DESIGN PROPOSAL FOR CRAFTS CENTRE, KANO, NIGERIA, WITH EMPHASIS ON THE USE OF TRADITIONAL MOTIFS.

M.TECH THESIS (ARCHITECTURE)

BY

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REG. NO: M.TECH/SET/1044/2003/2004

A PROJECT SUBMITTED TO THE DEPARTMENT OF ARCHITECTURE, POSTGRADUATE SCHOOL, FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA, IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTER OF TECHNOLOGY DEGREE IN ARCHITECTURE.

SEPTEMBER, 2004.

CERTIFICATION

This is to certify that this thesis titled Crafts Centre Kano, is an original work by me SULEIMAN SA'ADATU, Reg. No. M.TECH/SET/1044/2003/2004, under the supervision of Arc. Paul Haruna. It has been prepared in accordance with the regulations governing the preparation of projects in the Department of Architecture , School of Post Graduate Studies, in partial fulfilment of the requirements for the award of M.Tech Degree in Architecture, Federal University of Technology Minna.

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DEDICATION

This work is dedicated to Almighty Allah, the most merciful, for seeing me through to this stage. To my family for all the love and concern, especially my dad for believing in me, am very proud of you.

ACKNOWLEDGEMENT

First and foremost, I would like to thank God for keeping me alive. My dad for the special love and financial support, my mum for editing this work and for being the most wonderful mother a child could ever have. To my supervisor Arc. Paul Haruna, for taking time out to read and making corrections where necessary. To the library staff of Arewa House, for all the relevant information. To Mallam Danjuma of data room, Department of Architecture, A.B.U. Zaria for his efforts. To the Director, Deeds, Ministry of Lands and Survey, Kano State. To all the staff of National Museums Jos and Kaduna that rendered assistance in one way or the other. To Abubakar and Samaila, I feel indebted to you people, thanks for everything. To Faisal, may Allah reward you.

To the entire class of '97, and all the departmental lecturers for making the story complete. To my friends Lape, Olaniyan, Maimuna, Idoko, Emeka, Ashang, Sadiq, Shehu, Billiaminu, Amina, Murtala, Zainab, Rufai, Commander and Fati,thanks for making my stay one to remember.

To my siblings and grandparents, I'll always love you. To those that were helpful to me, I may not have put your names down, but am very grateful.

ABSTRACT

Traditional motifs are able to retain the culture of a people in visual form; this is because each and every single motif has an origin in the traditions and lifestyle of that particular people. Crafts on the other hand involve a special skill at making things with the use of the hands.

The origin of most of the crafts in Nigeria today is not known due to lack of documentation. One major hindrance to the issue of documentation is the fact that these crafts are produced and used within households of the craftsmen. This usually happens from one generation to the other and since the avenue to educate the public on the existence of these crafts is not encouraged, documentation is almost, if not impossible.

Craft centres cannot be divorced from the use of traditional motifs, this is because traditional motifs has a lot to do with traditional architecture and traditional architecture is incomplete without considering the customs, culture and way of life of the people which can easily be explained when related to their traditional motifs since these traditional motifs help to establish the identity of a people.

It is therefore important that in every changing culture, even though new methods of construction are adopted, that the traditional motifs that were used to connote and beautify buildings continue to be celebrated appropriately.

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CHAPTER ONE

1.0 INTRODUCTION

The precise date of the founding of Kano city is not known but evidence based on the Kano chronicle indicates that the original settlement was a small iron-smelting village at the foot of Dala hill, and the settlement was founded before the closing years of the eleventh century AD 1150.

For many centuries, Kano remained an industrial workshop producing a variety of wares and crafts, which were shipped to the Maghreb and Timbuktu from Katsina, then the major port of the central caravan route. Its importance as a great commercial centre started in the fifteenth century when it featured prominently as distributing centre for kola from the forest of modern Ghana.

The real turning point in the growth of Kano came with the Fulani jihad, which swept across western Hausa land in the early years of the nineteenth century. Katsina resisted the jihad and was subdued after a long siege. From this time, Kano replaced Katsina as the chief market of Hausa land and fifty years later, Henry Barth was able to describe Kano as 'the commercial metropolis of the western Sudan'.

The population has always remained predominantly Hausa, but as a great commercial centre, Kano also has a large number of foreigners. In pre-British days, the major items of trade exported from Kano were leatherworks, locally made cotton cloths and iron goods. To this effect one can conclude that since the inception of Kano, the indigenes have been craft oriented so much so that iron smelting in Kano dated to as far back as before the closing years of 11th century AD.

Crafts generally are activities involving a special skill at making things with the hands. For example, clothes weaving, woodwork, pottery and basket weaving amongst others. There are various types of crafts, which are peculiar to different tribes and ethnic groups.

This design proposal will take into cognisance the crafts, which are peculiar to the Hausa speaking people of Kano state. Such crafts as calabash carving, pottery, leatherworks, iron and brass works, mat weaving amongst others, so as to create an avenue where these crafts will have the opportunity of being made known and appreciated in terms of the skills involved and the durability of the finished products.

1.1 AIM AND OBJECTIVES

AIM

The aim of the use of traditional motifs in the proposed craft centre is to create an atmosphere where the form, building materials, finishes, and aesthetics of the craft centre harmonize perfectly with the environment and the use to which it will be put.

OBJECTIVES

The objectives are as follows:

a) To encourage the use of traditional building materials.

b) To encourage the study of African architecture.

c) To create craft centres that will appear to have grown from the natural environment, in close harmony with the landscape.

d) To rekindle the indigenous architecture of Nigeria.

1.2 RESEARCH METHODOLOGY

For this project two research methods were used and they are thus,

i. **Historical method:-** this method involves the use of past information that relates to the project and its sources are

- Journals

- Magazines
- Books

ii. **Descriptive survey method:-** the sources of this method includes

- Questionnaires
- Enquiries from experts who in one way or the other offered useful suggestions as regards various aspects of this project
- Carrying out case studies on existing similar craft centres where traditional motifs were used.

1.3 SCOPE OF WORK

This project is divided into two major aspects. They are:

- The literature: this involves discussions, history, various skills involved in the production of crafts as well as its economic importance.
- The design: this focuses on the planning of the site, the building concept and the circulation. The detailed design will be done with respect to the research and methods of production of the crafts

The proposed craft centre will take into cognisance all the necessary facilities that will enable the aim and objectives of the study to become a reality. In view of this the under listed units will be made available.

a. **Administrative and education unit-** this will maintain and run the affairs of the crafts centre as well as educate tourists as regards history, types and methods of production of the crafts.
b. **Craft production hall -** this will provide for the area where the crafts will be produced into their finished form
c. **Gallery/sales area-** this will house some of the crafts produced and where the crafts will be sold.
d. **Restaurant**

1.4 LIMITATIONS

In the course of collecting data with respect to case studies, it was noticed that most of the craft centres were a unit in the museum while other places limited themselves to the production of only one type of craft. Another difficulty that was encountered was with taking pictures and enquiry from the crafts men as regards the method of production of the various crafts. Lack of proper documentation of the use of traditional motifs also posed a problem in the course of research.

1.5 IMPORTANCE OF STUDY

Traditional crafts are worth studying for themselves, as products of the human spirit, of African man, placed in giving ecological context. From this angle, technical procedure must be meticulously studied, reconstructed if need be and conserved just like finished products. Craft products of often-remarkable quality do not reveal the simple, even rudimentary tool that were used to make them, instead to a reasonable extent portrays the creative ability of the people as well as their cultural heritage.

The study therefore is aimed at creating an avenue where various crafts can be produced and sold, where knowledge of crafts-making can be acquired, their origin and production processes properly documented and generally creating awareness as to the various crafts peculiar to the area of the proposed project (Kano state).

1.6 DEFINITION OF TERMS

1. **CRAFTS:** an activity involving a special skill at making things with the hands. For example, weaving, woodwork, pottery, basket weaving, calabash carvings, leatherwork and others.

14. **JAN GARGARI:** fine textured reddish clay.

15. **ZAKWAYE/RAWANI:** pinnacles found on the roof of a traditional Hausa building.

16. **ZAURE:** reception area.

CHAPTER TWO

LITERATURE REVIEW

2.0 HISTORICAL EVOLUTION OF ART AND CRAFTS

During the early days of European exploration of the continent, African art was looked upon as 'fetish'. The first missionaries, anthropologists, and travellers collected old pieces of 'object d' art' and mixed them up with what was genuine, this made African art to be treated with a patronizing attitude. It has since enjoyed the reputation of its influence as a result of its historic impact upon modern art.

In the passing African social context, the African view of art was a view which was identified with other aspects of the African life. It was not an objective or analytical view of art. The first time Africa received the word 'art' as applied to the creative imagery of our ancestors, was at the beginning of European colonization of the African continent.

Africans are extremely religious people whose lives are marked at every point with rituals and ceremonies. Whether they live in highly organized kingdoms or in acephalous communities, individuals, families, lineages, villages and kingdoms had their own gods whom they used to consult in times of crisis. These gods which were intermediaries between them and the high God were usually

sculptured in wood. In this way, millions of pieces of sculpture were produced and this marked the evolution of art and crafts. They were basically seen and worshipped as god, but in recent times, they have become objects of decoration, and materials portraying the story of some man's past achievements.

2.1 PROBLEMS ASSOCIATED WITH THE HISTORY OF ART AND CRAFTS

In Africa, certain unavoidable circumstances militate against the natural preservation of works of art and crafts. About 80% of African works of art and crafts are in wood which does not survive the ravages of fire, fungus, termites, weather and wood-worm. The oldest wood carvings are probably the ancestral (Ekpo) figures from Oron in Eastern Nigeria made on pterocarpus soyauxii (cam wood) and coula edulis (oron ekom) and yet they are said to be only 150-200 years old.

William Faggs attribution of the continuity of African arts to the high rate at which termites eats up carvings as soon as they are produced, which in turn necessitates the production of new ones, is perhaps not the only reason for the continuity which has occurred within families of carvers who train the younger generations as they come along. But it is true that quite an uncountable number of

good works of art and craft which we may never know anything about have already perished in this way.

The most ancient and preserved of African works of art are those that were made in metal, but even here, cases are known where old brass works have been melted down and recast. For example, some works of art in Benin are known to have been melted down and recast as bells and other instruments for which there is a more ready market. In this way, a good deal of unrecorded works of art whose beauty and significance we may never discover, have been lost.

Furthermore, in some cases where the owners of these works have tried to take care and not destroy their objects of art, they have been ignorant of the scientific means of preserving these art works. The people of Tada, for instance have badly damaged their famous bronzes by frequently scrubbing them with sand.

The above mentioned is not all that constitute the greatest danger to the preservation of works of art and crafts. Such danger comes from the disintegration of the old social structure which was based on the indigenous religion and a subsistence economy.

Apart from the ravages of termites which have been mentioned, the introduction of both Christianity and Islam, found new converts who often demonstrate their faith in the new religions by destroying those objects which are associated with their old faith.

2.2 SOME COMMON CRAFTS IN NIGERIA

Art is not static. Like culture, art changes its form with the times. The craftsman artist struggles between realities only with what he possesses of the old technique. The situation represents the psychological effects of colonialism. It has no African directive. The following are some of the crafts in Nigeria.

i. **Leather works:** This type of crafts is peculiar to the people of Kano, Zaria, Maiduguri, Sokoto and Oyo and the products from this leatherwork include footwear, travelling bags, briefcases, handbags, poufs, ornamental objects, pendants, antimony containers and leather sheaths for knives, daggers and swords.

ii. **Calabash decoration:** This in notable in Nigeria among the people of the north-eastern and western states. Calabashes grow in almost every part of the country and the use is extensive. They may be used as bowls, ladles, drinking cups or flasks, sound boxes or resonators for such instruments as sansas and xylophones, and even for shielding babies' heads as among the women of the north-eastern states.

iii. **Ornaments:** In Nigeria, ornaments are widely used for personal decoration. There are, however, many other purposes for which they are used. For example, the Hausa and Fulani wear talisman and amulets for protective and magical as well as for decorative reasons.

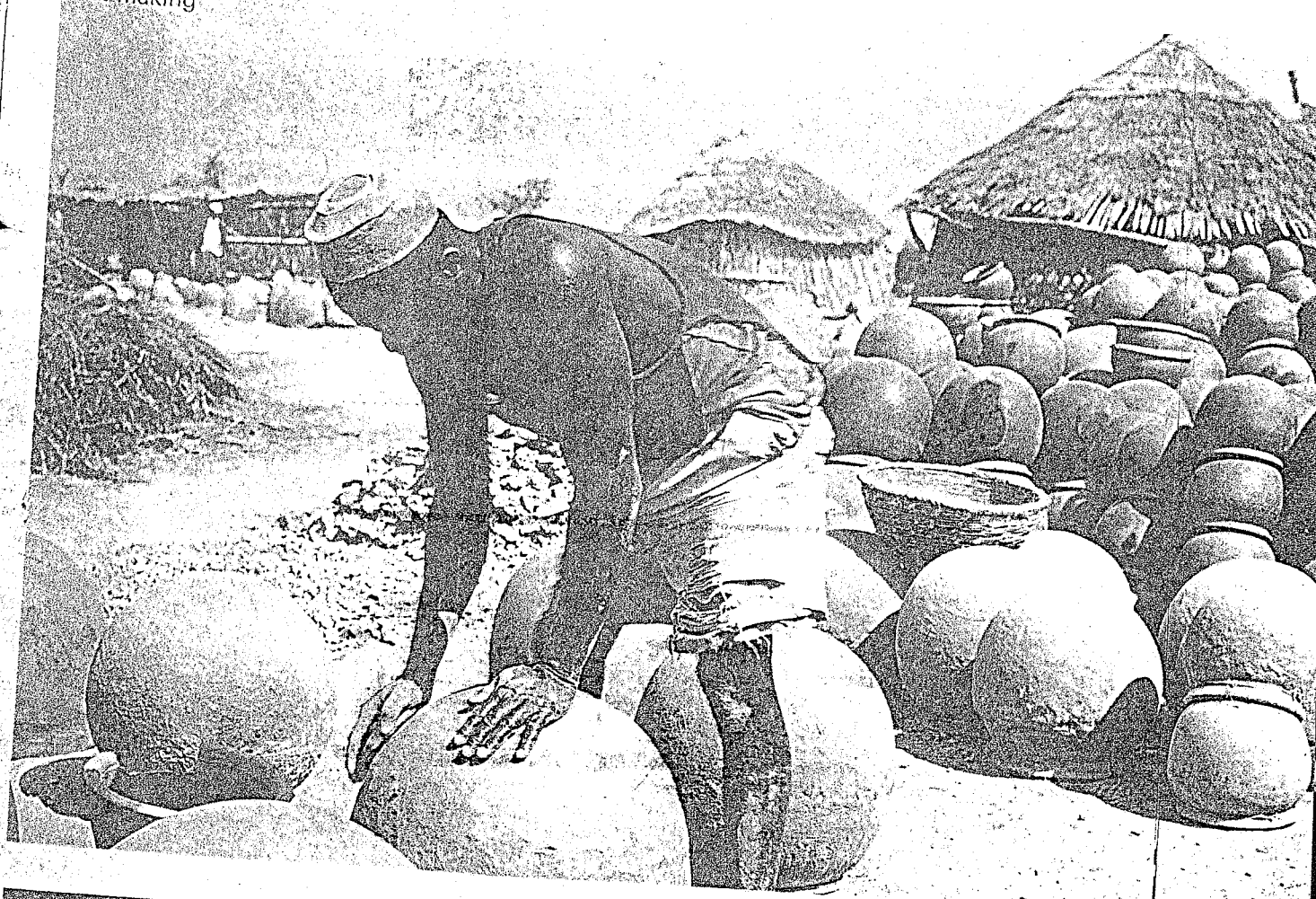
Some ornaments are worn by Obas and chiefs as a sign of social status. Other are connected with religious and social ceremonies. Beads of different materials and colours are still being used by Nigerian women as necklaces and bracelets.

iv. **Pottery:** The majority of the potters in Nigeria are women. Pottery is used in Nigeria for various domestic, ceremonial, ornamental and industrial purposes. Natural objects such as seed pods, pebbles, shells or plaited fibre may be used to impress pottery designs.

v. **Wood carving:** In Nigeria, calabash and clay are not the only materials utilised for domestic and ceremonial purposes. Wood is one other material exploited for making household utensils. Among the Nupe are found beautifully carved stools and door panels. The Yoruba carve wooden bowls in which kola nut is both presented to visitors as a sign of friendship and also offered to the ancestors or gods for peace.

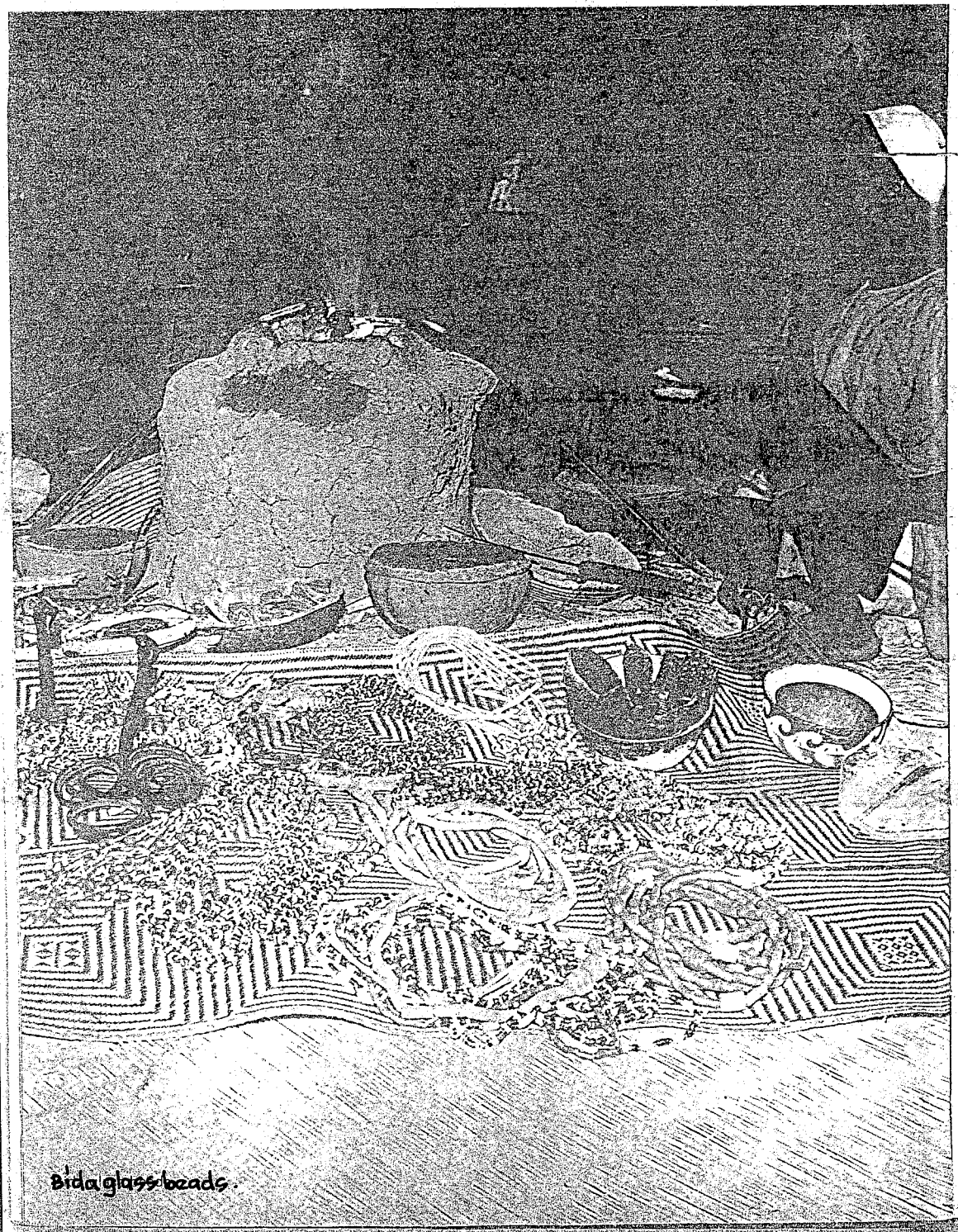
Various wooden utensils of different shapes and sizes are widely used in Nigeria. They include food bowls, spoons, forks, tray, mirror frames and combs. Some of these are elaborately decorated with representational or geometric motifs similar one to which is also found on calabashes.

Pot making

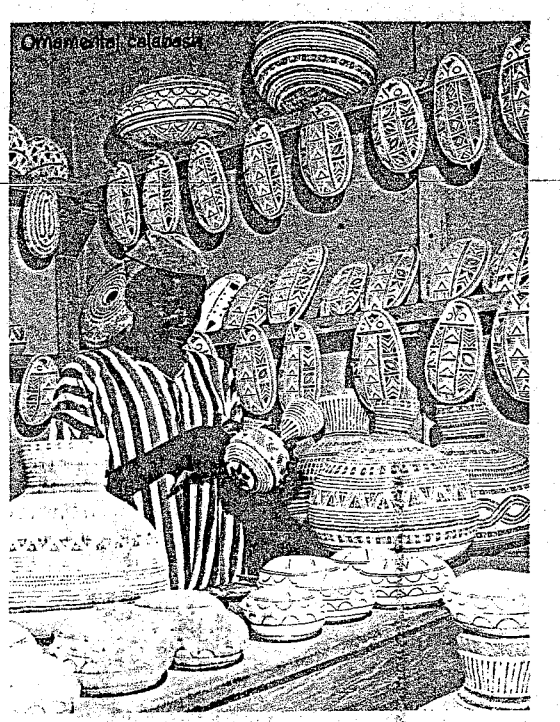


Wood carving

13a — Plate 1

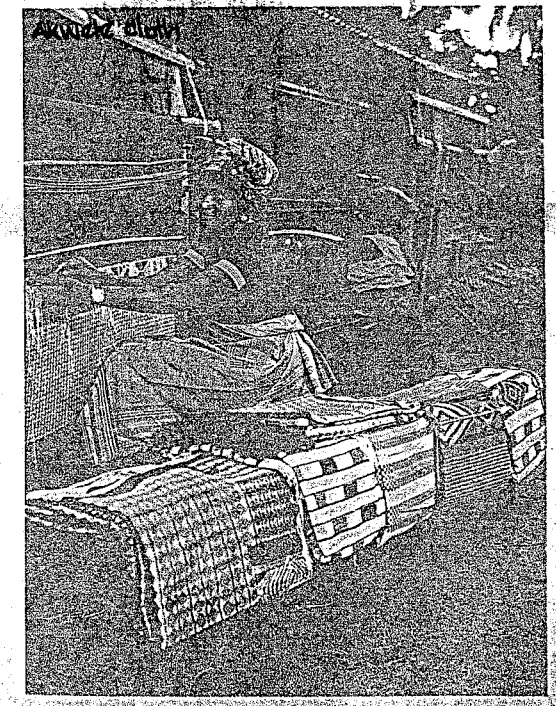


Bida glass beads.



Ornamental calabash

Brass-work



Akwete cloth

Leather work

vi. **Brass work:** This can be found in Kano, Bida, Benin and Katsina. Decoration may be incised or impressed on the objects after casting and the designs are mostly geometric and floral.

vi. **Clothes weaving:** This has long been practised in Nigeria. The fibre used is mainly cotton. In Okene, Kogi state, and in some parts of the mid-western states, a mixture of silk and cotton is used for pattern weaving. Cotton is sometimes dyed with local pigments to produce black, blue, green and red colours. The patterns are produced by the arrangement of different coloured threads in the warp and weft.

vii. **Plaiting:** This is mostly done by women and the Fulani men. Their hair can be plaited in various styles and patterns and ornaments such as beads can be fixed unto the hair to further enhance its beauty.

Other types of crafts are furniture making, sewing/ embroidery, tie and dye, sculpture among others.

2.3 THE STRUCTURE OF CRAFT PROCESSES

Of the special kinds of experience and thinking processes involved in visual art, the most important are exploration, perception, creative techniques and evaluation.

2.3.1 EXPLORATION

Exploration covers materials, mechanics and aesthetics. In exploring materials, one should experience them for what they are rather than what one thinks they should be. To do this, one must shed all preconceptions about the normal use to which a material is put; natural curiosity about a material will lead to problems in its use and hence to possible solutions.

In exploring the mechanics or techniques for a given craft, one encounters mechanics which have a general application across many crafts, such as joining, melting, threading and so on.

Exploring the aesthetics of a craft involves the systematic experiencing of the concepts of line, shape, colour, texture, pattern, form and kinetics (real or implied).

2.3.2 PERCEPTION

The process of perception has to be focussed on some particular concept so that it does not become an unyielding collection of unrelated visual input. Focus, for example, on colour, mood evoked by different light sources and quantities, the differences in the growth and decay, the young and the old, reflected surfaces and distorted images.

2.3.3 CREATIVE TECHNIQUES

The practical techniques which are taught for each craft, are those which have evolved over the years as the best way of achieving particular results; a known route towards a known goal. When the craftsman comes to experiment, it is important that he understands the reasons for a given technique so that he can apply this knowledge to his chosen medium of expression. How well a technique is performed is the result of practice; the success of the work depends on the successful expression of the original aesthetic concept by means of those techniques.

2.3.4 EVALUATION

Evaluation of a product of art or craft should not rely solely on the judge's personal taste. The most important things to take into consideration are : the creativity 'type' (whether divergent, spontaneous or academic), and the historical and social group- culture of the artist; what he set out to achieve, and the success with which he solved the problem; and his skills in aesthetic organisation and mechanical techniques.

No one can justifiably evaluate a work of art without knowing the series of problems to which any end product is merely on, for a continuing series of answers.

2.4 METHODS OF MAKING SOME CRAFTS

2.4.1 LEATHER WORK

Leather is a material made from raw hides (buffalo, horse and cattle) or skins (calf, pigs, goat and sheep). The conversion of raw hides and skins into leather involves several processes.

The hair or wool is removed by cleansing and scraping the hides and skins after their immersion in alkaline liquids. The leather is then prepared either by tanning the hides and skins with preparation of bark, wood or leaves, (for example, in the case of morocco leather and cattle hide leather) or by thawing them with alum.

