ACCOMMODATION OF CHANGE IN AN INDIGENOUS HAUSA-FULANI SETTLEMENTS A CASE STUDY OF BAUCHI.

M.Sc. (U.R.P.) Thesis

BY

JAMES BAKO KALTHO

B.A.(HONS) Geography

Ahmadu Bello University,

Zaria - Nigeria

June, 1977.

DEPARTMENT OF URBAN AND REGIONAL PLANNING,
AHMADU BELLO UNIVERSITY, ZARIA.

JULY, 1982.

DEPARTMENT OF URBAN AND REGIONAL PLANNING,
FACULTY OF ENVIRONMENTAL DESIGN,
AHMADU BELLO UNIVERSITY,
ZARIA.

C E R T I F I C A T E

This is to certify that this Thesis has been submitted in partial fulfilment of the requirements for the award of Master of Science- Urban and Regional Planning.

APPROVED

Kulshrestha S.K.

DR. S.K. KULSHRESTHA
HEAD OF DEPARTMENT.

JULY, 1982.

".....the reconstruction of a city cannot be interpreted exclusively as a process of rebuilding, It is essential at the same time to discover the laws of a city's development, to take scrupulous care of the architectural masterpieces of the past, to make allowances for the influence of history, the particular features of the culture and life style of the inhabitants....."

Mikhail Posoklin.

Towns for People pg. 84

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I give the glory of this work to God who has been my ALL.

A.B.U. Samaru
18th July, 1982

Kaltho, J.B.

D E D I C A T I O N

This work is dedicated to indigenous city-builders and their cause.

Kaltho, J.B.

18th July, 1982.

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chapter 1

CHAPTER ONE

1.0 INTRODUCTION

The structure and spatial character of a city results from the interplay of socio-cultural, religious and technological forces. Accordingly, the indigenous cities of Nigeria and specifically of the Hausa-Fulani of Northern Nigeria, the basic characteristic form, structure, architecture, and design of which are identifiable, are a product of the Hausa-Fulani culture, Islamic values, and indigenous technology.

However, these towns are today the product of evolving experiences through the colonial and post colonial epochs of history characterized by different value systems and needs. The degree of impact of the experience since the colonial times vary from one town to another depending on the extent to which the inhabitants adopt the new ideas, values and technology, and also whether the town was partially or wholly superimposed upon by the colonial experience and present modernisation processes.

Since the spatial impact of these experiences have not been purposefully and effectively co-ordinated, problems have been posed with regards to the following:-

1) Urban perception- The modern value systems, and needs that is characteristic of the society affects the people's perception of the urban environment, and its priorities in the function of the built form and their symbolic and social connotations. There is still the strong adherance to the indigenous forms as the most imageable forms-city wall and gates, palace, mosque, and the compound forms.

However, some modern forms have strong imagebility and a crisis situation resulting from the fact of the literate groups adopting and diffusing modern value. but retain some of the traditional ones,

while the traditionalists are adopting some non-traditional values and skills thereby producing a complex urban environment and environmental perception.

ii) Urban structural composition- The distinct spatial nuclei of the cities with distinct physical character has produced an overall complex urban organisation. Even the traditional city is, especially for "superimposed" centers, becoming increasingly complex owing to unco-ordinated nature of new developments of various scales.

iii) Urban functional integration- The spatial nuclei of these cities are largely functionally unitegrated thereby producing limited community interaction. Each element and indeed each spatial unit are added to the urban landscape and remain unintegrated with already established units.

iv) Co-ordination of activity systems- The city activity systems are unco-ordinated owing to distinct requirements and spatial separation of the city units. Accordingly, city management systems, services, systems, and communication and transport systems are conflicting thereby producing problems of waste management, concentration of facilities, and traffic problems.

These have negative implications for urban growth and development which require definate planning intervention strategies in order to harmonise these conflicts to produce an integrated urban whole.

In every society, the urban culture and its physical elements change continuously in which the societal changes produce physical changes that inturn set the stage for subsequent societal changes. Adeyemi has rightly observed that ".....change is an accepted phenomenon, making itself felt in any organic system. Society therefore as an organic system cannot remain static but its organic structure renders it susceptible to continuous change. However, the nature of change is

often influenced by factors external to and impinging on it and while change does occur, the nature of change is not absolute but is evolutionary"[1]

The change and transformation of spatial structures result from the fact that the interaction, which is sometimes contradictary between" .....idealized and realized relations concretized in specific spatial structures, are .....the grit from which change and transformation are fashioned. (Thus) ...."outmoded spatial structures generate as much conflict as outmoded social structures and to that extent contain the seeds of their own destruction"[2]

For example, city forms and structures"...that reflect certain idealized expectations in their origin (may turn out to be)..... expectations which overtimecame to be no longer relevant or viable and consequently are discarded in favour of new and more appropriate one"s [3]; and in turn the forms and structures change (in degree or in kind) in response to the new expectations and pattern of relations.

There is therefore an extent to which towns may be refered to as places where the past activities of people are recorded in the contemporary scene, for, towns are indeed foci of change, growth and development.

