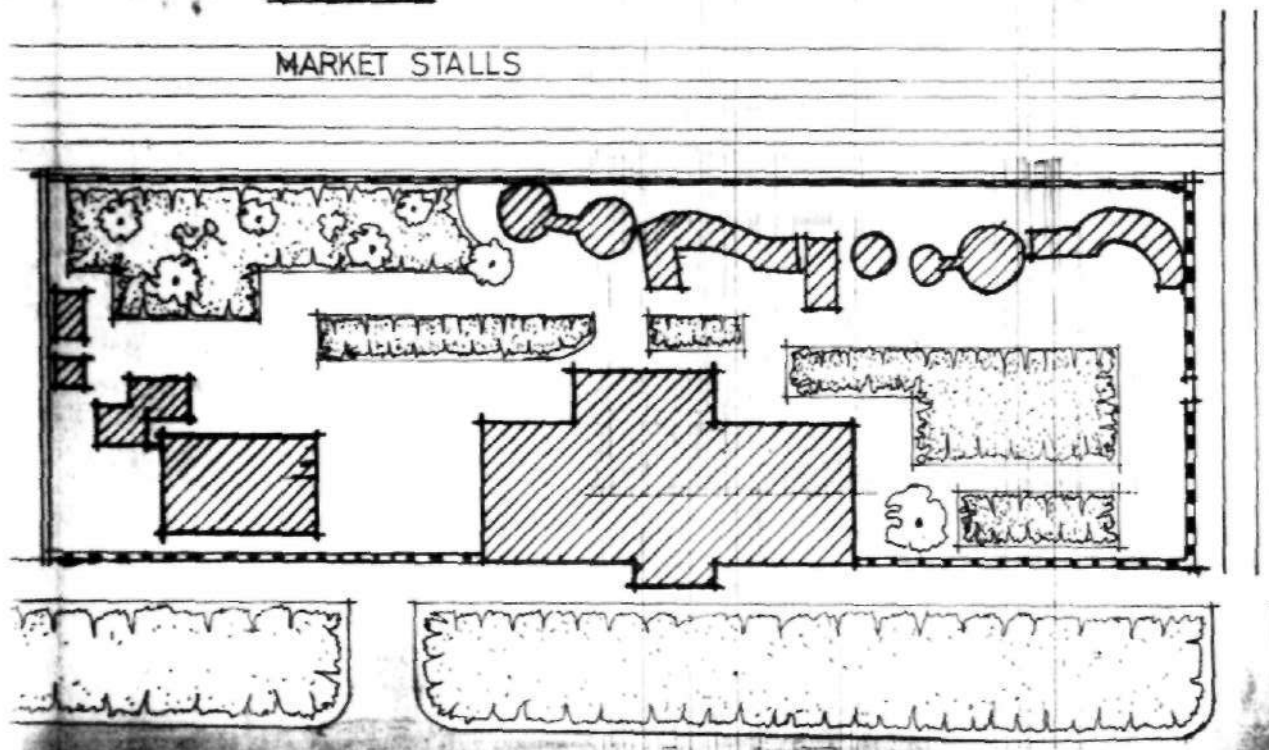
However, the general recommendation is that Jos Museum in Nigeria context, is the best musuem amongst the National Museums in Nigeria.

2.4:5 National Museum, Kaduna.

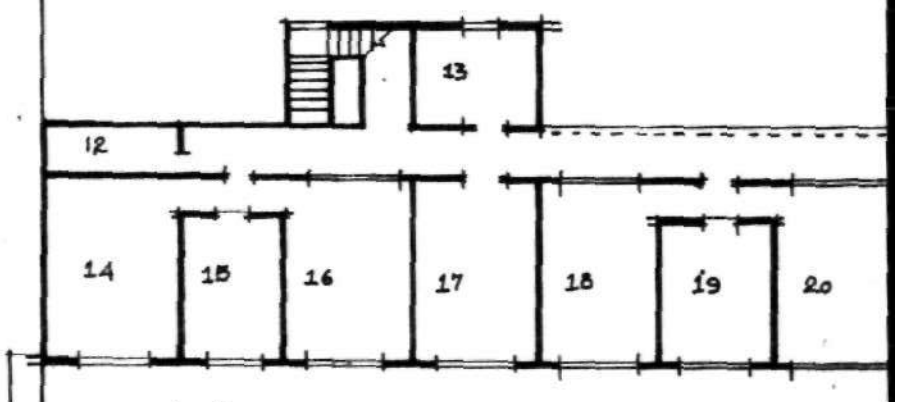
This museum was opened in the Northern Peoples Congress (NPC) Office at Kaduna in 1975. This shows that the Museums is not a purposed museum. The museum is located along Ali-Akilu Road, Kaduna. On the North, the Museum is bordered by a petrol filling station, on the South by the Ministry of Lands and Survey buildings, on the Eastern side by the Ali-Akilu Road and on the West, by a rail line between which some number of market stalls are built.

NATIONAL MUSEUM KADUNA

SITE PLAN



FIRST FLOOR PLAN



12	PHOTOGRAPHIC UNIT
13	STORE
14	LABORATORY
15	OFFICE
16	OFFICE
17	ANTIQUITIES STORE
18	LIBRARY
19	OFFICE
20	HEAD OF STATION

SOURCE:

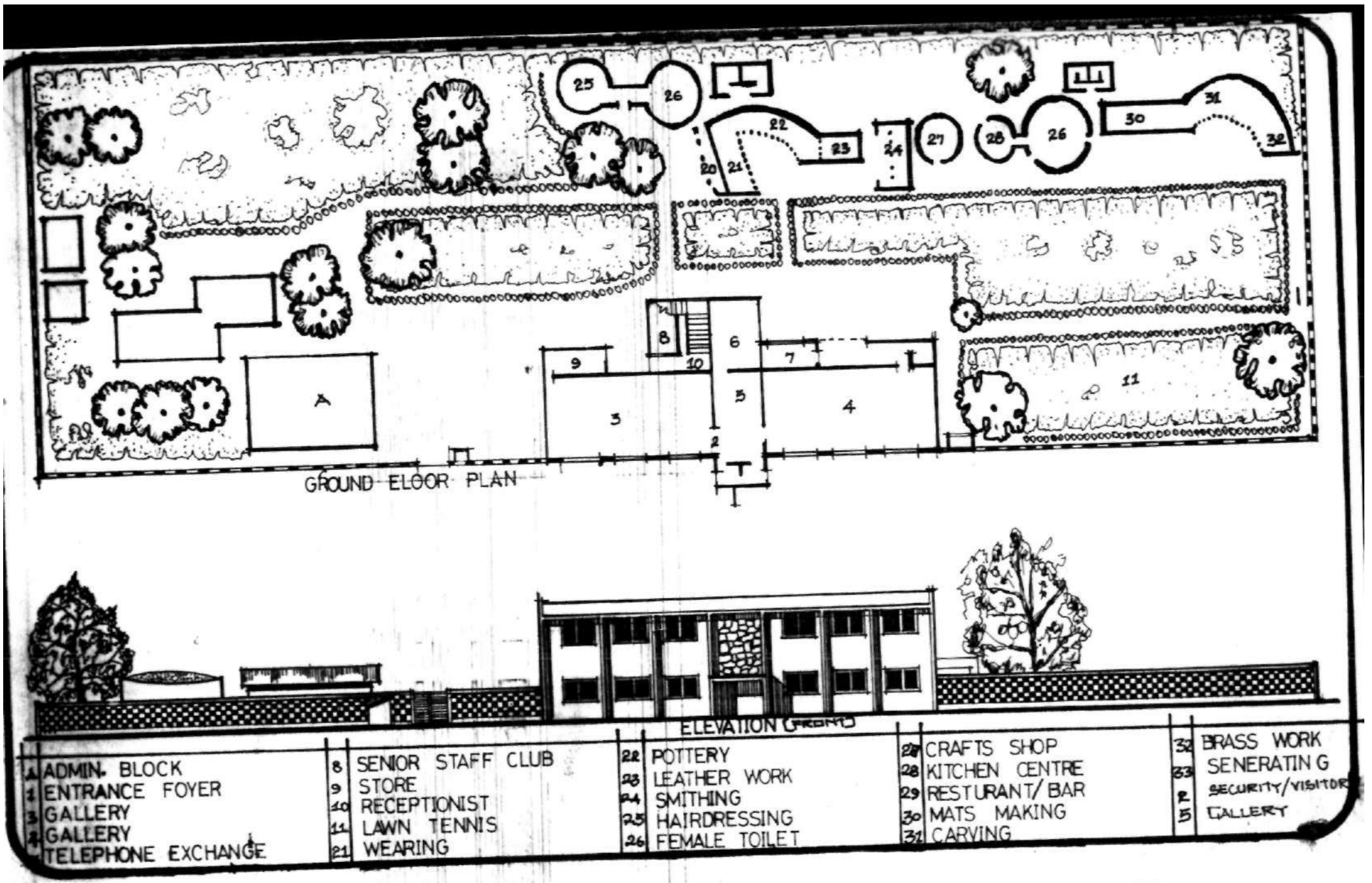

GROUND FLOOR PLAN
ELEVATION (FRONT)
A ADMIN. BLOCK
1 ENTRANCE FOYER
3 GALLERY
4 GALLERY
TELEPHONE EXCHANGE
8 SENIOR STAFF CLUB
9 STORE
10 RECEPTIONIST
11 LAWN TENNIS
21 WEARING
22 POTTERY
23 LEATHER WORK
24 SMITHING
25 HAIRDRESSING
26 FEMALE TOILET
28 CRAFTS SHOP
28 KITCHEN CENTRE
29 RESTURANT/ BAR
30 MATS MAKING
31 CARVING
32 BRASS WORK
33 GENERATING
SECURITY/VISITOR
GALLERY

Fig.6b

The museum is a two storey building structure with an eastern access faced of stone work. The ground floor houses the exhibition galleries, store, a telephone exchange room and Senior Staff toilets. On the other hand, the upper floor contains the offices, the photography unit, the laboratory, and Library. This building is consist of wide plane windows on the eastern side exposed to the direct rays of sun.

Lighting is purely artificial. Artifacts in the History and Archaedogy gallery are lighted with flourescent lamp fittings with no evidence of filteration of the light to remove the harmful rays of the ultra violet radiation. Fittings are hidden from direct view so that the light baths the objects on display. This enhances visual contact since the viewer views the objects from comparatively darker region.

From conservation point of view, the use of the tungstan lamps for lighting in the remaining galleries is safer than the flourescent lamps. However, tungstan lamps generate a lot of heat and therefore lack the cooling effect on exhibits.

Ventilation is also artificial. Unit air-conditioners are use for ventilation . Although this may be the best method of maintaining the internal environment, but not all museum objects require the same environmental conditions. Some can be kept healthy by simple natural ventilation which can enhance by ordinary ceiling fans.

Materials used for this block of building are modern. Floor finish as terrazo which is resistant to wear. Materials for wall is sandscrete blocks and metal sheets for roof covery.

Glass showcases are used for the display of objects. The circulation is generally random, that is, it is not defined. Stair to the upper floor is hidden from visitors, as such, it will take a visitor a frustrating long time search to locate it.

Craft village which was latter planned and designed is detatched from the main building. In this village, traditional crafts such as, weaving, mats making, pottery, Bronze, metal and traditional hair sallon works are carried out.

Other buildings within the craft village are Museum shop, Restaurant and a bar.

Building materials employed for this craft village are mainly local with mud for the walls while roofs covered with zinc and later, a layer of thatch grass on top to serve as an insulating material against radiation.

On the south of craft village, Fine Artists and Painters shops are located. Material used are also mud and Azara trunks (Deleb planks).

Appraisals

a. Easy accessibility both for cars and pedestrains to the site.

b. From the traditional point of view, craft village is architecturally articulated to portray Hausa Architecture (tradition).

Demerits

a. No provision for visitors car parking

b. Site is too close to major traffic road which fumes from the traffic pose a serious danger to museum pieces.

c. Traffic noise is a source of discomfort to museum visitors.

d. Problem of viewing sequence of the exhibits due to their crowdness.

e. Exceptfor craft village and Fine Arts round huts, the character of the architecture is that of an office block.(that is the main building block)

f. A petrol filling station is very close to the site which increases the damage of fire hazard.

2.2.6: Esie Museum

Esie Museum is located in Irepodun Local Government Area of Kwara State. (See figure 7)

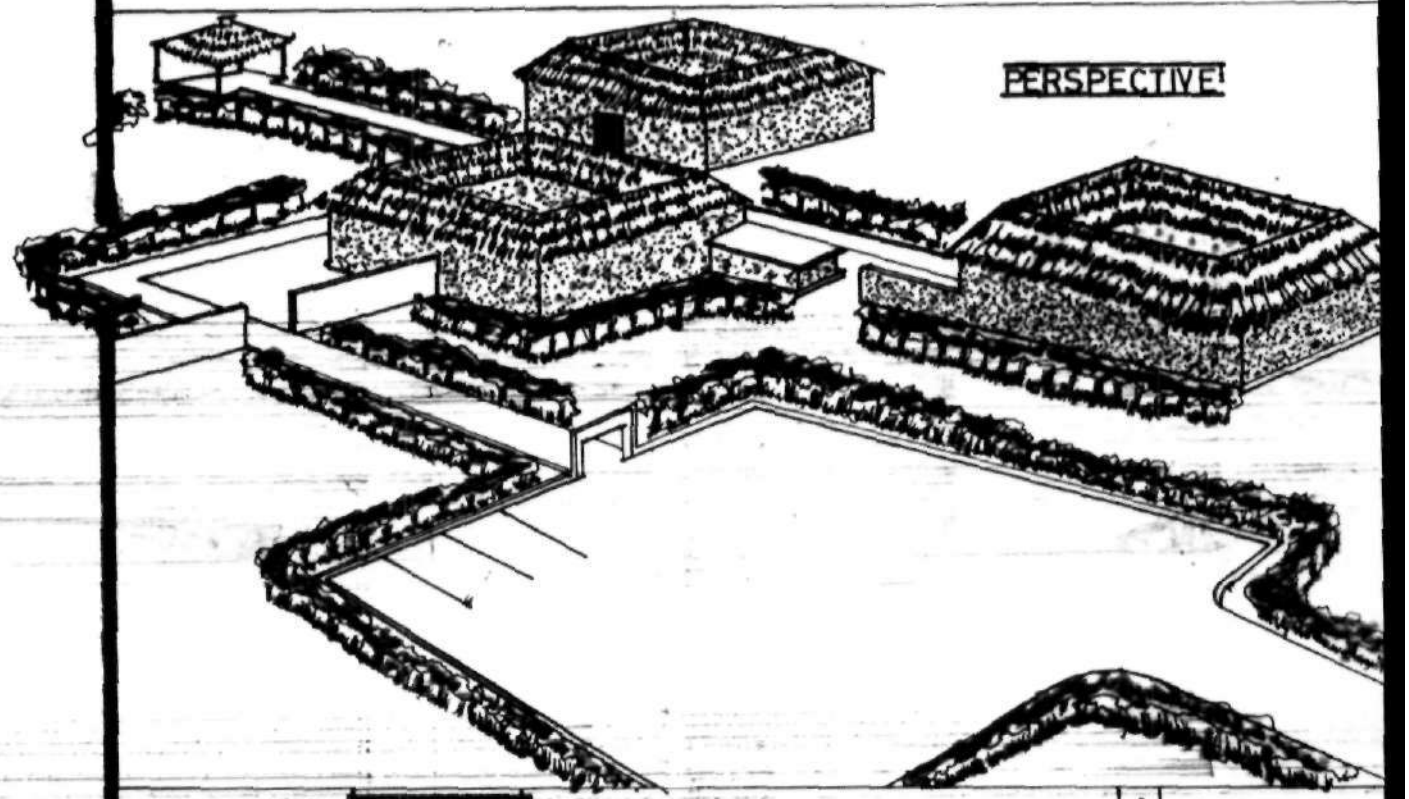
The Museum is consist of four square plans. One of the plans is a shrine housing the ritual artifacts.

The galleries houses thousands of stone collections. These collections are left for visitors to entertain themselves any time of the day.