The leather thus produced may be decorated in a number of ways. Besides colouring by dyeing, painting and gilding, designs may be made on the leather with tools. Often, leather is engraved with a red-hot sharp knife, a hot blade, or a hot nail thus producing a burnt black design. This may be described as linear decoration. Another technique is stamping the leather with a specially designed punch to produce repetitive designs. Strips of leather, fibre or cloth may also be cut and sewn on the leather to produce elaborate patterns.

2.4.2 CALABASH DECORATION

The preparation of ripe calabashes involves soaking them in water, cutting and scraping them, and then drying the shells in the sun. The shells may then be stained on the outside to colour them and thereafter, may be decorated. There are three main technique used for applying designs.

The first method is that of scrapping. By this technique, a knife is used to scrape off the surface of the calabash about two to three millimetres deep, thus creating a pattern which stands out in relief. Chalk may be rubbed in the scrapped areas as done by Fulani women.

The second technique of decoration is called 'pyro-engraving'. Here a red-hot knife, blade or nail is used to burn the lines into the surface of the calabash thus producing intricate and elaborate patterns.

The third technique called pressure-engraving involves the use of a sharp knife with which to incise lines upon the calabash.

2.4.3 POTTERY

In Nigeria where the potters wheel is absent among the traditional potters, pots and sculpture are moulded by hand. They dig clay from the earth, prepare it for use, form, decorate and fire it.

PLATE 3

PLATE 36) Stacking the firing takes up to two hours. Stacking pots end to end allows efficient circulation of heat.

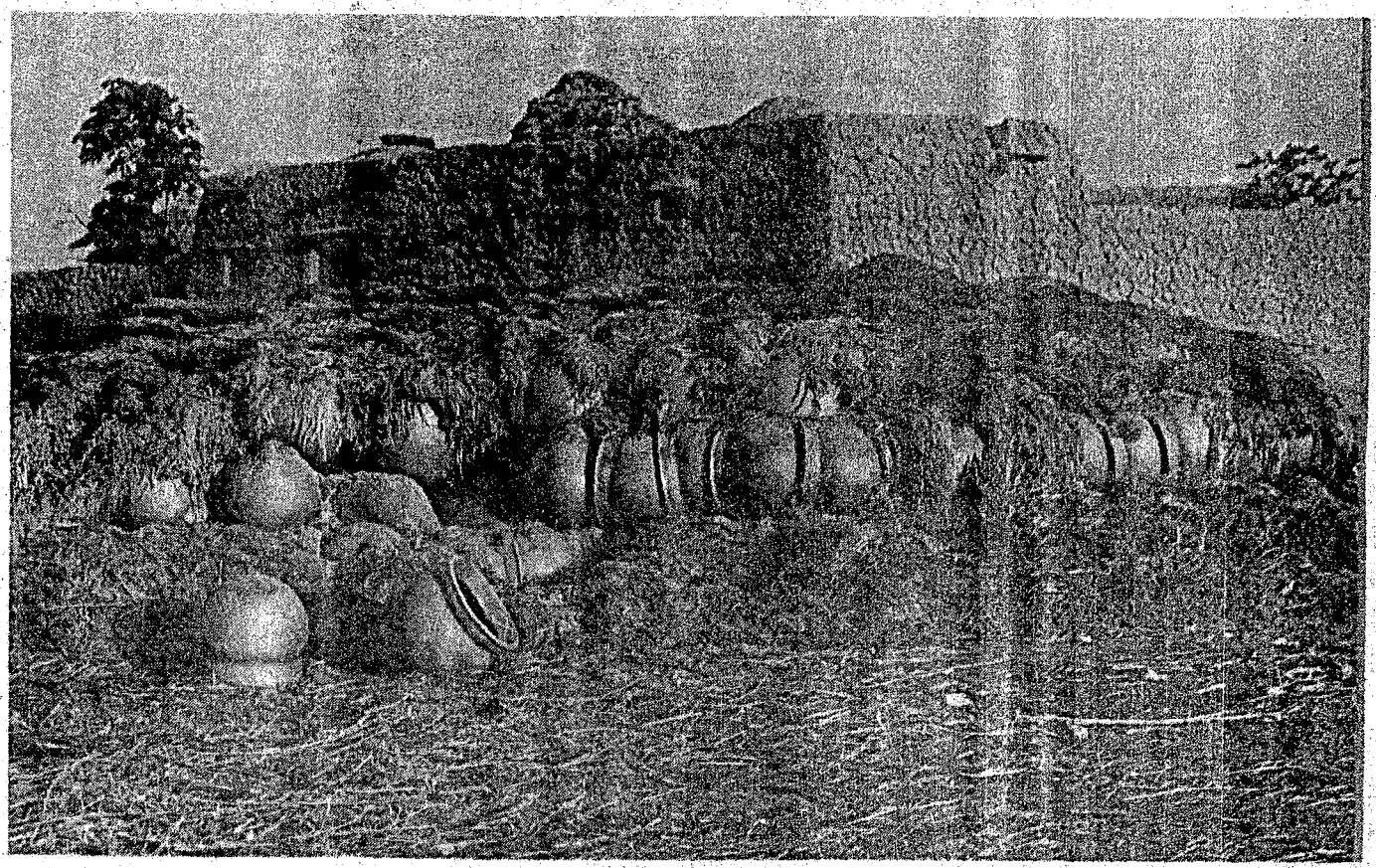


PLATE 37) Early morning after a firing.

The clay body is prepared by removing extraneous matter by hand and mixing in sand or some other type of 'filler' to improve the working qualities and prevent breaking during firing. This is followed by pounding or treading. It is then worked on a supporting device or turntable which may be a sherd or a calabash.

The usual technique of forming is done by walking round the pot backwards and turning it on its support. The smoothing of the pot is done with a piece of calabash, a broken piece of pot or a twig and water. The pot is then dried in the sun ready for firing. Sometimes when the pot is leather-hard, it is immersed in a bath of slip and then dried for firing.

2.4.4 BRASS WORK

There are three principal ways used by brass workers to cast brass. The first method is by using an 'open' mould. In this case, the shape required for one side of an object is made in clay and molten brass is poured into the 'open' mould. Bangles of aluminium, brass and silver are produced in this way by the Nupe blacksmiths. The forms, after casting, are twisted and fashioned to desired shapes.

The second method of casting is by using a 'closed' mould. This involves the use of two identical pieces of mould tied together but allowing a space into which the molten metal is poured. This gives a round object when the two pieces are separated.

The third way of casting is by cire-perdue (lost-wax) method. The object to be cast is modelled in bees wax and is the covered with clay. This is then heated to melt the wax which runs out leaving the impression of the form inside the clay mould. Molten metal is then poured into the mould which is later broken to yield the metal object.

2.4.5 TEXTILES (WOVEN CLOTH)

There are two types of looms used for hand weaving in Nigeria. One is the horizontal loom used by men and the other is the vertical loom, used by women. The technique of working the loom is basically the same in each case. Two types of weave can be produced; one is the twined (plain or chequered) weave and the other is the twill (diagonal and sateen twill) weave.

2.5 CRAFTS IN KANO

Evidence based on the Kano chronicle indicates that Kano state was originally a small iron-smelting village and this was discovered before the closing years of the 11^{th} century A.D. This means that crafts in Kano dates to as far back as the 11^{th} century A.D. other types of crafts evident in Kano are tie and dye, embroidery making, leather works, calabash decoration, ornamentation, pottery, wood carving and brass work. The areas within Kano state where the above

mentioned crafts can be assessed easily are Gumel, Kumbotso, Dawakin tofa, Dutse, Bichi, Gwaram, Minjibir, Tudunwada, Dawakin kudu and Gaya local governments.

2.6 CURRENT PROBLEMS ASSOCIATED WITH ART AND CRAFTS

Till date, a few problems still hinder the progress of arts and crafts in Nigeria generally. The crafts, even though known to people, do not have a ready market and this, to an extent, discourages the craftsmen from putting in their best to produce the crafts on a large scale.

Public ignorance due to lack of knowledge is another problem associated with crafts. Most people prefer to decorate their houses with foreign objects instead of the locally made crafts. This mostly is due to the fact that the history of these crafts are not documented to enable the public aware of its origin, method of production and uses which could in turn enable them appreciate such crafts.

The crafts are most times, not produced in a large scale and even when they are, they are usually not addressed specifically.

CHAPTER THREE

RESEARCH AREA

(USE OF TRADITIONAL MOTIFS)

3.0 INTRODUCTION.

Architecture is a medium through which one could see the history, tradition, cultural heritage and the way of life of a particular people. The most common interactions are those among the indigenous cultures of African people and those imported from the Arabians and Europeans. Such cultural legacies are reflected in the architecture of the continent.

Isolating the decoration of a building from its form may create a dichotomy which the builders never had in mind. In common parlance, motifs are repeated designs, shapes or pattern used as decoration. Such decoration as it applies especially on buildings, helps to establish personal and community identity. The existence of traditional decorative motifs dates to as far back as the 17^{th} century. Various motifs in existence are usually peculiar to a group of people or community and it has a significance which is supposed to depict the use to which the building will be put, therefore, motifs cannot be divorced from the architecture of the past and present.

In discussing the use of traditional decorative motifs, traditional architecture cannot be left out since these motifs emerged from them, although, lack of documentation has hindered their exact historic origin.

3.1 THE ACHITECTURE OF NIGERIA.

The architecture of Nigeria offers many examples of the triple heritage culture of Africa due to its ethnic diversity and the inter-related influence of indigenous Islamic and European culture.

European contact in Nigeria was with the Portuguese in 1472, who expanded slave trade and then gradually introduced western architecture by first trading infrastructures and then as administrative facilities of the colonist.

Islam cannot be divorced from the architecture of Nigeria and its influence on the façades of buildings especially in the Northern part of the country. The mosque at Borno, estimated to be 1000years old (moughtin 1985; prussin 1986), is another example which is said to be the earliest Islamic structure in the region.

Nigerian architecture has her forms, building materials, construction techniques, decorative patterns and many other styles which have helped in distinguishing those peculiar to the various ethnic groups within the country. Modernisation though has tampered with this indigenous architecture of the Nigerian people; however, most ethnic groups still have ancient buildings which

reflects their architecture. A brief examination of the architecture of the Hausas, Yoruba and Igbo as the three major ethnic groups in Nigeria are summarised below.

3.1.1 HAUSA ARCHITECTURE

The Hausa speaking people are mainly found in the Northern part of Nigeria, though there are Hausas in Mali and Niger Republic.

Northern Nigeria is known in terms of agricultural produce, leather works as well as other types of crafts, and gold. Hausa architecture is typical of cities that were under medieval Hausa states.

Kano for example, retains a major architectural repertoire of a detailed construction method that has inspired varying interpretations from different scholars. The suggestions range from that of ancient Egypt as the origin of Hausa architecture to its source as purely of Islamic influence brought to the region by a few individuals who had been in contact with North Africa. The North provides an ideal environment for the construction technique derived from dudanic states.

Wall decoration is an important aspect of Hausa architecture, clay is used in the manipulation of colours. The most common method of applying clay plaster is by natural movement of the builders' hands, sometimes with the aid of a sponge or other soft materials that helps to produce the desired effects on the walls.

Ornamentation of exterior and interior walls are derived primarily from traditional themes and motifs of animals, Koranic and mechanical motifs are also incorporated. Heatcote (1976) wrote that some of the wall paintings include bicycles, airplane, lizards and verses from the Holy Koran.

3.1.2 IGBO ARCHITECTURE

The Igbo's are found in the South-Eastern part of Nigeria, a forest zone with abundant timber and clay for building. Most of the building materials-clay, raffia, palm-fronds and timber are locally obtained. Raffia and palm-fronds are used for wall construction. They are woven into a lattice of square grids and plastered with clay.

The common form of motif found around here does not have a direct bearing with effects on the walls as seen in the Hausa architecture; instead, it is particular to the arrangements of houses. Most of the houses in Igbo land are of the impluvium type because of the structure of the courtyards which they form, and such houses are built to serve a specific function. Examples are meeting houses, spirit houses or houses of cults associated with specific duties.

The Mbaries are one of the Igbo clans who have elaborate buildings as a way of honouring their ancestors and these temples are built by special people ordained to perform such tasks.

3.1.3 YORUBA ARCHITECTURE

A brief look at the Yoruba architecture reveals that, the afin (palace) heads in the hierarchy of the buildings in the town. Special considerations are therefore given to the design of the afin. For instance, the walls that surrounds the town are often higher and wider than the walls of the afin, but all other walls in the town are for security, but the walls of the afin serves the purpose of keeping the Oba from the sight of the public. This obviously means that there is a form of hierarchy that is followed in the architecture of the Yorubas.

The main entrance to the afin is a thing of interest because it is the focal point of the town. The doorways are decorated elaborately with various motifs and patterns typical of the area. Series of courtyards also open onto one another for the residence wives. The decorative elements are a subject of uniqueness, elegance and credibility.

3.2 CAUSES FOR THE CHANGES IN TRADITIONAL ARCHITECTURE

Architecture has undergone changes in systems/characteristics over the ages. Various periods in history have witnessed various changes in the science/art of architecture. Each era has its own characteristics and level of technology.

Kano is an example of a commercial city in Northern Nigeria. It is made up of an architecture which is rich and covers the scope of most other Northern cities. Its compact planning and other prominent points are typical of Northern Nigerian architecture.

Zaria, which is the traditional home of the great builders of Hausa land, is the seat of an Islamic empire.

Moughtin says "the major cause of change into the physical structure of the city, since the nineteenth century and until recent times, has undoubtedly been the growth of Islam". Islam has no doubt influenced the planning of the houses. Another reason is that Nigeria has entered into an era of modernisation where it becomes fashionable to possess buildings of concrete blocks, steel structures, glass and of many other imported materials not only for their permanence but, as symbols of affluence. Because of this, those who live in buildings built of local materials like timber, laterite, bamboo, and so on, are associated with the poverty mark.

The study of African architecture has been retarded by the ethnocentric attitudes of western scholars, particularly in the search for an evolutionary explanation of architectural developments.

The myth of darkest African which is prevalent even today demotes the glory of African cultures by labelling them primitive. This leads to a limited view

of African architecture and a narrow functional evaluations of buildings beneath titles like 'shelter' or 'housing' which does not describe or analyse the process of giving meaning to form.

Furthermore, the materials used in construction itself as 'hut' and its life expectancy as 'temporary' reduces the significance of the object of study.

Another cause is that while building materials like mud, red earth, raffia, thatch and so on are available, research and technology have not been affected with a view to modernising these materials, scientifically in commercial quantity.

Also as the world moves closer; architects find that the bulk, if not all innovations in architectural design come from Europe and America. This leaves the Nigerian architect at the mercy of foreign ideas.

Change has been introduced so rapidly that essential qualities in traditional architecture in terms of building materials, forms, decorations and so on have lost in the technical execution of the buildings.

3.3 TRADITIONAL FORMS

Traditional forms are basically styles that reflect the way of life of a particular people and this can be attempted in a number of ways. The characteristics features of buildings in overseas countries for instance, enable one to identify the architecture and the country to which it belongs.

Take for example, European residential houses, especially those of the English; the high pitched roof, the prominent chimney, the simplicity of the structure united by the solemnity of the elevation. The buildings also blend with the environment, and therefore draw ones admiration to the endless vistas bounded by the horizon.

The Japanese building-their temples, public building and residential houses are no exception. Although skyscrapers have since sprung up in most Japanese cities, the pagoda of yesterday is still the pagoda of today; it has not undergone any metamorphoses. A building that appears to grow from the natural environment in close harmony with the landscape, the grandiose pyramidal roof of the pagoda adorned in tiles, the simplicity of the whole composition, the sublime scenery of the environment fostered by luxuriant greenery, leaves no one in doubt about the grandeur of Japanese architecture.

All these features that enhance the recognition of the architecture of races are not lacking in Nigerian traditional forms.

This work will limit itself to the architecture of the Hausas, since the proposed project is located in the North (Kano). Considering the traditional Hausa buildings, from residential to palaces and local courts, the importance of the 'Zaure' is never subdued. The 'Zaure' serves as the reception space to visitors.

In most cases, the 'Zaure' is brought forward conspicuously and embellished in gorgeous decoration in such a way that it conjures a charisma that beckons to

visitors. Its three dimensional structure is usually carried higher than the rest of the elevation. The traditional Yoruba buildings on the other hand have elaborately decorated entrances because these entrances are a major focal point. The walls of the building are also constructed bearing in mind that the highest walls are the town walls, next to it in height is the wall of the afin (palace) and that every other building should be lower in height. The traditional Igbo buildings are designed also to form courtyards. These courtyards serve the purpose of circulation, lighting, and most especially depicting the tradition of the Igbos.

Amidst the euphoria caused by the advent of modern building materials and technology lies the possibility of rekindling indigenous architecture in Nigeria. One way is by converting the two-dimensional traditional wall murals and motifs into three-dimensional forms like decorative hollow blocks and bricks for screen walls.

Traditional decorations could be adopted as wall murals in modern public buildings. All categories of buildings ranging from first received before going into the main interior of the building. The white man calls it a lobby and in residential houses, it is called a foyer. The function of this space is exactly the same with the traditional Hausa 'Zaure' – reception.

Examples of buildings which reflect traditional forms and decorations are the Zaria Friday mosque, the Obas palace in Yoruba land, the Shrine of the 'long god' at Arochukwu amongst others.

3.4 ORIGIN OF DECORATION IN THE NORTH

The true origin of the complementary post Jihad 'Islam-Hausa' decorative arts and architecture may however lie in the great Babban Gwani (Chief Mason) of the Zaria city. He had been to Egypt on pilgrimage and had returned around that time with new ideas and perception on architecture and walls decorations in general. His introduction of Qur'anic inscriptions and geometric decorations was a milestone towards the development of this art.

This has been collaborated by his son Mallam Haruna who is the present 'Sarkin Magina' of Zaria city. Mallam Haruna also supplied information on how decorative patterns were first copied from those made by 'Babban Gwani' himself on the interior walls of the city central mosque.

Most of the Hausa emirates are both the administrative and spiritual heads of their people; hence, initial decorations as seen today were first applied to the facades and interiors of the Emirs' palaces. This spread to the royal and title holders who also solicited for the services of the master masons to decorate the facades of their buildings. Later on, even the affluent followed this fashion. To this

issue, the decorations allowed were not to be the same as the ones in the Emirs' palace.

3.4.1 CONCEPT AND NATURE OF DECORATIVE MOTIFS

Due to the prohibition by Islam as to the use of pictures of human beings or decorative motifs made in the form of human figures, the people of Hausa land had to adopt themes from the Arabian styles and develop styles of their own.

There are basically three types of decorative relief used by the Hausa master masons, these forms are vegetal forms, geometric forms and Qur'anic inscriptions.

Vegetal forms were derived from earlier art forms, the use though became widespread and the patterns were elevated to a more celebrated level.

Qur'anic inscriptions were more often formed around by vegetal decorations.

By far, the most important to us are the geometric forms which received a new dimension in their use as architectural decorations. Motif themes were broken-off and combined with neighbouring motifs in a new fashion. There existed also symmetry although centres around which motifs developed were often mirror reversed, their axis were never really finite physical entities. Thus visible units whether geometric, vegetal of otherwise, were subordinated to abstract principles. Physical forms then became a vehicle of intrinsic expression.

Due to the splendour and the proficiency needed in making these decorations, not so many master builders are experts in making them. These decorations are referred to as 'magini-mai-zane'. As studies on this issue have shown, among the over 200 master builders in Kano city, only a handful are referred to as 'magini-mai-zane'. The patterns are drawn from a common cultural pool available to all craftsmen in the decorative arts, leather works, embroidery and so on.

3.4.2 THE AESTHETICAL VALUES OF TRADITIONAL ARCHITECTURE.

Decorations fall within the enclave of aesthetics. Aesthetics is that part of philosophy that deals with the beauty of arts which in general exists in the western society.

The aesthetics values of Hausa traditional architecture are decorations which have singularly covered the aspect of beatification of the traditional buildings in general, since there is no such thing as dramatic manipulation of roof structures as in the western architecture of the doric and gothic orders found in the Roman and Greek classical architecture.

In the Hausa society, the proficiency and the prowess of a builder lies in the way in which he could manipulate the clay to bring out a dramatic effect on the

building in a way that it has delightful visual effect on the admirer of his works which is why the aesthetical values are found in the decorations on the walls and ceilings of the buildings.

3.5 DECORATIONS OF HAUSA TRADITIONAL ARCHITECTURE.

Finishes in Hausa traditional architecture vary from wall plaster, floor finish and ceiling finishes. Virtually all the finishes in Hausa traditional architecture are applied using the same materials.

Floor finish in Hausa is referred to as 'dabe' also considered to be part of decorations. The process of making dabe is by removing the top soil and gravel (tsakuwa) applied to about 10-15cm thickness. It is then saturated with water and rammed with a specially made wooden stick known as 'madaba' by children and women. The finished floor is usually is usually coated with 'bakuwa' to give it a smooth glossy finish. However, cement screed has been able to successfully substitute the traditional floor finish which is less enduring and resistant to hazards.

Paints are a necessity in bringing out the best effects and beauty of decorations and finishes in architecture. The traditional Hausa people have paints which come in different colours; they are made from shrubs, herbs and earth. They come in black colour, which is obtained from rama leaves, red which is obtained from farar kasa (quick lime), and blue colour which is obtained from indigo.

Materials from interior finishes are not treated as elaborate as those required for exterior finishes (rendering). Often, ordinary clay is made into a fine paste and applied as internal plaster on walls and ceilings. A master mason who intends to decorate his ceiling must invariably plaster his azara panels with clay.

Two types of plaster pastes are used in their natural states in internal finishes, to give a glossy finish to walls and ceilings; these are the blackish sticky clay from the anthill known as 'bakuwa' and the fine textured reddish clay called 'jan gargari'.

These internal finishes are mostly hand moulded. Metal plates ranging from a few to about 950 in a room, are embedded in wet clay plaster mostly on the ceiling and upper part of columns and walls. Hand moulded geometric patterns can be made by embedding in clay plaster using cement screed or clay with hand trowel and afterwards, painted when dry.

Some of the decorations especially internal are just drawn using hand brush on already uniformly painted backgrounds. They are mostly drawn in different colours to give the walls desired patterns. The colours used for decoration on the walls are basically silver, black, red and blue in the olden days, but nowadays, with the introduction of varieties of paints with wide range of colours, virtually all kinds of colours could be seen. Decoration in interiors of rooms could be moulded,

scratched, engraved, painted or textured with alternation between smooth or rough finishes.

The location of external decorations are usually around the portals and window openings. However, those who can afford it often have the entire front façade of their residences embellished lavishly with decorations. Even in such cases, the portals and window openings receive special treatment as to the various patterns made on them. The 'zankwaye' and the 'rawani' which are the pinnacles found on the roof are considered decorative elements themselves, but are mostly devoid of any patterns. External decorations are of paramount importance to dwelling owners in Kano, Katsina, Zaria and Zinder. Kano masons/decorators excel in internal decorations. The zaure, shigifa and turaka of the noble men usually have elaborate decoration on walls and ceilings. Kano masons are the best in the whole of Hausa land in terms of decorating buildings.

Finishing is an essential aspect of mud construction. The principal objective of this special process is protection of the completed buildings from the hazards and ravages of weather. However, in addition to the thick paste of 'tabo' which the tubali (local blocks) are embedded in, another overlying coat is applied by the 'magini'. The choice of material here is subject to choice and treatment to ensure its resistance to weather and other environmental hazards.

The most common and cheapest variety of plaster is made by adding animal dung or animal hair. The mixture is saturated with water, covered with grass and allowed to rot in a stinking compost. It is then mixed properly using the feet, into a dark sticky paste ready for application by hand to walls.

3.6 METHODS OF APPLYING WALL DECORATIONS.

Hausa architecture, like other old architectural styles in Egyptian, Greek and Roman architecture consists of a variety of decoration to personify places of magnificence like palaces, public places, religious places and residential buildings.

The pattern of surface decoration in Hausa traditional architecture was usually the work of the mason, and was carried out during the phase of construction when the final coat of plaster was applied.

The simplest and probably the oldest method of house decoration in Hausa land is made by repetitive mechanical hand movements on the newly plastered surfaced of mud walls. This decoration is used on the least important walls, which are usually finished with a mixture of dung and laterite. Before it is dry, the fingertips of the hand moved it in long sweeping gathers to create a pattern of parallel lines.

'Makuba' could be used to achieve similar effects in wall finishing. This is also made by rhythmic movements of the arm, using the sides of the hand to

produce a series of shallow, semi-circular troughs. The ordinary smooth plaster without decorations is often referred to as 'wankan tsaye'; but when the mason decides to leave the imprints of his fingers, it is referred to as 'matsar yakuwa'. A more beautiful pattern which is done is the 'sandar gora' (the bamboo stalk) where the mason simulates the arrangement of the leaves on a bamboo plant, a kind of pattern results. When the stalks of the bamboo plant are laid on the walls horizontal plane, the resultant decoration is called 'Idon hashiya' (pigeon's eye).

All these methods of applying decorations mentioned gives an overall pattern, which in the strong sunlight enhances a building with a lovely textured pattern.

3.7 STRUCTURAL ELEMENTS AS DECORATIVE MOTIFS

The structural elements in Hausa traditional architecture serves both as supports and decorative elements because of the ways some of them are arranged, especially the beams on the ceilings. An example of these elements is the 'kandame' (arch). For structural forms especially within a building, the masons relied on the use of good proportion and harmonious composition of structural elements to give beauty.