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1. Adeyemi, E.A.(1975) "Changing traditional culture and Modern Architecture" in ARCHIFORUM No. 1 dept of Architecture, A.B.U., Zaria. pg. 13

2. Mabogunje, A.L. (1980) The development Process: A spatial perspective p.57

3. Mabogunje, A.L. (1980) Ibid pg. 57

In the traditional Hausa-Fulani culture change".... has taken a slow pace in the traditional Hausa towns.....(however), a new composite culture is perceivable in the 'new' architecture of the residential layout, recreation houses, churches and schools, banks and offices and the European type houses of the Government Residential Area(G.R.A.)[4]

This gives a general view of the total urban scene-one appearing "..... in new and different disguise as the mirrow of its age and the epitome of its region"[5] That is, certain urban elements that appear strong and of highest priority during centuries disappear from the urban scene whilst others withstand all changes and constitute, together with other newly adpoted elements, the major elements of the urban structure today. These together considered, should form the basis for contemporary planning.

This thesis sets out to identify the physical changes, and their underlying socio-cultural, administrative, and economic changes in Hausa-Fulani towns and in particular Bauchi, so as to have a strong basis for physical planning intervention.

1.20 Aims and Objectives .

The aims of this study therefore are :

1) To understand the nature and effects of the forces of change in an indigenous Hasua/Fulani settlement- Bauchi-Since the colonial period;

2) To propose physical planning strategies by which the changes can be effectively accomodated without destroying the indigenous character and image of Bauchi or any other Hausa-Fulani Settlement.

4. Adeyemi, E.A. (1975) op.cit, pg. 14

5 Smailes, A.E. (1953) The Geography of Towns (University of London Press Ltd.) pg. 70

In pursuance of these aims, the following objectives have been drawn:

1) To identify the general planning and design principles that have produced the forms and structure of indigenous Hausa-Fulani settlements.

2) To study the socio-cultural, economic and political changes of the residents of Bauchi, and of the role and status of the town.

3) To survey the effects of the changes on the indigenous physical character of the town, and evaluate their validity in present context.

4) To make recommendations, and an upgrading design proposal for the effective accomodation of the changes.

5) To suggest an implementation programme and management structure for the design proposals.

1.30 Data Collection

The data used in this thesis was obtained from the following sources:

1. Field observation
2. Informal interviews with local historians
3. Published and unpublished literature on the subject
4. Two stage sampling frame questionnaire interview to establish existing situation, pattern of some societal and spatial changes, and people's preferences and priorities:
   a) 1% sample compound survey of Bauchi town
   b) 5% sample household survey of Unguwan Mai Bage of Bauchi City.

1.40 Scope of the study

Studies of urban dynamics cover areas as:

1) the tempo as well as the characteristics of the changes that occur within both individual settlements and the settlement system, and

2) Changes in the human situations, characteristics and behaviours in the settlements.

This study concentrates on the aspects of both areas which have direct relevance to the understanding of past principles that produced the indigenous urban forms and structure, and of their changing pattern in the space, form, material, layout and design of t since the colonial period. It covers changes/Hausa-Fulani urban places, and their underlying administrative socio-cultural and economic changes.

1.50 Structure of Thesis

The thesis is divided into three parts (See fig 1.1). The first part introduces the subject; and utilizing field observations and existing descriptive literature and history of the Hausa-Fulani settlements, the forces and principles that operated in the development of the settlement forms and structure are given and explained. These form the contents of chapters one and two; and fulfils objective one of the study.

The second part reviews the physical changes in the case study settlement- Bauchi-and the underlying socio-cultural, economic, and administrative shifts since the colonial period. Then the problems arising from this trend of changes are highlighted. These issues are discussed in chapter three, in fulfilment of objectives 2 and 3.

The third part, concerns the development of appropriate tools for professional planning intervention in order to ensure effective accommodation of the changes without destroying the indigenous character of Bauchi or any other Hausa-Fulani settlement. The recommendations made covers principles to be applied at the city, residential area, and compound levels. Some of the recommendations are then applied in the upgrading design proposal for a residential area of Bauchi city. A programme is then