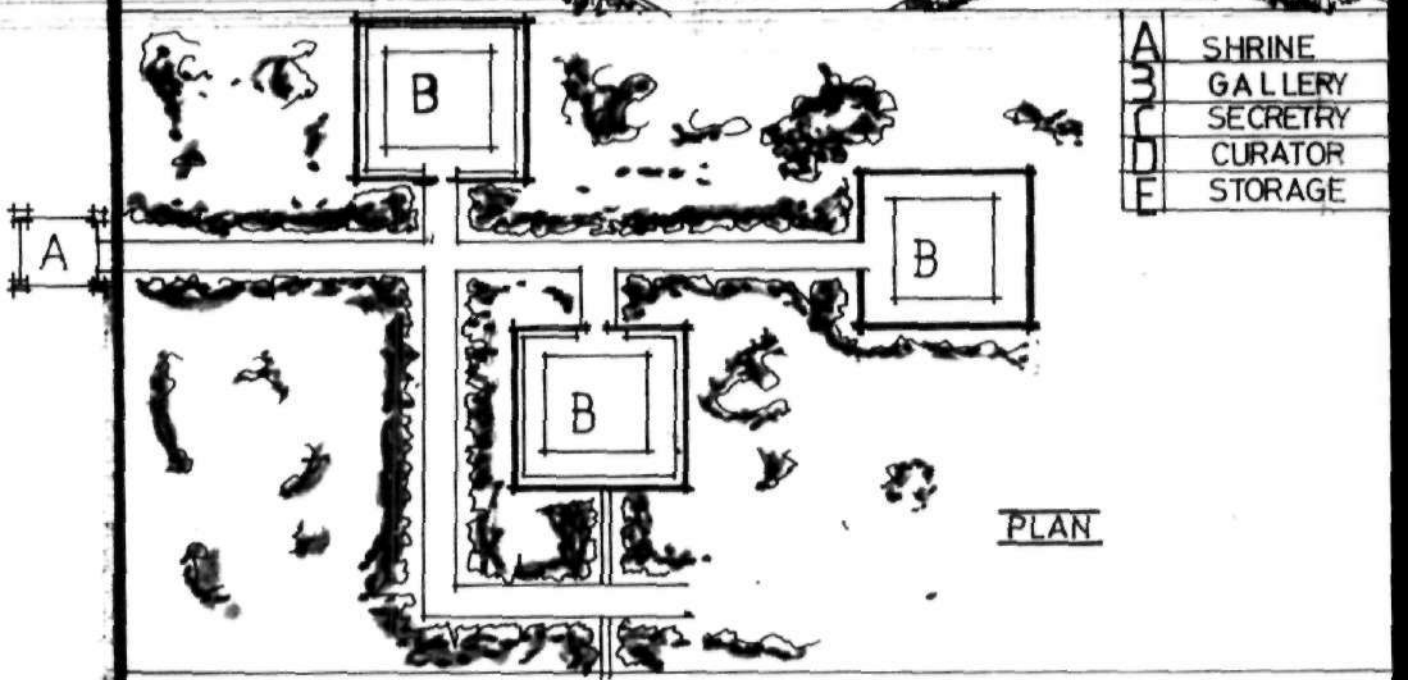
Materials used for the museum are thatch grass and mud for the roofs and walls respectively.

Presently, there is no conservation problem since all the collections on display are stones, which are

ESIE MUSEUM, KWARA STATE.



PERSPECTIVE



PLAN

A	SHRINE
B	GALLERY
C	SECRETRY
D	CURATOR
E	STORAGE

SOURCE:

NOT TO SCALE

weather resistant artifacts. However, there are may be need to display them in some manner but this can be successfully done only after the mystery behind these thousands of stone figures are unravelled.

Appraisals

a. The museum posses greatness because apart from an curator, practically no staff, that is building and its contents can speak on their own.

b. The buildings and its contents are harmonized.

Chapter 3

TOURISM

3.1 What is Tourism

Tourism is the migration of people or individuals from their usual place of residence to another for recreational or visitational purposes at specific times and for a limited period. Futhermore, tourism is also seen as an organised travel from one place to another in search of pursuits that are of interest to the undertaker. Such pursuits could be political, social, cultural or religious. There are basically three categories in which these fall:

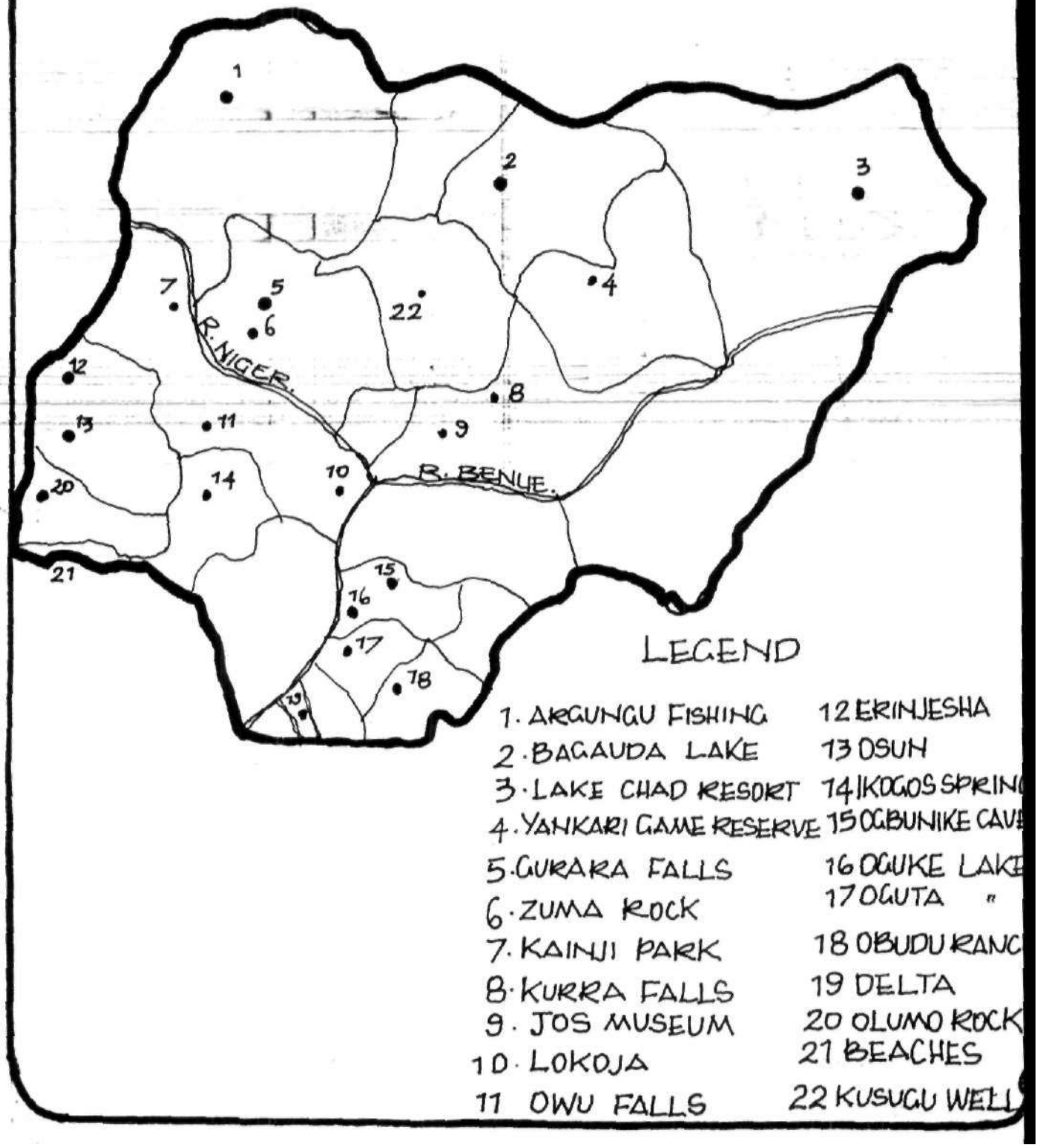
a. Leisure Tourism: (all aspects of tourism that deal with leisure and recreation, such as; sunseeking (sun bath), and sightseeing).

b. Business Tourism: (undertaken solrely on business purposes).

c. Specific Tourism: (this could be educational, sports, religious, conferences, ceremonies, festivals, pilgrimage and so on).

TOURIST MAP OF NIGERIA

FIG 8.



LEGEND

1. ARGUNGU FISHING
2. BAGAUDA LAKE
3. LAKE CHAD RESORT
4. YANKARI GAME RESERVE
5. GURARA FALLS
6. ZUMA ROCK
7. KAINJI PARK
8. KURRA FALLS
9. JOS MUSEUM
10. LOKOJA
11. OWU FALLS
12. ERINJESHA
13. OSUN
14. IKOGOS SPRING
15. OGBUNIKE CAVE
16. OGUKE LAKE
17. OGUTA "
18. OBUDU RANCH
19. DELTA
20. OLUMO ROCK
21. BEACHES
22. KUSUGU WELL

3.2 Tourism Potentials in States Affected by Nok Culture

In Benue State

In this state, tourism potentials includes:

1 Scenic Sites: These are: Ushango Hills located along the Katsina Ala Road. It is here the Tiv Tribe hide to defeat Ganye during the traditional tribal war. One can still find war (equipments) at this place today. A number of people continously attracted to this site.

2. Bassa Hills: The hill is about 317 metres high which gives an impressive view across the River Benue when one stand at the top of it (the hill). A short distance walk take one to the natural body of River Benue waters.

3. Ofejiji Falls: Is found near the Okura saw Mills along the Aryangba - Ankpa Road.

4. Tse-Mker George: This is a one hundred and eighty Meter depression located 18km from Makurdi town. It housed a mysterious serpent which keeps guard over a great diamond stone. The reason however is not known.

5. Makurdi Moneterium: This is a half kilometer off the Makurd Gboko Road. In this place, barts, skeletons of birds, and animals, skin of snake and animals, bird features are display.

6. Tomb of Tarka's: Dr. J.S. Tarka tomb along Gboko-Yandere Makurdi Road. A price piece of architecture is employed for the tomb.

Other attractions are cultural and festive activities. These include:-

i. Songo Puppet shows (Kwagh-Hir) and "akomobo" rites. Different types of traditional dances are displayed there.

ii. Acrobatic shows by the Ingyough dance group led by Ijan Gbe.

iii. Idoma Masquerades and Alokwa festival

iv. Inikpi Festival (by Igala tribe)

v. New Yam Festivals

vi. Coal Mining Sites in Ankpa Local Government Area.

vii. Cultural shop Makurdi.

viii. The Aketa fishing Festival and so on.

Almost all the festivals and cultural activities mentioned held at the rainy season and during harvest each year. These sites can be visited by tourists through the following Federal Roads.

Roads that links the area:

1. Enugu - Otokpo-Makurdi Road
2. Afade-Gboko-(Katsina-Ala)-Takun Road
3. Markudi-Gboko-Lessel-Ogoja Roads
4. Vandakya-Obudu Road
5. Yandev-Zaki-Biam Road

6. Yandev-Katsina Ala-Road
7. Otukpo-Ankpa-Ayangba-Dekina-Shintaku
8. Oweto-Adoka-Ugboju-Otukpo-Onyike Road
9. Ajaokuta-.Ayanga Road

In Plateau State

There are numerous tourism potentials in this site. Among them are the following:

1. Shere Hills
2. Mado Tourist Village. This village provides accommodation for about 50 guests. These are huts and chalets. Also found there is bar and restaurant.
3. Beautiful works of pottery at Naraguta Village and leather goods.
4. Jos wildlife safari park, cross covers 7sqkm, Has wildlife, Hills and Streams. Tickets cost N1.00 per car drive.
5. Picnic sites include Vong Nfwei Hill. Found between Jos and Bukuru townships.
6. Other attractions already developed are ; the Museum of traditional Architecture discussed in chapter two above.
7. Zoological Garden. About 50 species of animals and birds, in the garden.

In Niger State

Sites of great interest are the following:

1. "the famous Gurara Falls. It attract visitors throughout the year.
2. Forms of attractive Hills at Abuja, Kagara and Mina respectively.
3. Shiroro George Lake. It is a high potential electric lake.
4. Dr. Hajiya Ladi Kwali famous glass beads, pottery, brasswork, embroading dyeing and cottage works, mat making and so on.
5. Zengeru rail and Bridge over the Kaduna River.
6. Bida Arts works.

In Kaduna State

In Kaduna State the main attractions as the tourism potentials include:

i. The Famous Nok sites,
ii. Kagoro Hills
iii. Chori and Nok Hills. On these Hills we find dyeing prints, have lasted many years back, caves, (where Jaba people hide during the tribal wars).
iv. Kpop-Ku House, Nok
v. Sheik Njeing (an initiation forest)

vi. Matsirga Falls at Kafanchan

vii. Kaduna Stadium

viii. Textile Industries, Kaduna etc.

ix. Emir of Zaria's palace, Zaria Mosque

x. Botanical Garden, Sculptural Garden, and A. B. U. Museum.

xi. National Museum Kaduna and many others.

xii. Other attractions are as follows;

i. Ninzan and Kuramah New Crops Festival

ii. Kaje Fishing Festivals, Kaningkong too are also not left behind.

iii. Hunting festivals. This is common in Saminaka Local Government Area.

iv. Kagoro-Day, usually takes place in December each year.

v. Tuk Ham Cultural Festival. (Takes place in Easter Break each year).

Federal roads links these states together, such that one taking a trip from any of the states can easily get to the other for excursion to all places of great attractions in all the states affected by the Nok culture.

3.3 Museums and Tourism in Nigeria

Museum and tourism are like two sides of a coin, one is a necessary part of the other. The existence of one call for the other, one cannot think of going to see cultural heritage harmoniously integrated in a purposed building enclosure when such an enclosure does not exist. Such enclosure I felt is museum. Also a museum cannot be think of, if visitors like tourists and travellers will not be going there. This is to say that museums in all parts of the world are increasingly becoming places of attraction for both tourists and travellers. Nigeri is therefore not exempted.

Museums in Nigeria are growing to meet the demand of visitors of Nigeria (Nigerians and foreigners). For the time past collections were usually private but now, most are for public. This is because the government has taken over to shoulder this responsibility. As such new museums are proposed in places where non existed before and people no longer have to rely upon occasional trips to a distance city for the benefits and pleasures of a museum visit. Furthermore, modern facilities that were completely isolated from Museum sites have now integrated into such complex to satisfy visitors in form of tourism. It is not surprising therefore when C. Robet put it that 'everybody seems

to know what a museum should not be and only few are in agreement as to what a museum should be'.

Since museums attracts tourism, it is necessary for it to house her tourists where there is no alternative accommodation. On the other hand, the following should also be considered.

1. To provide more types of entertainment for tourists at the sites.
2. To improve the marketing of tourist services.
3. To co-ordinate governmental tourism more effectively in respect of transport, health and environment.

The main challenges here are:

1. To promote equal development opportunities and earnings capacity among the various regions in Nigeria.
2. To enhance the standard of living among sections of the population through out the country. This will help in the redistribution of earnings of tourism.
3. Improve the national image of Nigeria among her nationals with respect to living standards and leisure activities.
4. If possible to increase revenue from tourism
5. To stabilize the economy by making new environment and obtaining an increased return from tourism.

6. To promote an expression of tourism throughout the various regions and maong enterprises of different types.
7. To discourage Nigerians from taking their holidays outside the country. This is to say that great importance is attached to domestic tourism in Nigeria. Reason is because international tourism could be disappointing since foreign tourist could steadly decline at any time. Spain for example fall a victim of this problem in 1973.
8. Improvement of access roads in all corners of the country, including rural and other open places.
9. Optimisation of economic, social and cultural benefits through tourism.

3.4 Transport and Accommodation For Tourists

The arrangement for transport and accommodation is done for the purpose of this thesis to cater for tourists coming from within and outside the country. The details of this arrangement is found on the design report in the last chapter of this write-up under the transport and accommodation units.

Chapter 4

PROBLEMS EXISTING IN MUSEUM DESIGN

4.1 General

Problems of museum design increases each year, thereby making the museum to deserve a special architecture as a means of affecting lasting solution to such problems.

Generally, in the planning of a Museum, the following are the basic criteria; viz:

1. Provision of enough space to handle all activities of the museum with flexible exhibition spaces to meet changing needs.
2. A viewing sequence is necessary so as to make it disirable to the public.

In the gallery planning the relativeness of objects is the number one thing to consider, and this is influenced by four important factors:

i. The successive steps to convey the message intelligibly to the visitors.
ii. a sequential treatment of objects
iii. achitectural consideration
iv. grouping of objects to achieve a pleasant composition.

3. Workshops and stores should be on the same level to allow for easy transportation and lifting. The workshops should be accessible to the curator without going out or into the galleries.

4. There should be a separate entrance for staff which should be connected to the offices with a direct access to the galleries, while the public entrance leads direct to galleries.

5. Recreational facilities should be accessible to visitors from the gallaries or from outside.

6. The architectural composition and functional flow of activities whithin the units and the complex must be near perfect.

4.2 Security

This is a very important consideration for Museums and Art Gallaries containing objects of high value which are mostly priceless articles, very rare to get. They deserve a high level of security to prevent their illegal removal or accidential distruction while on display. The removal of objects can be made difficult by either mounting, fixing casing or hanging with padlocks to prevent easy removal.
There are so many ways that objects could be secure, viz;

1. Fixing of cases to solid structure
2. Detection of successful removal by alarm, visual or audial.
3. Prevention of removal from building.

Other methods include the following;

4. Use of warden, placed inside gallaries and other strategic points (The common method for all museums in Nigeria).

b. Use of safety locks for operable openings.
A wire fence hidden by well groomed hudge.

3. Optical techniques involving the use of television consoles, photography and infra-red radiation.

4.2.1: Security Against Fire

There are many forms that damage can occur in mussuem due to fire. The water use in fighting the fire, the place where the museum is sited, flameable sites therefore discouraged.