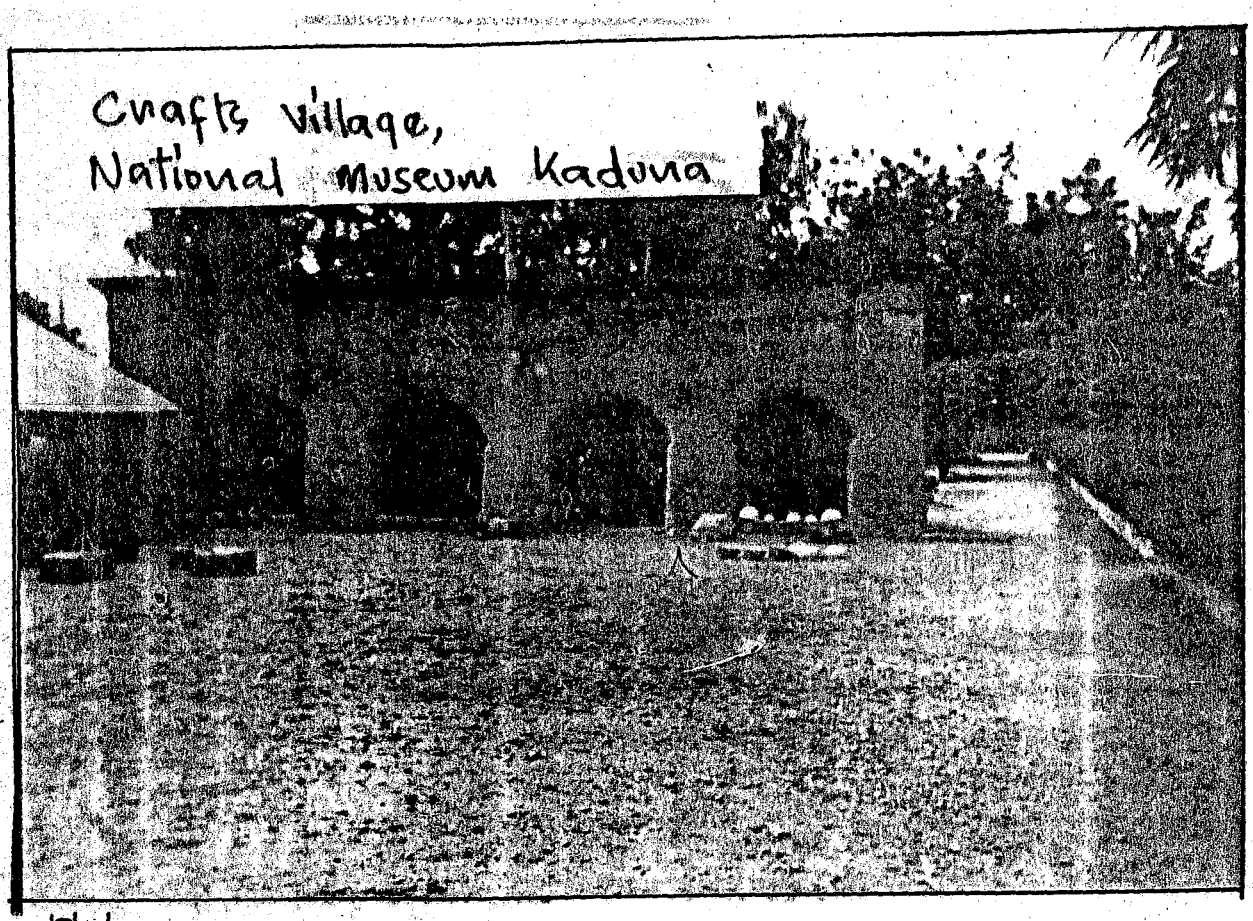


Plate 41

Calabash production unit showing the arches which are supported by rectangular columns considered as structural elements and traditional motifs.

These structural elements combined with simple geometric patterns, triangles, squares and circles makes up both decorations and structural elements used by builders.

An example of the application of forms to serve as structural elements and yet decorative is at the famous Zaria city mosque. This is believed to be the greatest work of Babban Gwani Mallam Mikhail. Here the master builder was able to innovatively make use of the materials and technology of his time to achieve such inspiring monument. The mosque consists basically of six bays carried by six piers. These carried the roof and framed design of the whole structure. The piers and other simple forms are more of structural elements but they also serve as decorations in buildings.

3.8 SIGNIFICANCE OF HAUSA TRADITIONAL MOTIFS

The decorations that adorn the facades of the Hausa traditional buildings signify certain things which are of interest. They are as follows:

a) **Cultural heritage:** some of the patterns, such as the `Dagi` has been adopted by Northern Nigerian people as a symbol for `Arewa` i.e. the North. The symbol is referred to in English as the `Northern knot`. This has served to give an identity to the people and a symbol of the unity in aspirations and ideas of the Northern Nigeria people.

This symbol is found in all the palaces and some public buildings in Northern Nigeria. Examples are the palaces of emirs of Kano and Zazzau as well as bank of the North headquarters.

b) **Commemorating historical events:** After the conquest of Zaria city by Queen Amina, and the erection of the Zaria city wall, craftsmen have endeavoured to etch in their decorations in order to preserve this memory. Most of the motifs used during that time were relief of shields and crossed swords. The decorations done by craftsmen thus symbolized the climax of the feeling of celebration that reigned inherently in a traditional builder at work.

c) **Display of status:** Elegant buildings are `number one` status symbol in the Hausa society, these themes are mostly used to depict the greatness of a ruler, the wealth of a merchant and the prestige of a scholar. The Kings have their own styles, likewise the scholars. This brought about distinct difference in the styles used by the royalties and the merchants.

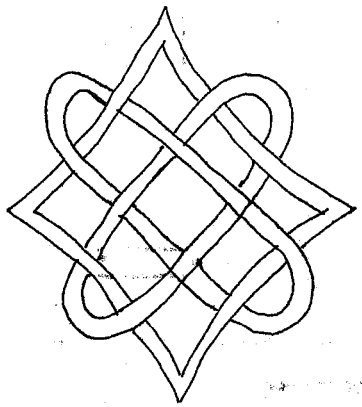
d) **Depicting traditional culture:** Traditional patterns and folklore are connected. This is because the patterns give origins to the folklore. For example, the Hausa had their decorative motifs which went a long

way towards depicting the origin, way of life, customs of the people and unity amongst them, and this was before the Jihad, although the coming of Jihad eliminated some of the motifs and gave rise to the use of arabic writings on the walls as religious motifs.

3.9 DECORATION TYPES AND DESCRIPTION

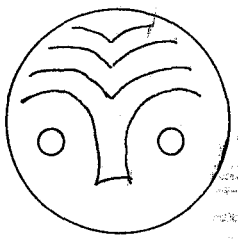
The decorations overleaf vary in pattern and style. Some of them are peculiar to certain areas and some are universally found in all the traditional buildings.

FIG 2.



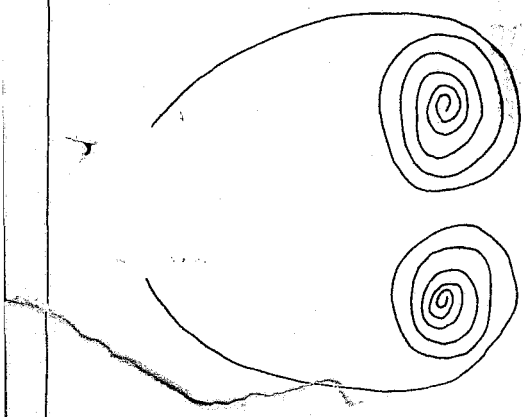
DAGI

By far the most common and widely used among the decorative patterns. Refered to as the 'Arewa symbol' or 'Northern Knot' but called DAGI in Hausa.



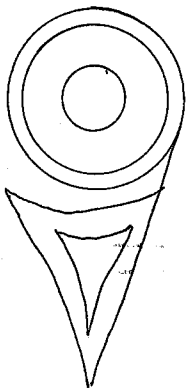
KUDI (PENNY).

Derived from the white man's exchange introduced at that time.



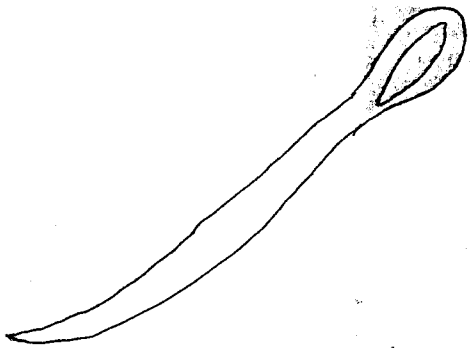
WUTSIYAR HAWAINIYA (THE TAIL OF CAMELION)

This is usually used at the tapering ends of walls and it is usually brightly coloured.



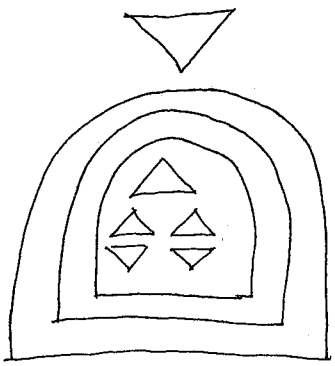
TUKUNYA KAN MURHU (POT ON FIRE)

This is used mainly in houses and within the dwellings of women.



KANSAKALI (SWORD)

Mostly used to decorate the walls of palaces to indicate strength.



KAN SAKKI (CROWN)

Strictly for the Emirs palaces, mostly on façades of entrances

FIG:3 — Decorative motifs on the walls of the apartment of a princess in Northern Niger

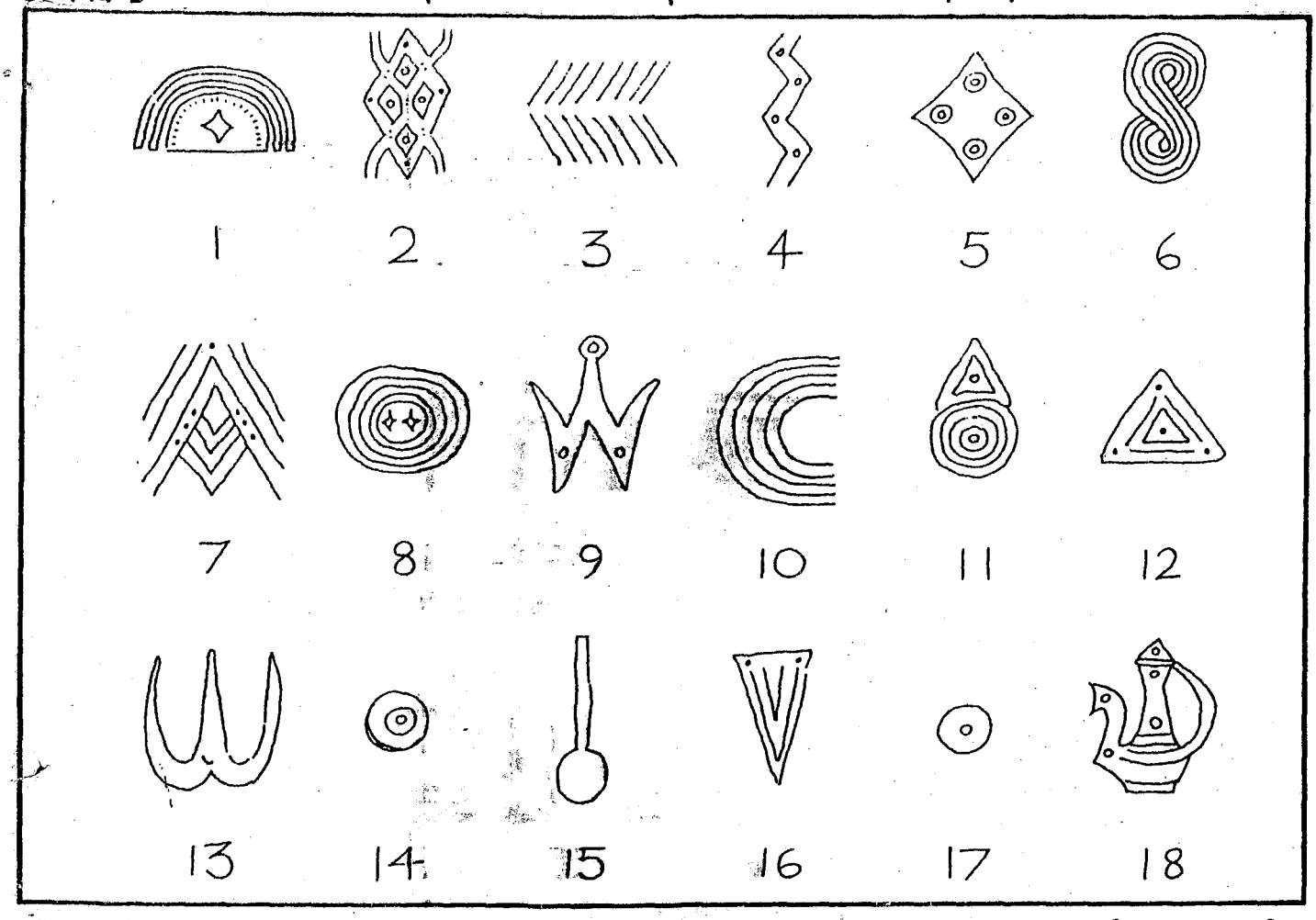
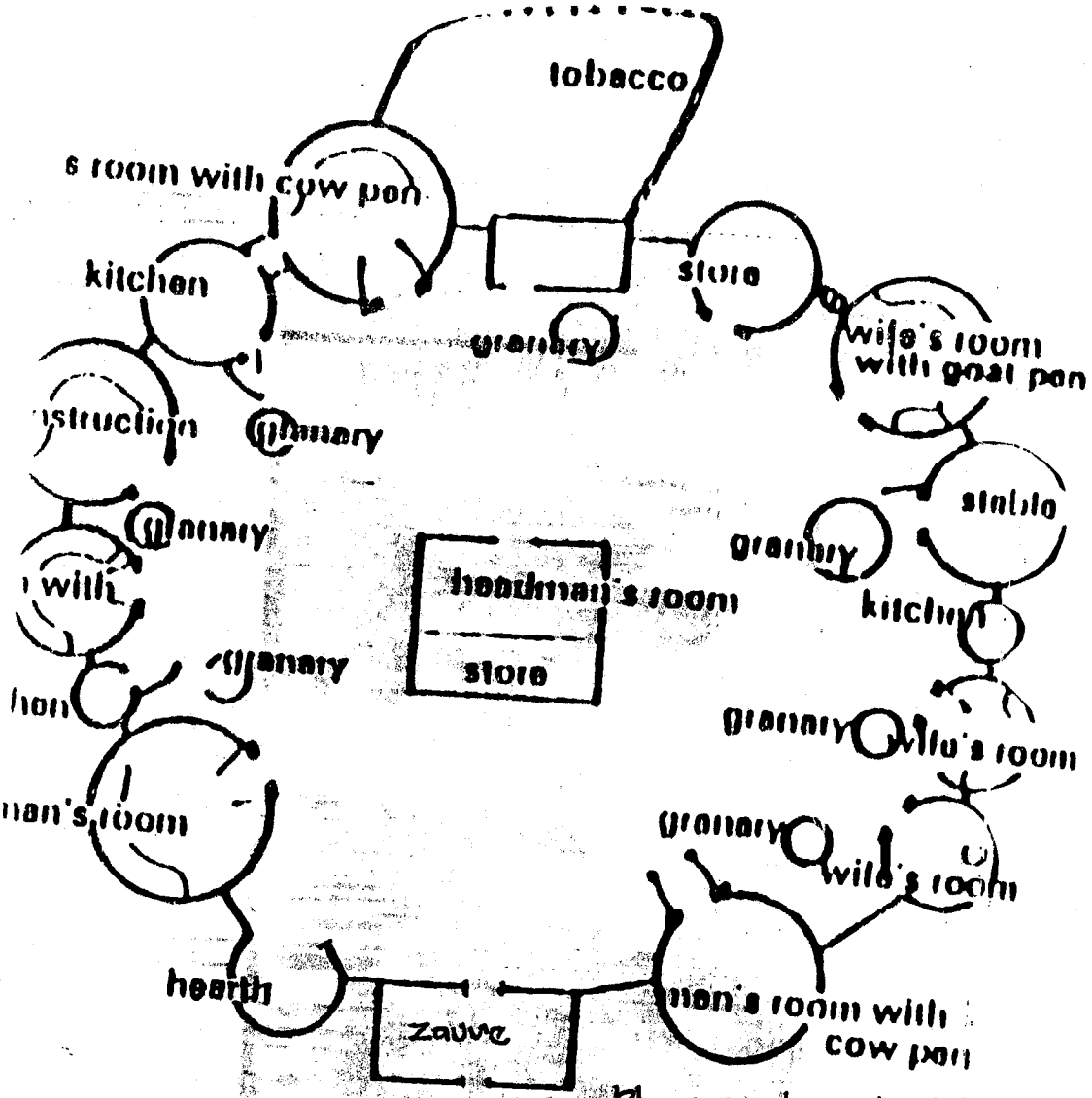
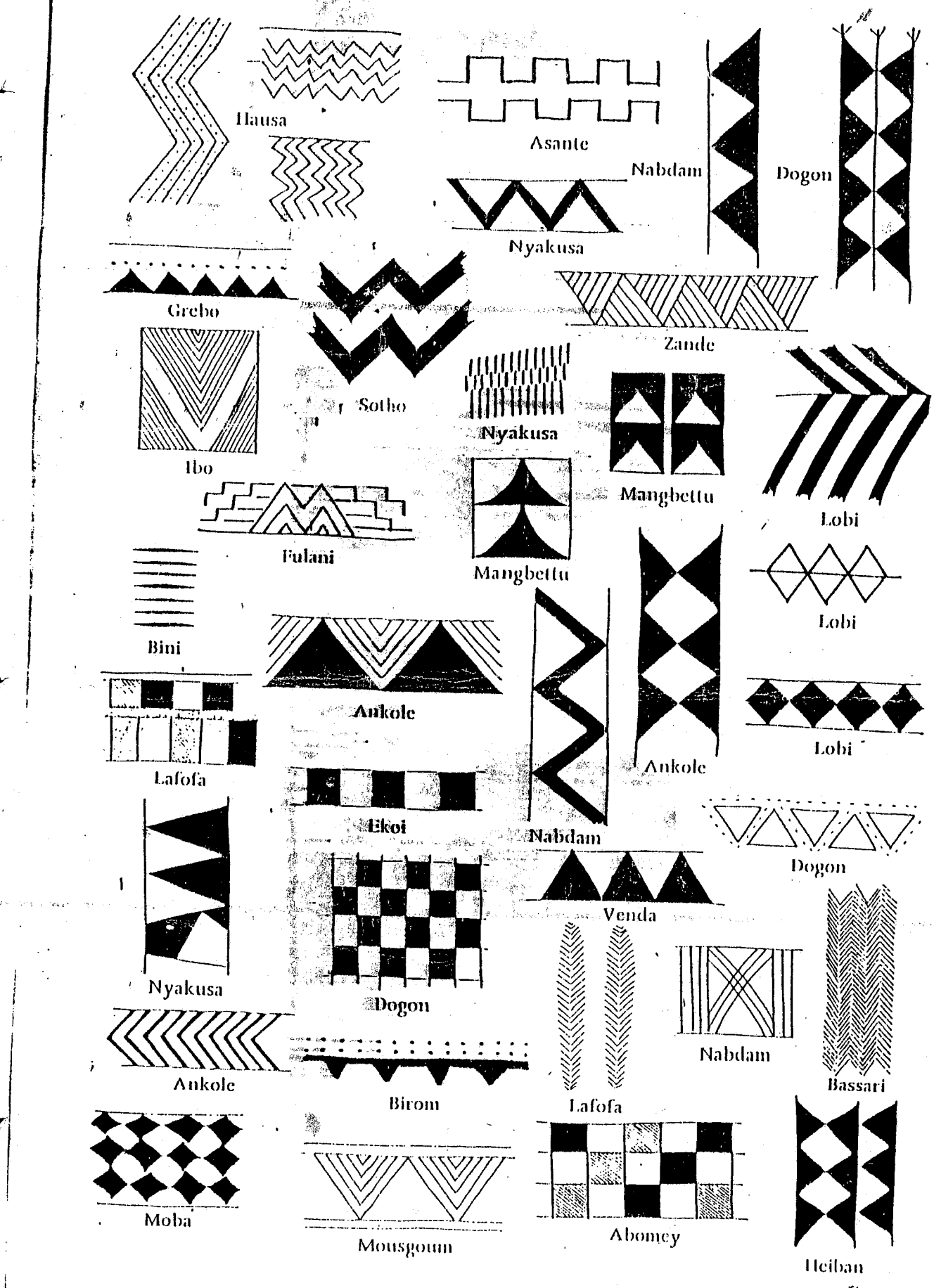


FIGURE 3. Decorative motifs from the princess's apartments: 1. *kan figini* (head of fan), 2. *sarka* (chain), 3. *kayar kifi* (thorny fish bone), 4. *fitsarin bijimi* (bull's urine), 5. *kan tsaka* (head of gecko), 6. *takalmi* (sandal), 7. *kan kadangare* (head of lizard), 8. *tambari* (emir's drum), 9. *tsattsewala* (swift or swallow), 10. *igiyan tambari* (leather rope on drum), 11. *tukunya* (cooking pot), 12. *gindim murhu* (fireplace for cooking), 13. *matsefi* (comb), 14. *bakin buta* (mouth of small bottle), 15. *ludayi* (ladle), 16. *kuge* (metal gong), 17. *gululu* (clay spindle whorl), 18. *shantali* (metal jug for ablutions).



Plan of a homestead in Northern Nigeria.
(A compact traditional form).

FIG 5 — Decorative motifs of various tribes and ethnic groups.



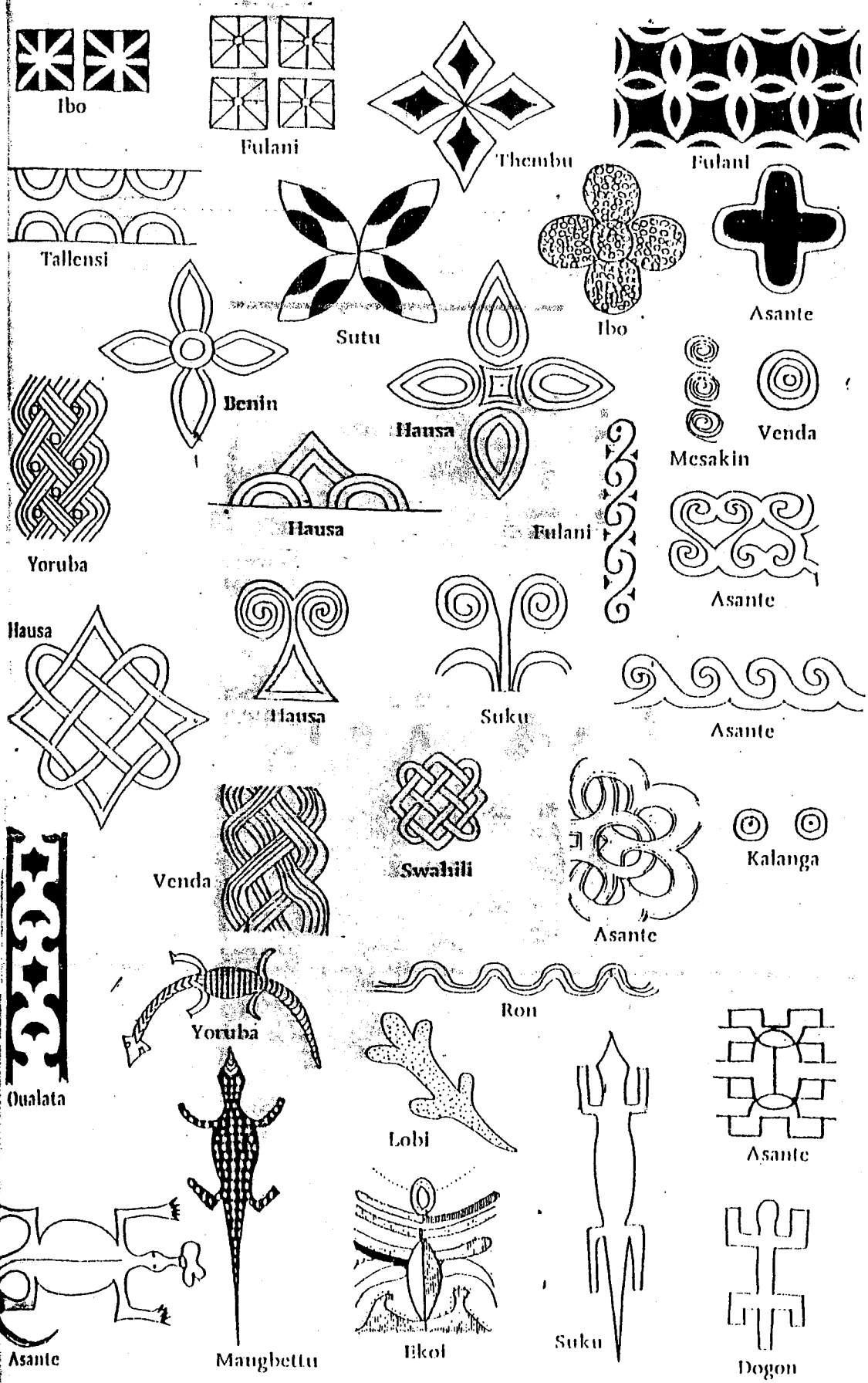
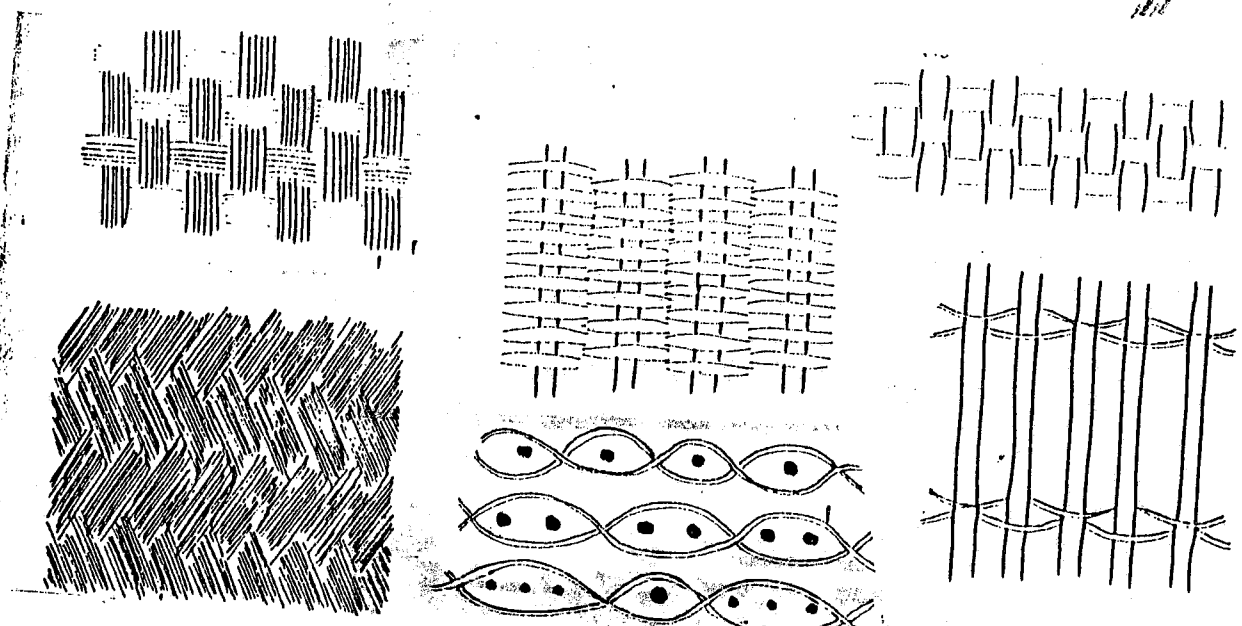
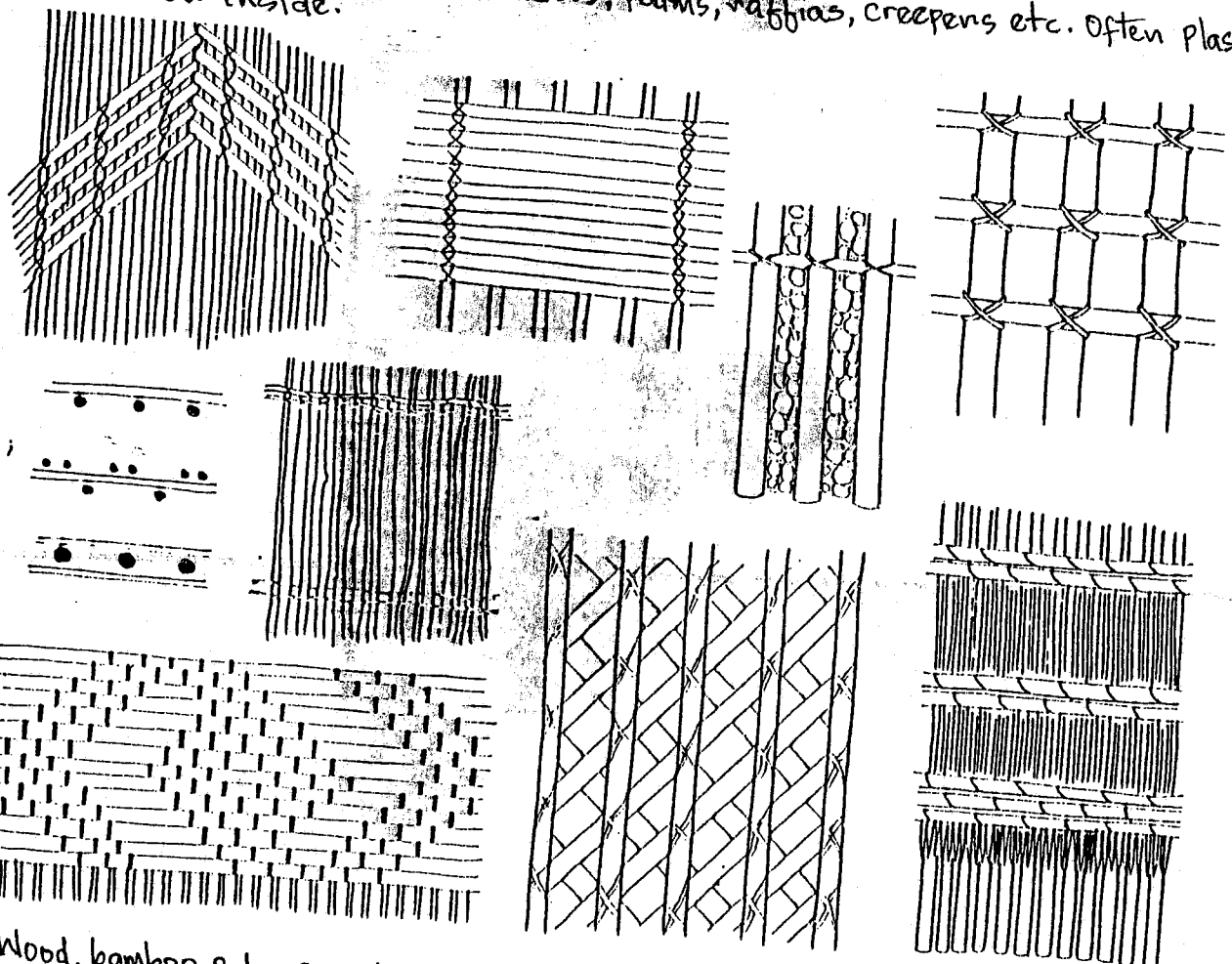