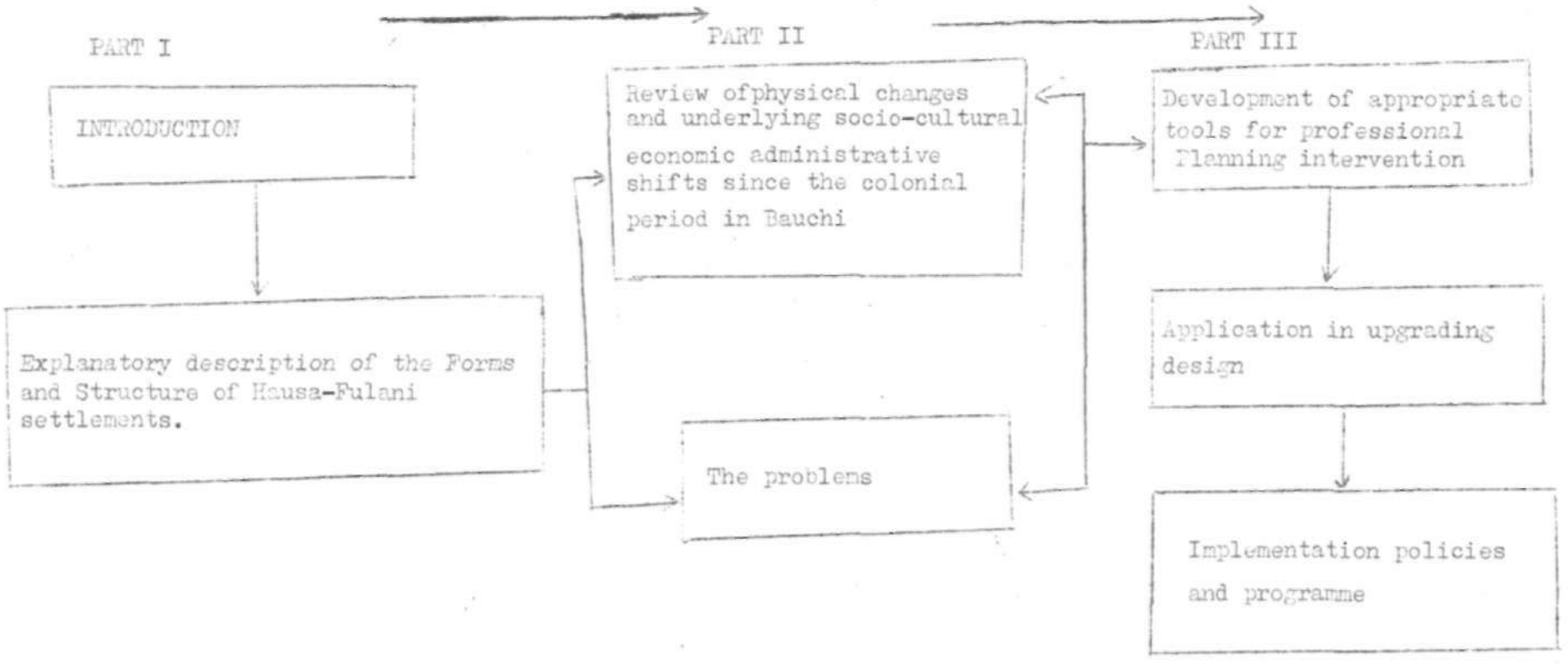


Fig. 1.1 Structure of Thesis

drawn for the implementation of the design proposal. This part which covers objectives 4 and 5, is considered in chapters four and five.

1.60 Definition of Key Terms

Key terms are defined below as they are used in this thesis report.

i) The term change simultaneously denotes a process, a condition, and a state of affairs. For our purposes, it may be said to refer to any alteration in the state of an object or phenomenal unit which includes that of location, volumes, substance, and form. Processes of change involve such actions as creativity, problem solving, and innovation-so described depending on the nature and results of the the process. Creativity relates to organic, artistic, and intuitive overtones, while problem solving and innovation have technique and scientific orientations.

ii) Principles:

Principles refer to general laws or rules which produce, underlie or determine particular methods of formation or operation. The operative principles in town planning and design in any period are due to the interplay of culture, religion, and technology which determine a community's pattern of needs, values, and means in creating and maintaining the urban landscape.

iii) Design:

Design may be defined as a process of building by selecting the elements of the visual arts-line, shape, value, colour, and texture-and arranging them in unified two-and three-dimensional forms. The regulation of elements in space to devise effective visual, social and functional relationships involves the multiplicity of decisions

and actions made by the people who live in it, with respect to the smaller elements of the urban landscape, and the power group (administrative, political and religious) who dominate the larger planning units of the township.


chapter 2

CHAPTER TWO

2.00. PRINCIPLE OF PLANNING AND DESIGN OF INDIGENOUS HAUSA/FULANI SETTLEMENTS

2.10 Introduction:

The Hausa/Fulani settlements of Northern Nigeria may be viewed as unique planned landscapes, ".....created both artistically and unintentionally by man"- not resulting from the implementation of professional planners' ".....views of what should, or might come to be an urban landscape.."(1)

Thus, although the traditional city has been refered to as having grown organically in which growth was accomodated in a practical rather than in a principled way, this thesis takes the position that the traditional Hausa/Fulani cities of Northern Nigeria are 'planned urban landscapes' in which the creation of both the components and the total city have been rationally motivated and artistically built. The people involved (over the long history) in the determination of form of these cities have been able to meaningfully and effectively communicate between them; and the individual's contribution stood in direct relationship to the city's total form, since they were bound by common traditions, technology, need and warfare means for protection, transport, and religion, within a bureaucracy led by the emir.

2) We can therefore speak of the same clusters of planning and design principles that have created these 'planned' urban landscapes that are closely comparable in nature. The slight variations in details of the form and structure of these cities particularly since the British colonial

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1. Urquhart, A.W.: Planned Urban Landscapes of Northern Nigeria (A.B.U., Press Zaria 1977) Pg. 1

2. Urquhart, A.W. : (1977) Ibid pg. 2

experience are due to the uniqueness of individuals, cultural groups, ideas, functions, and whether a town experienced duality of center development or was partially or wholly superimposed upon by the colonial development, as modifying forces.