This problem is effectively solved by making smoke detector available and if possible, to connect alarm switch boards directly at the nearest Fire Bridgade Station. On the other hand, where there is no Fire Bridgade, fire extinguishing apparators are distributed throughout the building. For prevention rather than cure too, emphasis is laid on incombustible structure and finishes for the buildings.

4.2.2: Security Against Theft

Guards as earlier mentioned distributed in all buildings are the traditional method of dealing with theft. They normally help in arresting thives in diverse ways, viz:

1. Help by setting off an alarm system which shows on a central switch board and which can cause all doors to close so as to trap the thief.

2. They could be assigned to stand at both the entrances & e to check visitors before they are completely allow to go out of the gallaries. This however may cause embarrassment to the visitor. But it should be emphasize that it is better to embarrass a visitor to rescue an exhibit from getting lost.

3. The other measures against theft are the ones mentioned in (4.2) above.

4.2.3: Security Against Damage

Damage in Museums are usually done by criminals whose aim is not for stealing. Preventive measures are usually taken to combat this problem, viz:

1. Objects are protected in glass cases, pepex or polycarbonate is very effective.

2. Fencing of exhibits by a rope, to keep the visitor from being in contact with exhibits so as to avoid accidental damage due to either slippering or so. This method however, have the disadvantage of distracting the visitor from enjoying exhibits.

3. Harmful objects are usually dis-allowed into the gallaries. Cloak rooms are therefore provided for visitors to keep them.

4. Things like ledges, Nooks or crannics are also not allowed into galleries as this is where parcel bombs could be hidden.

4.3: Ventilation

Ventilation is another considerable problem in museum design, usually for preservation of the materials on exhibition. It will be a great disaster if any of the exhibits or records stored in the department of artiquity is destroyed. Ample care therefore is taken to see they are preserved under the most congenial atmospheric conditions.

Generally, there are three methods of ventilations that are adaptable for museums, depends on the type of wea

1. Natural ventilation
2. Artificial ventilation
3. Infilteration.

1. Natural Ventilation: This could be achieved by any of the following.
   - i. Windows, doors and skylight
   - ii. Roof ventilators
   - iii. Stacks connecting to registers
   - iv. Special designed inlet or outlet (openings).

For the purpose of this design however ,emphasis is laid on window's and partly doors. This is because it is the only effective method with respect to the climatic

conditions of the proposed site for the museum. To achieve this effectively, there must be proper orientation of the buildings. Where this cannot be possible, trees are planted in the courtyards to create microclimate within the complex. Trees also serves as wind barrier. This type of ventilation is cheap and very much accessible anytime of the day.

2. Artificial Ventilation: This method could be achieve by either;

   i. Fans (ceiling fans) or

   ii. Air-conditioning ducts

i. Ceiling fans are usually hang on ceilings to ventilate the exhibits mechanically or by electricity. The problem occurs when there is power failure. Secondly, they generate a lot of heat when work for a long time, and some exhibits may get decay when no one is around to put it off in night time.

   Thirdly, it is fairly costly than using natural ventilation.

ii. This could be in the form of

   a. Unit airconditioners or

   b. Plant airconditioners.

These may be the best methods of controlling the internal environment, but it must be borne in mind that not all museum objects require the same

environmental conditions. Some artifacts can be kept healthy by simple natural ventilation which can be enhance by ordinary ceiling fans and this is what that is conceived in the mind of the author. Except that fans can generate heat. Night guards however can put it off.

One other problem with ventilation system (air conditions) is that they are very costly and required high technological services to all building units. However, unit airconditioners would be used when it calls for.

4.4: Lighting And Control

Lighting is very important in Museum for the simple fact that it is the only means through which objects are seen. Emphasis therefore, is on the relative brightness of the exhibits for comfortable viewing. Morever, light needed in musuem is not a quantity which can be specified easily. However, priority is confered, base on the situation and the context of that situation within the sequence of musuem viewing. Further more light, vary in both the wave length and intensity, as a result harmful to objects sensitive to it. It is an additional fact that all museum objects except, metal, stone and glass deteriorate with ultraviolet light.

To solve this problem, there are two ways of combating it, viz:

a. By natural means of lighting

b. by artificial means of lighting.

A Natural Lighting: This method of lighting is preferable for two reasons:

i. It is cheaper

ii. It gives the natural aspect of the exhibits.

There are two methods of introducing natural light into galleries;

1. Lighting from above, through the ceiling (at any angle).

2. Lateral or side lighting (through windows)

1. Lighting from Above: This is prefered by some Museum designers for the following reasons.

i. Free and steadier supply of light with exclusion of lateral obstructions by buildings and tress which might cause refraction or cast shadows, thereby altering the quality or quantity of the light.

ii. Amount of light can be regulated and uniform, and full lighting possible with minimum reflection or distortion giving good visibility.

iii. Use of wall space for exhibition

iv. the maximum latitude in planning space inside the building, which can be divided without requiring court yards or light shafts.

v. Good security with fewer openings in the outside walls.

This method of lighting however has got its disadvantages, viz:

i. Excess of radiating or diffused light with irregular rays

ii. Increased weight of the roof or ceiling supports, dirt coating rain penetration, moisture condensation, admission of sunrays, irradation and dispersion of heat and glare.

iii. Too monotonous to visitor working through series of rooms lit only from above, with no vision of outside surrounding.

iv. More complex architectural and technical problems to be solved which sometime don't work, and at the same time function as a roof effectively in terms of whether proofing, heating, maintenance, clearing, security, and so on.

2. Lateral Lighting: This is provided in the form of windows at intervals or continuous openings which can be of varying heights, depending on the type of exhibits.

This method also has its disadvantages;

i. Not all the walls can be used for exhibition.

ii. Opposite walls to opening become useless because showcases, paintings and any other object with a smooth reflecting surface placed against it acts as a source of reflections.

This method of lighting has the following advantages:-

i. It sheds full and agreable light on exhibits on the opposite wall or at the centre of the room;

ii. It brings out the plastic and luminous qualities of the exhibit.

iii. Simple and economical style of lighting with use of no transparent roofing. Convenient and simple regulation of temperature and ventilation, especially where airconditioning is uneconomical,

iv. It provide view of outside (courtyards), architecturally interesting gardens countryside etc). thus providing the visitor diversion and resting for the eyes and refreshing his mind.

v. Very easy to construct and maintenance, clearing and the rest is not a problem.

vi. Light can be directed to any direction one want through the use of reflectors..

For the purpose of this thesis, the author has decided to make use of the most advantegeous system of lighting (that is natural lighting)

B: <u>Artificial Lighting:</u>

This system of lighting is either done by flourescent tubes or incandescent (tungstent bulbs) to soften the crude illumination of flourescent tubes where necessary. The tungsten bulbs give exhibits a warm and golden lighting.

Flourescent tubes are in three types with respect to colour and temperature:

1. Upper range has 6000^{o}K
2. Middle range about 4200^{o}K (- equivalent of afternoon sunlight)
3. Lower range is 3000K(- equivalent of tungesten bulbs.)

For museum lighting, the middle range gives warm and lower intensity light, thus most commendable for museums. It is safer from conservation point of view.

Artificial lighting has advantage of localising lighting especially for small objects and lighting within a particular show case if deemed necessary. Artificial lighting has the advantage of being used especially late in evenings and as security lights at night.

For these reasons, exhibits in musuem are grouped in terms of lighting according to their sensitiveness to light destruction - (See table(2) below).

Table 2: Recommended Maximum
Illumination for various museum objects.

Type of Object	Illumination	Type of luminant
Objects incensitive to light like metal,stone, glass, ceramics, bones, Jewellery, stained glass.	Day, light,flour-escent light at about 6,500°K or about 4,200°K	Rarely necessary to exceed 300 Lux (306 m/sq. ft). except for special emphasis.
Oil paintings, Ivories Oriental lacquer Leather.	Day light, tungsten light, flourescent light about 4,200oK	Not more than 150 Lux (15/m/sq ft).
Specially sensitive objects (water colour textiles, tapestries, prints, drawings, manuscripts, wall papers, gruache, natural history specimens etc.)	Preferably tungsten filament lamps	Not more than 50 Lux (5m/sq ft) and not less if possible.

Table 3: Recommended levels of illumination for various Activities.

Activity	Type of Luminant
Reading	300 Lux-Library Reading rooms
Engine work	500 Lux-factories
Servicing	1000 Lux Factories
Instrument assembly	1500 Lux workshops

Control of Light in Museums

Lighting from above can be controlled by use of specially types of glasses such as acrylic glasses, automatic shutters, ultraviolet absorbing fitters, muslin panels, louvres, and so on, with walls made of colours that can absorb light.

Lighting from side can be controlled by curtains, venetion blind and horizontal or vertical baffles.

Artificial lighting can be controlled by using filters, and so on between light sources and exhibit and use of frosted glass.

4.5: Climatic Control and Conservation

Every museum has an obvious responsibility to make certain that the object in its care will survive and will remain intact for visitors to see in the future. The mere fact they are in a museum does not necessary reverse this. On the contrary, the switch from an environment to which the object has adapted (a wood panel from a certain humidity for example)- to the new surroundings of the museum may in itself cause considerable damage if there is no air conditioners or proper natural ventilation within a museum. Emphasis on lighting and the need for public access, always ideal for the preservation of certain exhibits. Deterioration is caused by several factors;

Decay: Decay destroy most of the artifacts in both the galleries and stores. However, museums try to exclude agencies of decay known as:

1. Humidity and temperature
2. Deleterious elements in the air
3. Fungus due moisture, etc.

4.6 Circulation

Circulation is one of the problems in museum design This aspect of museum problem is usually taking care of to prevent inconvenience of movement of three parties within the museum, viz:

i. Visitors
ii. Workers and finally
iii. Artifacts.

To achieve a good flow of movements of the three parties mentioned above, it is customary to provide separate entrances, one for workers and the other for visitors without one party inconveniencing the other. This problem is avoided in this thesis.

On the other hand, visitors are usually forced to pass through places of attractions while confidential areas closed from them through design. To do this effectively, museum is usually zoned into areas, namely;

- Public areas
- Office areas and
- service areas

The author of this piece of work try to meet up this important challenges.

4.6.1: Layout of Display Areas

Display is an important function of a museum. Basically, there are two methods of layout of museum gallaries while other areas like offices, workshops, accommodation, etc take the form of normal approach to design. These methods includes:

a. Random layout
b. Layout with introductory gallery

1. Random Layout: In a traditional museum, display is often arranged in a series of galleries of rooms. This arrangement is usually in random sequence. In this case, an object or picture could be accommodated wherever space was available. Thus large exhibits had to find where they would fit. This display ends up showing what the museum possesses, rather than what is suitable or needed. This type of arrangement sometimes confuses visitors on entering as he does not know which way to go. A unified system of guidance is usually the best at the planning stage.

2. Layout With Introductory Gallery: Visitors are usually led into the introductory gallery on entering the museum. This gallery contain display that summarised

the themes and subjects of the museuem. Now left for visitor to decide whether to which part of the display he should go. This idea sometimes create good impression on visitors making him/her urgently want to go on time to watch exhibits.

Large museums normally adopt this method. Generally, arrangement of exhibits in gallaries calls for two types of circulation and these are:

i. Random and

ii. Sequential patterns of movements within the gallery. The sequential pattern is most appropriate as it allows the visitor to itemised what he has seen sequentially. On the other hand, random pattern is suitable for subjects where browing at random called for.

4.6.2: Display Elements

There are four methods of housing a museum object within the field of vision of the observer, viz:

1. Showcases
2. Free standing on the floor, supports or prints
3. Walls
4. Panels

A: Showcases: They protect objects and also bring them to reasonable viewing heights. The protection they

offer include against theft, insects and dust completely excluded. The climatic conditions within the showcases are kept much more constant and can be altered if necessary, for example, by inserting hygroscopic material such as a silica gel.

Showcases are sub-grouped into three:

1. Free-standing showcases
2. Desk-type showcases
3. Wall cases.

1. Free-Standing Showcases: These types of showcases have hoods. They are made entirely with glass.

Have their corners listed with nylons to make the case dust proof or at least relatively so. This rests on a wooden base of cruciform pattern, thus giving a lighter appearance and perfect stability.

2. Desk-type showcases: These are grouped into two classe

i. Double sided, having on each side an inclined fibre, board movable panel resting on wooden support.

ii. One sided showcases of type (i) above accommodated on either window recesses or support on metal brackets.

Movable interior fittings allow easy alteration of display, and it is possible either to use the inclined panels above or vertical perforated firbre 'board panel at the back of the case to which three dimensional objects can be displayed by fixing glass shelves to the panels by means of clips.

3. Wall Cases: Some of these cases allow display, support and enclosure to be separated while in others, the cases are upright and access is possible from the rear. They can be hung on side of partition wall The front is a single glass panel set in a wooden frame, the sides consisting of doors opening on hinges each fitted with two safely locks.

Three dimensional objects are set on glass shelves fastened by metal chips to a perforated fibre-board backing, with a silver grey flock coating. The backing is in two sections, and slide out on rails to allow exhibits to be reached.

The advantage of this is that a whole room or part of it can become a display case by having partitions between glass cases. In some large enclosures, it can be moved mechanically by a fork lift or jack up on a trolley.

There exist also tetrahedral cases which are separated by tetrahedal cloth.

Note that reflection can only be avoided from surface of showcases by avoiding positioning them at the following:

a. Opposite a window
b. in front of a window
c. Lighted cases facing each other
d. Under overhead lighting.

B. Supports:

1. functions include holding up an object which cannot be described since wall, panel or case had done so.

2. They provide stability at a desirable level
3. They could be fixed to prevent removal
4. They help differentiate the display from surrounding

The examples of these supports include:

1. Metal floor support into separate stone base
2. Metal, trees to walls
3. Metal and stone sculptures standing other examples include
4. Wood bases
5. Curtain tracks
6. Ceiling grid and
7. Bronze legs.

Walls, floors and ceilings can be designed to have prepared positions for the location of support.

Another possibility is that exhibits which can support themselves, can be left free standing on floors, these are mostly sculptures and the like .

C. Walls: These are mostly readily available support surface in traditionally contracted buildings. Modifications of surface is possible by colour or addition of another surface for display purpose. This is particularly necessary where reduction in the scale of the setting is required.

D. Panels: Panels are additional walls or floor or ceiling planes, and service as support, background and space separator. Those got the advantage of

being moveable and changeable. It can be altered to light. The examples of these include the following:

1. Panels hinged in walls
2. Timber mounted boards
3. Block worth wall panel
4. Movable screens and timber screesn

Others include the following:

1. Supported panels
2. Glass covered recesses
3. Parrels on metal upright

Panel's provide enclusure, carry light and control circulation. Demauntable panels and panels and plywood screen incorporating top and side lighting are also available. From the above four types of display elements the first three elements have been adopted for this design with particular preference to show cases.

Chapter 5

EXISTING INFRASTRUCTURES AND THE ARCHITECTURE OF HAM PEOPLE

5.1 Existing Infrastructural Facilities

Treating this aspect is necessary to introduced us to the stage at which development has reached in Hamland. Siting this project there would therefore be an additional development to the area.

5.1.1 Roads

Most of the existing roads are feeder in nature constructed for Economic and communication purposes. Ham are bounded by the Kafanchan-Kwoi trunk 'B' Road on the South-East and Kachia-Keffi through Kwoi Trunk 'B' Road on the western part forming an apex in the South at Kwoi.