Ibo
Fulani
Thembu
Fulani
Tallensi
Sutu
Ibo
Asante
Benin
Hausa
Mesakin
Venda
Yoruba
Hausa
Fulani
Asante
Hausa
Hausa
Suku
Asante
Venda
Swahili
Asante
Kalanga
Oualata
Yoruba
Ron
Lobi
Asante
Asante
Maugbettu
Ekoi
Suku
Dogon

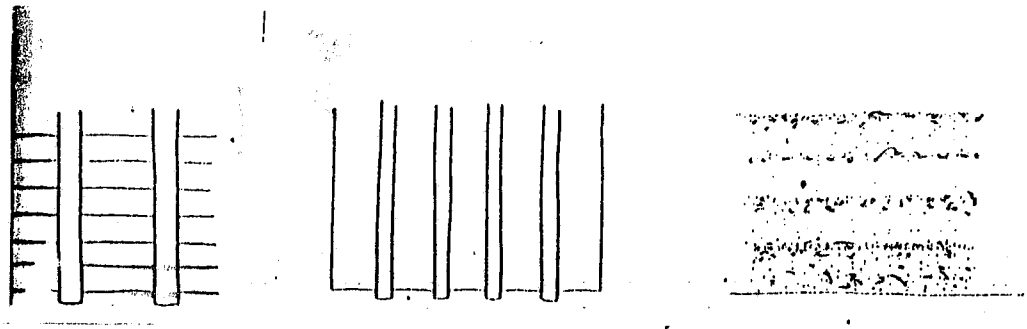
FIG 6 – Some traditional building materials.
(Walls – Analysis of materials)



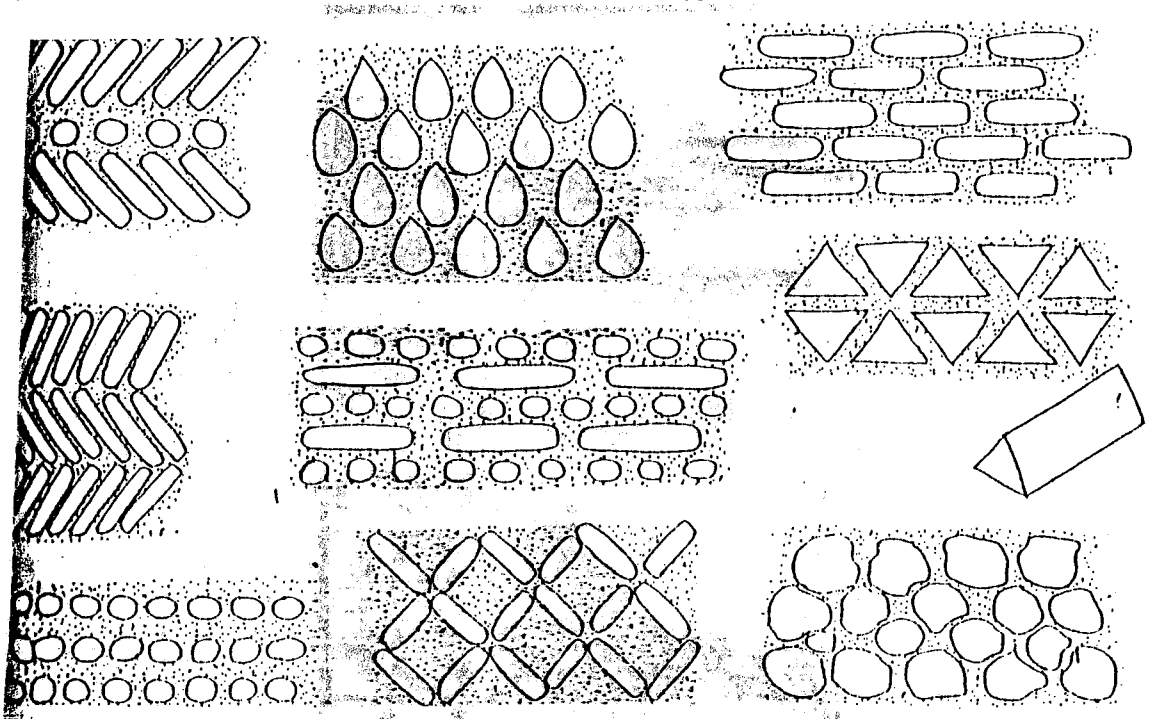
Woven cleft wood, split bamboos, palms, raffias, creepers etc. Often plastered over on inside.



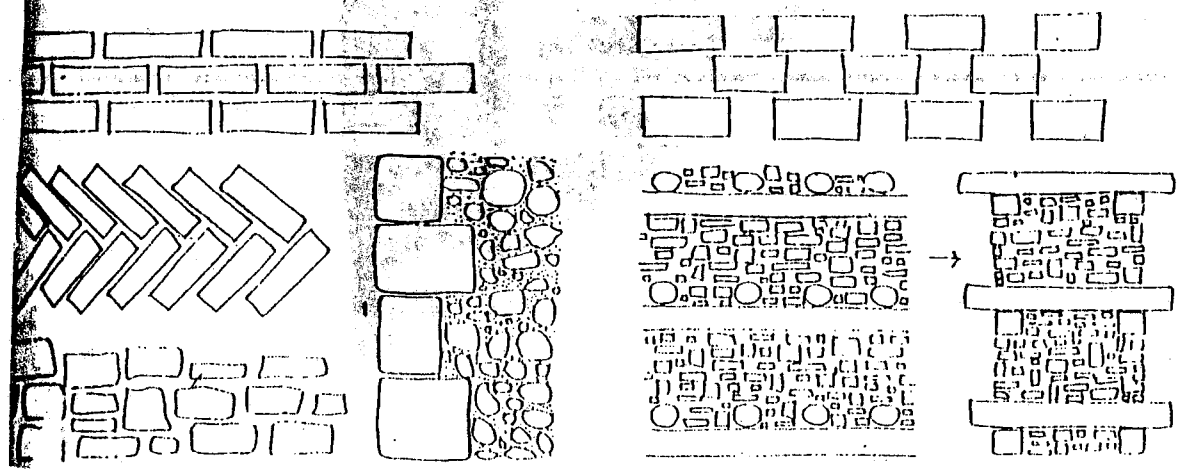
Wood, bamboo palm fronds, grass, bullrushes, tied to framework of wood, bamboo or palm fronds. Stones sometimes used as infilling. Sometimes plastered over on inside or on both sides.



Puddled mud laid in courses. Roof supports sometimes embedded in walls.



Dressed stones or sundried bricks, either rectanguloid or pear shaped, embedded in mud, often plastered over on both sides.



Rubble wall set with mortar plastered over on both sides. Openings and corners edged with dressed stone.

Stone rubble walls reinforced with wooden planks held in place by short wooden cross pieces. Solid rock walls sometimes dressed to imitate this technique.

3.9.1 CONCLUSION

The use of traditional motifs cannot be divorced from traditional architecture and even the present day architecture which has been influenced by modernization. As earlier mentioned, most of the ethnic groups in Nigeria makes use of virtually common building materials. The differences are basically in their respective forms as per organization and construction techniques. However, one of the major differences that enables even lay men recognise the area which a particular architecture is peculiar to, is the decorative motifs.

There is no decorative motif that is common to any two or more ethnic groups; the only similarity is perhaps that most of them signify cultural heritage, historic events and display of status. A crafts centre should therefore emphasize not only the handwork of the people, but also the culture, ways of life, customs and heritage. This can be achieved by emphasizing also on the use of traditional motifs which gives room for the study of the traditional architecture, culture, ways of life, customs and so on, of the people.

The form of the proposed crafts centre has been organised in a way that traditional architecture which gave birth to the use of traditional motifs is not divorced from it. The use of circles, rectangles, arch ways and building materials such as burnt bricks, thatch, clay, and decorative motifs peculiar to the North can be seen on the plans and elevations of the production area.

Lastly, traditional motifs do not limit themselves only to decorations on the walls, but the forms as well as building materials typical of a particular area in a way that it establishes personal or community identity.

CHAPTER FOUR

CASE STUDIES

4.0 INTRODUCTION

Case studies in any analysis serve as a guide towards a proper understanding of the proposed project. its appraisal with respect to this work, will help in the proper understanding of the extent to which architects in various areas have succeeded in portraying the cultural identity of the areas in question.

Visits to already existing craft centres is necessary to get an idea of the space requirements required for such a centre and the administrative and organisational structure of such establishments. the crafts centres were visited to physically evaluate the general requirements as well as their merits and demerits.

4.1 CASE STUDY ONE – NATIONAL MUSEUM KADUNA

The national commission for museums and monuments (national museum) Kaduna is located Along Ali Akilu Road at Kaduna – north local government. Some of its adjoining properties are investment house and ungwa-sarki bus stop. It has the following facilities:

a) Administration

b) Gallery

c) Education unit

d) Crafts village

The crafts village which is the major area of concern has the following sections:

a) Leather section

b) Clothes weaving section

c) Iron, brass, and gold smith section

d) Pottery section

e) Sewing section

f) Saloon section

g) Crafts display area

h) Restaurant and

i) Conveniences

The building style is generally traditional, considering that the materials are basically mud for the walls, aluminium roofing sheets and thatch as the roof cover. The use of arch ways which are used in the traditional Hausa buildings also helps

to show that since the centre is located in the north, the architecture of the north should reflect on the buildings. there is also a green area which is called the botanical garden and a large open space around the buildings where some of the crafts are kept to dry and where some are fired (especially the pottery works).

Merits

a) The use of traditional building materials and forms to depict the architecture which is peculiar to the area which it is located.

b) The site is highly accessible since it is located along a major route.

c) The surroundings are well landscaped.

Demerits

a) The parking space provided is inadequate and it is not well defined.

b) The crafts display area is relatively small.

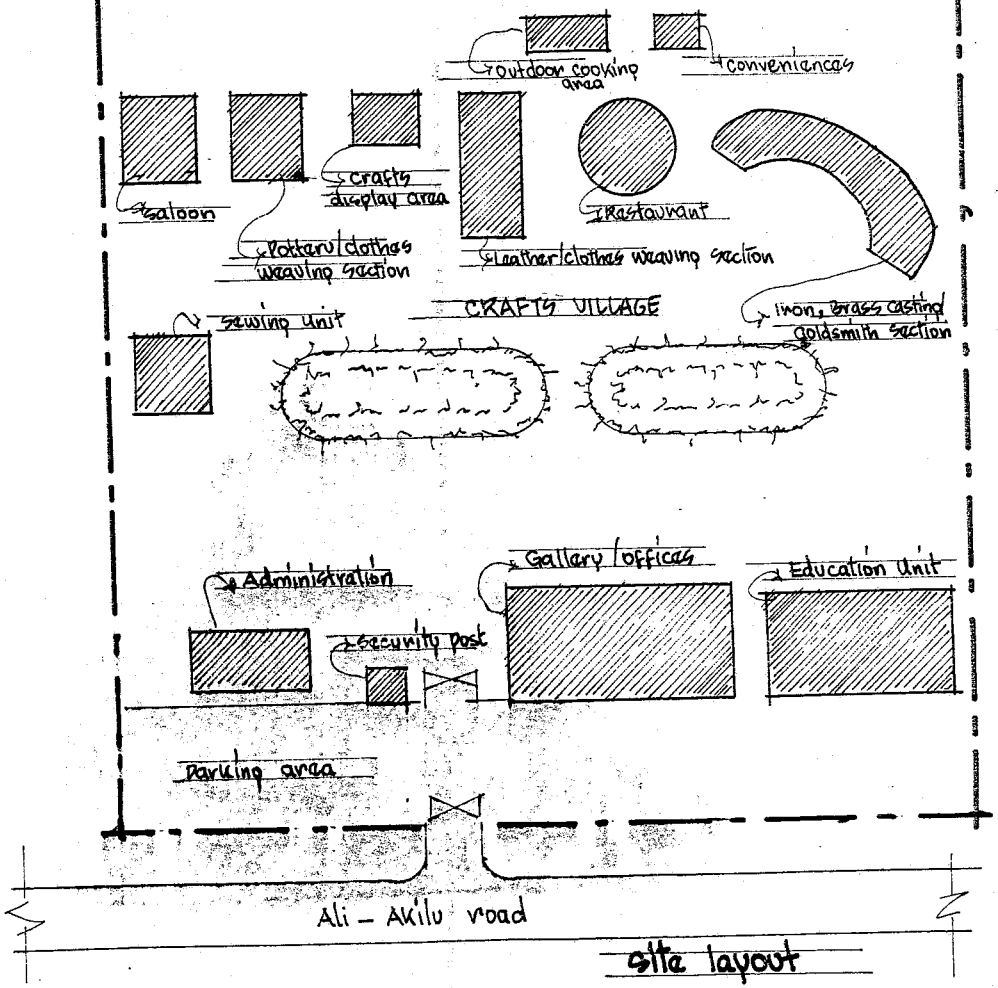
c) The conveniences are located quite close to the restaurant

d) The security post is not well positioned.

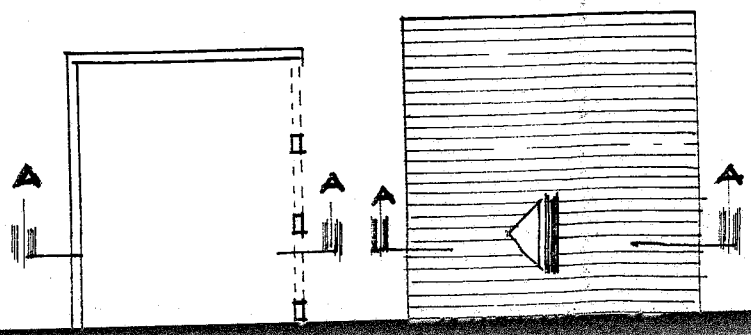
CASE STUDY

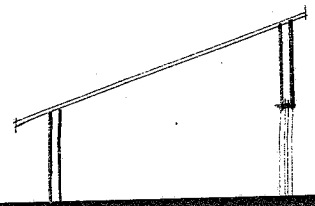
NATIONAL MUSEUM KADUNA

Approach view of the museum



site layout





4.2 CASE STUDY TWO – NATIONAL MUSEUM JOS

The national museum Jos is located along legal avenue. it is the second oldest museum in Nigeria. the construction of the building started on 23rd September 1949, and it was opened on April 26th 1952. It has the following facilities:

a) Exhibition area

b) Library

c) Archaeological section

d) Administration

e) Pottery museum

f) Motna and

g) Crafts village

The crafts village has crafts making shops, leather work, brass work, metal work and paintings section. the building style is traditional in terms of the materials used and some of the forms.

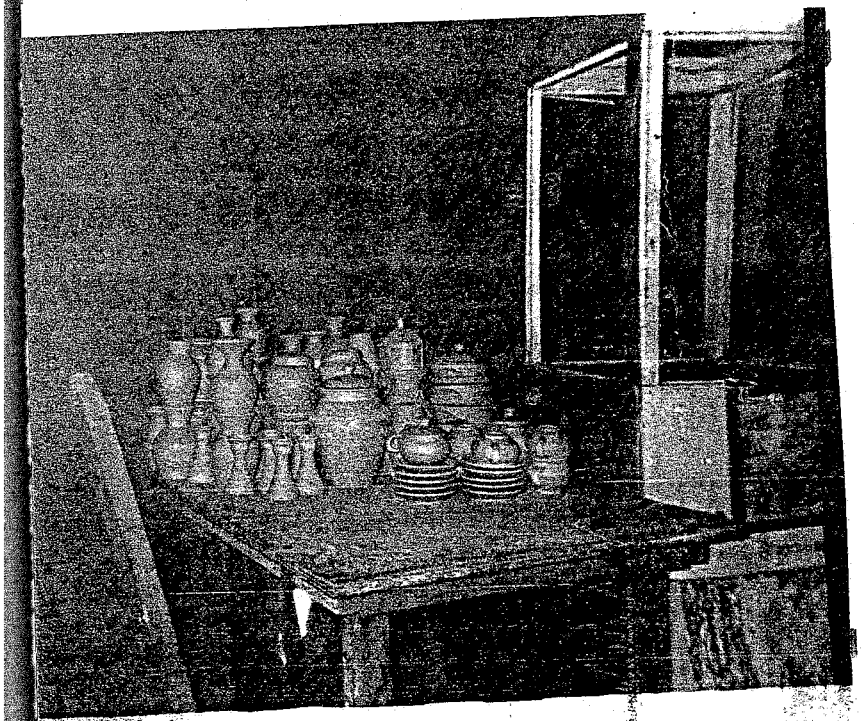
Merits:

a) The use of traditional building materials

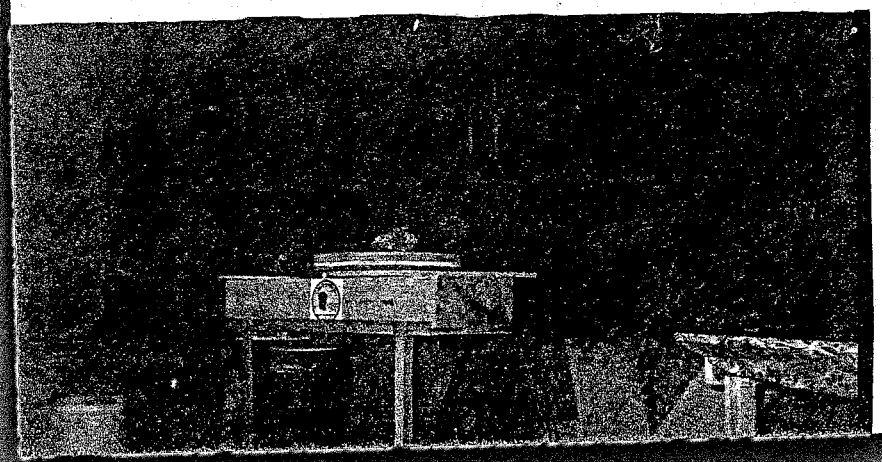
b) The centre is easily accessible from the museum area.

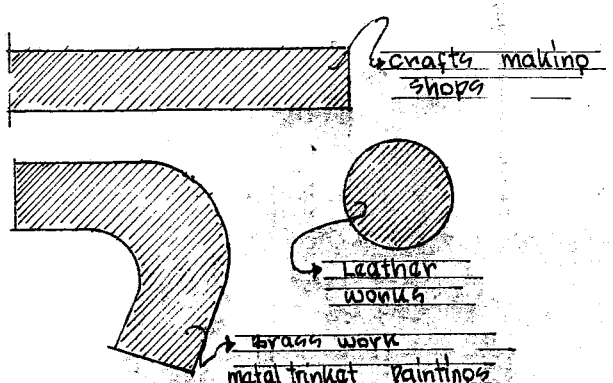
CASE STUDY 2

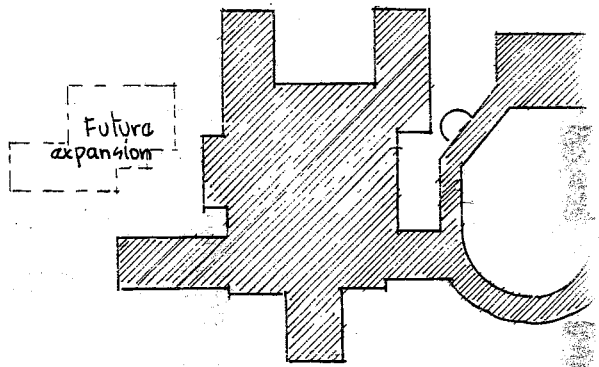
NATIONAL MUSEUM JOS

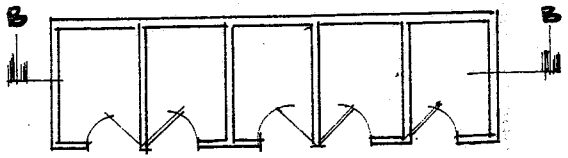


Some finished pottery products

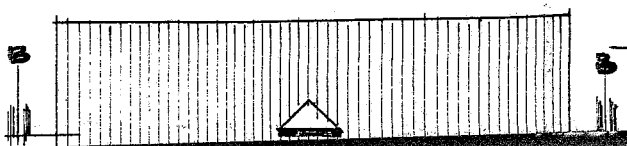


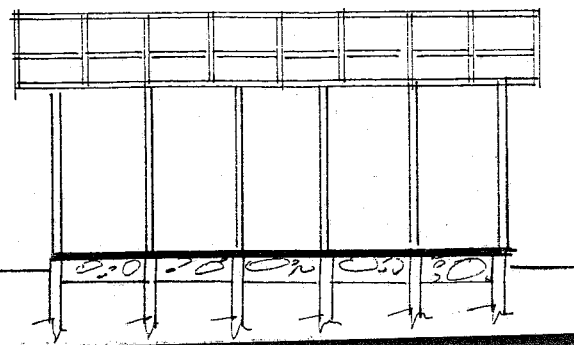






Floor plan of crafts making shops





Demerits

a) The space requirement within the crafts making area is inadequate

b) The building material is mud and hence requires constant renovation.

c) Absence of conveniences and well defined production halls.

4.3 CASE STUDY THREE – MALLAM TIFIN CRAFT CENTRE, MASAGA, BIDA.

The craft centre is located at masaga in Bida, Niger State. it is a family kind of business and so the living area is located within the same layout as other production units. Crafts produced are house hold utensils, beads, glass, silver smith and brass work.