The contemporary Hausa/Fulani largely operate within social frameworks set by traditions, and codes that are carried over from earlier eras, and also live and function within elements of urban forms originating from those earlier eras. However, in this second half of the 20th century when not only building styles, but techniques and materials; and layout are increasingly drawn from alien cultural and technological traditions (enforced and/or independently prefered), it is essential to understand what the indigenous Hasua/Fulani society itself sees as significant in its design and planning principles; to learn what its priorities may be in the function of its built form of their symbolic and social connotations within the context of their modern value system, and needs, if we are to ".....have a a clear concept of the underlying design structure that must be produced to set in motion the involved processes of city building"[3] , rebuilding, and improvement and preservation of the city image and identity.

2.20 HISTORICAL BACKGROUND:

2.21 Hausa and Hausa-Fulani Periods:

It would appear that by the 14th and 15th centuries the Hausa immigrants, had settled in much of the area of present-day Norther Nigeria with Daura town as the legendry base, and established the Habe Kingdom consisting of seven States (Hausa Bakwai) i.e. Daura, Kano, Katsina, Zaria, Gobir, Biram, and Rano. The Hausa practised traditional religion of the worship

3. E.N. Bacon, Design of Cities (Thames and Hudson Ltd., London 1974), pg. 33.

of spirits (iskoki), and 'bori' practices[4] . Although Islam was introduced to Hausa-land since 14th century through the trading contacts it had with North African Arabs, acceptance of the religion seemed to have been restricted to a few wealthy and scholarly individuals.[5] Thus with the settling of the Fulani in the 16th century who were moslems, and increased disatis-faction of the people with the administration of their Habe rulers, developments ensued which culminated in the Fulani Jihad of 1804-10 that witnessed the downfall of the Habe rule, the establishment of Islamic religion, rules and laws and a resultant built form and organisation based on them, but utilising Hausa technology.
(see Fig. 2.1 for the Hausa and Fulani area distribution)

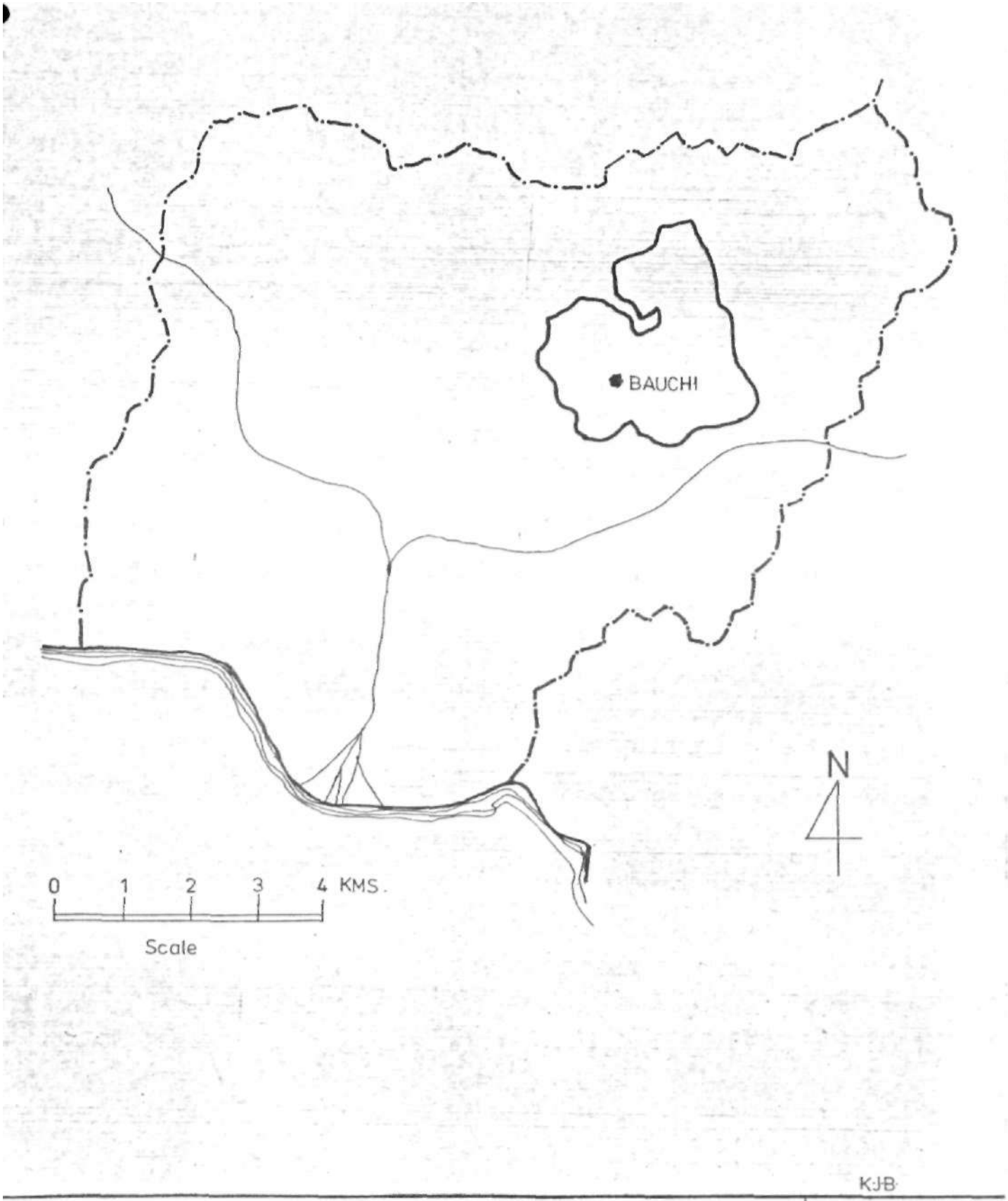
2.22 The Indigenous Planning Process

It was these historical development that spelt out the cultural religious, and technological characteristics which dictated the needs, values, and means of the people and consequently the principles that were used in the planning, design and maintenance of the urban landscapes. This relationship is shown in Fig. 2.2