The newly constructed Trunk 'C' Roads that link the villages includes;

- Kwoi-Nok
- Nok Chori, Chori-Kurmin/Musa
- Kurmin/Musa to Sabon Sarki - Jaban Kogo
- Nok - Chori Baraki - Kuryas - Fadan Kagoma-Kafanchan
- Kwaturu - Sabon Sarki - G/Mana - Jaban Kogo-Ungwa Rimi

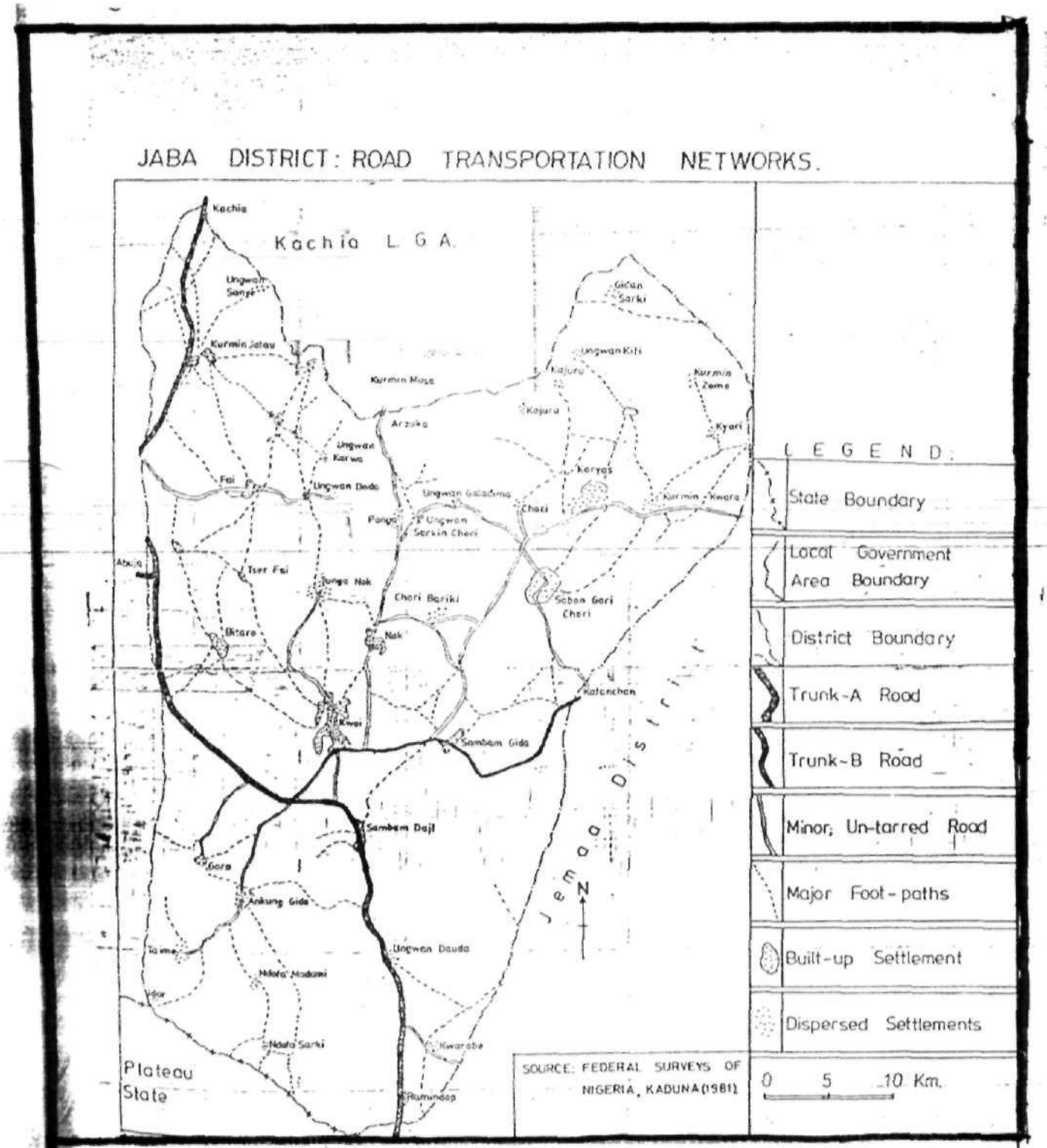

JABA DISTRICT: ROAD TRANSPORTATION NETWORKS.
Kachia L G A.
Kachia
Ungwan Sanyi
Kurmin Jatau
Kurmin Musa
Arzuka
Ungwan Karwa
Fai
Ungwan Dodo
Ungwan Gadama
Panga
Ungwan Serkin Cheri
Abuja
Tser Fai
Jungo Nok
Cheri Bariki
Bitaro
Nok
Gidan Sarki
Ungwan Kiri
Kajuru
Kurmin Zama
Kyari
Kerrgas
Cheri
Kurmin Kwara
Saban Gari Cheri
Katanchan
Kwoi
Sambam Gida
Sambam Dajl
Gora
Ankung Gida
Ungwan Dauda
Ndafa Madami
Ndafa Sarki
Kwarabe
Rumundaga
Plateau State
Jemaa District
N
SOURCE: FEDERAL SURVEYS OF NIGERIA, KADUNA (1981)
LEGEND:
State Boundary
Local Government Area Boundary
District Boundary
Trunk-A Road
Trunk-B Road
Minor, Un-tarred Road
Major Foot-paths
Built-up Settlement
Dispersed Settlements
0 5 10 Km.

Fig. 9

- Kwoi-Samban Daji, Dura - Taime
- Gora -Kwoi, Ungwan Rana-Karmin Kwara-Chori, Kurmin Jatau - Kenyi, Ungwam Gaji-Fai.
- Jaban Kogo-Gidan Jibir - Ungwan Rana
- Jaban Kogo - Gidan Maga - Zonkwa

At least communication problem is now less in the area as Trunk 'C' links almost all the major villages in the area.

5.1.2 Electricity

Kwoi being the largest town in the area enjoys the National Grid Supplied through Kafanchan. Poles have been erected already in villages like Nok, Chori, Kurmin-Musa and so on to extend the service of this grid supply to these areas.

5.1.3 Water Supply

Water requirements in the area are for domestic and municipal purposes with estimated consumption at about 25 litres per person per day. Sources of water for use include rain water, surface water and spring water. However, bore-holes have already been proposed in some villages like Nok, Kurmin Musa and Jaban Kogo while one has already been dug at G.G.S.S. Kwoi. However, a small dam have been proposed at Nok when the area is fully converted to Kaduna Tourism centre.

5.1.4 Schools

Apart from primary schools in almost all the villages, there are about 6 (six) secondary schools situated in Kwoi, Samban, Kenyi, Kurmin Musa, Jaban Kogo and Kuryas. In addition to these, is a Bible College at Kwoi that conducts adult education classes.

Over 75% of the population in the age group ranging from 12-30 years have at least attended a primary school. This is to say that the level of education is very high amongst youths and low amongst elders. At least siting a museum at Nok, apart from the benefit students from College of Education Kafanchan will gain, it would be of a great importance to the above mentioned schools.

5.1.5 Health Facilities

Health Services in the area includes:

- a maternity and child welfare ECWA Clinic Dispensary Kwoi
- Maternity Clinic Fai
- Clinics at Kurmin/Musa Jaban Kogo, Kurmin Kwara
- Proposed clinic for Ham at Nok.

With these health facilities existing in the area, it does not call for another health facility for tourist at the proposed site for this project. However, a First Aid Box is necessary at the site for urgent needs.

5.1.6: Churches and Religion

Church organisation is very high in Ham land. The number of church buildings have consistently increasing since their introduction by the Missionaries. A couple of Muslems also live within the household groups in some Ham settlements like in Gyani and Kwoi.

Churches are much involved in social life activities outside the church walls; activities like film show in schools and in public places, health activities like the ECwA Dispensary at Kwoi, the Kwoi Bible School and so on. This project too, will also help to encourage cultural and tourism activities in the area.

5.2. Architecture

The architecture of Harm is purely traditional and has been in existence from ages. Ham have a common architecture with other neighbouring tribes in the whole of Southern Zaria - Denyer Susan.

5.2.1: Settlement Patterns

This is governmed by the geographical features in the area. Villages like Kurmin Musa, and Jabah Kogo are situated on ridge formed by the numerous swift streams which form the tributaries of River Gurara and River Njeing. Ham settled in compact villages protected with walls of cactus hedges. A common Area called "village square) is normally set aside for social activities and where protection from out side aggression was assured.

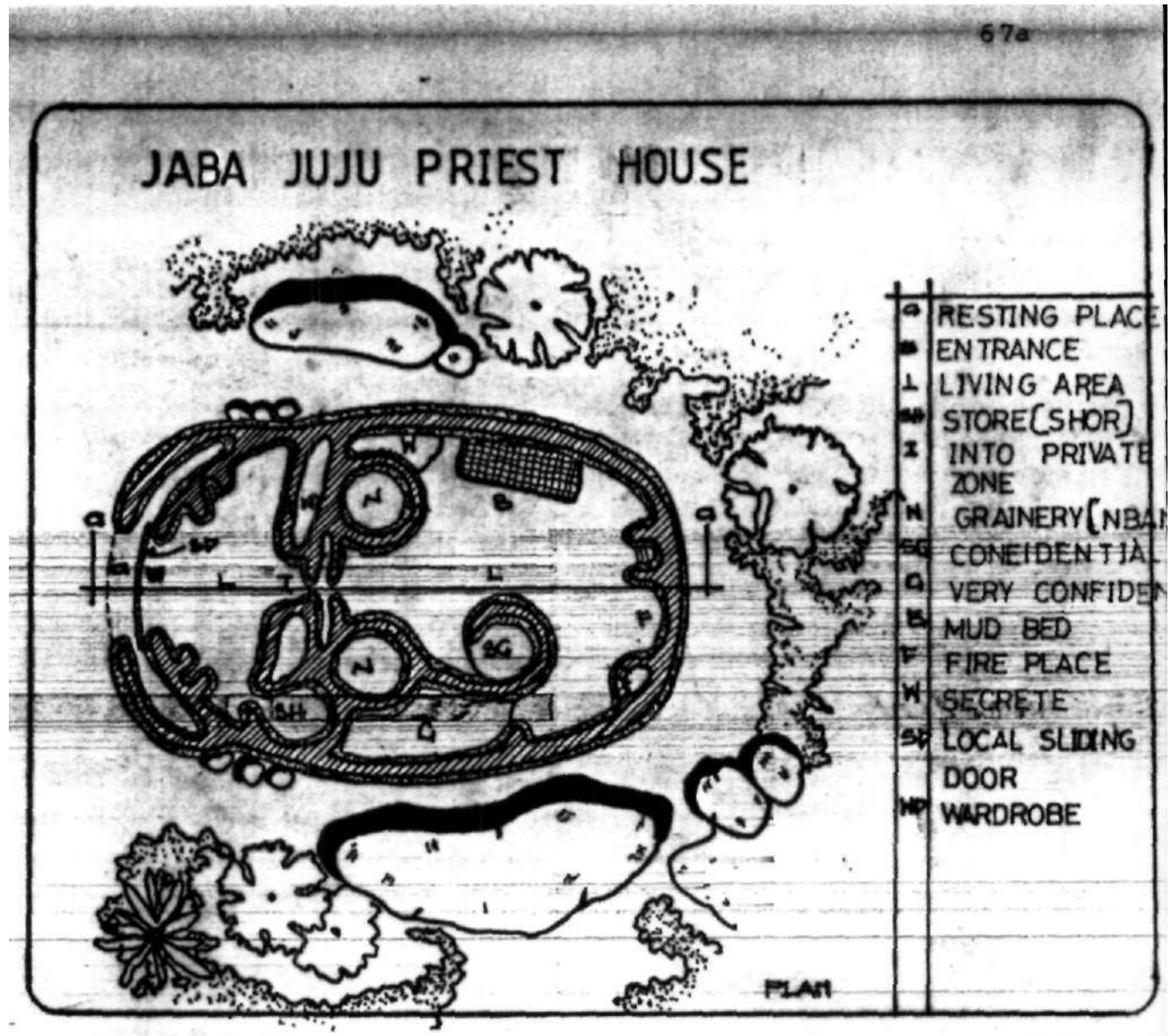
Generally, the prevailing settlement pattern is that of a cluster of small dicrete harmlet or small dispensed homestead. This settlement pattern

is encouraged in accommodation unit of this project to avoid isolation from the architecture of the environment the project is sited. And in addition, to harmonized the complex with the environment.

5.2.2 Building Trends

Architecture in Ham land has undergone a revolutionary changes from Oval building forms to round huts and from Round huts to the present rectangular forms. This style of architecture is also true of all Jaba neighbouring tribes in the whole Southern part of Kaduna State popurlarly known as Southern Zaria; viz: Kaje, Kateb, Morwa and so on. Because of the classical nature of the architecture, a historian Elizabeth Isichei, A. characterised the architecture as "an outstanding example of the exploitation of the possibilities of mud in architectural design - a house design which is a veritable sculpture of living". These building forms namely oval, round (circular) and rectangular forms are then treated accordingly below.

Oval Form : This is the oldest of all Jaba building forms. It is a self contain type of house complex partitioned into so many useable spaces, usually thatched with an inclined conical roof bend backward at an angle of about 37^{o} (See figures 10 & 11). The various partition spaces or rooms includes:


JABA JUJU PRIEST HOUSE
RESTING PLACE
ENTRANCE
LIVING AREA
STORE(SHOR)
INTO PRIVATE ZONE
GRAINERY(NBA
CONFIDENTIAL
VERY CONFIDE
MUD BED
FIRE PLACE
SECRETE
LOCAL SLIDING DOOR
WARDROBE
PLAN

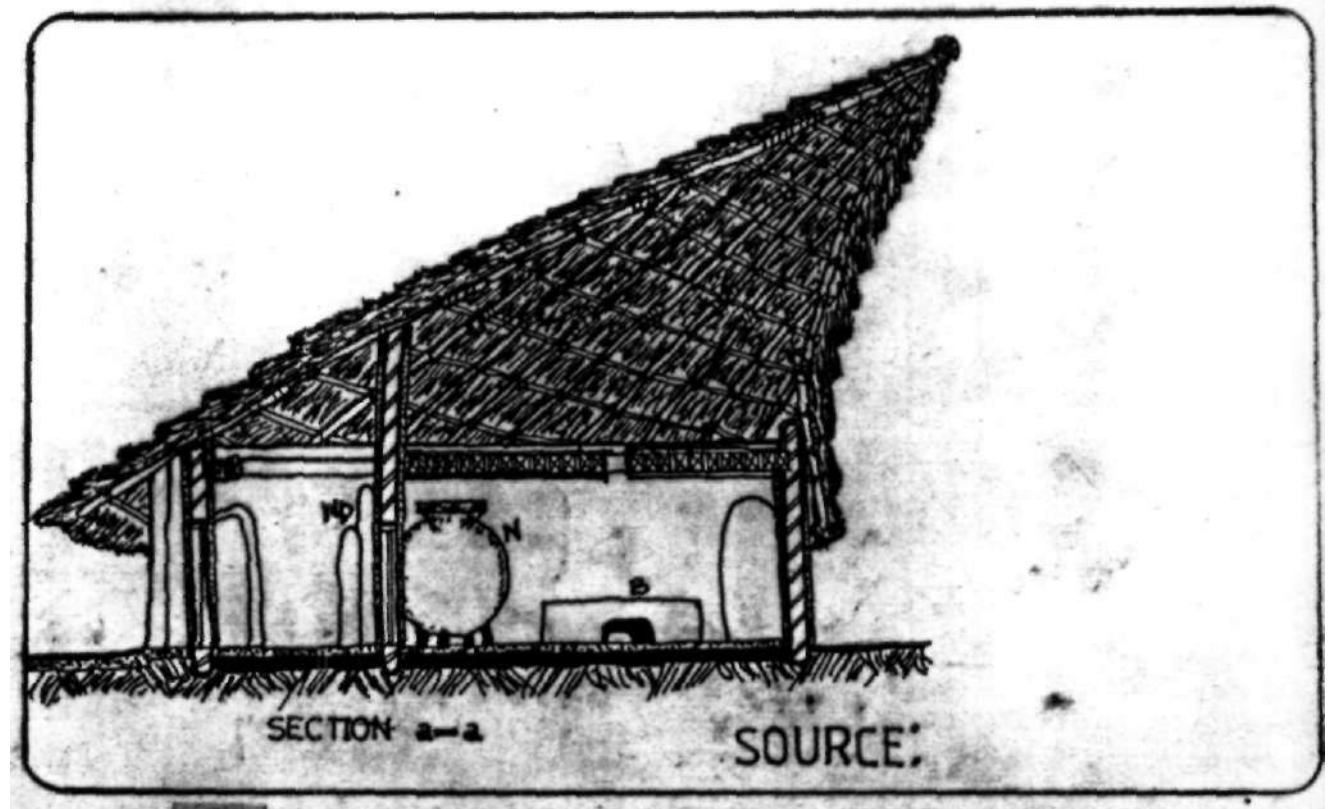
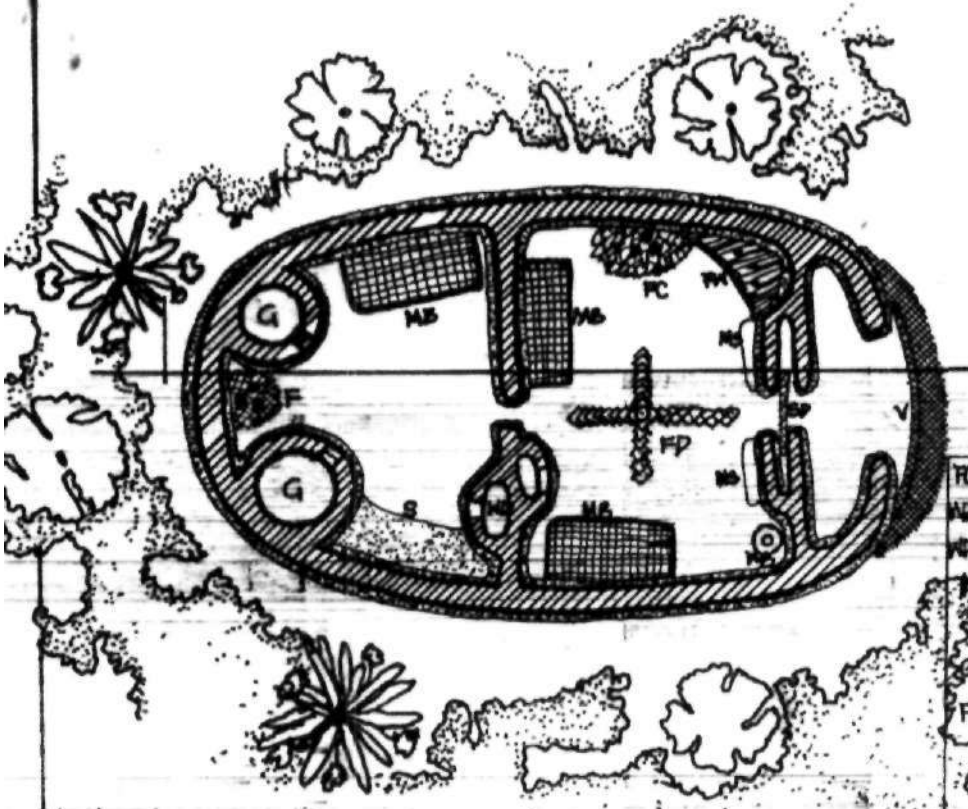
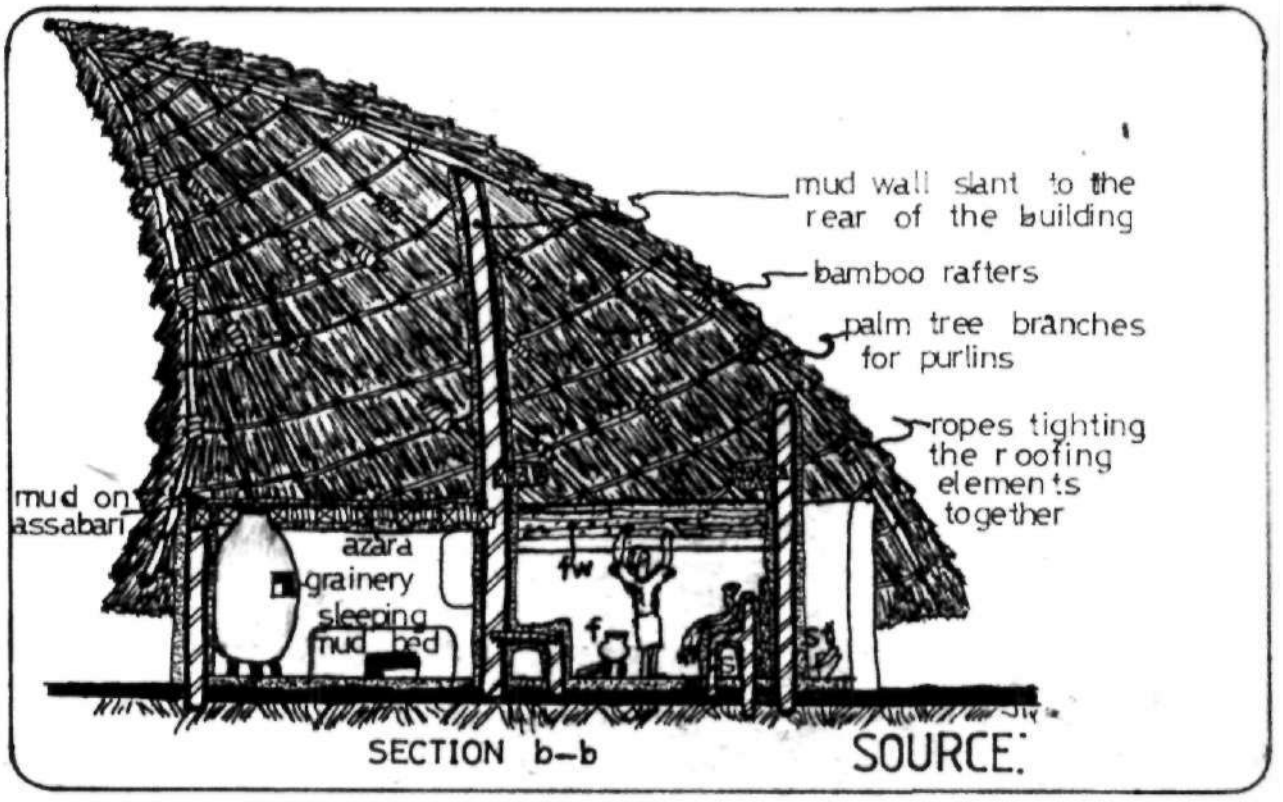