The craft centre has the following facilities:

a) Display and sales area.

b) An office.

c) Production halls.

d) Fuel store.

e) Material store.

f) Living unit.

g) Equipment store and

h) Central court yard.

The architectural style is traditional, involving the use of mud and round huts.

Merits

a) The centre is manageable due to its small size and family nature.

b) It is accessible because it is located along a major road.

c) The various units are well defined.

Demerits

a) The production process is secretive.

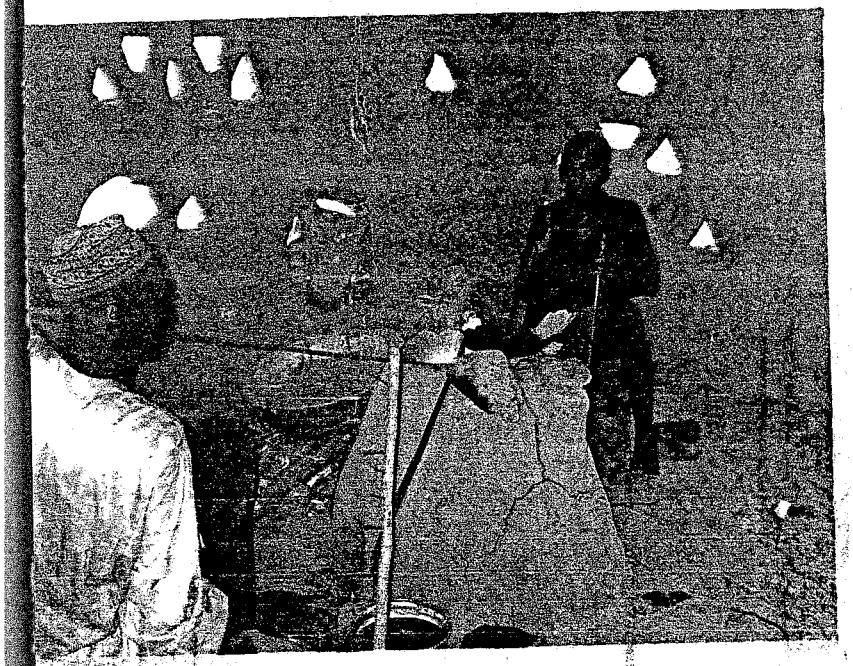
b) There is no provision for welfare and educative facilities.

c) The centre is small and handled by a family.

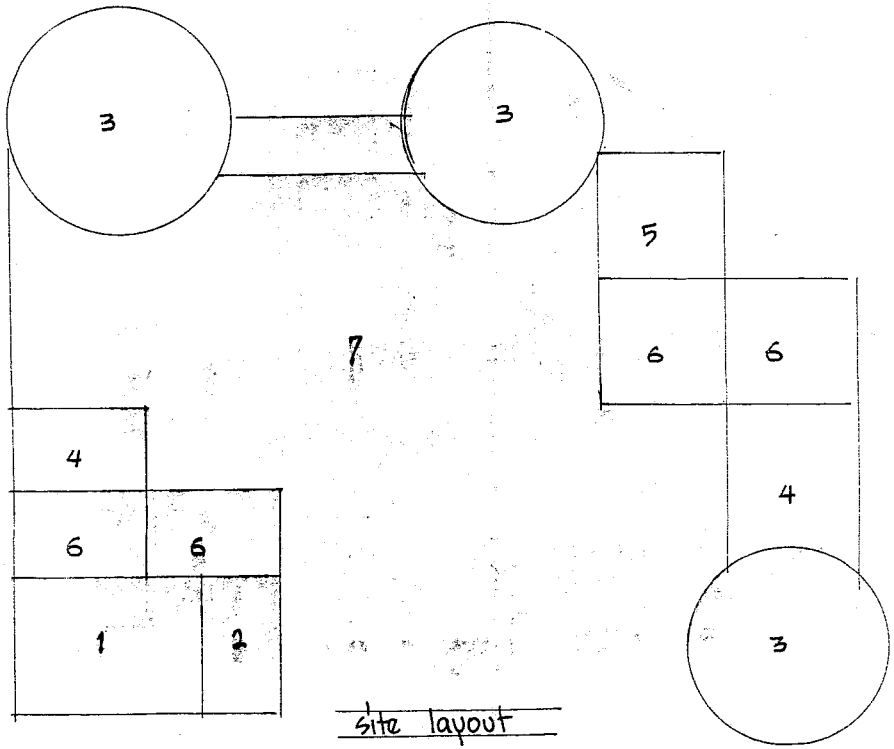
d) Building material is mud and hence requires constant renovation.

CASE STUDY 3

MALLAM TIFIN CRAFTS CENTRE BI



A crafts man at work



site layout

	Legend
1	Display and
2	Office
3	Production
4	fuel stor
5	material
6	Living un
7	central co
8	Equipment

CHAPTER FIVE

DATA COLLECTION

5.0 INTRODUCTION

One clear fact about the Kano Region is that it is named after, and includes the Kano city, and the close settled zone around it. This fact is common to all known definitions of the Kano Region. Three such definitions are found in the literature to date.

The first definition has been summarized by Udo (1970) as the core region of Hausa land which contains two of the ancient 'ports' of the Sahara; Kano and Katsina. This Kano region is described as an open country characterized by 'great concentration of rural population around Kano and Katsina', intense farming and dominance of groundnuts in the rural economy. This is a definition whose criteria are drawn from socio-economic variables. The boundary of this type of Kano region is difficult to draw.

The second definition is the one used by Government functionaries. To them the Kano region is either the old administrative unit known as the Kano province, or the current unit known as the Kano state. The criteria for the definition are political, and the boundary is easy to draw.

The third definition is that which can be gleaned from Rack ham and Rose Innes (1978). It describes Kano region as the combination of the drainage basins of rivers Hadejia, Katagum, Jama'are, up to their union as the Yobe. The criteria used here are physiographic.

5.1 CLIMATIC CONDITIONS

The present climate of the Kano region is the tropical wet-and-dry type, coded as Aw by W. Koppen, although climatic changes are believed to have occurred in the past. The climate of the Kano region is controlled by the interplay of the tropical marine (m T) air mass which originates over the Atlantic Ocean to south, the tropical continental (c T) air mass which originates over the Sahara desert to the north, the Inter-Tropical Discontinuity (ITD), and the prevailing winds. The ITD (also known as the Inter-Tropical convergence zone: ITC) is the dividing zone between the cool and dry, sometimes dusty, c T air mass and the warm and wet m T air mass. The ITD itself is a zone of tropical, weak frontal weather conditions which in West Africa, swings from latitude 5 degrees North at the lowest-sun period (December) to latitude 18 degrees North at the highest-sun period (June), and back from 18 degrees North to 5 degrees North during the other half of the year. It is believed that the ITD advances northwards at about 160km/month, resulting in a relatively gradual onset of rains from the south to the

north; but it retreats southwards at about 320km/month to cause a more rapid end of rains. The northward advance is associated with southerly winds while the southward retreat is associated with northerly winds, known locally as the harmattan. Altitude is not an effective control of climate in the region, but latitude and the continental location of the region are greatly reflected in the temperature characteristics.

5.1.1 RAINFALL

Rainfall is a very critical element in the region because of its deficiency during the dry season. In a normal year, the mean annual rainfall in the southern parts of the region is about 1000mm, decreasing to about 800mm around metropolitan Kano, and about 600mm in the north and northeast. Great temporal variations occur in the amount of rainfall received anywhere in the region, no two consecutive years record the same amount, and averages calculated for any two periods are never the same. For example, Table 1 shows the average annual rainfall over a long period (more than 50 years) for the Kano region to be 884mm.

However, calculations based on the period 1965 – 1974 result in an average of 729mm, while the next five years (1975-1979) recorded an average of 748mm.Variations of up to 30% on either side of the mean value are considered normal. Wider variations occur under drought conditions. Thus, during the 1972/75

drought, the Kano region received only about 48% of its long term mean annual rainfall.

The variations in the amount and other aspects of rainfall result in three rainfall regimes.

a) There is a wet regime when the amount of rainfall received is larger than the long-term mean. The duration of the wet season is longer than normal, and the pattern of rain is steady.

b) There is a moderate regime when both the amount and the duration of rainfall are approximately normal, and the pattern of rains is steady.

c) There is a dry regime when either any of the amount and the duration of rainfall is less than normal with erratic rain pattern or both of the amounts and duration of rainfall are less than normal with, or without erratic pattern of rains. The regimes occur at random, the occurrence of the dry regime for two consecutive years means a major drought

5.1.2 TEMPERATURE

The temperature regime is warm to hot throughout the year, even though there is a slightly cool period between November and February. The mean annual temperature is about 26 degrees centigrade, but mean monthly values ranges between 21 degrees centigrade in the coolest months (December / - January) and

31 degrees centigrade in the hottest months (April / May). The long term mean conditions at the Kano region are shown in Table 1.

TABLE 1: Average climatic conditions in Kano area.

Month	Mean Temp (°C)	Range (°C)	Rainfall (mm)	Et (mm)	Sunshine (h/d)	RH/* (%)
January	21.2	17.8	0.0	133.3	9.0	28
February	23.7	20.9	0.3	141.1	9.0	25
March	27.7	18.5	1.8	182.5	8.6	23
April	30.5	16.4	8.9	195.5	8.4	26
May	30.4	13.6	70.2	187.9	8.8	51
June	28.1	13.0	132.7	156.3	8.7	65
July	25.7	10.7	210.9	126.4	7.5	78
August	24.9	9.0	314.0	112.7	6.0	83
September	25.9	10.9	132.8	112.5	7.9	79
October	26.8	16.5	12.8	144.0	9.5	58
November	24.6	19.7	0.0	139.9	9.8	37
December	21.7	18.7	0.0	127.4	9.2	32
Year	25.9	15.5	884.4	1771.8	8.5	49.6(50)

SOURCES: *Olofin (1980)

5.1.3 SEASONAL EFFECTS OF THE CLIMATIC CONDITIONS

The general effects of the climatic conditions and the temporal variations in rainfall and temperature conditions give Kano region, not just a dry and wet season as commonly believed, but four seasons which are:

a) A dry and cool season (kaka): starts around mid November and ends in February in metropolitan Kano. The period is characterized by cool and dry weather conditions, with occasional dusty harmattan haze.

b) A dry and hot season (bazaar): Is a short transitional period between the harmattan season and the wet season. Winds are very variable, but the region still lies north of the ITD. The season starts from the end of the cool season and ends about mid May in Kano. This is the hottest season of the year when mid-day air temperature can be over 40 degrees centigrade in a Stevenson's screen.

c) A wet and warm season (damina): Follows the hot season, and ends in Kano around mid September. This is the proper wet season in the region when over 90% of the annual rainfall is recorded and southerly winds prevail. The temperature is warm and fairly steady, resulting in the lowest diurnal and monthly ranges of temperature for the year.

d) A dry and warm season (rani): Starts at the end of the rains, and ends about mid November in Kano with the onset of the harmattan. It is the second hottest period of the year when the relative humidity is still sufficiently high to make sensible temperature almost unbearable. Winds are very variable, and the season records the highest number of calms in the year.

5.2 EVAPOTRANSPIRATION

The combination of evaporation and transpiration (evapotranspiration) is very high in the region. The potential evaporation of the Kano region is shown in table 1, to be about 1772mm per annum. The mean evapotranspiration for the station, by sunken pan method, is about 2538mm per annum. These mean values decrease slightly to the south and increase towards the north of the station. However, actual evapotranspiration, estimated at about60% (south) to 75% (north) of the annual rainfall is not as high as the potential one. In terms of the amount, the actual evapotranspiration is higher in the south than in the north. However, an increasing proportion of a decreasing rainfall is being lost from the south to the north, creating an increasing amount of water deficit northwards, i.e. aridity increases northwards (Allan 1973).

5.3 HUMIDITY

Relative humidity in the wet season exceeds 60% in the morning. In the dry season, the harmattan winds help to reduce the relative humidity from a level of 60%. Grasses wither; trees shed their leaves while water courses dry up, the entire landscape appearing like a desert. Bush fires are common and dust storms blow away sandy soils from the sun baked fields.

5.3.1 SUNSHINE

During the dry season (November to February) the monthly variation for sunshine follows the general trend of an increase from over 295 hours. As the rainy season approaches, the cloudiness increases. Kano is exposed to approximately 2700 sunshine hours annually (Maboyon 1977). The sunshine hours decline generally as the rainy season progresses and it gets to its lowest values in July/August.

5.4 GEOLOGY AND TOPOGRAPHY

5.4.1 GEOLOGY

The Kano region is characterized by two major geologic structures, with minor intrusions of a third. The larger area of the region to the south and Northwest is underlain by rocks of the Basement Complex with intrusions of

Younger Granites in the extreme southern parts. To the northeast are the unconsolidated sediments of the Chad Formation. The two structures are separated by a transitional zone which constitutes the well defined Hydro-Geological Divide of the region.

The rocks of the Basement Complex have been subjected to weathering to produce fairly deep regolith which has been subjected to laterization. Thus the occurrences of exposed and hardened laterites and of unexposed hard pans constitute part of the structural characteristics of the Kano region. Another addition to the structure is the occurrence of a layer of wind drift material on the surface, particularly on the plains developed over the Basement Complex rocks.

BASEMENT COMPLEX ROCKS

These rocks are of pre-Cambrian origin and consist of metamorphic and igneous types. Common among the rocks are granites of different descriptions, granitised sandstones (as in kazaure), migmatites, gneisses, philites, and so on. The granites dominate the structure. Hence it is common to refer to the rocks of the Basement Complex as the older Granites.

These rocks have been in existence for millions of years. They have been subjected to chemical and forms of weathering to produce clay-rich regolith. The regolith was subjected to widespread laterilization during the pluvial periods of the

past. The outcrops of the laterite occur in interfluve areas of the upland plain, and on the summits of regolith hills such as the Goron Dutse and Dala Hills within the Birni areas of Metropolitan Kano. Notwithstanding the occurrence of the regolith and the wind drift layer on it, outcrops of the rocks of the Basement Complex are common, but irregularly distributed in this part of the region. Such outcrops occur on all facets of the landscape (i.e. from the valley floor to the interfluve), either in isolated or grouped forms. The outcrops are fewer and lower in the north than they are in the south where they constitute imposing highlands.

THE YOUNGER GRANITES

The Jurassic intrusion that affected the Jos plateau occurred in the southern tips of the Kano region which consists of foot hills of the Jos plateau. Although the Younger Granites have been subjected to some weathering, their outcrops dominate the area where the intrusion occurred such as in Riruwai, Rishi, and Ningi. The Younger Granites are well jointed and occur in ring complexes.

THE CHAD FORMATION

The Chad Formation is composed largely of unconsolidated sediments. In the Kano region these sediments are mainly of Tertiary terrestrial origin. On the surface, they consist of vast, Tertiary accumulation of sand on plains and

interfluves, recent alluvial accumulation in channel complexes and Tertiary and Tertiary and recent accumulation of silt and clay in depressions. In some areas the vertical profile is an alternating band of sand (aquifer) and clay (impervious) layer. In areas close to the Lake Chad, there are three bands of sand, described as upper, middle and lower layers, and three of clay, each band measuring hundreds of metres in thickness. In the Kano region the bands are not as numerous and as thick.

5.4.2 TOPOGRAPHY

The Kano region occupies the south western rim of the Chad depression and shares physiographic divides with the Niger and Benue river systems to the south and with the Niger system to the southwest and west as the Chad-Sokoto Divide.

The elevation of the region above mean sea level ranges from about 400metres at the north eastern margin to over 1200metres at the southern tip. That is, the highest elevation occurs in the south, and elevations decrease both northwards and north-eastwards. The region is part of the popular High plains of Hausa land except for the section east of the Hydro-Geological Divide. The rock structure, the relief, and the landforms of the region are closely linked.

The topography of this region can be described under three types occupying three distinct zones, as the highlands, the high plains, and the low Chad plains. The first two types are parts of the High plains of Hausa land, as hinted above, and the

third is a part of the Chad plains. The topography is greatly influenced by the geology; the highest elevations are associated with igneous structures, and the lowest with the Chad Formation as in figure 1.

THE HIGHLANDS

The highlands occupy a relatively small area to the south and southeast of the region where they constitute part of the foot slopes of the Jos Plateau, lying further south. The peaks of the highlands, which are commonly outcrops of Younger Granites, rise more than 1100metres above mean sea level. The elevation of their bases ranges between 700 and 800metres. The highest of the peaks, which is also the highest elevation in Kano region, is about1230metres above sea level.

The overall scenery of this relief unit is one of massive and towering rocky outcrops, separated by narrow and patchy plains, as can be observed near Riruwai.

THE HIGH PLAINS

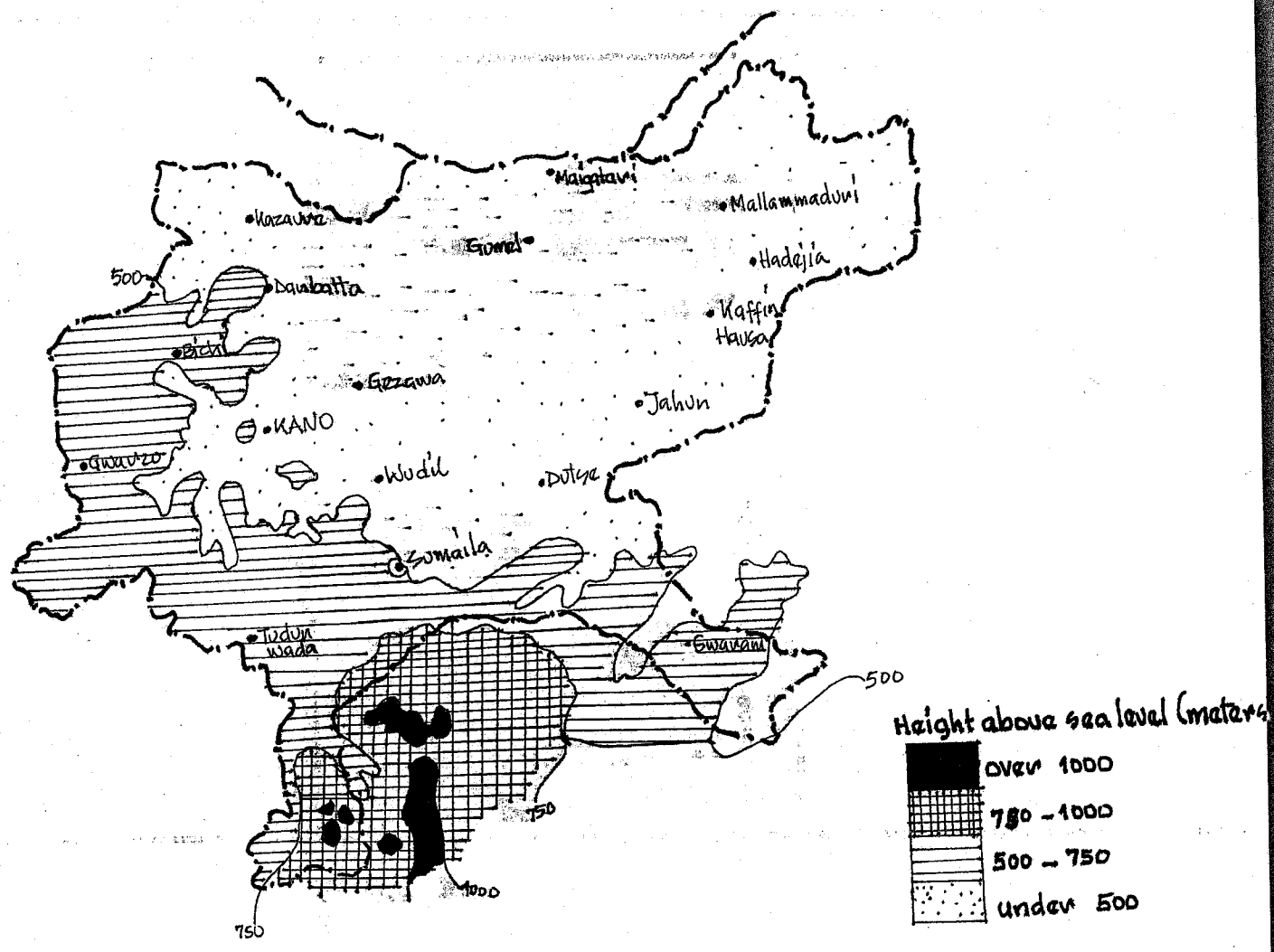
Plains whose elevations range between 450metres and 700metres occupy about 40% of the surface area of the Kano region, and constitute the largest single relief unit. The high plains are areas of low relative relief, usually less than 30metres, except in sections where grouped hills occur. In such sections, the hills may rise more than 100metres above the plains. Most of the hills (both grouped

and isolated) are outcrops of the rocks of the Basement Complex, over which the plains are developed.

THE LOW CHAD PLAINS

The lowest relief unit of this region consists of the plains developed essentially on the sedimentary structure known as the Chad Formation. The unit also includes the transition plains immediately west of the Hydro-Geological Divide which, although developed on the rocks of the Basement Complex, are lower than 450metres above sea level and over which sands of the Chad Formation occur. The average elevation of the relief unit ranges between about 430metres, west of the Hydro-Geological Divide, and 400metres at the north eastern margin. The relative relief is between 15 and 20metres, except in sections occupied by sand dunes. In such sections, the dunes are up to 30metres higher than the interdune depressions, as can be observed near Jahun in figure 1.

FIG. 1 : THE RELIEF OF KANO REGION.



SOURCE: Collins and Longman 1985.
Federal Surveys.

5.5 SOIL AND VEGETATION

5.5.1 SOIL

The factors of soil formation in the region are not different from factors elsewhere. However, the role of parent material is very great in the region. Parent rock appears to pull a greater influence than climate. Thus the variety of soils occurring in the Basement Complex area is different from the variety occurring from the Chad Formation zone. Another factor of great significance is topography. Climate gives a zonal stamp, even though the mature soils of the region are more intrazonal than zonal. Climate has only a generalised influence; parent rock creates meso-scale spatial differences.

Weathered rock and sandy drift constitute the two main soil-forming parent materials, but differentiation in soil types depends largely on the catena arrangement. On the interfluves and upper slopes of undulating districts the soils are of red-brown to orange colour and consist of the sandy clay loam overlying lateritic ironstone. These soils are cultivated in areas where the ironstone is only a few inches beneath the surface. In the fadamas or seasonally flooded valley floors, heavier grey alluvial soils with high clay content occur.

Accelerated soil erosion by wind and running water has laid bare certain tracts in the densely settled areas of the region. Wind erosion is particularly serious towards the end of the dry season, when the storms preceding the onset of the rains

blow off much soil. Gully erosion is most serious along valley sides where the slopes create favourable conditions for easy run-off.

5.5.2 VEGETATION

The region lies within the Sudan zone, but its vegetation has been completely modified as a result of several centuries of human occupation featuring bush clearing and burning for cultivation and hunting, as well as cattle grazing. In the closely settled areas around Kano and Katsina natural bush vegetation is almost completely absent, but several trees have been planted for shade and fruit. A considerable growth of natural vegetation occurs in areas which are remote from human settlement or which are marginal or uncultivable, but even in such areas grazing and bush fires restrict mature woodland to a few spots including the forest reserves, while scrub communities persist over most of the landscape.

Compared with the Guinea savannah, the vegetation here consists of shorter and more feathery grass. The number of thorny plants, usually a specie of Acacia, is greater and the leaves of trees often smaller. Acacias who have varied coloured barks are particularly numerous in low-lying sites, including seasonally flooded ground along river valleys. Another important species of the Sudan zone is the Dum palm which occurs singly or in dense groves. Glary forests or riparian

woodland featuring a dense tangle of climbers persist along river valleys in areas remote from human settlement.

5.6 SOCIO-CULTURAL LIFE

The population is predominantly Hausa but there are a considerable number of Fulani's and strangers from other parts of Nigeria. In the past, the Hausas were usually identified as settled cultivators in contrast with the nomadic Fulani, but today such a distinction can no longer be accepted because many Fulani's have since settled down as farmers. In an area which has seen many periods of unrest, the tendency was for people to flock to surroundings where they were sure of protection from attack. This is one reason why the Kano district in particular has had a large concentration of population for many centuries. Recent developments in industries and agriculture have created employment opportunities for seasonal labour in the farms as well as skilled and semi-skilled labour in the city of Kano. In addition, the Kano district has always been a rich agricultural district, and the fact that much of it is cropped permanently makes it possible for the high population density of over 500 persons per square mile to survive. Apart from farming as the major source of livelihood, the people are also very good with crafts such as leather works, pottery, black smith, brass work, calabash decoration, tie and dye, embroidery making amongst others.

time when farms are being made in other areas. After harvests, however, cattle may be grazed on farmland when they feed on crop residues.

Kano Emirate has a few small forest reserves. Little or no timber is produced and distance from centres of population precludes the reserves from being useful as sources of firewood. Natural grazing, like cultivated land, may be located in a fadama or on an upland area. Excessive pressure on available grazing land has resulted in severe degradation, and in some upland areas the grass cover is rather poor.

MANUFACTURING

There are small, medium and large scale industries, most of which are located in or around Kano. Three major areas where these industries can be found are Bompai, Sharada and Challawa industrial areas. Leather production is one of the main industries. Leather is produced and exported within and outside the country; most of the raw material comes from within the area itself. Kano traditional industries, including their leather works and cotton textiles, which brought her fame prosperity in the past, have now moved to the factory. The leather factory established in 1962 supplies part of the raw materials for the leather shoe factory which makes sandals, police boots and leather belts. Rubber for this factory as well as for the plastic shoe factory comes from Midwestern Nigeria.

There are two large textile mills each of which produces about 45,000 yards of cloth each week. Another traditional industry which has moved to the factory is the manufacture of perfumes which are in great demand by Sudanese people. The principal occupations, by which the people supplement their incomes, are those connected with various crafts making, cotton-spinning, weaving, dyeing, soap making and the manufacture of enamel ware. There is practically no such thing as an industrial worker pure and simple, it is evidently very difficult to classify people as belonging to one class or the other. Crafts are made by both men and women for decorations and sales to earn extra income or as a major source of livelihood. Spinning is done entirely by women, and it is impossible to arrive at any estimate of the number of women who spend more or less of their spare time at this.