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4. Ajayi, J.F.A. and Crowder, M. History of West Africa (Macmillan, London 1971) pg. 116

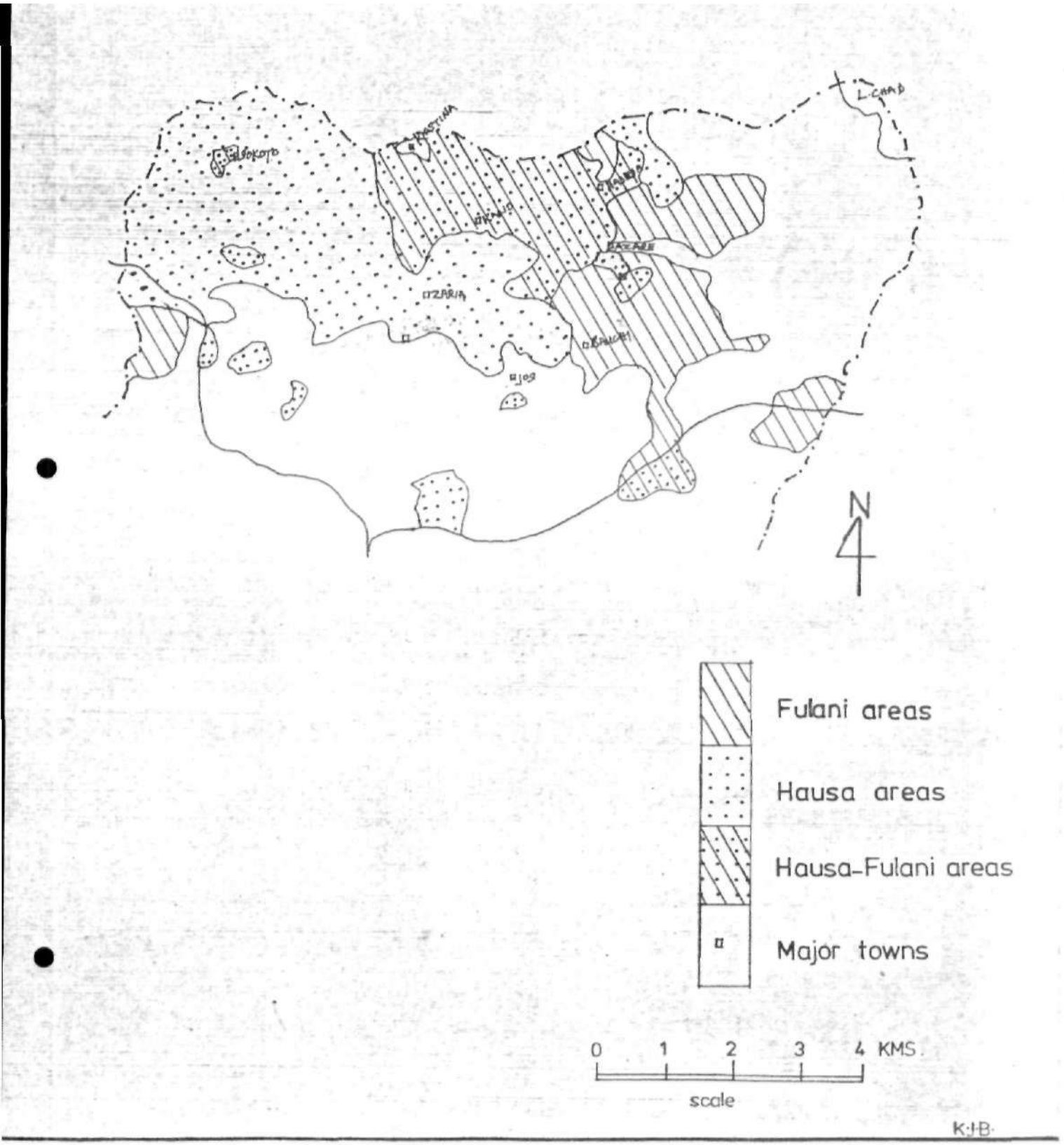
5. Allan Leary, 'Key monuments of Islamic Architecture West Africa' in Architecture of the Islamic World: Its History and Social meaning (ed) G. Michell (Thames and Hudson Ltd., London, 1978) pg. 274.



K·J·B·

FIG·2·1a BAUCHI : LOCATIONAL MAP

dept U.R.P.