SECTION a—a
SOURCE:

Fig. 10

TRADITIONAL SELF-CONTAIN JABA HOUSE





SECTION b-b

SOURCE:

i. - storages like, granaries, water basin, firewood, others.

ii. - Sleeping spaces

iii - Relaxation place (was also used for story telling)

iv. - Cooking places

v. - Story telling place

vi. - wardrobes.

This building form is illustrated in figures 10 and 11.This building form was in those days constructed for security purpose. One can stay inside throughout the day without going out as Hayenas were going about killing younger ones who their parents have gone farming and left them behind.

The building has characteristics of thick walls, small windows (sometimes none),

Short walls, arched doors, projected eaves (usually to protect walls from rain and wind abrasion)

The function of this building form include the following;

- Use for ritual performances
- Use for the worship of ancestral spirits
- Use for the housing of juju priest (see fig. 12)

Due to security factor attatched to this type of traditional form and the desire to preserve the idea, adaptation of the concept for this project is an achievement.

Circular Form: This building form is next in age to the most traditional oval form. Unlike the oval type, it has its apex point of the roof pointing up the sky and usually conical in shape. Its characteristics involves the following;

- thick walls
- tinny openings
- grass cover(thatch roofing)

Its several functions also involves the following:

- Used for the pounding of grains during the rainy season.
- Function as a zaure (Reception Inn) or lobby
- Use for sleeping.

Rectangular Form: The indigenous architecture of the area is fast disappearing due to external influence on the culture. To be more pecific colonial era has influenced the area whereby the indigenous architecture have been substituted by rectangular form hence now dominating the whole area. Some few circular forms are still found in some compounts.

Most of the functions of this type are pushed outside, leaving only sitting and sleeping rooms inside.

5.3 Construction

Infact there is no professional specialization governing the building construction.

Most of the building works take place in the dry season allowing the whole community to fully participate in the exercise and the end result is a formation of what is called Gbeh (communal labour).

Setting-out is achieved by either using foot prints to mark the building line on the ground or by tightening a rope on a peg and fasted into the ground with a marker tight at the other end of the rope. Moving the marker on the ground at a constant radius marked out the setting outline.

5.3.1 Foundations

Basically, Ham uses two types of foundations:-

i. dug type and
ii. stones type

Dug type: In this case, the top soil on the setting-out line is removed and building wall erected directly on top. Except for granaries, this method is employed in all other types of buildings.

Stones type: Some nice selected stones are vertically fasted into the ground and some larger flat once laid on top of the verticals which a layer of mud or clay is smeared on top of the flat stones to cealed their exposed surfaces. After the mud has dried the building wall is then erected on top. This type of foundation is used for graneries.

5.3.2 Wall

Mud is used for walls. There are two methods of construction; the dry and wet type.

i. The Dry type: This method has a long process. First, the making of sun dry bricks and the casting of tubali Rectangular blocks are mostly used for rectangular buildings while tubali very suitable for the construction of circular huts. Sometimes both types of bricks are used for all forms of constructions.

ii. The Wet type: This is done in successive layers one after the other, after allowing each layer to dry a bit before the other layer is laid on top. This process is repeated over and over until the walls has reached the required height, ready for roofing.

5.3.3 Roofs

There are basically three types of roofs

i. Rectangular pitch roof

ii. Conical type sloping backward

iii Conical type pointing upward.

The materials for roof construction include the following: Bamboo, palmfront, tree branches, corn and millet stalks. These materials could be used for either rafters or purlins. Some roofs could be

constructed on the ground, thatched and later taking and placed in position on the wall. For larger rooms however, both the skeletal construction and thatching are done directly on the wall.

5.4 Building Materials

Traditional building structures in Ham land are mostly built of natural materials like wood, clay/mud, thatch grass, leaves little trace once they have been abandoned. The climate and insects quickly destroy the inhabited houses. Therefore little is known about the Ham architectural building materials.

Like most indigenous buildings in Nigeria, the Ham people use the following in their building constructions: Mud, stones, timber, ropes, thatch/grass, Bamboo, palm front sticks, Azara, laterite, corn and millet stalks.

5.4.1 Mud

Mud is cheap and available in the area, as such, serves as the most important building material in the area. Mud is a mixture of sand and clay in varying proportions. The clay provides the binding effect while the sand adds to the strength of the building.
The mud is very versatile so that almost any shape can be expressed in it, and a wide variety of roof solution are possible. For example shells, flat roofs, domes

vault etc. If the surfaces of the mud walls are well maintained, it prevent water from seeping into the cracks. They will some times out line their original builders. Laterite are also important building finishes.

5.4.2 Stones

Stones are used for both foundations and walls Some times, large stones of about 300mm to 400 mm are laid on the ground before the walls are raised on them. Fire places are usually plastered with stones. Stones are also very important for grainary construction.

5.4.3 Timber/wood

This is sometimes useful in structural construction apart from mud walls. They are used to support roof over hangs which are purposely projected too long from the wall. And sometimes wooden posts are used in the centre of any circular building with larger diameter.

5.4.4 Ropes

There are different types of ropes with different functions to perform. The functions depend on how strong they are, and the type of rope to be used is dictated by the point of application.

5.4.5 Thatch Grass

Generally, thatch is the local building materials used for roof covering of all building shapes.

5.4.6 Others

The remaining building materials includes:

- Azara, deleb stem cut into thick strips to be used as beams.
- Bamboo, palm tree-branches, corn and millet stalks, are used as rafters and purlins. Depend on individual taste and availability and so on.

Chapter 6

THE SITE

6.1 General

In the time past, siting of museums were generally chosen with an eye to the most impressive location, thus decision been made by the local province or Municipality. Today, a new dimension has been taken making museums to acquired a new importance in society as the level of education has steadily increased. This is to say, among other things, a new approach have now been adopted for siting museums with a view to attracting those who until now have never been to the chosen site for museum. Based on this new approach, siting of museums has been classified into three groups; viz:

a. Urban Areas
b. Regional or Rural Areas
c. Site Museum

In light of this, apart from the cultural importance (discussed below)ascribed to Nok village and the personal interest, the writer have for the site, the new approach to museum siting' was an additional factor that brought the idea of proposing a Site Museum at Nok. In addition, accessibility, availability of land,

proximity to towns topography, natural attractions and free traffic flow also contributed.

6.2 Factors Affecting the Choice of the Site

i. To link Nok culture to the site where it was first discovered. Since it is the most developed cultural site among the Nok sites. Cultural activities carried throughout the year.

ii. To keep the valuable findings of the Nok culture near the site of excavation in order that they should be made accessible to the public in their original surroundings.

iii. To attract workers from cities who are tired of the restless activities of the cities.

iv. Visitors will be stimulated when they see the original place where the 'finds' came from thereby creating a 'fill out' in visual impression they received.

v. There are no technical difficulties to overcome on the building process since the project is located in a local area.

vi. The most central of all the excavations sites in Nigeria.

vii Abundance of both the natural and man-made attractions like; picnic sites, caves, shrines, mysterious Nok tree, the most famous Kpopku House (Juju Priest House), Sheik Njeing (initiation forest), Natural Rock paintings, Standing Stones believed to be human beings, boat swimming and so on. Also a short distant journey take one to Jabankogo hills, Kagoro hills and many more.

6.2.1: Disadvantages

i. Some of the farmland affected.

ii. Although the site is easily accessible to traffic, some surrounding villages would have to walk some distance since they are fairly isolated from traffic roads.

6.2.2: Advantages

i. Easily accessible to traffic

ii. Good top and sub-soil which will provide good base for building footings and foundations.

iii. Has abundant natural and man-made attractions

iv. Centrally located to all Nok sites

v. Availability of land

vi. Its proximity to magnet towns and villages

vii. To create means by which the predecessors of the Nok Culture could be enhanced

viii. A step to national development as this will create employment opportunity for villagers thereby cutting down the number of those that would have left for cities for job.

ix. Has good view towards both the Nok and Chori Hills.

x. Already a site proposed for the Kaduna State Tourism Centre.

xi. Free from vehicular toxic gas and smook polution.

State Tourism Centre with particular reference to Museum at the spot this project is sited.

6.3: Site Analysis

a. It helps one to know the existing problems within the site.

b. By knowing the problems, means in turn lasting solutions can also be achieved easily.

c. To enable one to know things that are worthy to adapt for integration into the proposed design on the site.

d. It help one to know the geographical conditions of the area so as to enable one to choose suitable building materials for the design.

i. Location: The site is located in Kwoi District of Jema'a Local Government Area in Jaba land in Kaduna State. It lies between Latitudes $9^{o}29'$


SITE LOCATION MAP
TO KURMIN MUSA
R. CHORI
sch.
CHORI HILLS
gari
KWAR
5°30
5°30
Chori Barki
NOK HILLS
NOK VILLAGE
2802
2729
2765
2800
2655
RIVER NOK
TO KWOI
TO KWOI
BUILT UP AREAS
ROADS
FOOT PATH
STREAM OR RIVER
2354 SPOT HEIGHT IN FEET
SCH SCHOOL
THE SITE
AREAS LIABLE TO FLOOD
SOURCE:
SCALE: 1:50,000.

Fig. 12

and 9° 30' North of the Equator and Longitudes 8° o2' and 8° 03' East of the Prime Meridian. It is on the plain between Chori Hills and Nok Hills with Nok Hills on the South and Chori Hill on the North. However, Nok-Chori Road bounded the site towards north. On the other hand, towards chori Baraki at the East are farm-lands that bounded the site and the same thing to the West towards the Nok village.

The location of the project is central and is along one of the major access road that links almost all the major towns in the state and even the Federal Capital too. A short distance walk take one to the site from the nearby villages.

II Topography: The site is on the regional plains ranging in height from 450 metres to over 900 metres above sea level and reflecting a general gentle slope to the North. The major features found near the site include, Chori Hills, Nok Hills, Kwoi Hills, Nok Valley . Others are Jaban-Kogo Hills, Kagoro Hills, Matsirga Falls and so on. River Gurara and River Suung form the main drainage system and carries water throughout the year with most of their tributaries almost dry in the period between January and May. Streams are wide spread all over the general surrounding of Hamland.

iii Vegetation: Lies within the Northern Guinea Savannah zone having a characteristics of few trees ranging in height between 5 metres to 10 metres high. Well developed grass layer and scanty shrubs. Bush burning and grazing activities have greatly modified the vegetation cover and composition of the area.

6.3.1 Climate

A comfortable living environment will depend on maximizing the aspects of environment which reduce heat and the effect of humidity, rain and dust. Planning therefore with climate at all scales to the advantage of this design is an essential factor. After all conducive environment for the artifacts in Museum is generally recommendable.

i. Temperature: Net radiation is generally felt as a result of air temperature, which is greatly influenced by humidity conditions in the air. The Nok and Ham generally records her highest temperature during the dry seasons and temperature changes between the lowest and highest ranges about 20^{o} C (see table (4) and fig. (13)). In the rainy season however, the maximum temperature greatly lowers down due to the dense cloud cover on the sky.

CLIMATIC TABLE, KAF. 1979-82.

MEAN MONTHLY MAX.& MIN. TEMPTS RESPECTIVELY IN °C

LAT	LONG	YR	JAN	FEB	MAR	APL	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC
9°–36′	8°–18′	1979	36	37	39	37	32	30	29	28	39	32	34	34
		1980	36	36	37	37	34	30	30	31	30	37	35	43
		1981	36	37	37	—	39	37	33	29	29	33	38	35
		1982	36	36	36	36	32	31	29	28	29	30	33	36

MAX.

LAT.	LONG	YR.	JAN.	FEB.	MAR	APR	MAY	JUN.	JUL.	AUG.	SEPT	OCT.	NOV.	DEC.
9°–36′	8°–18′	1979	14	16	18	20	19	18	19	19	18	18	14	11
		1980	14	12	19	19	20	18	18	19	18	15	14	12
		1981	12	12	19	—	12	11	10	17	18	19	15	13
		1982	13	14	17	20	32	19	17	19	19	18	12	13

MIN

MAX.& MIN. MEAN PERCENTAGE RELATIVE HUMIDITY RESPECT.

AT.	LONG	YR.	JAN.	FEB.	MAR.	APR.	MAY.	JUN.	JUL.	AUG.	SEPT	OCT.	NOV.	DEC.
9°–36′	8°–18′	1979	40	57	80	91	91	95	95	100	100	95	82	29
		1980	78	66	86	100	91	95	100	100	90	95	96	86
		1981	87	80	82	—	100	100	100	100	100	96	81	58
		1982	—	—	78	—	—	74	77	91	95	—	52	38

Max.