Weaving is done always by men, except in the case of the 'Kano cloth,' woven on upright looms with a double thread. The latter is of no importance as a general industry, and is probably not native to Kano; even the present supply is dependent on the European demand for it. It is estimated that there are 82,000 men in the province who pursue with some regularity the occupation of weaving.

Other manufacturing industries are rope-making, mat-making and iron-smelting. Tailors, either professional or part-time workers, form a considerable fraction of the population.

Fishing may perhaps be added as an 'industry,' it is pursued by a number of people in Katagum and Hadejia Divisions, but hardly ever as their sole occupation.

LABOUR FORCE

The majority of labour force works in agriculture. Trade activities, which are mainly generated by agricultural production, engage a large proportion of women, although not on a daily basis. The manufacturing sector is believed to employ a small proportion of the labour force, although a number of women engage in handicrafts, particularly as a part-time activity. It is expected that the largest proportion of the labour force will continue to be engaged in agriculture, although it is likely to form a smaller proportion than at present for the following reasons:

a) Improved techniques of agricultural production and some mechanization are likely to reduce the amount of agricultural labour per cultivated hectare.
b) The expected establishment of several industrial enterprises and the consequent expansion of related activities are likely to attract a larger proportion of the labour force than previously.

5.7.2 COMMERCE

During the last sixty years, the commercial importance of Kano has increased enormously following the extension of the railway to the city in 1912 and the building of all season roads from Kano to various parts of the country. Kano is also the second international airport in Nigeria, after Lagos. The importance of Kano as the second most important commercial / industrial centre in the country has never been in dispute. From time immemorial Kano has been the most famous and most strategic commercial entreport in the whole west-African sub-region trading in locally produced goods and crafts with west-Africa and even Europe in the well known Trans-Saharan Tradė.

In view of its accessibility, large population coupled with the enterprising nature of the people, entrepreneurs from far and near are naturally attracted to come and set up their business enterprises. Kano state commercial buoyancy has been consistently on the upward scale.

The growth of residential districts as well as shopping and industrial areas has taken place outside the city walls. Kano is an embodiment of ancient and modern culture, the former being carefully preserved within the walls while the new residential areas with their well laid out streets, their playing grounds, modern houses and amusement centres compare favourably with such new towns as Port Harcourt, Enugu and Kaduna. Sabon Gari, or new town, houses the strangers from

other parts of Nigeria, while Nasarawa town is the high class residential area formerly known as the European reservation. The two towns are separated by the central business district where the main open-air market is located.

5.8 TRANSPORTATION AND TRAFFIC FLOW

Transportation facilities play a key role in economic growth of an area. A good transport system encourages industry, agricultural production and exploitation of minerals and forests. It is also essential for the promotion of cultural exchanges. Apart from the well constructed roads network in Kano township, the railway line from Kaduna which passes through Kano to Nguru also provides transport for certain purposes.

The express roads in Kano includes Zaria road, Maiduguri road, Sabo Bakin Zuwo road, Bayero University road, Mohammad Abdullahi Wase road, Ibrahim Taiwo road, IBB way, Murtala Mohammed way, Ashton road, Sani Abacha way, Hadejia road and Audu Bako way. Apart from these roads, there are other roads which can be classified under main and secondary roads respectively.

The chosen site for the proposed crafts village is located along one of the main roads named Sharada road. All these roads are well constructed and maintained and have hence helped in easy transportation and flow of traffic.

Rail transportation is mainly along Municipal and Nasarawa local governments all the way to Nguru. Kano township is connected by regional routes, primary distribution, major interchanges, district distributor and local roads.

5.9 EXISTING LAND USE AND FUTURE TRENDS

Except for the modern irrigation layouts at the Kano River Project, Hadejia Valley and the smaller areas associated with the Tomas, Gari and other dams, not much conscious effort was made in the past to develop the land. The land was merely exploited through traditional tillage. In the Kano region, the land is used for agricultural, forestation and urban purposes.

Three major agricultural land uses can be identified in the region and they are:

a) Rainfed Agriculture: Up to 70% of the land of the region is put to agricultural use, and about 90% of this cultivated land is under rainfed cultivation for both subsistence and commercial (cash) crops. The landform units used for rainfed agriculture are the upland plains and the well drained river terraces. Slopes are characteristically gentle on these landform units, even though each higher unit drops sharply 3 to 5 metres to the lower.

b) Fadama Cultivation: Fadama cultivation, a dry season market gardening, is associated with the valley bottoms, i.e. the flood plains and the floodable parts of the low terrace. Low terrace depressions retain water which is used to irrigate the farms.

c) Large Scale Irrigation: Modern irrigation layouts with elaborate canal systems are now a common sight, especially on the upland plains of the Basement Complex section, and on the abandoned floodplains of the Hadejia valley. In all, about 25% of the cultivable land is expected to be put under both rainfed (wet season) and irrigated (dry season) cultivation.

The most promising lines of development for Kano include:

- The establishment of a decentralised, labour intensive agricultural development programme.
- The encouragement of handcraft industries, which seem to be widely dispersed throughout the area. They provide an important contribution to household income and employ indigenous skills and materials.
- The expansion of service industries promoted by the improved routes.

CHAPTER SIX

SITE ANALYSIS

6.0 INTRODUCTION

A site can be described as a geographical location that defines the dimensional limits within which development is to take place. An analysis of the site is vital for the designer at the pre-design stage in order to ascertain the advantages and disadvantages of the site regardless of whether natural or artificial, and how to take full advantage of the positive aspects and find means of counteracting the negative aspects.

Site analysis as an integral part of the pre-design stage involves physical, ecological, cultural, infra-structural, aesthetic, acoustic and climatic site analysis of the chosen site.

Physical site analysis involves the analysis of the type and depth of the soil and how it can determine the substructure and/or foundation design.

Ecological analysis relates to the prominent plant and animal communities, their sensibility to change, self regulation and adaptability, and determining the trees to be retained and other useful vegetative ground cover which should all be clearly mapped out.

Cultural analysis of a site refers to the studies of resident population, their hope, fears, wishes, preferences, symbolic expressions, meanings attached to site, individual and group identification with site.

Infrastructural analysis deals with existing development on the site, for example, buildings, roads, paths and services like electricity, sewage, telephone and water lines, environmental problems like pollution e.t.c.

Aesthetic analysis is a study of peculiar site characteristics with respect to vistas, viewpoints, horizontal outlines and visual sequences.

Acoustic site analysis involves the identification of possible or existing sources of noise and strategies to be adopted in eliminating or minimizing such nuisances.

Climatic site analysis refers to the climate of the exact area to be developed and as such it could more or less differ from the climate of the nearest meteorological station.

6.1 CRITERIA FOR SITE SELECTION.

In choosing the site for the proposed crafts village, the aim and objectives of the crafts village were considered, and to achieve the said aim and objectives, the followings emerged as the criteria for the chosen site.

a) Easy accessibility from neighbouring towns.

b) The location of the site which is within Sharada Industrial area of Kano.

c) Easy accessibility to some basic amenities as electricity, constant water supply, good drainages and road network, and telecommunication.

6.2 LOCATION OF SITE

The site for the proposed crafts village Kano is located along Gongoni/Tsamiya Road, within the Sharada phase three industrial area of the town.

It became necessary to locate the site of the project within the industrial area due to its proximity to other neighbouring towns and the nature of the crafts to be produced, since the raw materials needed can be accessed easily within Sharada area.

6.3 SITE CHARACTERISTICS

The characteristics of the site for the proposed crafts village are as follows:

a) **Topography:** the topography of the site is relatively flat with clay deposit to the north-eastern part of the site.

b) **Environmental pollution:** the site is almost free from environmental pollution except for possible air pollution resulting from the insecticide producing company down gongoni road.

c) **Vegetation:** it comprises of scattered trees and shrubs with a few grasses.

d) **Physical properties:** apart from the trees, shrubs and grasses, the clay deposit at the site will serve as a raw material in the crafts village especially the pottery unit.

e) **Adjoining properties:** some of the adjoining properties of the site are:

i) Gongoni company limited

ii) Dala foods Nigeria limited

iii) Fas-Agro sacks company limited

iv) Nigeria cable industry limited

6.4 ACCESS AND CIRCULATION

The site is easily accessible from a well constructed existing road (Sharada phase three road). Gongoni and Tsamiya roads surround the site to the north and west part, they are tarred and hence accessible.

Circulation within the site itself shall be by well tarred roads and paved walkways with trees around to create shade within the walkways.

6.5 UTILITIES

The site has advantages of some important amenities around it. Such amenities as good water supply, electricity, telecommunication, good roads network, good drainage system e.t.c are present and as such the site is free of

difficulties that are usually encountered in the cause of making available such amenities to the site.

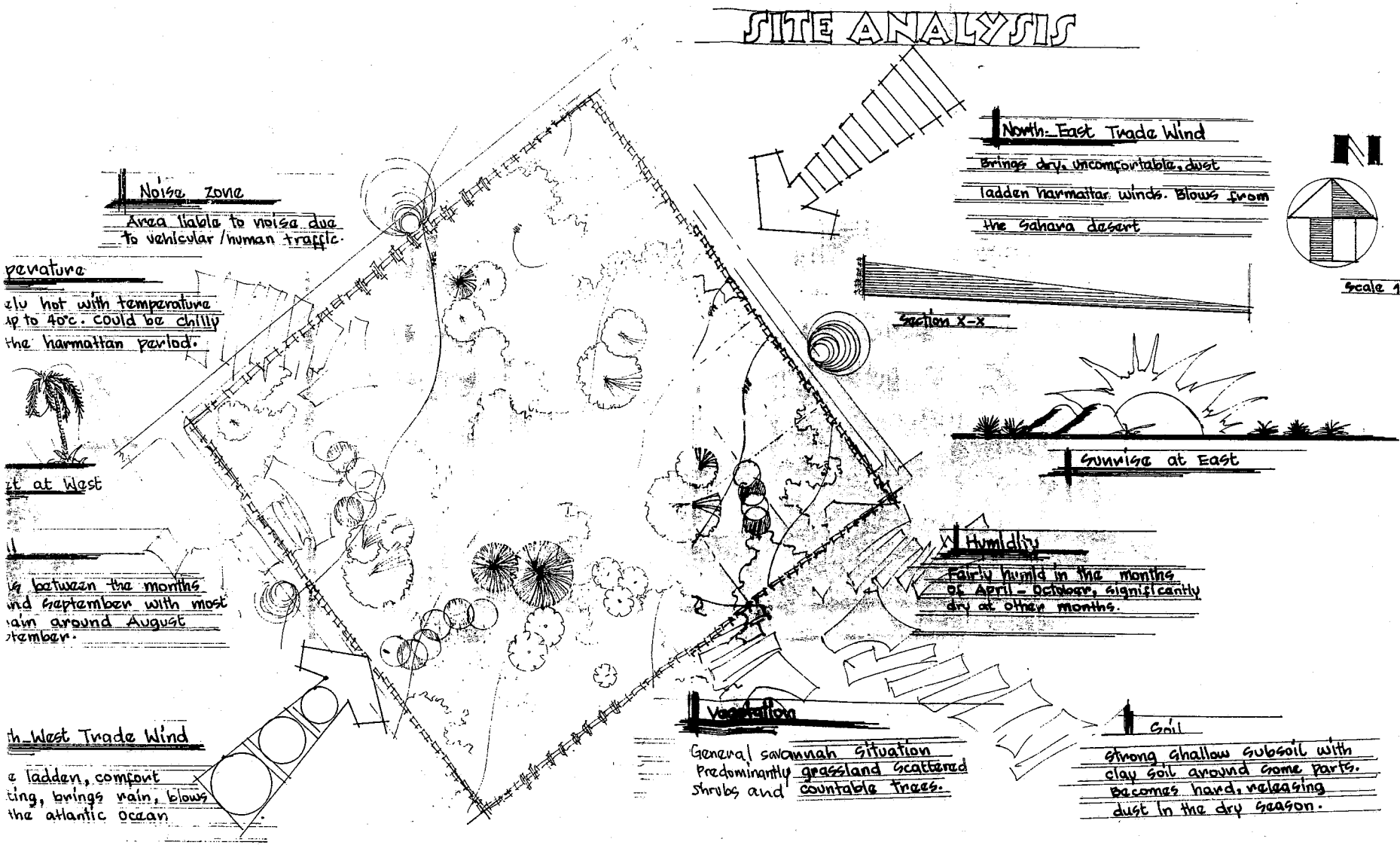
6.6 SCENERY / MAN-MADE FEATURES.

There exists clay deposit at the north-eastern part of the site. The presence of River Salanta will also help in the provision of basic amenities as water for the crafts village.

6.7 ENVIRONMENTAL PROBLEMS

Possible environmental problems like pollution will likely occur as a result of the location of Gongoni Company limited which is situated down Gongoni road. Another possible environmental problem could be that of noise pollution from the Nigeria cable industry which is opposite the site of the proposed crafts village. To adequately take care of these various possible environmental problems, trees which will serve as a barrier between the proposed crafts village and the various industries will be planted in a manner that will take adequate care of the environmental problems.

SITE ANALYSIS



Noise zone

Area liable to noise due to vehicular / human traffic.

perature

elu hot with temperature
ip to 40°c. could be chilly
the harmattan period.

t at West

l

ig between the months
nd September with most
ain around August
tember.

th_West Trade Wind

e ladden, comfort
ting, brings rain, blows
the atlantic ocean

North_East Trade Wind

Brings dry, uncomfortable, dust
ladden harmattan winds. Blows from
the Sahara desert

Section X-X

N

Scale 1:1500

Sunrise at East

Humidity

Fairly humid in the months
of April - October, significantly
dry at other months.

Vegetation

General savannah situation
Predominantly grassland scattered
shrubs and countable trees.

Soil

Strong shallow subsoil with
clay soil around some parts.
Becomes hard, releasing
dust in the dry season.

CHAPTER SEVEN

THE DESIGN

7.00 INTRODUCTION

The nature of Nigerian societies in the past did not call for the existence of craft centres due to the fact that most craftsmen produced their crafts within their houses; usually a room is set aside to serve this purpose.

Traditional skills as well as art and crafts were passed on from generation to generation, ensuring continuous presence and growth. Each individual or child grew up with a sense of awareness as regards the type of craft prominent within his neighbourhood. Crafts making was one of the sources of income of the people, most of the crafts were used as house hold utensils and others as decorative elements, and hence the issue of documenting the origin of these crafts and their ways of preservation never came up.

In the contemporary setting, the proposed crafts centre will help in showcasing the handwork of the people of Kano state. The first requirement therefore was to see to the proper selection and development of the site, the proximity of its location to the customers and tourists, availability of public

amenities such as electricity, water supply, and some of the raw materials required in the production of these crafts.

7.01 CONCEPT AND DESIGN

Concept may be defined as a thought or idea. In philosophical terms, a concept is an idea that includes everything characteristically associated with or suggested by a class of logical species.

The concept in this design is simply analogical and conforms to the fact that traditional motifs are repeated shapes, patterns and forms used to establish personal or community identity. Various shapes have been arranged in a way that a compact design which is typical of Hausa architecture is achieved.

The design itself is a proposal for crafts centre, Kano. It has made provision for the production area for various crafts common in Kano, a gallery/sales area, an administrative and education unit to run the affairs and document the origin, method of preservation and the procedure for making these crafts and lastly a restaurant.

7.02 MATERIALS AND CONSTRUCTION

Some of the materials to be used in the construction of the proposed crafts centre are listed thus: concrete, long span aluminium roofing sheets, transparent

plastic roof cover, PVC roof tiles, burnt clay bricks, thatch, and fire resistant glass, amongst others. The materials can further be explained with respect to where it shall be used as explained below:

SUBSTRUCTURE

The substructure will be built with reinforced concrete and adequate damp proof membranes, to see that the foundations are properly anchored to the earth to ensure stability of the proposed structures.

SUPER STRUCTURE

The superstructure will be categorised into four parts i.e. floors, walls, roofs and finishing. Each of the proposed units is explained below with respect to their materials and construction methods.

a) CRAFTS PRODUCTION/DISPLAY AREA.

The floor of the crafts production/display area should be very hard and durable and so marble will be used. The walls will be built with burnt bricks for strength, fire resistance, durability and aesthetics. The exterior of the building will be plastered to enable the proper arrangement of the motifs on the walls. Plywood board will be

fastened to the frame of the roof as a base, roofing felt which is weather resistant will be applied as an underlayment before the PVC roof tiles are arranged in a lap like manner and glued together using adhesive. The thatch which will serve as the final finish on the roof cover will then be arranged atop the PVC roof tiles. The purpose of constructing the roof in this manner is to prevent rusting which can subsequently lead to roof leakage.

Fire resistant doors and windows will be used since in the past most of these crafts were lost to the ravages of fire.

b) ADMINISTRATION

The walls will be plastered and painted with weather resistant and fire retardant paints. The interior walls of the exhibition space will be decorated in mosaic. The floors will be marble except for the conveniences which will be tiled to provide moisture resistance. The same fire resistance windows will be used and then high quality flush doors and sliding doors where applicable. Aluminium roofing sheets will serve as the roof cover.

c) RESTAURANT

The floor will be tiled; long span aluminium roofing sheet will be used as roof cover, the walls will be built with burnt clay bricks.

7.03 SPACE REQUIREMENTS

Location	Min. area (m^2) required per person	Number of persons provided for	Total area occupied (m^2)
a) **crafts production area**			
• Leather works	2.0	8	16.0
• Pottery	4.0	3	12.0
• Mat weaving	2.0	5	10.0
• Calabash decoration	1.8	8	14.4
• Brass work	2.4	4	9.6
• Black smith	2.4	4	9.6
• Clothes weaving	1.8	2	3.6
• Embroidery	1.8	5	9.0
• Saloon	2.0	8	16.0
• Conveniences	2.0	1	2.0
• Display/sales area			314.2
b) **Administration**			
• Offices	2.4	3	7.2
• Exhibition space			75
• Library			75
• Conveniences	2.0	1	2.0

c) **Restaurant**			
• Kitchen			6.0
• Store			3.6
• Servery			3.0
• Eating area			24.0
• Convenience			2.0

7.04 ELECTRICITY AND LIGHTING

Electricity will be from the power transmission line which is very close to the site. The generating plant will also cater for the fluctuations that may occur. For the purpose of aesthetics, conduiting shall be used for electricity distribution in the buildings.

Generally, light reveals different views, when light is used externally; it reveals the architectural character of an environment and the landscaping features becomes more beautiful. Internally natural lighting would not pose any problem as provision has been made in the design for enough light penetration.

7.08 REFUSE DISPOSAL

Refuse from the site will be disposed appropriately to avoid pollution. It will be buried deep down the ground, and allowed to decompose.

7.09 ACOUSTICS

The control of noise and sound within any building is very important. Comfort of the end users has to be duly considered, otherwise there will be discomfort and the aim of the proposal will be defeated. Possible acoustic problems have been taken care of by materials used for construction, and forms of the buildings.

7.10 FIRE SAFETY

Fire is a destructive element to buildings and properties and so poses a great concern to any design. In view of this, most of the fixtures within the structures are fire resistant and non combustible. Other fire safety measures such as underground tanks which will help provide water in the case of fire outbreak are provided, fire alarm systems, electronic sprinklers, portable fire extinguishers etc. will be located at strategic points.

7.20 SECURITY

Security is of paramount importance and so gate houses have been provided. Asides the gate houses, the compact design used will also help keep theft at bay.

7.05 HEATING, COOLING AND VENTILATION

This is conditioning the interior space of a building for the environmental comfort of the occupants. Temperature regulation of the surrounding air motion, dust and odour are the factors that will be controlled by mechanical devices. Environmental comfort is provided by the provision of windows for ventilation, air conditioning, and diffusers, the location of cooling out lets depends on the size and proportions of space, its areas of heat loss or gain are wall, ceiling, floor construction and finish, and the activities of its staff.

7.06 WATER SUPPLY

The source of water supply will be from the water board. Water tanks and bore hole shall also be provided as an alternative to the source from water board, this is necessary because water is required in the production of most of the crafts.

7.07 DRAINAGE AND SEWAGE DISPOSAL

An appropriate network of drainage channels follows the terrace and road pattern, the slope of terrains allows natural flow of eventual discharge into the neighbouring drainage. The drainage canals would be incorporated into the pedestrian walkway. The sewage disposal will be properly channelled to the individual septic tanks and soak away pits.

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7.30 MAINTENANCE

Maintenance can be divided into two i.e. restoration which is bringing a defect back to good and replacement which entails changing the faulty element completely. The materials for construction have their various life spans and maintenance methods. They shall all be treated in accordance with the maintenance methods and when their life spans expire, they will be replaced. Most of the materials to be used for construction have life spans of between 20-80 years.

7.40 SOLAR CONTROL

Radiation from the sun is considered most in orientating the buildings to guide against excessive heating of the interior of the buildings. Bad orientation causes optical glare which causes discomfort to the end users.

Since comfortability of the end users is of paramount importance, natural air from openings and trees as shading devices will be used extensively.

CONCLUSION

In Nigeria, the production of crafts has changed very little since their recognition as an art form in the seventeenth century. The crafts were and still are produced by individuals in family compounds and taught to the younger generations as they grow up. This has limited the advance or development of refined and more efficient methods that could have been innovated since then, thereby enabling production on a larger and cheaper scale that could have made these crafts an everyday part of the developing Nigerian culture. One of these important crafts that has almost become extinct is the use of traditional motifs in buildings. These motifs involve the forms, styles, and materials peculiar to various ethnic groups and they can still be adapted for use today.

In proposing a crafts centre, one can provide an avenue through which these crafts can be produced in a competitive and commercial atmosphere that will encourage its growth and development. In using traditional motifs for the structures, it will encourage the adoption and diversification of these motifs in other structures of different purposes. Nigerians can thereby appreciate their native crafts in their appropriate settings and hopefully be inspired to promote their indigenous architecture.

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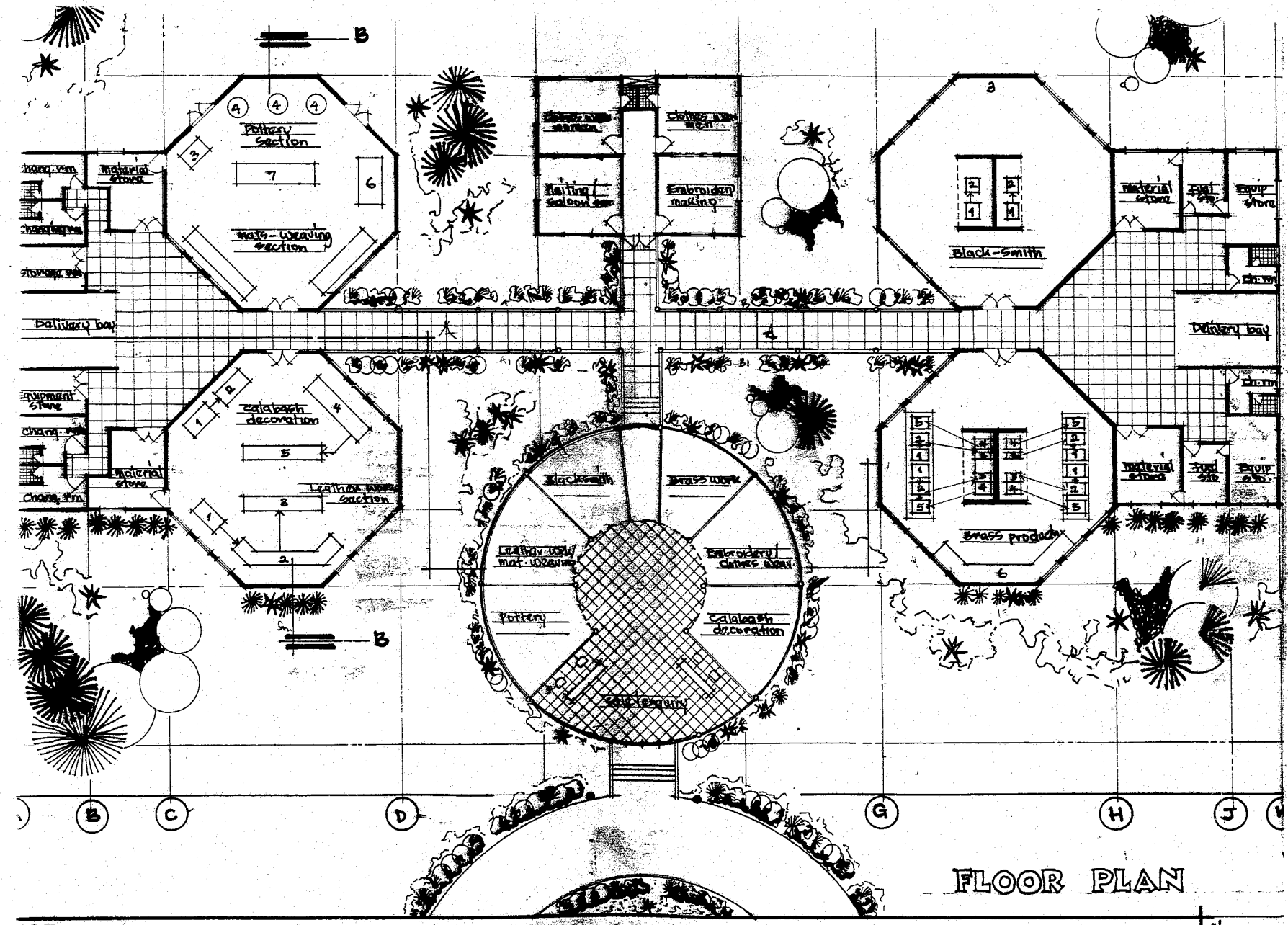