FIG·2·1b NORTHERN NIGERIA: HAUSA AND FULANI AREAS

SOURCE : UROUHART A.W.(1977) Pg 4 (1952)

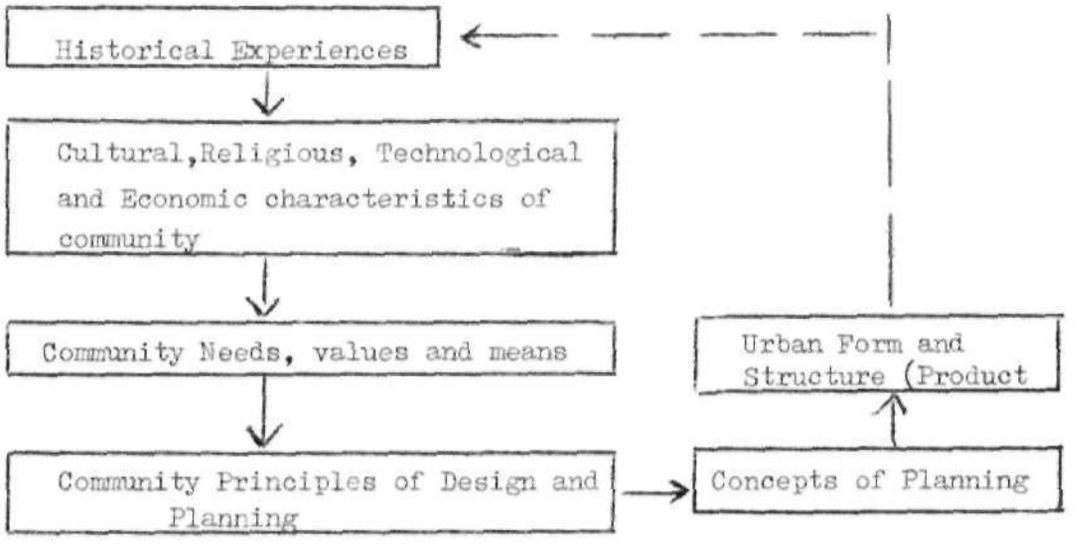


Fig. 2.2 Flow-Chart Showing the Planning Process of Indigenous Planned Urban landscapes.

2.30 THE URBAN FORMS AND GENERAL PRINCIPLES

2.31 Principles at city level

a) The Planning Units:

A typical Hausa-Fulani/Fulani settlement is organised in various hierarchy of social and physical units, these being the city(Birni) residential district (gunduma), residential area (Unguwa), housing cluster (Sashe) and compound or house (Gida)[6]. It is these organisational units that are used as framework of discussion of planning and design principles (see figure 2.3) during the Hausa and Hausa-Fulani historical periods considered as the indigenous setting.

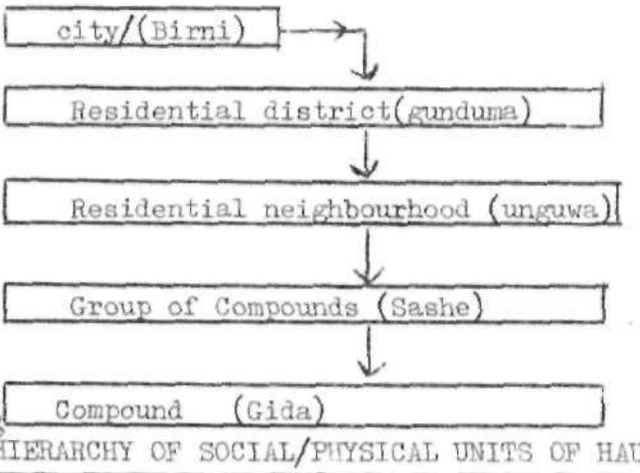


Fig. 2.3 HIERARCHY OF SOCIAL/PHYSICAL UNITS OF HAUSA-FULANI URBAN SETTLEMENTS

6. I.D. Suleiman(1979) Conservation Planning in the Walled Cities of Northern Nigeria: A case Study of Zaria. Unpublished M.A. (URP) Thesis, University of Northingham p.g 31.

b) The principles:

i) Public and Semi-Public areas-

Adeyemi has indicated that " at the Fulani invasion from 1804 to 1810, much of the art and literature left over from contact with the Songhai Empire, was destroyed...."[7] The Hausa period 11th to 19th centuries were times of extensive wars amongst the Hausa states and between the states and two powerful blocks-the Yoruba and Kanem, and of control of the landscape by the natural forces, which situations demanded the application of the principle of community security and survival. This was applied in the founding of cities, siting of markets and building of houses in particular sites, evoking the traditional religious practices and rites of worship of spirits (Iskoki) and the cultural religious practices of 'bori', and local technology[8]. The resultant form at the city level, especially as exemplified in the pre-Fulani towns of Katsina, Kano, Daura, and Zaria, consisted of Conglomerations. surrounded with irregular walls having gates connected with paths leading to the chief's palace and markets all of which (the four elements) were established during special rites thereby confering supernatural protective influences on them and the people[9]

During the Hausa-Fulani period (19th century), earlier Hausa towns were taken over by the Fulani rulers, and in addition, caliphate towns were founded at strategic locations for Fulani administration e.g. Yola, Sokoto, Bauchi, Gwandu etc.

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7. Adeyemi, E.A. op. cit. pg. 31

8 Urquhart, A.W. (1977) op. cit pg. 2

9. Mortimore, M.J. (1970A) 'Settlement Evolution and Land Use' in Zaria and its Region: a Nigerian Savanna City and its environs. Occasional Paper 4.pg. 108-109.