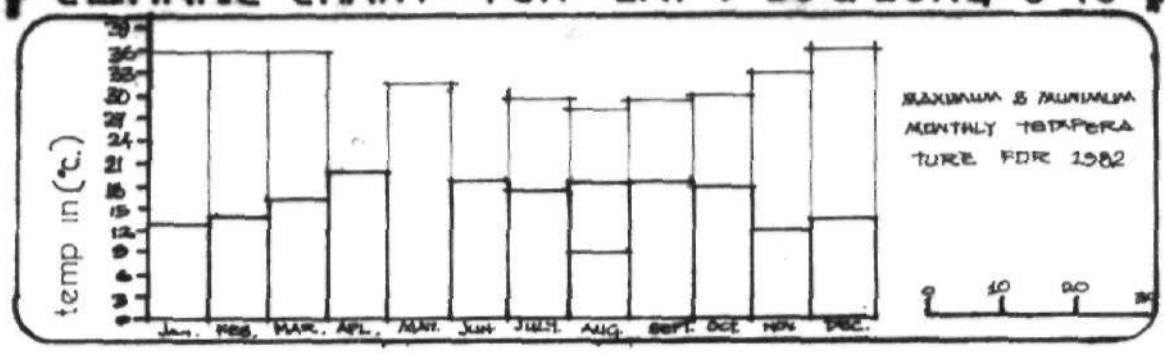
LAT.	LONG	YR	JAN.	FEB.	MAR	APR.	MAY.	JUN.	JUL.	AUG.	SEPT	OCT.	NOV.	DEC.
9°-36′	8°-18′	1979	6	5	10	15	61	66	74	78	69	70	19	5
		1980	9	7	13	24	55	70	66	77	60	48	20	24
		1981	18	20	16	—	46	64	76	71	76	39	14	13
		1982	—	—	9	—	—	78	38	76	76	—	23	NR

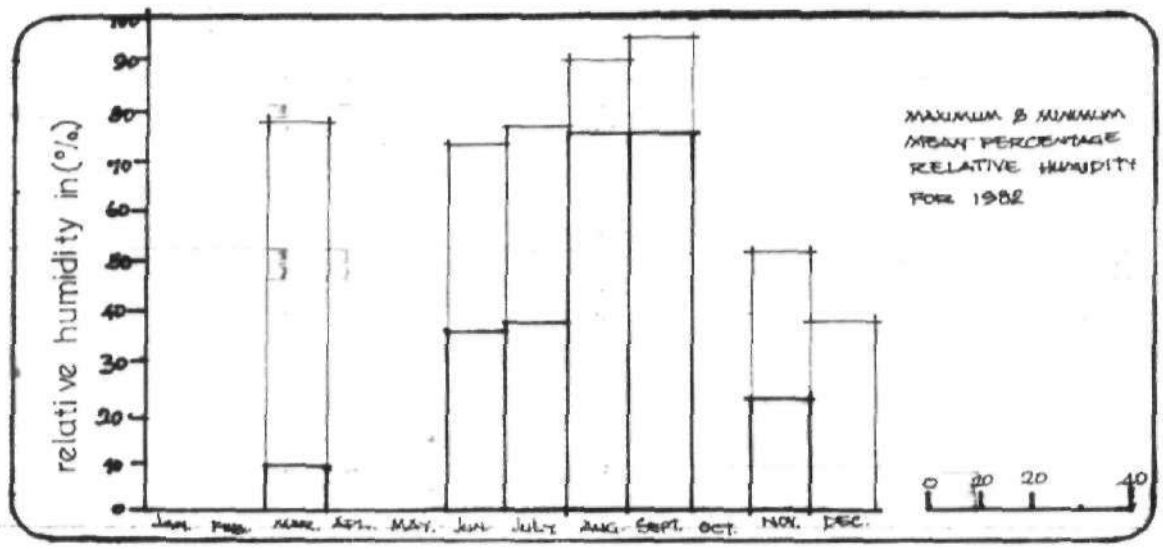
MIN

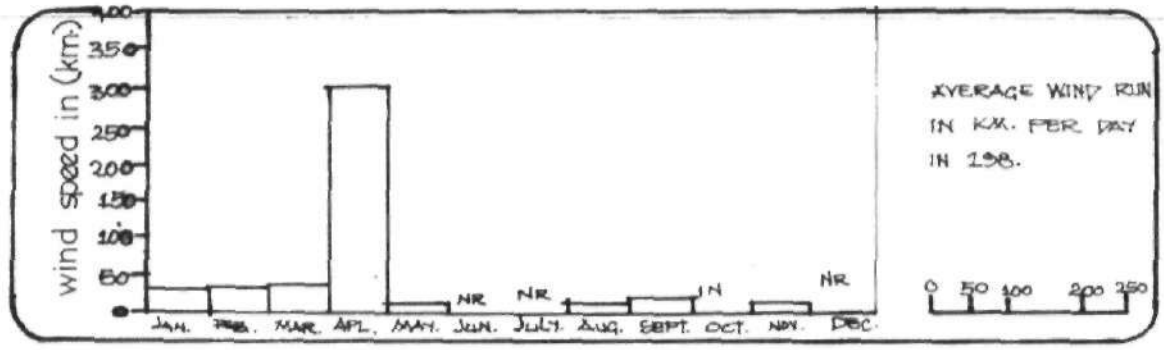
SOURCE: KADUNA STATE STATISTICAL YEARBOOK, 1983.
STATISTICAL DIVISION, MIN. OF ECON. PLANNING KAD.

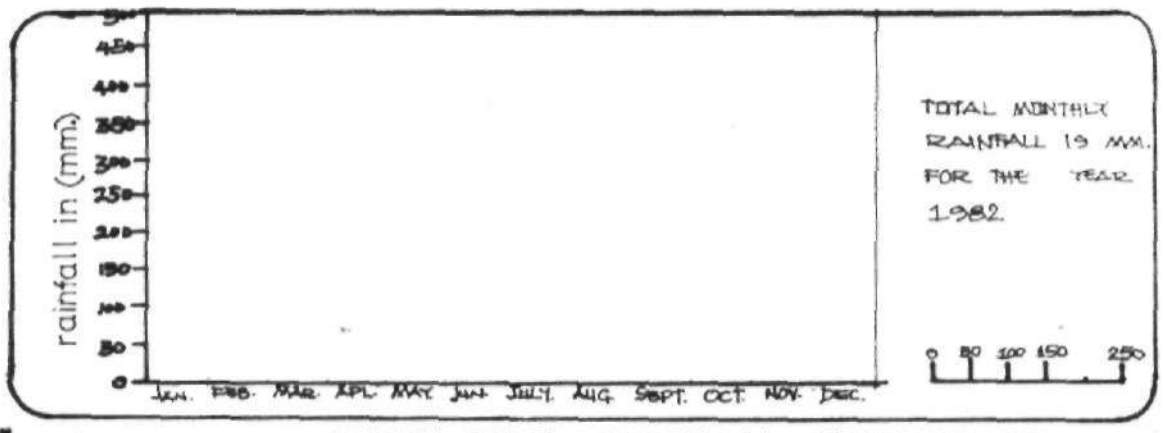
Table 4

CLIMATIC CHART FOR LAT 9°-36' & LONG 8°-18' KAF.









SOURCE: KADUNA STATE STATISTICAL YEARBOOK, 1983.
STATISTICAL DIVISION, MIN. OF ECON. PLANNING KAD.

Fig.13

DRAWN BY THE AUTHOR.

ii. Humidity: Human sensibility to temperature is greatly affected by relative humidity. During the dry season, relative humidity falls in the afternoon. On the other hand, relative humidity is higher, especially in the morning hours when it can reach its peak point, (see table (4) and fig.(13).

iii. Wind: There are basically two types of air masses that blows across the site due to wind.

a. North-East wind, mostly dry, and continental in origin and brings hamattan.

b. Wind from Atlantic Ocean from the South-West direction, mostly equational maritime in nature brings rain.

The North-East wind is higher in the dry season while the South-West wind dominates the rainy season. (See table(5) and figure (13)).

iv. Rainfall: This season is usually between months of May and October ending and sometimes extends to November. This is to say that Ham enjoys less rain compare to dry season that usually accompany by high sun shine. The total monthly rainfall is shown in both table (5) and figure 13).

KAFANCHAN CLIMATIC TABLE 1979-1982

AVERAGE WIND RUN IN (KM) PER DAY

LAT.	LONG	YR.	JAN.	FEB.	MAR.	APL.	MAY.	JUN.	JUL.	AUG.	SEPT.	OCT.	NOV.	DEC.
9°–36'	8-18'	1979	268·13	42·46	59·50	51·18	34·78	28·85	23·91	20·32	31·92	21·05	20·97	212·12
		1980	45·46	38 76	49 46	44 07	36 85	37 25	27 25	33 58	36 53	33 70	26 70	42 85
		1981	51 56	42 93	57 92	—	56 91	38 56	38 56	24 91	26 86	13 73	20 69	21 47
		1982	33 43	34 73	39 24	30 47	8 89	NR	NR	10 95	16 98	IN COMPLET	14 74	NR

N.R — NOT RECORDED

MEAN MONTHLY RAINFALL IN (MM)

LAT.	LONG	YR	JAN	FEB	MAR	APL	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC

SOURCE: KADUNA STATE STATISTICAL YEARBOOK, 1983.
STIATISTICAL DIVISION, MIN. OF ECON. PLANNING, KAD.

Table 5

6.3.2 Geology and Soil

i. Geology: The area is largely under laid by undifferentiated precambrain basement complex formations comprising igneous and metamorphic rocks. The superficial deposits include:-

a. Older alluvium and

b. Younger alluvium deposits.

a. The older deposits is composed of fine grey-brown sands,clay,red - sands and gravels of between 45-120 cm thick in the general surrounding of them.

b. The younger deposits consists of grey brown sands, silts and clays of up to 90 cm thick on Hamland. For economic, laterate of various ages are used extensively for road surfacing as well as for wall building. Building material including crushed stone from the older granites. Pottery and block manufacturing material like Kaolimitic gneisses and fragments of granitesare available.

ii Soil: The soil is grouped under Zaria soil which have covering material of about 420 cm in depth. Generally, the area is water logged with heavy rains and dry out with cracks during the dry season. There are two types of alluvial soil;

a. Alluvial sand associated with the low laying area adjacent to the major rivers - Gurara, River Suung, Chori, Nok, and Kuryas.

b. Alluvial clay consists of some metres of grayish white loamy coarse sand with layers of gray heavy mottled clay occuring at verying depth within the profile.

6.3.3: Site Concept

In order to make best use of the site, a site conceptual planning is necessary. This factor is achieved in this project through grouping facilities of like functions. These groupings are;

a. Office areas
b. Public areas and
c. Service areas.

To separate public from staff vehicles bringing in artifacts to the complex two entrance roads are tapped from Chori - Nok Road to the site. This is done to avoid constant disturbance of the two parties mentioned (public and the management) above.

Chapter 7

DESIGN REPORT

7.1: Design Brief and Definition of Functions

A careful study of standards based on Museum Standards in Nigeria was done and used for the grouping of the related functions for effective functioning of the complex. However, where the standards were not available, (museum being a dynamic institution undergoes changes in terms of facilities, design and the like any time), as such, as much as possible the concept was kept loose, open and experimental rather than arguing from one success that all Nigerian Museums in similar areas have similarly planned.

Grouping of Functions: For effective functioning of the complex and good use of the facilities provided, functions have been grouped into three areas, viz:

1. Public Areas
   - Car Park
   - Entrance Hall
   - Box Office
   - Cloak Room
   - Exhibition Galleries
   - Education Service
   - Home of Crafts
   - Catering Service
   - Shopping

- Amphi Theatre
- Childrens Park
- Recréation and Resting

Office Areas:

- Car Park
- Administration
- Management

Service Areas

- Unloading/Parking Bay
- Workshops
- Stores/Reserves
- Laboratories
- Curators Offices
- Transport service

Definition of Functions

Entrance Hall: This is clearly pronounced from the approach for easy recognition of access into the building by visitors coming to the complex for the first time. Visitors find their way into the building through this entrance. Three entrances are provided, public, staff and the other through the restaurant. The separation of these entrances was necessary to avoid inconvenient the two parties (staff and public) Security guards are also kept at the entrances to monitor the movements of visitors.

Reception : Visitors are received at the reception hall by a receptionist on entering the entrance hall.

Facilities provided here include souvenir shop, box area (or ticket table) and Introductory exhibition to guide visitors on types of exhibits contain in the galleries and elsewhere within the complex.

Box Area/Ticket Table

Box area otherwise known as the ticket area is located at the reception hall for visitors who will like to go from the exhibition galleries to chargeable entertainment areas like Amphi-theatre and so on.

Cloak Room: This room is provided attatched to the galleries where visitors keep their belongings before allowed into the exhibition areas to avoid theft, smuggling and accidental damage to exhibits.

Exhibition Galleries: This is where exhibited antiquities are kept. This area take 50% of all the antiquities under the management care, while the remaining other 50% for reserves. In this design, three types of exhibition galleries have been provided namely, temporary exhibition gallery, History Archaeological and (Modern and Contemporary Gallery).

Home of Crafts: These include working areas where crafts can be made and sold to the general public. However, these areas are rental working areas for craftsmen; A nice courtyard is provided for resting and relaxation. Provision for outdoor work by craftsmen are also made. Types of crafts provided include pottery or ceramic works, wood carving, calabash decoration,

smithing, matting and weaving, traditional hair plaiting and so on.

Catering Service: This cater for visitors food services, snacks and drinks in restaurant and bar.

Shoping or Shops: Building enclosure where goods in form of special commodities are sold. Shops available within the complex include Museum of Nok souvenir shop, provision shop and crafts shops.

Amphi Theatre: This is an open Air theatre with the auditorium exposed to the sky with a platform stage extending into the open auditorium. Here, activities like theatres, traditional dances, drama and many others are performed, audience faces the performing area. While the back stage otherwise reharsal stage is behind the performing stage. Facilities here include; toilets, dressing rooms which could also serve for storage, entrance Hall inside which is a Box table for the sales of tickets to visitors and finally an outdoor car park.

Children's Park: This is children's museum, so to say where activities such as story telling, arts and crafts, and indigenous games are provided for children.

Recreation/Resting: These are the refreshing and relaxation areas in open areas. Facilities like sports, and swimming pool are provided. Picnics and sight view also are part of recreation.

Administration: This covers everything involved in administrative service and is made of personnel management, budgetary management and render general services, and so on. Director is the one in charge of administration and has his office on the first floor while his assistants office is located on the ground floor close to the reception hall for visiting specialists. Specialist can also be directed to the Director's on issues that the Assistant Director cannot resolve.

Management: This is provided to cater for all practical and technical tasks involved in the proper functioning of the museum.

Workshops: This term covers all areas in which production functions are carried out. However in this design, laboratories are incorporated into workshops. This will partake the maintenance and production of showcases for exhibits and many others.

Stores/Reserves: Stores are provided to stock ordinary consumer goods necessary for proper functioning of the museum together with equipments necessary for the maintenance of the building. The reserves however, are devoted chiefly to the storing of the exhibits that are not on display.

Laboratories: When antiquities or archaeological findings are brought from the field, they pass through the laboratories for chemical treatments against climatic

conditions for weather resistance. Broken artifacts are also repaired and restore and coated with weather resistance chemicals and against insects that destroys artifacts. Research works for conservation of artifacts necessary for the proper functioning of the museum and the careful study of the chemical contents of artifacts are usually carried out in the laboratory and usually placed near the stores/Reserves and workshops.

Curator: Curator is responsible for collecting, buying and taking care of the exhibits. Some technical and attendants work hand in hand with the curator.

Transport Service: The service of the Transport Operation Agency (TOA) is hoped to rendered to tourists for sight-seeing in all the Nok sites in Nigeria and other tourists attractions within these states. viz: Kaduna State, Plateau State, Benue State, Niger State and Federal Capital, Abuja - Operation tour roads linking all the important towns in Nigeria is provided to meet this demand. Drivers from this section are also assigned the duty of driving curators to fields for field work. (See figure 10 showing tourists attractions in Nigeria).

Photographic or Documentation Shop: This is provided to documents the Nigerian Cultural Activities other than the Nok findings through production of films, slides, photographing, sound recording and other visual aid materials including graphic arts. Therefore the

basic functions of the units is for fieldwork architectural, archaeological and social events video taping.

Accommodation: This is intended to provide tourists and excursionists sleeping places and for artists who will come from distance places and will stay for the period of time required. A common store for furnitures is also provided.

Education: This is intended to provide facilities for learning to educate visitors on the importance of Nigerian cultures and the like through film shows, video, entertainments and enquiries about moseum are also intertain in this section.

Archives: This unit is like a library. The Nigerian cultural records are kept. With special permission tourist could be allowed into this building enclosure for historical informations. Important secret documents (kept confidential from visitors) are kept.

Library: This is purely for research reading, Information and references. Books are only loaned out to staff running the complex while visitors can use it but no borrowing.

Restaurant: To break the old tradition that museum is solely a place for the display of antiquities, this provision is made to give visitors a sort of rest

refreshment point. This is designed in such a way that visitors are forced to pass through the restaurant. However, those not willing to enter have an alternative to either reverse to the main entrance or from the home of craft one can go direct to the amphi theatre for entertainments. This facility is provided to pull people to the complex for a better market.

Restoration/Preservation:Antiquities are kept and well catalogue in both the laboratories and stores for these purposes. Here, antiquities are dust free on cleaning at some giving intervals.

Landscape: The surroundings and courtyards of the complex are lanscaped for the following reasons;

1. To act as a stabilizer for the sites micro climate conditions.
2. To filter dust and smoke (if any) carried by wind across the site.
3. To act as noise breaker for the complex
4. To direct visitors within and surround the building complex.
5. To enhance aesthetics within the complex.