FLOOR PLAN

FOR

Name

Reg. no

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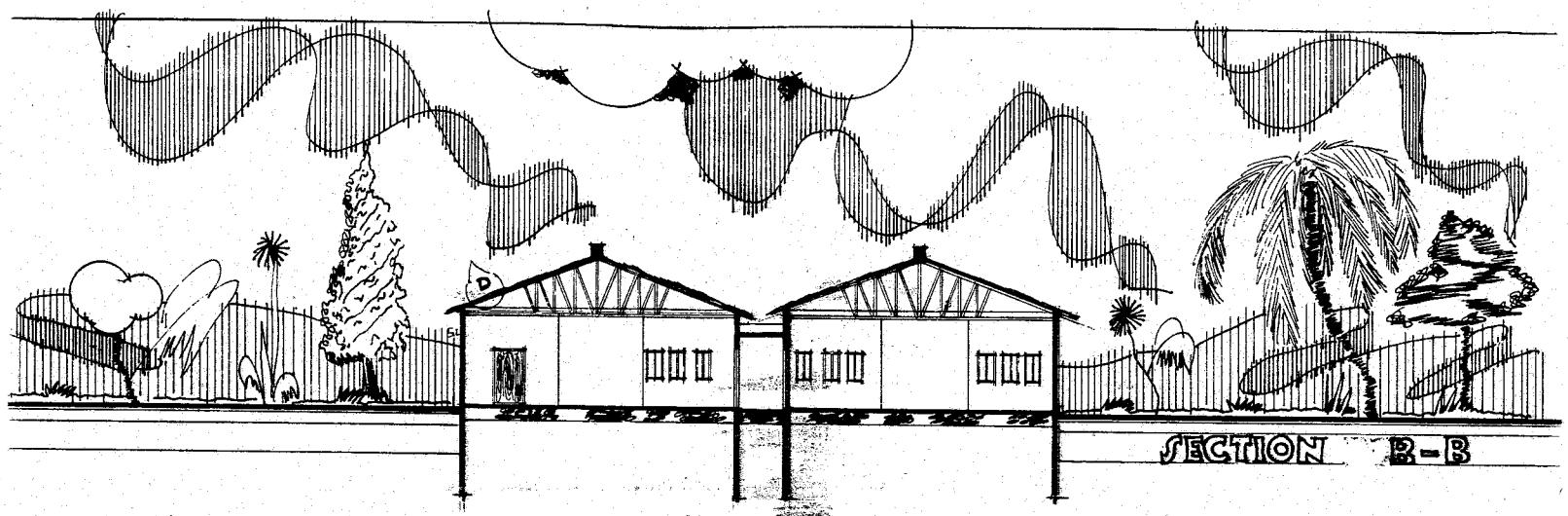
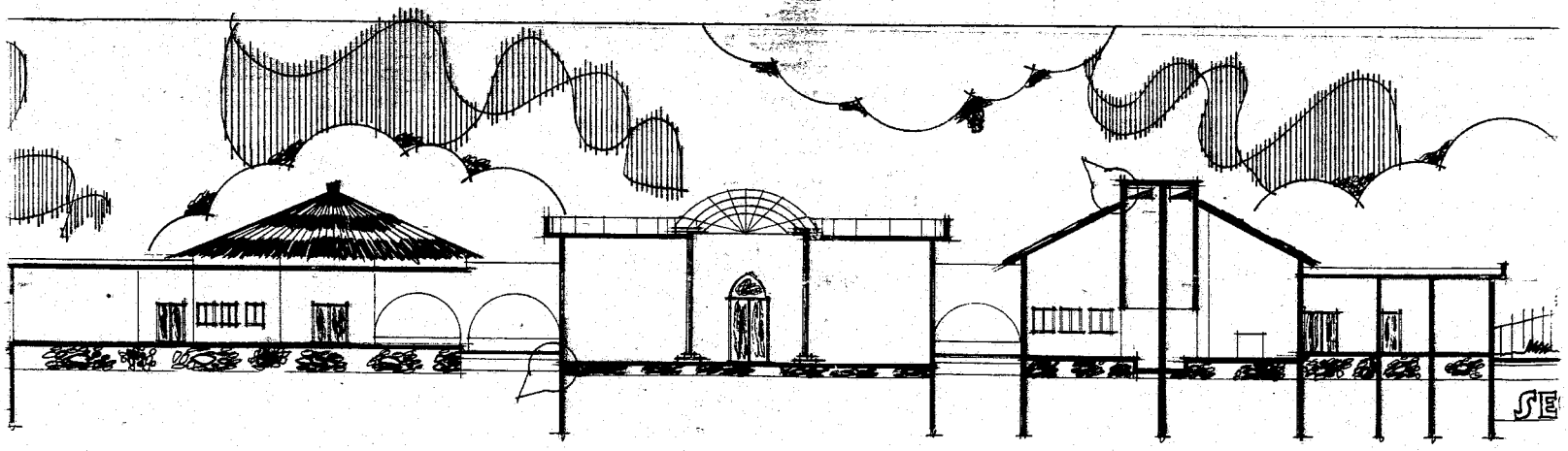

SECTION B-B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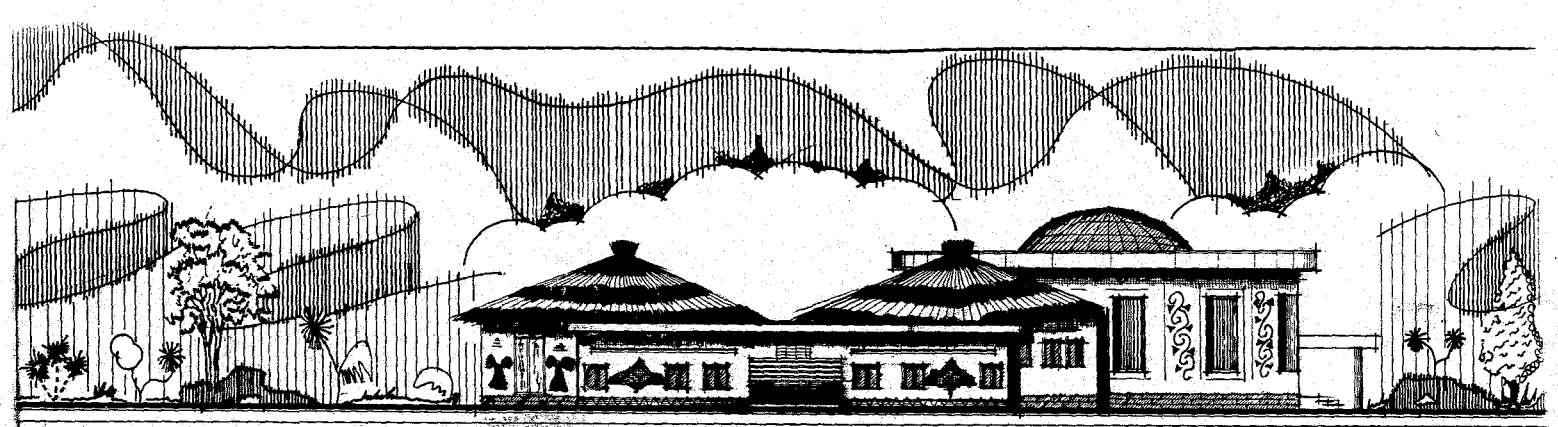
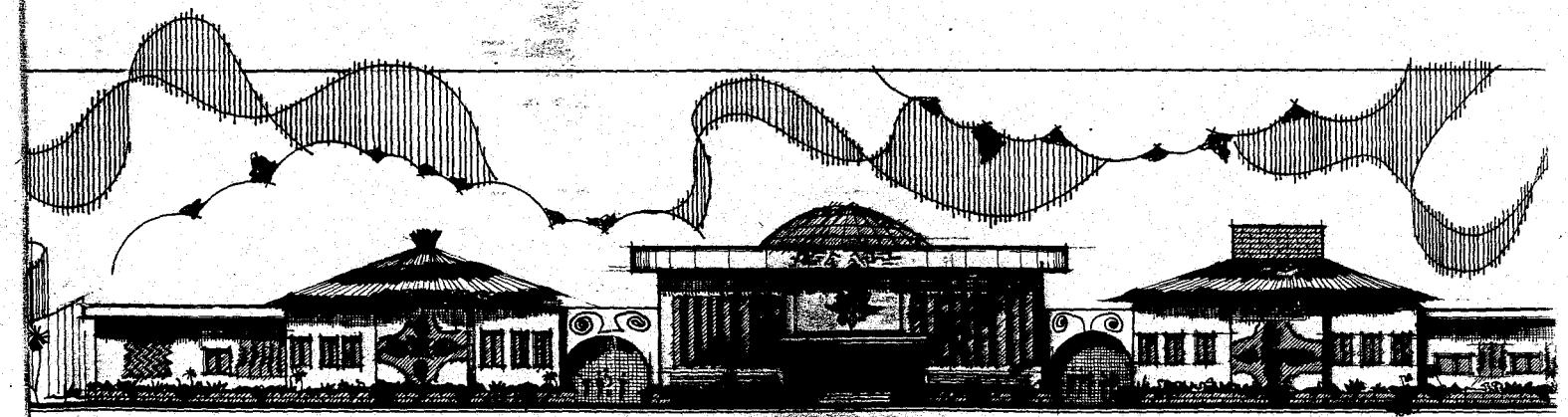
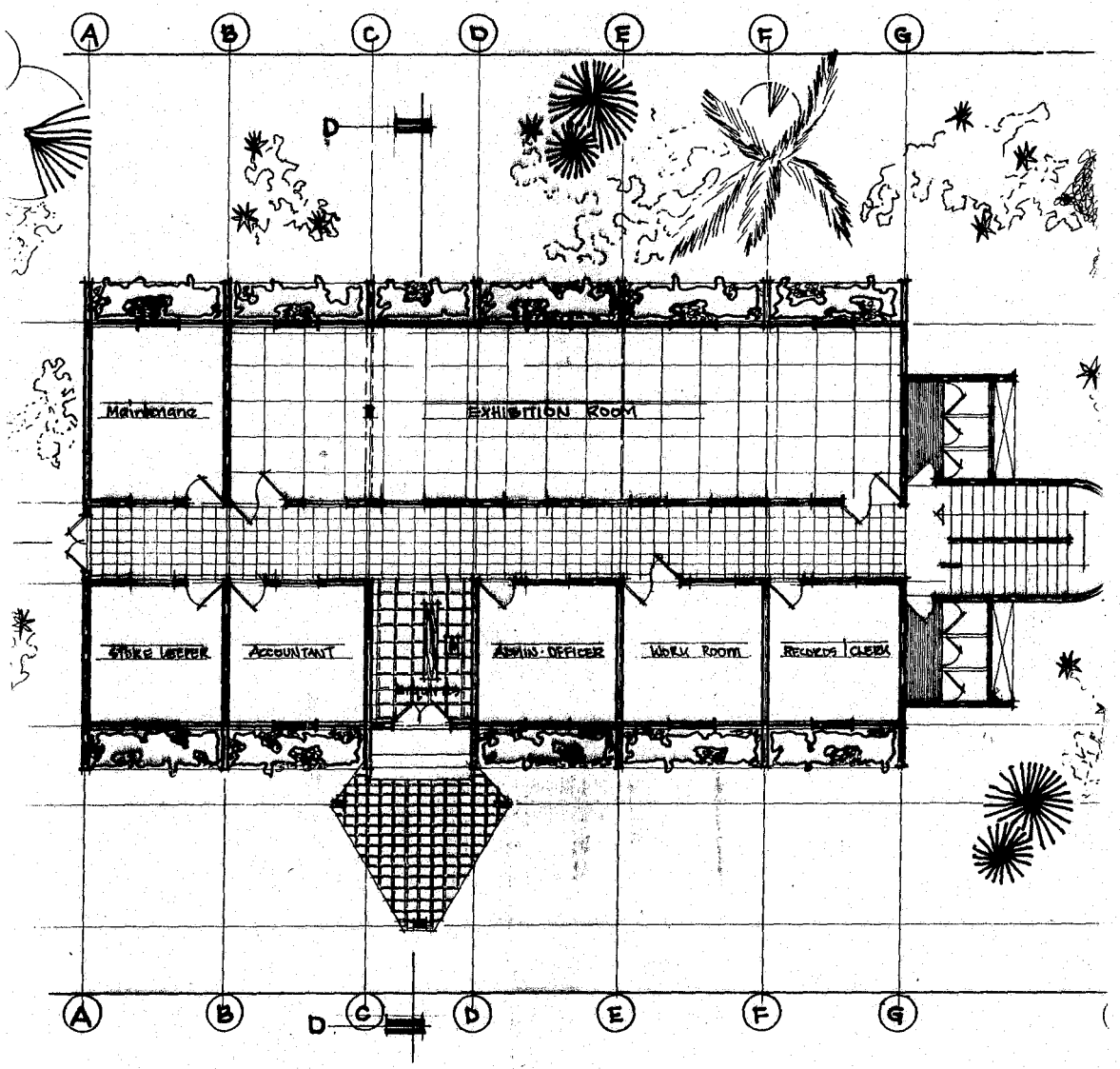




ADMINISTRATION

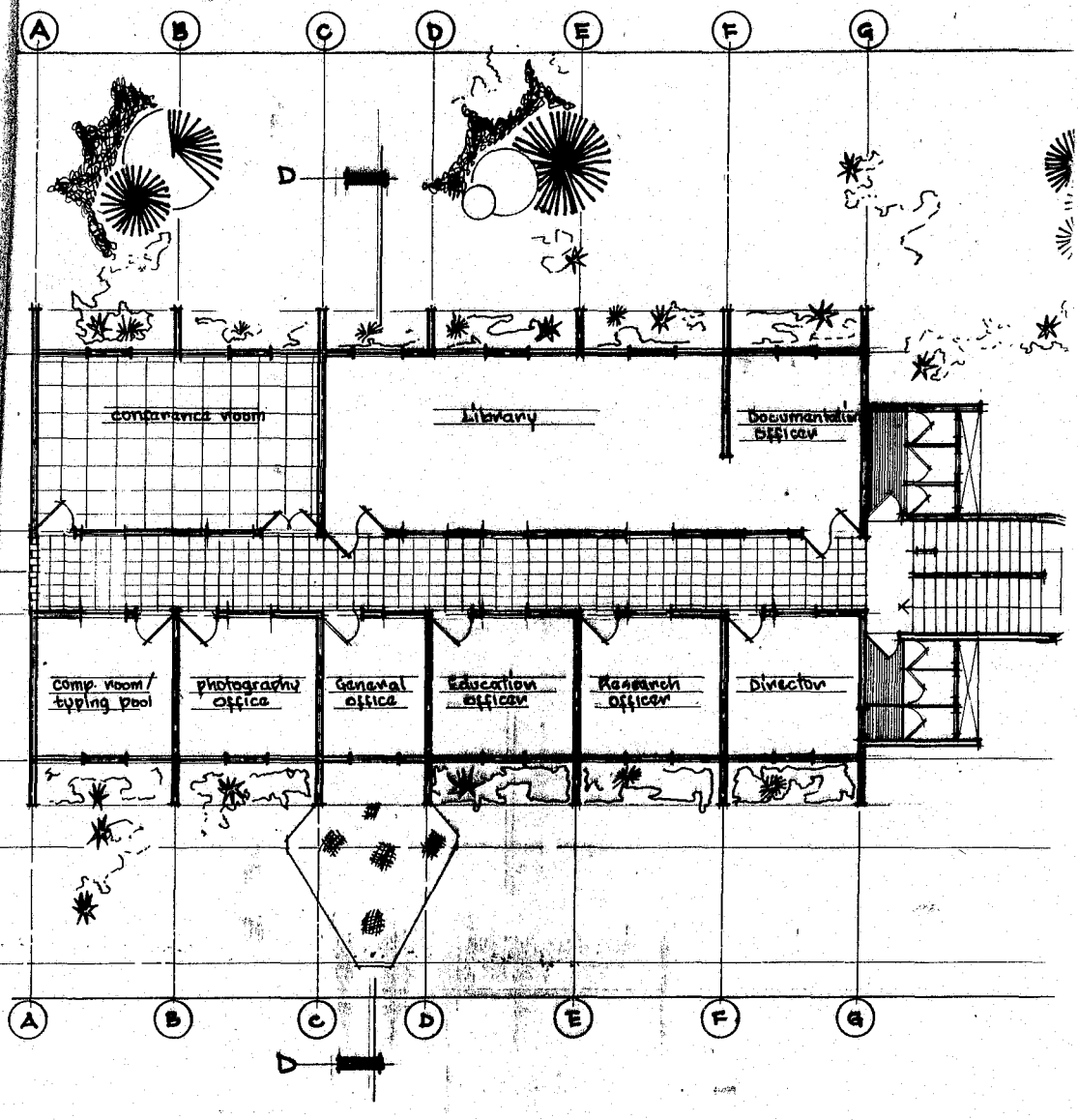


GRO

RAFTS CENTRE KANO

WITH EMPHASIS ON USE OF TRADITIONAL MO

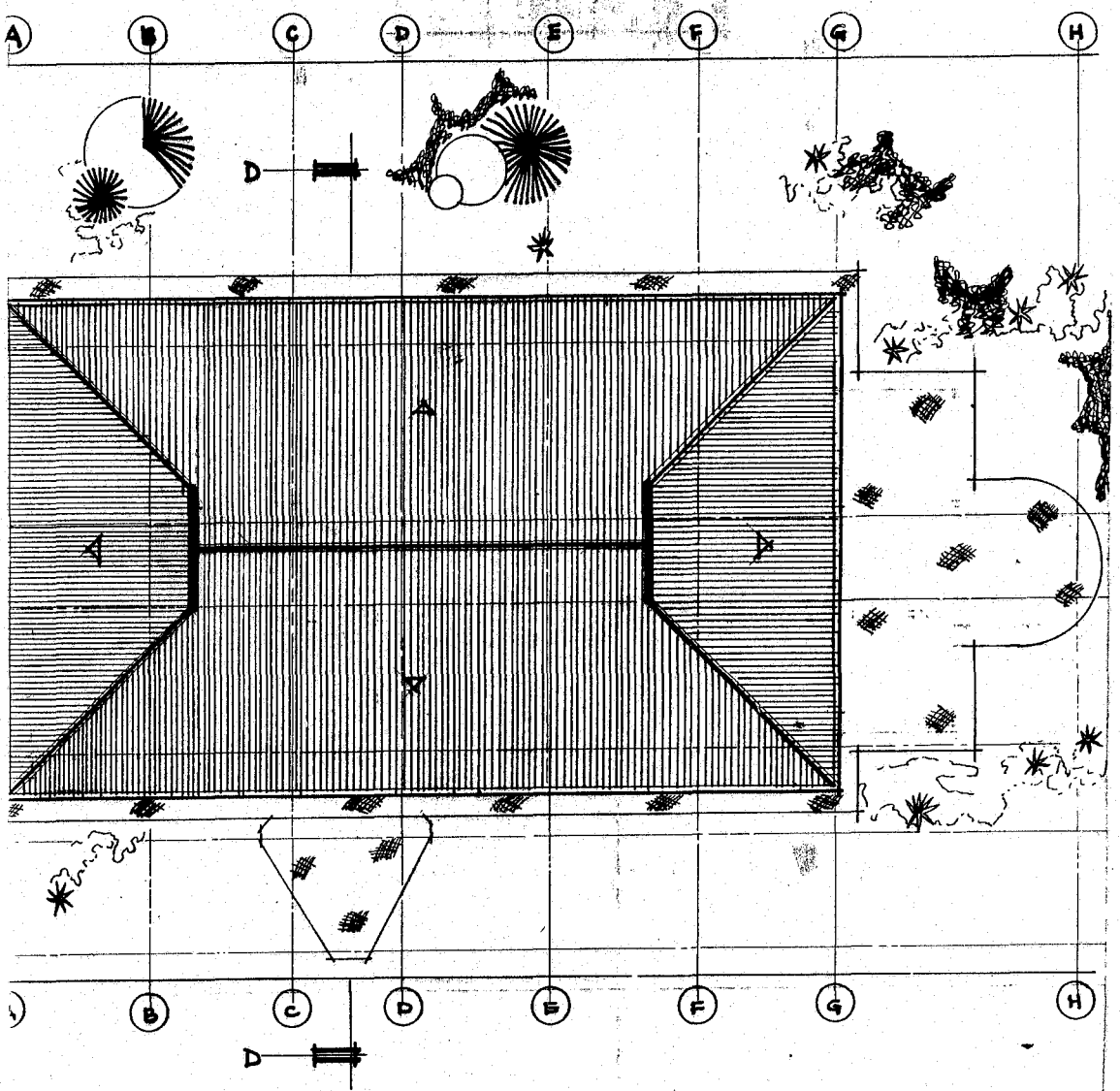
ADMINISTRATION



RAFTS CENTRE KANO

WITH EMPHASIS ON USE OF TRADITIONAL M

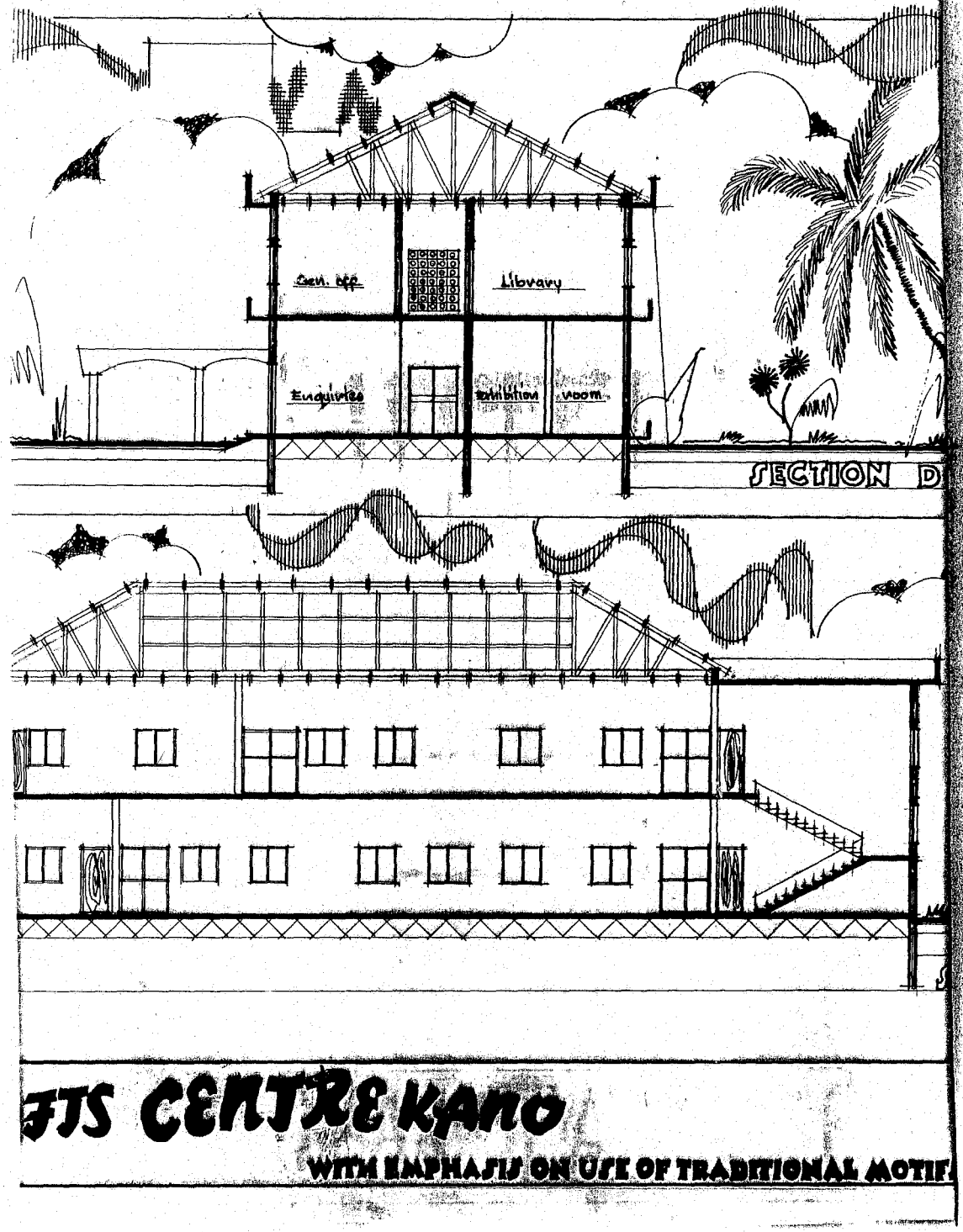
ADMINISTRATION



AJTS CENTRE KANO

WITH EMPHASIS ON USE OF TRADITIONAL MOTIF

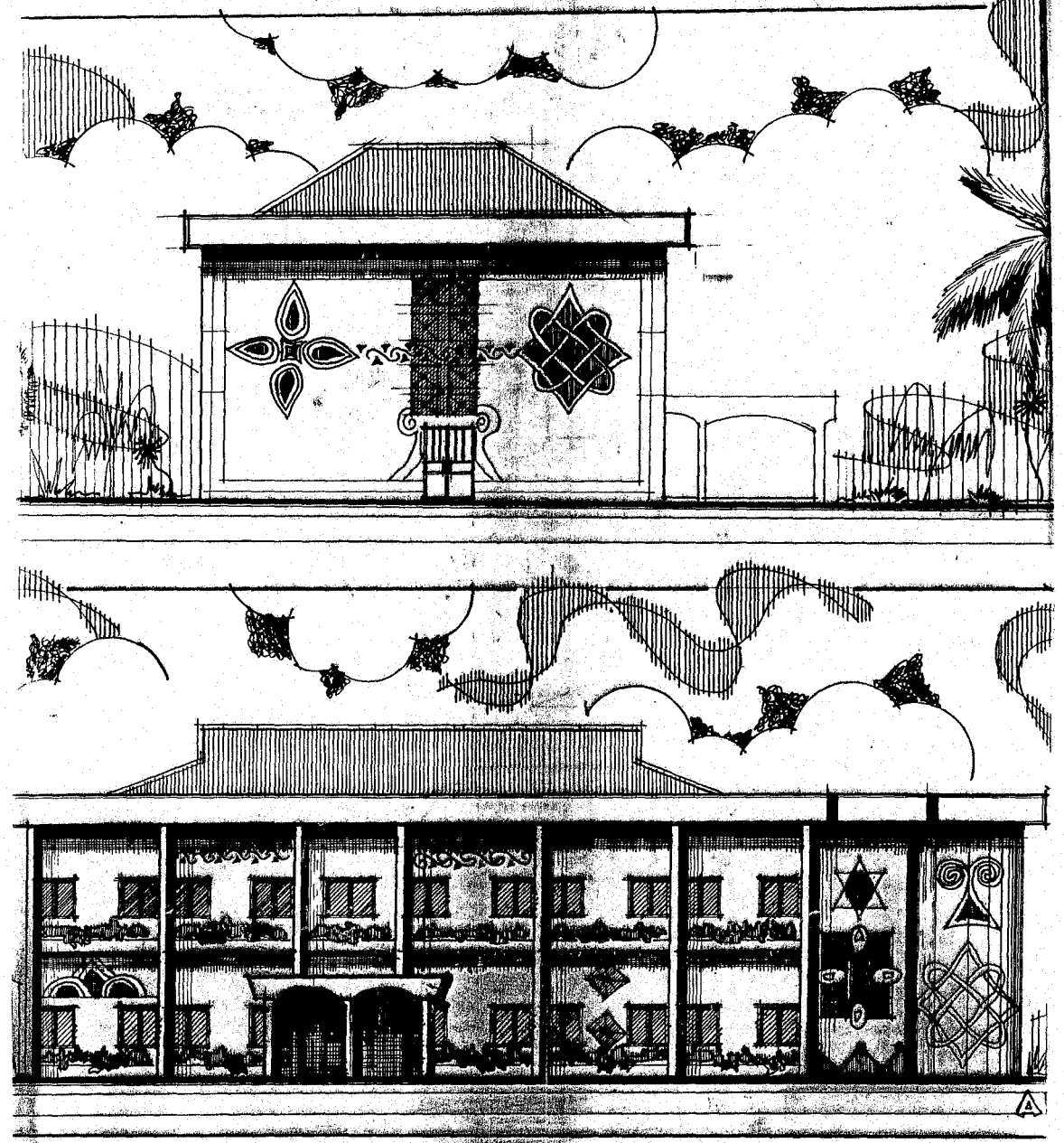
ADMINISTRATION



FTS CENTRE KANO

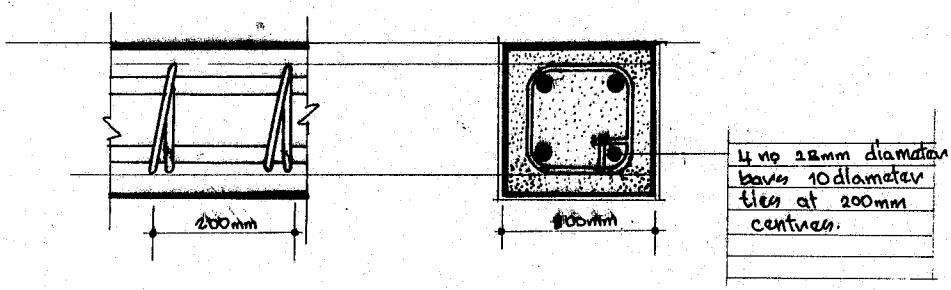
WITH EMPHASIS ON USE OF TRADITIONAL MOTIF