The urban forms of the Hausa- Fulani period was a result of cultural mix, and needs and values set out by Islam. The scale and rapidity of the Islamic Fulani invasion of Hausaland and numerical minority made it inevitable that existing buildings were taken over, that local craftmen were employed to construct new domestic units, and that these builders would be instrumental in giving architectural form and layout to the germinal principles and concepts of the new religion.

The principle of community security and survival operative during the Hausa turbulent period continued to be applied during much of the Hausa- Fulani period on account of the fierce jihad or religious war.

Accordingly, mud built town walls were erected around the newly established caliphate towns, and those earlier built by the Hausa around their towns were retained and maintained, sometimes extended. Thus, the towns of the Hausa- Fulani remained highly bounded with gate-pierced town walls 20-40ft (6.1m-12.2m) in height and 10-20ft (3.0m-6.1m) in width, often associated with ditches, distinctively marking the urban environment from the rural.(10).

During times of relative peace, after the jihad, the forces of culture and religion emphaised the needs and values of emir glorification and wealth depiction to impress on residents of other cities in the kingdom. Accordingly, the principle of expressive leadership power and wealth was evolved. The application of this principle resulted in the

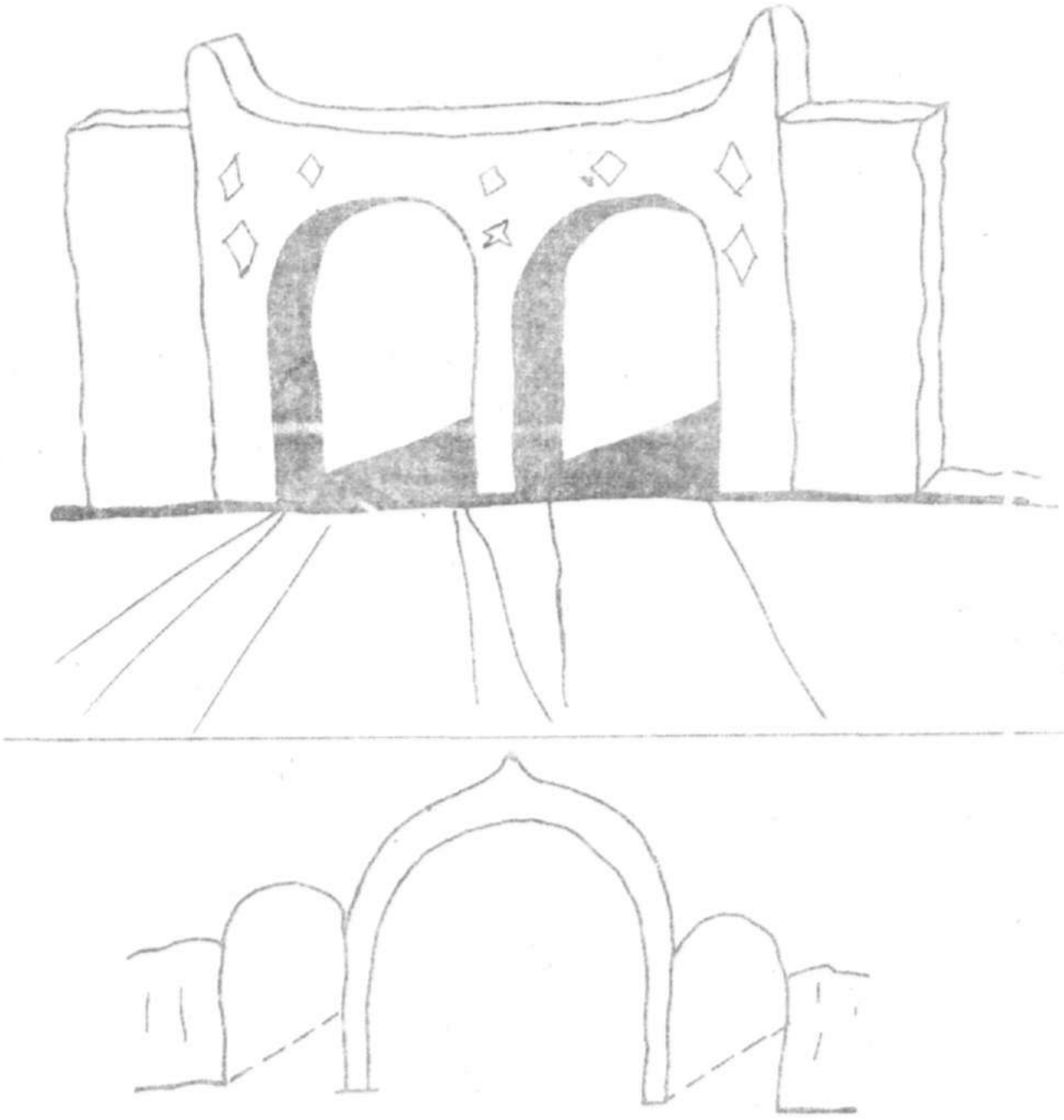
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10. The Master Plan for Abuja: the new Federal Capital of Nigeria, 1979, pg. 67-68