Security: This is provided to protect Museum priceless objects from stolen. As such, security guards are distributed at all entrance and exit points in the complex.

For fire protection, adequate number of fire extinguishers are provided at all points. This is also taking care of through the imposing use of inflamable building materials.

Table 6

8.1.1: Schedule of Space Requirements

	Facility	Remarks	Area in (M^2)
A(1)	**Public Areas**		
	Entrance/Reception Hall	1	225.00
	Sourvenir shop	2	35.00
	Museum Guide Co-ordinator	2	42.5
	Cloak room	1	66.5
		6	369
A(2)	**Exhibition Galleries**		
	Temporary Exhibition Gallery	1	180.0
	History Archeological Gallery	1	270.0
	Modern and Contemporary gallary	1	360.0
		3	810.0
A(3)	**Library**		
	Reading/Reference	1	101.5
	Librarian		16.0
	Photostat room		13.5
	Projection/room		35.0
	Lecture room		94.5
	Store		40.0
			299.5
A(4)	**Archive**		
	Archivist		16.0
	Reading/Reference		32.75
	Storage		30.0
			78.75

Home of Crafts		
Smithing	2	57.83
Beads and Metal Works	2	30.00
Pottery or ceramics	2	57.83
Calabash decoration	2	57.83
Wood Carvings	2	56.83
Craft material shops	4	117.50
Traditional Hair Plaiting		72.00
Open Yard		88.31
Circulation	30% of the total	116.24
Hair styles display Area		16.00
		720.37
Amphi Theatre		
Auditorum	6.45x500)	225.00
Stage proper	0	78.00
Back stage	1	40.00
Changing or dressing room	2	55.00
Security Post	1	4.00
Entrance/Box space	1	33.00
Resting or waiting area	Under the Auditorium	225.00
Toilets (men & Ladies)	14	45.00
		705.00
Shopping Stores		
Museum of Nok Souvenir shop	1	22.50
Photo shop	1	29.25
Provisional shop	1	27.00
		78.75

Restaurant		
Entrance Foyer	Shared with Bar	
Lobby	-do-	40.00
Dinning	1.3 x 85	110.53
Service Centre	20% 110.53	22.11
Kitchen	60% of 110.53	66.32
Store	1	55.26
	Shared with Crafts	294.3
Bar		
Drinking (The Bar) area	1.3 x 82	106.6
Service	20% of 106.6	21.32
Store/Empty cattons/liquor		63.96
		191.88
Accommodation		
1. 2 bedroom circular chalets (Cluster of 5)		2374.8
2. Single bedroom rectangular chalets (cluster of 8 chalets)		1960.0
3. Cluster of 7 double bedroom chalets		1420.5
4. Chief porter		150
5. Asst Porter		12.0
6. Furniture Store	2% of 5755.0	115.0
Car park (62 cars x 18)	1116.0 +	5897.1
	-	7013.1

Refreshing Areas		
Lawn tennis	2	1800.00
Volley Ball	2	1680.00
Swomming Pool/Changing rooms/Surrounding		8160.00
Traditional activities square	1	2586.00
Picnic sites	Outside the complex	
Resting		3196.0
River Swimming	Outside	
		17,421.0
Children's Park		
Play area for 202 children	2	
Story telling area	3	
Craft area (weaving, painting)	2	
Hidden space	4 x 18	72.00

Total Area Public:

B OFFICE AREA(Administration)

1. Facility

Secretary (Director	1	27.00
Secretary (Asst Director)	1	21.00
Director	1	47.00
Asst. Director	1	30.00
Education Officer	1	22.00
Asst. Education Officer	1	22.00
Meeting Room	1	56.00
Confidential Store	1	25.00
Toilet		92.00
		279.00

B	**Management**		
	Accounts	1	30.00
	Accountant	1	22.00
	Cashier	2	22.00
	Purchasing Officer	1	22.00
	Assistant Purchasing Officer	1	22.00
	Service Area(Workshops / Laboratories)		
	Workshop (wood/metal) store	1	140.00
	Drawing room/Architect	1	55.00
	Printing room (Lab)	1	108.00
	Darkroom	1	30.00
	Photographic room (laboratory)	1	76.50
	Graphics office (Lab)	1	49.00
	Documentation (Lab)	1	38.00
	Film/Photographs drying	2	52.00
	Research Lab	1	103.5
	Chemical Store	1	32.0
	Restoration/Store	1	120.0
	Curator-Archaeology	1	22.0
	Curator-Documents	1	17.5
	Curator-Restoration	1	17.5
	Curator - Research	1	17.5
	Curator-Ethnographic	1	20.0
			898.00

Stores/Reserves		
Othnographic	18.75% of 540	101.25
Tixtiles ·	18.75 - do -	101.25
Archaeology	22.45% of 540	121.25
Iron beds/Metal works	15.05% of 540	81.25
Others	11.12% of 540	60.00
Stones	13.88% of 540	75.00

Transport Service			
Car Park (Luxurous/Small cars)	15x16 x 33 15x 6 x 3		990.00
Car Hire Office	1	20.00	
Sites trip planning office			12.00
Transport Operation Agencies		20	12.00
Car Repair Room (Bay)/foiling		3	100.00
Chief Mechanics		1	21.00
Asst. Mechanics		1	18.0
Maps Room		1	16.0
Toilets		8	12.0
			1201.00
Circulation = 60% of 1201 =			720. 0
=			19216m^2

Security Service		
Chief Security Officer	1	18.00
Asst. Security Officer	1	12.00
Property lost and Found Office	1	18.00
Security Guards	24	12.00
Telephone Boot		4.00
Identity Cards Issuing Office	1	16.00
Car Park	10 x(3x3)	180.00
		260.00

7.2: Design Consideration

These intends to give a brief detail of the project from the stetch to the final stage of the design.

7.2.1: Site and Design Concepts

i. Site Concept: For effective utilization of the size, the concept of site zoning was adapted to encourage better functioning of the complex. This was achieved by grouping the related facilities into three areas namely public, office and service areas. In doing this, the writer try to locate the public areas towards the Nok village so that villagers could equally benefit from some of the facilities provided for public use in the complex. Tourists accommodation being part of this public areas is also located towards the village so that settlement will be in the same direction. Attractions are concentrated towards South and North of this area thereby making it easy for tourist to find their way to picnic sites.

On the other hand, service area is located away from the public and office areas to separate noisy area from silence area. This was achieved by allowing the South-West and North-East wind to blow the noise from these areas (public and office).

Office area which is contained with the facilities that coordinates the affairs and see to the smooth running of the complex was therefore located in such a way so as to link both the public and service areas respectively.

ii: Design Concept: The Ham (Jaba) Traditional oval form (see figures 13/14) . Concept of self-contain within which a single perimeter wall and one roof contain what a typical Jaba man would need to keep him within the house for a whole day and at the same time a security measure against his enemy was adapted with modifications to suit this design. The modifications involves the following:

1. Intentional breaking of the continuous roof to achieve security against fire spread (which was lacken in Jaba oval form) within the main design.
2. To provide courtyards that will invite good scenery through proper landscape and to create micro-climatic conditions within the complex for proper ventilation.
3. A means through which weather resistant sculptures could be displayed outside.
4. To achieve the separation of the areas earlier mentioned above in the site concept.
5. A place where craftsmen could sit and work for visitors to see them at working process.

However, a single perimeter wall surrounding the main design was maintained with all the writer had in mind enclosed within this wall. Recreational otherwise leisure activities are provided outside the main design building and properly landscaped just like the relaxation and play ground space Jaba people usually provide by their houses . Story telling, dancing and so on usually take place here. Swimming pool, sporting, children's park and so on supplement this idea.

7.2.2: Site Planning and Service Drawing

Site Planning: The complex has a traditional touch in planning. There are two vehicular entrances into the complex. This was done to separate public vehicles from those bringing in artifacts and the like into the complex. One of the roads (public access) separates the recreational facilities from the core design to serves the amphi-Theatre, security office, tourist accommodation general parking area and restaurant. The public entrance to the museum is prominently facing the Nok-Chori Road for easy identification by visitors coming to the site for the first time and directly accessible from the main road. Public car park is provided in front as well, while paved walkways linking the parking leads the visitor to the entrance hall or the amphi - Theatre.

On the other hand, recreational area is planned in such a way that people walking along the Nok-Chori Road could see activities going on. The restaurant and Bar which shares the same entrance are both facing the recreation areas so that people enjoy themselves in the bar and restaurant can as well see the activities going on.

Accommodation chalets are planned near the recreation area so that visitors will not find it too difficult task to reach the place. These chalets are located towards an openning space around where the attractions are concentrated towards the Nok village. In the site concept we were made to understand too that the chalets were placed in this direction so that settlement area is defined between the villagers and the accommodated tourists.

To achieve traditional touch the chalets are clusterly planned with walkways linking each cluster. A common play ground (Yehl in Jaba or Dandali in Hausa) is also provided around the residential area. And finally, a common or general car park is provided for visitors residing in the chalets.

To ease the problem of transfering artifacts from the stores to the galleries, the stores/Reserves are place near the galleries, workshops and laboratories.

Furthermore, each cluster has a courtyard and among the thirteen clusters, each is easily identified by the alphabetical letters labelled against each of them. This labelling ranges from 'A' to 'M' while chalets in each of the clusters is call by the name of the chalet (e.g. cluster A will have chalete call A1, A2, A3, A4, and so on).

Proper ventilation was achieved through proper orientation of the buildings and location of the openings This is discussed below. Buffer zone have been planted in the direction of wind to filter dust, and noise to the buildings. They also shed buildings from the west-ward sun.

(ii) Service Drawing: The site gently slopes towards Nok-Chori road and all the drainage gutter provided to collect the water and later taken to the road facing the approach to the complex to join the main drainage system.

The sewage pipes provided to drain waste from toilets and follows the same pattern as the gutters except that septic tanks are provided as indicated in the service drawings to the central sewage system since there

is no provision of central sewage system in the whole area.

Water supply take a different dimension since the site is gently: elevated from the proposed water main supply from the proposed Nok Dam, provision is therefore made to store water tank at the higher point as it is seen in the service drawing. From this tank, water is then distributed to various blocks within the complex.

On the other hand, rain water collected from roofs find its way from the roof's slop to the gutter and finally join the main drainage system.

7.2.3: Access and Transport

1. Access: In planning for any Museum, especially museum like this type having tourism taste catering for large groups of people, particular attention has to be given to access, and in addition to parking and reception.

Good vehicular access and addequate parking arrangement for vehicles is essential for two reasons:

To prevent vehicles from creating difficulties or hazards for other visitors and

at the same time to clearly lay out pedestrain access from the street (as has been done in this design for pedestrains).

Therefore, in the site planning above, two access roads have been tapped from the Nok-Chori Road into the complex to prevent the occurance of the problem mentioned above i.e. difficulties and hazards for other visitors. On the other hand, this is also achieved by providing de-congested parking spaces for turnings and reverse. This important point is discussed shortly below.

i. Transport: After considering the accessibility of tourist into the complex, it is equally important to know how tourists could be taken to all other Nok sites and other attractions other than the Nok sites in states affected by Nok culture in Nigeria. To solve this problem, a transport operation unit is provided to take care of that.

Kaduna State Government has just bought about (36+) commercial inter-city buses out of which in my proposal I recommended about 15 buses for the Museum to cater for tourist coming and going out of Nok to other Nok-sites in other Nok states mentioned in chapter one above. Accommodation is also available for tourists to Nok village. For those going outside Nok village, Hotel accommodation arrangement is made with the Hotels Board in the states capitals of all the Nok states, to accommodate tourist away from Nok.

Hire cars are also available. Drivers in the transport division drives the hirers and not they themselves as some of them may disappeared with cars if allowed to drive themselves.

7.2.4: Car Park (Parking)

Car parking depend to some extent on the proximity and conditions of use of other alternative facilities provided within the complex. There are basically five parking spaces in the whole complex.

1. Public car park at the public entrace hall
2. Car park provided for Amphi-theatre and restaurant and bar
3. Car park (garage park) for transport unit
4. General parking space for accommodation
5. Vehicular delivery bay at the service yard.

Transport unit and delivery vehicles have the same access road separated from that of the visitors due to additional requirements may be by contractors requiring access often for the artifacts and or exhibits brought by them to the site.

7.2.5: Entrance

In this design, the main entrance facing the Nok-Chori Road was made very inviting, prominent and clearly indicated for easy recognition by strangers to the site. The identity of the entrance include:

1. Traditional entrances, one in front and two others, by sides all accessible to the main entrance hall.

2. The replica of Nok terrocottas are clearly fixed to the tall wall having the shape of a mountain or hill for easy identification by tourists, when looking from a distant.

3. It reflects the nature of caves on Nok and Chori Hills. Going into the entrance hall will mean as if one is going into a cave which has a void or wide opening inside.

7.2.6: Circulation

This is discussed in 8.2.3 above archieve and lecture room on the first floor or keep on moving on the ground floor to other exhibition galleries where sequential circulation has been made for proper understanding of the objects within the galleries so that at the exit point one would have gathered a sequential link of exhibits from those days to the present time.

7.2.7: Display(Outside and Inside buildings)

Outside Display: In this design only the open courtyard open to the amphi-theatre have provided with free standing weather resistant sculptures permanently fixed into the ground and as such does not require any special form of lighting, ventilation and so on.

Inside Display: This is done inside the exhibition galleries. In this design, three types of display have been achieve throughout the exhibition galleries. These include; showcases, free standing on the floor, and walls. These types of display have previously been discussed in chapter (5.6.1) above.

7.2.8: Lighting

In this design, natural light has been given great attention to reduce cost and in order that exhibits could be seen in their natural appearance. However, artificial lighting is used minimizely on objects that call for it.

This is achieved in this design through lateral side natural lighting through the use of windows. This type of lighting was chosen because of its numerous advantages partly listed in chapter (5.4) above.

In reserves the same type of lighting is also used. Both the galleries and stores/Reserves high windows were chosen with some few normal windows at some places. Acrylic glasses have been used to filter the ultraviolet effect of light rays on exhibits

7.2.9: Security

To achieve a good security network in the whole complex, and galleries pecifically, the following measures have been employed.

1. Guards and police have been distributed to all sections and gates in the whole complex.
2. Fixing and secure show cases have also been used to prevent the removal of the exhibits.
3. Openings to the outside perimeter wall of the complex have been minimized.
4. Incombustible materials were used to prevent fire spread.

In addition, fire exintinguishers have been distributed all over the complex as a measure against fire outbreak. Halon 1301 modern fire extenguishers been employed for this job for their effective functions.

Cloak room was provided for visitors to keep their belongings before allowed into the galleries as these could easily cause accidental damage on exhibits.

7.3: Building Materials

Materials used throughout the complex includes; Concrete, steel trasses, stone facing, laterite,thatch grass, terrazzo, rubber tiles, rubber carpets and foam carpets.

Floors: For durability, fire resistance and a measure against slippery, the tarrazzo is used on the following floors; viz:

1. Exhibition galleries
2. Amphi-theatre
3. Stores/Reserves
4. Laboratories and Workshops

To reduce noise in offices, bar, restaurant, rubber tile's was used on floors. For chalets, cement screed covered with rubber carpet, was used. While laterite was employed for floor in the Home of Crafts to achieve traditional effect.

Walls: Sandscreed bricks and stone facing for walls. Stone facing is used for the chalets while the remaining walls contain concrete frames for stability, durability and fire resistant. To minimize sound in the lecture room, coak material is used to cover the walls to absorb sound of the projector. Advantage of stone facing is that it has a traditional touch and cheap while concrete is a good fire resistance material.

Roofs: Except for entrance conopy at the main entrance and restrurant/bar entrance, and chalets canopy that have concrete, all other roofs in the complex have been constructed from steel trusses and timber.

Steel trusser are durable, resist weather conditions and good fire resistant. Hardwood is used on Home of crafts and chalets to minimize the cost of material.

Ceiling: Ceiling boards used on galleries, amphi theatre, work shops, laboratories, offices (top floor) Home of crafts to serve as an insulator against heat. Through roofs.

7.4: Drawings

These are the final work of the project reduced and bind together in this write-up.

7.4.1: Site Plan

One site plan covering the whole complex was produced. In this plan the following building units are seen. The main building block of the musuem in which you find offices stores/Reserves,Home of crafts,Restaurant/Bar Amphi-Theatre, provisional shops and finally the exhibition galleries, Transport operation unit, Security office, swimming pool, sporting facilities, chalets comprising a circular huts, rectangular types(all planned in cluster), children's park, and the traditional activities square, and generating house.

7.4.2: Plans

There are five plans altogether two for the main design (ground and first floors),the circular chalets, and two other rectangular challets plans.

7.4.3:Elevations

There are seven elevations, four for the main design, the elevations speak for themselves, showing changes in levels to pass the message across to people that culture is dynamic - it changes with time. To respect the nearby features to the site, the entrance wall take the form of a hill with arches like caves accessible to the building.

7.4.4: Sections

There are six sections, four for the main design and two for the chalets.