ADMINISTRATION



CAFTS CENTRE KANO

WITH EMPHASIS ON USE OF TRADITIONAL MOT

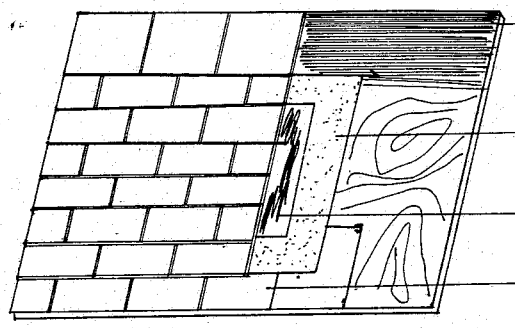


Detail at K – R.C square column at Exhibition room

scale – 1:5

OF TRADITIONAL MOTIFS

Name	Suleiman S.
Reg. no	M.Tech |SET|1044|2003|2004
Course	Arc 621
Supervisor	Arc. P.B. Haruna
Date	September 2004



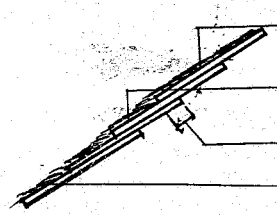
Plywood (sheathing) used as structural panels fastened to the frame of roof as a base.

weather-resistant material to serve as roof felt.

adhesive to which the tiles will be stuck.

P.V.C roof tiles arranged in an over-lapping manner

Detail at D - Roof Construction of production hall



Top-lap

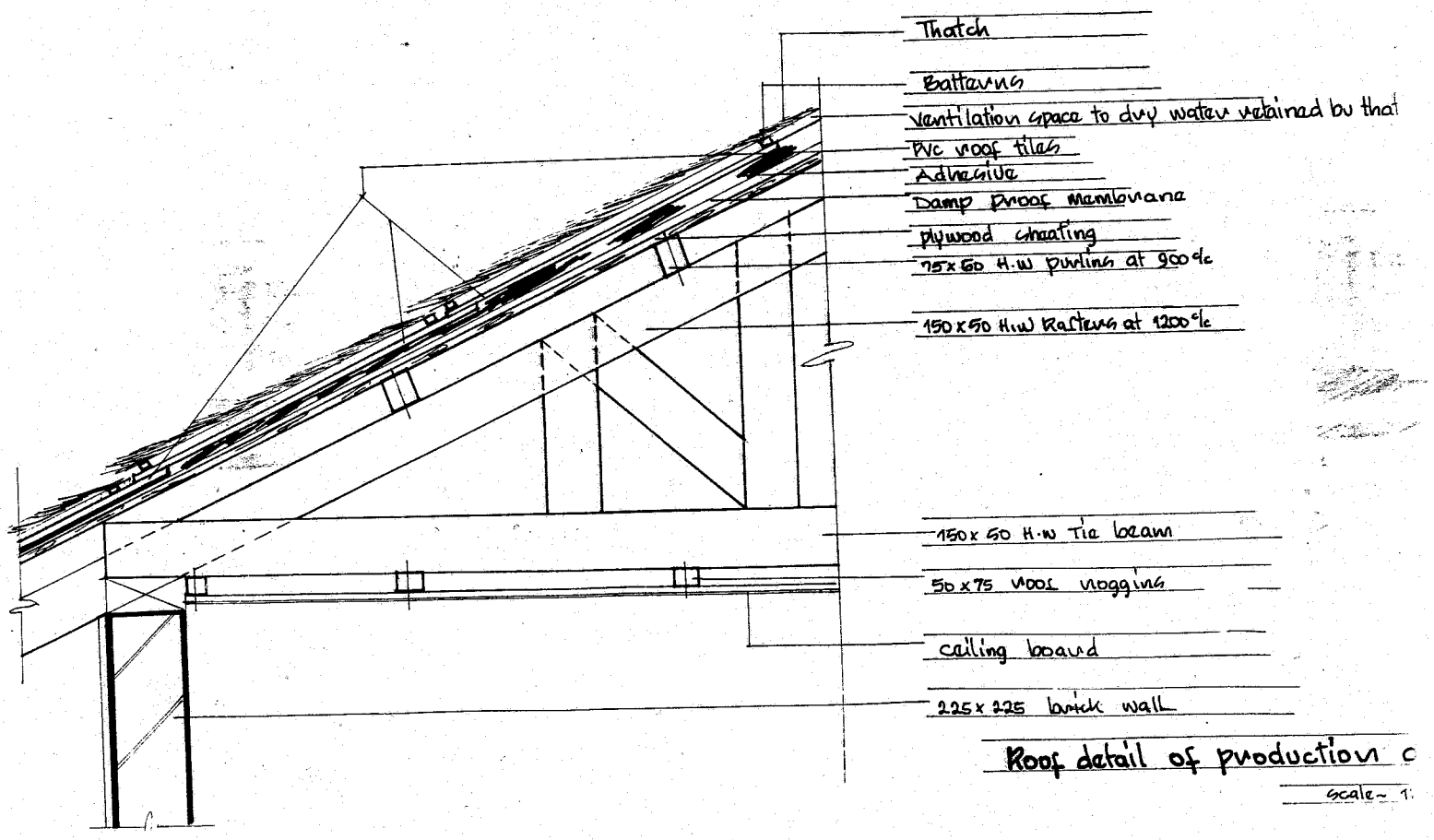
Exposure

Head-lap

Thatch

DESIGN PROPOSAL FOR

CRAFTS CENTRE KANO



Roof detail of pvoduction c

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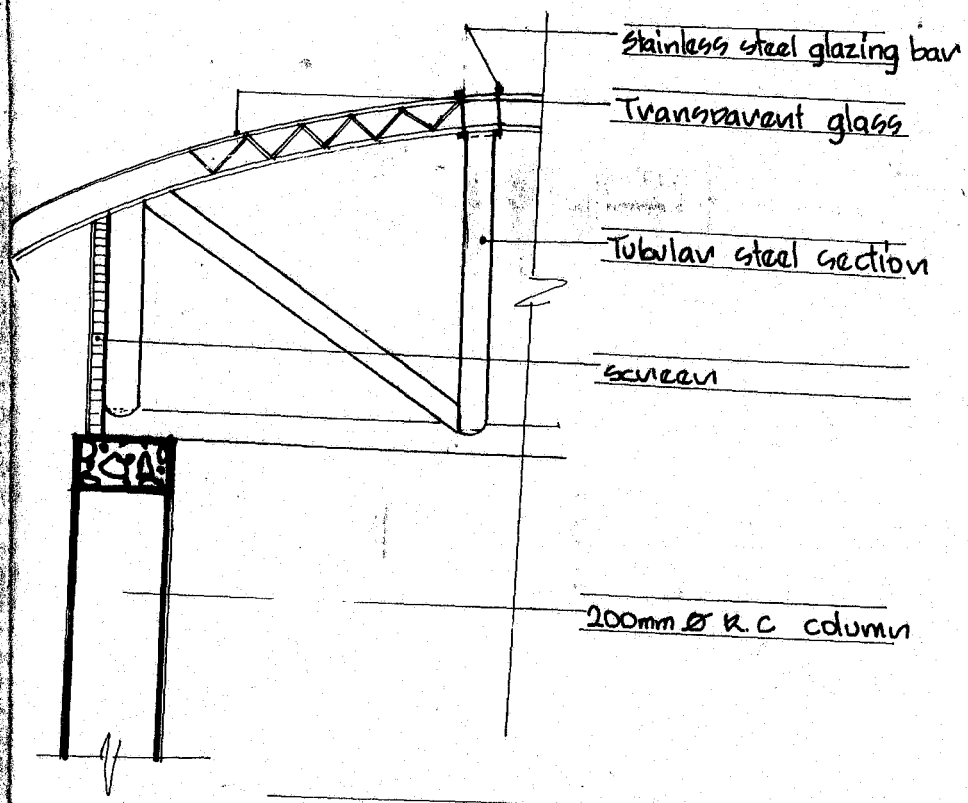
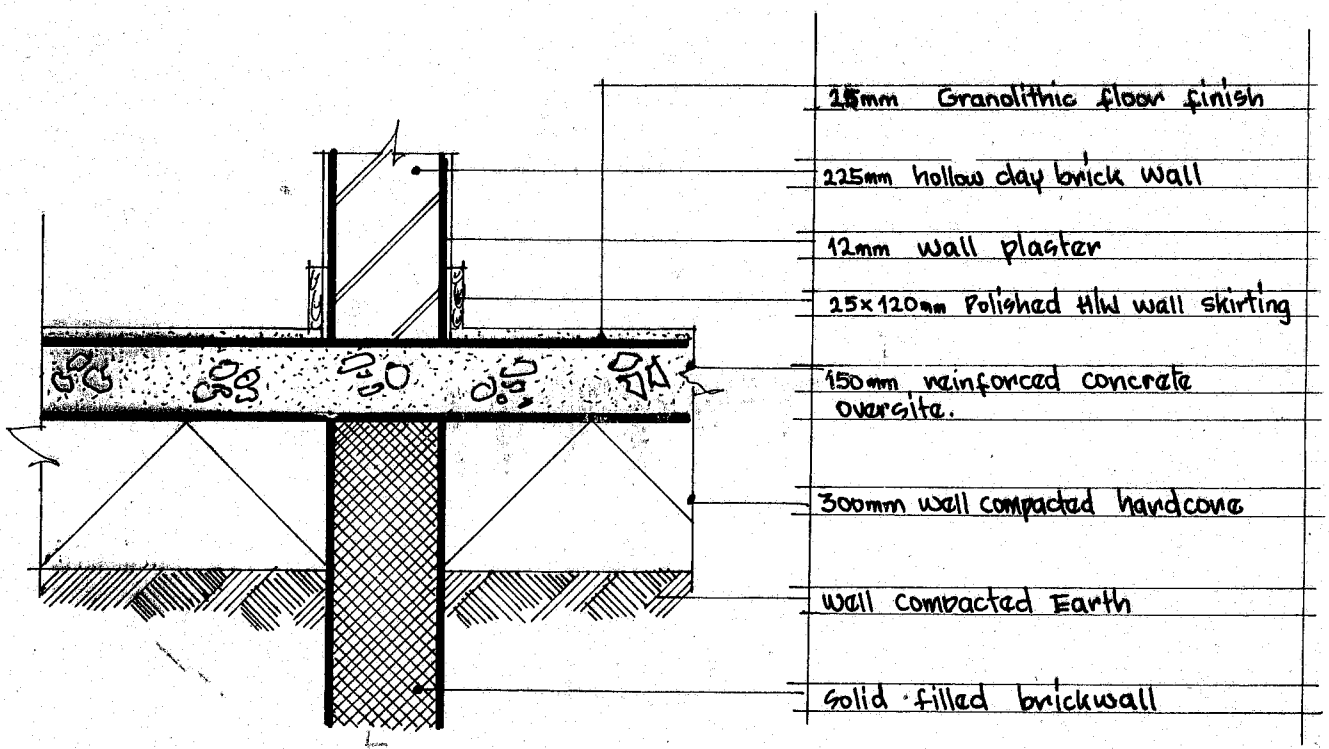


Transparent glass cover at display area

Scale ~ 1:10

ALMOTFS	Name	Sulaiman S.
	Reg. no	M.Tech/SET/1044/2003/2004
	course	Arc 621
	supervisor	Arc P.B Haruna
	Date	September 2004

DETAILS



Scale 1:10

Detail at B _ Reinforced concrete floor at display / sales area

NTRE KANO

WITH EMPHASIS ON USE OF TRADITIONAL MOTIFS

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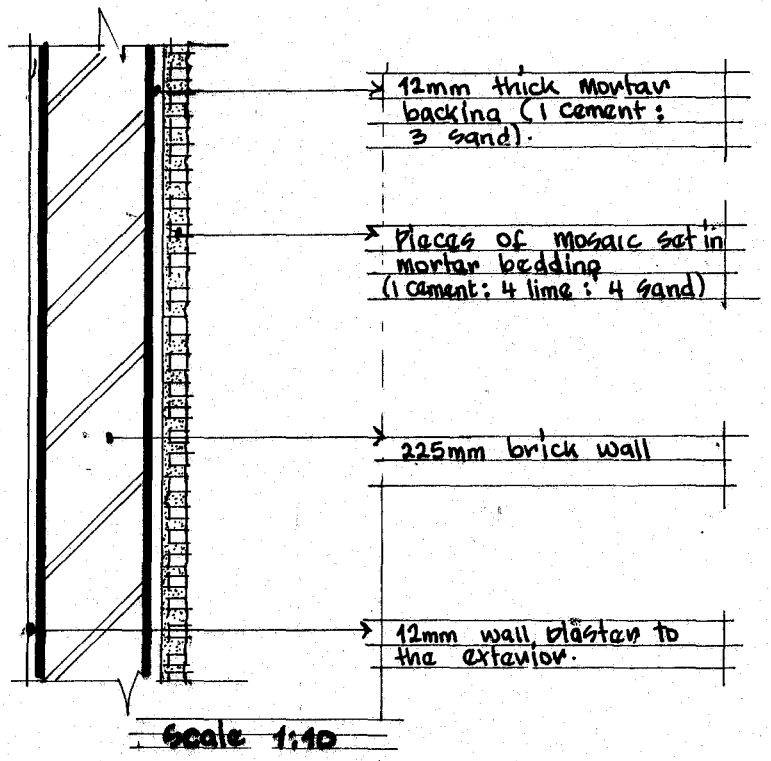
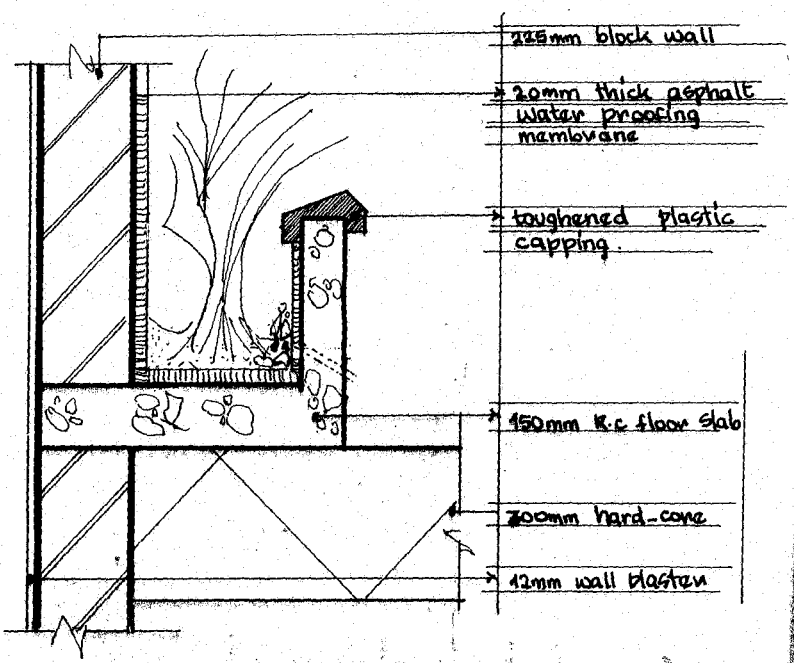


Detail at A _ Interior wall decoration at the exhibition room

DESIGN PROPOSAL FOR CRAFTS



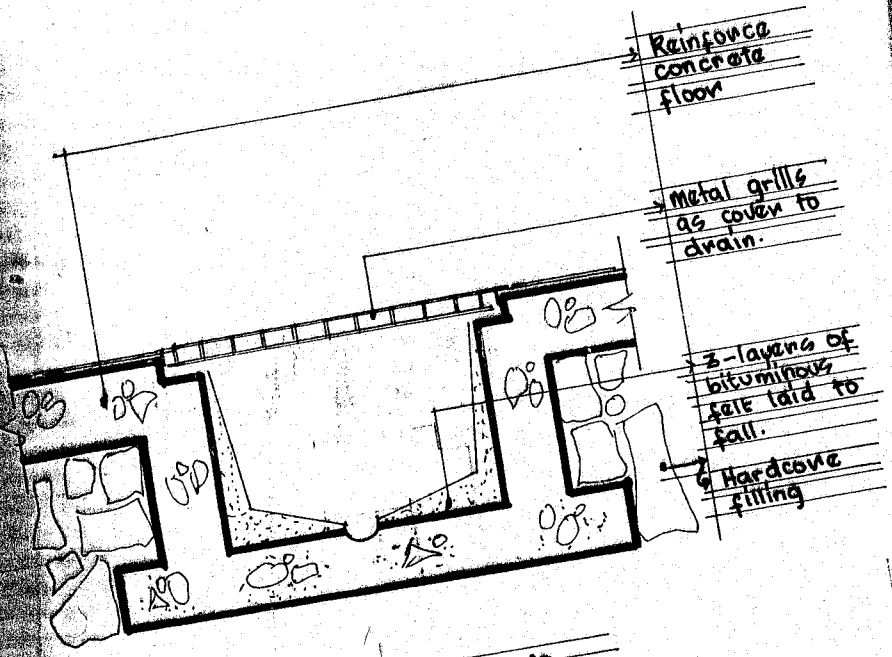
scale 1:10

Detail at c- planter at administrative unit

DESIGN PROPOSAL FOR

CRA

DETAILS

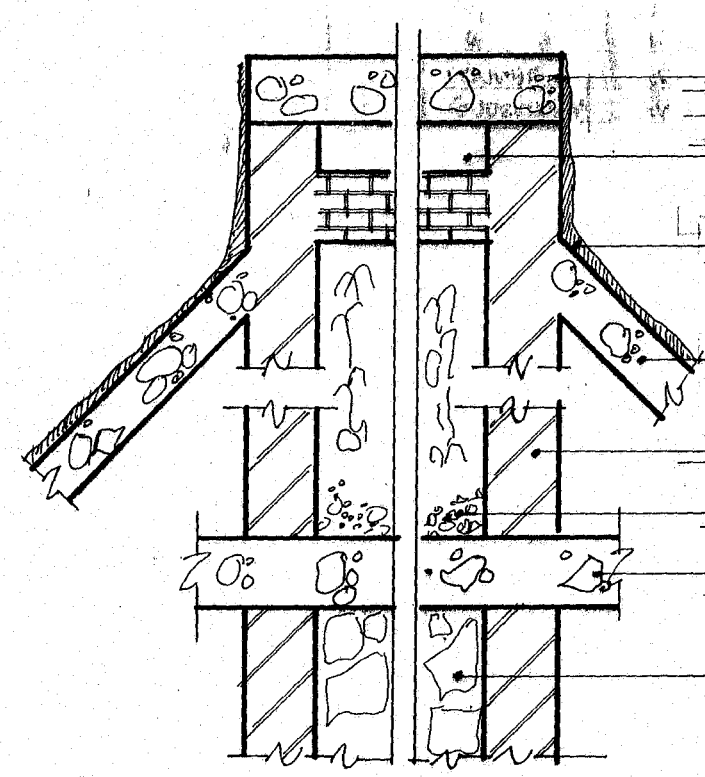


Scale 1:10

Drainage detail at production unit.

RAFTS CENTRE KANO

WITH EMPHASIS ON USE OF T



Scale 1:10

Detail at F and G - Furnace, smoke-outlet, and roof drain at production unit.

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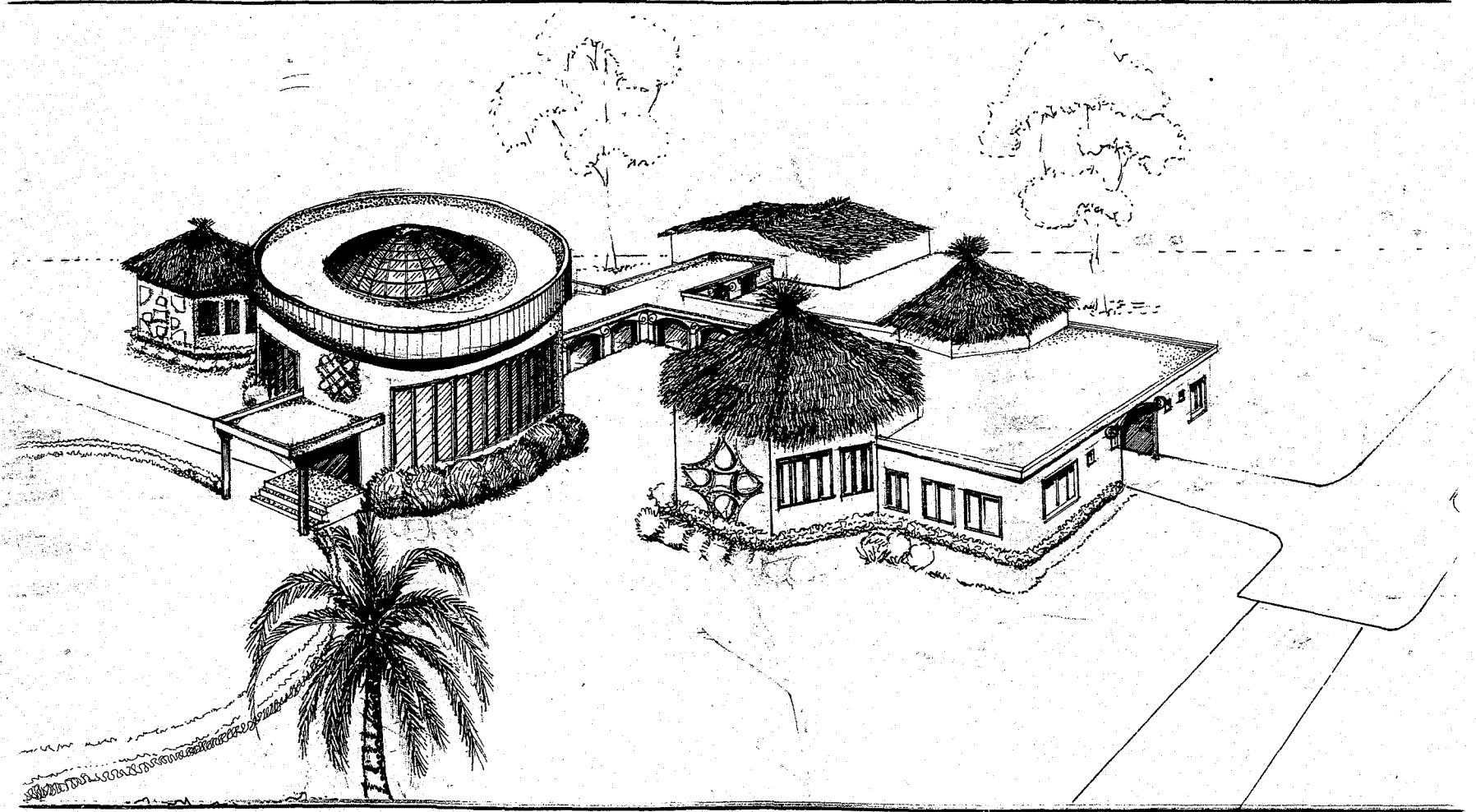
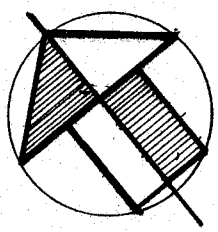
Course	Arc 621
Supervisor	Arc. P.B. Haruna
Date	September 2004

USE OF TRADITIONAL MOTIFS



EXTERIOR PERSPECTIVE OF PRODUCTION/DISPL. AREA.



scale– 1:1000

LEGEND.

A	Crafts production
B	Administration
C	Restaurant
D	Clay pit
E	Drying area
F	Open storage area
G	Firing pit

Suleiman

SITE PLAN