7.4.5: Perspectives

- An aereal perspective of the museum.
- An aereal perspective for the circular chalets.
- Interior perspective.

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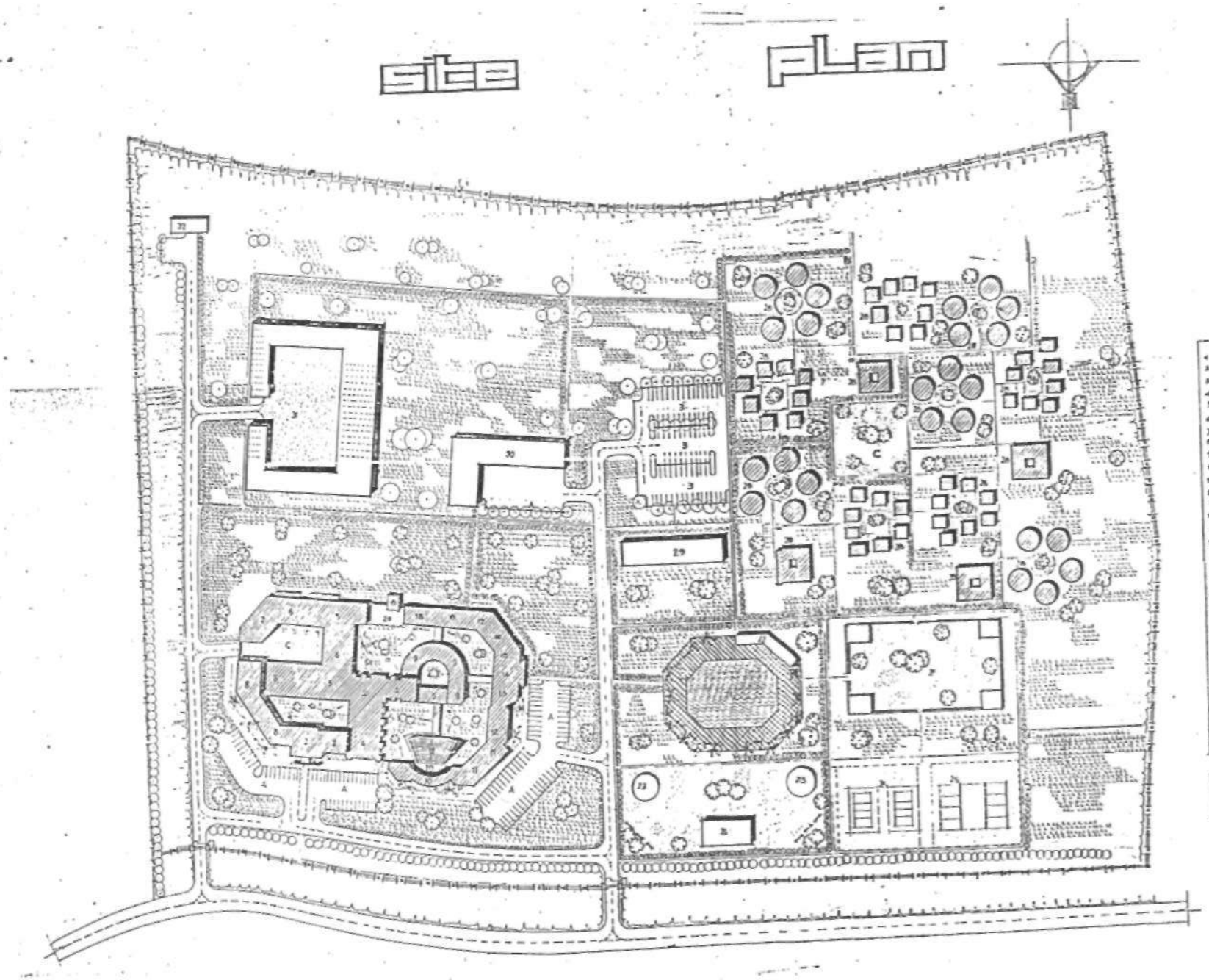
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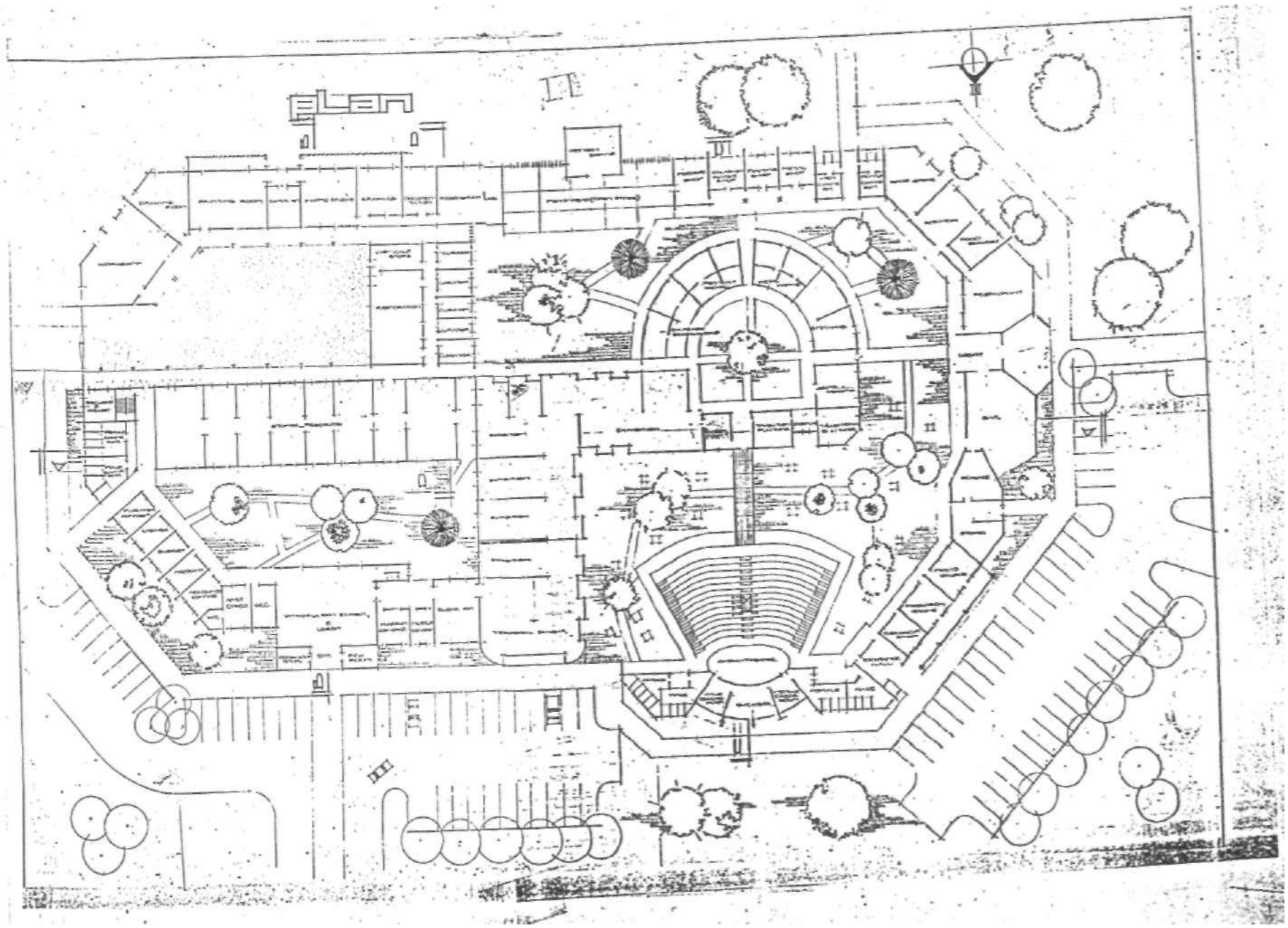
site plan

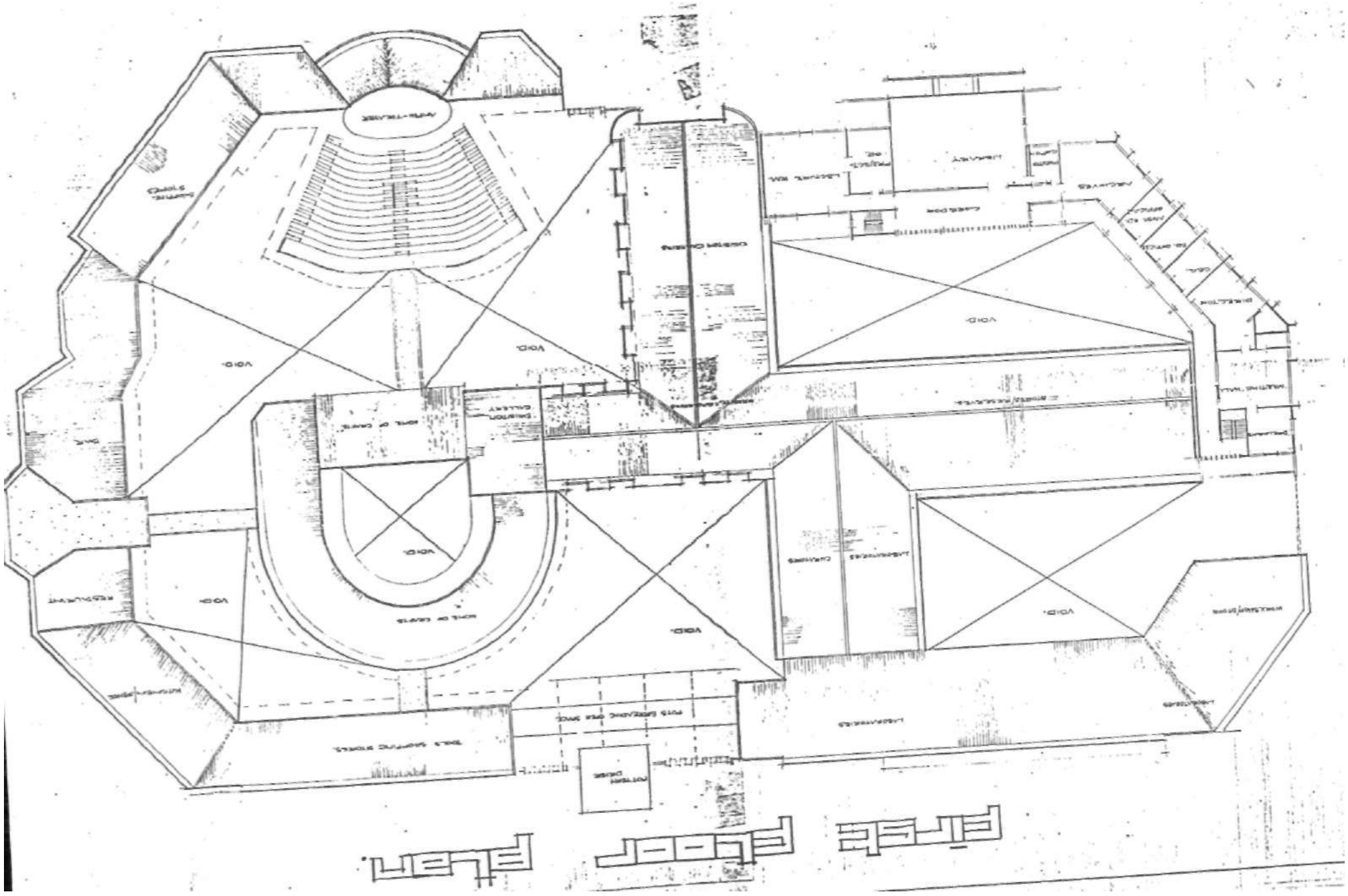


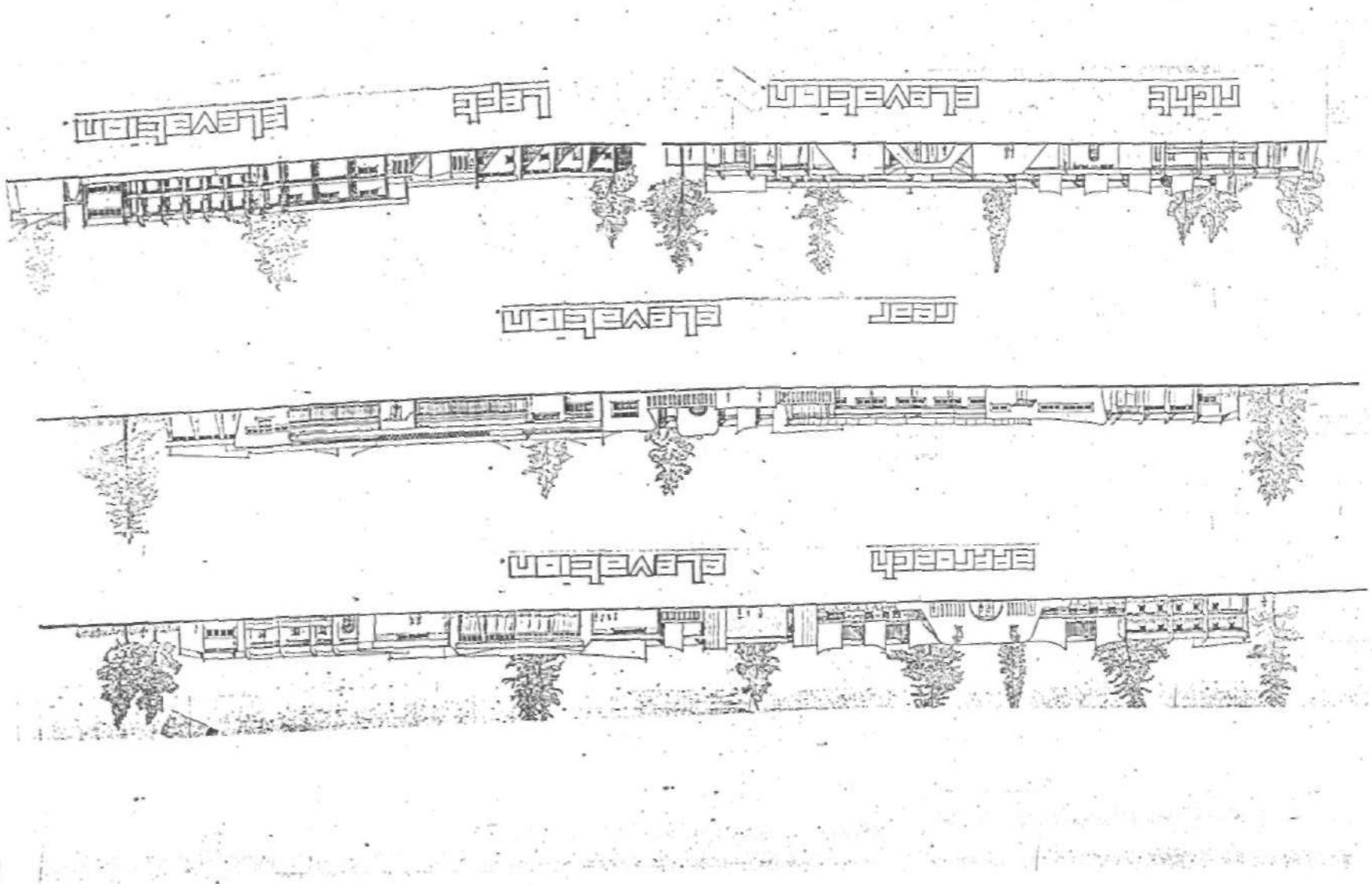
KEY

1	ENTRANCE/SWIMMING POOL/BOY TOON
2	INTRODUCTORY EXHIBIT [SCREEN]
3	MUSEUM CO-ORDINATION/ CENTRAL ROOM
4	EXHIBITION GALLERIES
5	STORES/ WORKSHOPS
6	LABORATORIES
7	WORKSHOP/CURATORS
8	OFFICES
9	WORK ON CRAFTS
10	AMPHITHEATRE
11	SHOPPING STORES
12	HAIR STORAGE/HAIR DRESS
13	BANK
14	ENTRANCE/LOBBY
15	RESTAURANT
16	FOOD/DRINKS SERVICE
17	KITCHEN/STORE
18	HOME OF CRAFTS MATERIAL SHOPS
19	CERAMIC DRIER
20	POTTERY SLIP MIXING
21	SWIMMING POOL
22	DIVING POOL
23	
24	STAGE
25	VALLEY BALL COURT
26	LAWN TENNIS COURT
27	CHILDREN PARK
28	ACCOMMODATION CHALETS
29	POSTERS/NURSERY STORE
30	SECURITY/TELEPHONE BOOTH
31	TRANSFORMATION UNIT
32	GENERATOR HOUSE

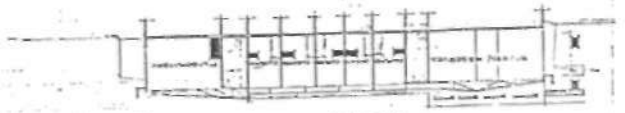
A	CAR PARK
B	ACCOMMODATION CENTRAL CAR PARK
C	BANDA







Разрез Г-Г



Разрез Д-Д



Разрез Е-Е