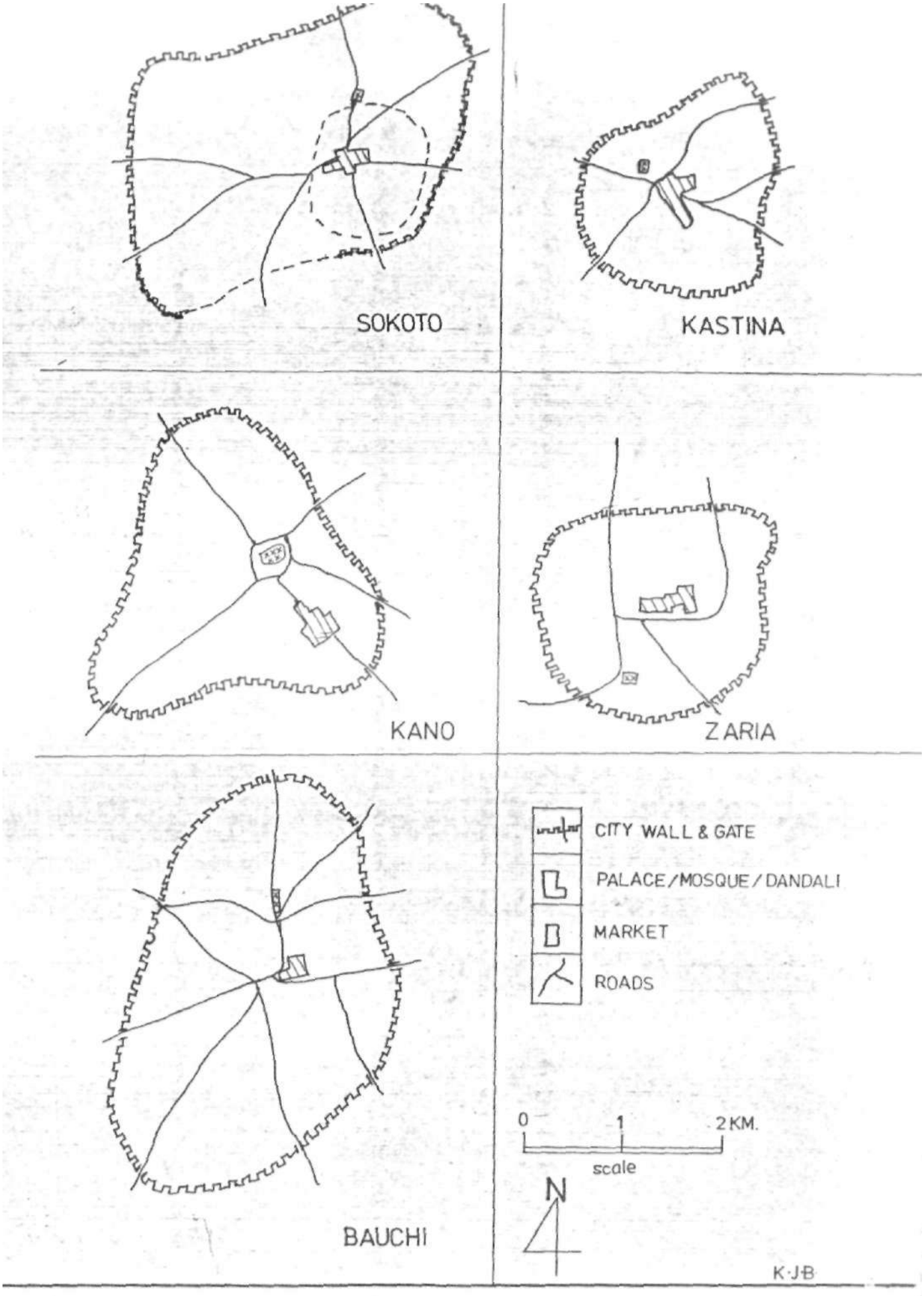
rebuilding of the walls especially parts close to the gates. The gates which served to admit or exclude were also rebuilt after two plan types- the straight gate, and the bent entrance (see fig. 2.4) and also expressively decorated in coloured mud reliefs, at which points tolls were collected. Thus, though town walls and the gates could be said to have been primarily military and defensive, their re-building and elaborate decoration of the gates during more peaceful times showed the declining emphasis on defense, and increasing emphasis on symbolic expression of power and wealth.

In view of the requirement of both segregation of domestic life and participation in the economic, cultural and religious life of the community set out by the new religion, the Hausa- Fulani city characteristically comprises a tripartite system of public, semi-public and private spaces, varying in degree of accessibility and enclosure. The main public areas of the town are the market, palace/dandali, and Friday mosque. The Islamic dictates meant that these public places be considered the domain of men, to which they needed maximum accessibility and unrestricted social, religious and commercial contact. To meet this need and considered value of the elements, the planning principle of Centrality of Location was evolved.

The application of this principle led to the radial pattern of urban design whereby the location of the palace/dandali, the Friday mosque, and market are in the geographical centre of the city (see fig 2.5) and linked to the town gates by the main streets, and to the [illegible] Unguwa by the secondary streets, and to the individual dwellings by the narrow, blank-walled alleys and culde-sacs which branch off the secondary



FIG·2·4 SOME TRADITIONAL CITY-GATE DESIGNS



FIG·2·5 INDIGENOUS HAUSA-FULANI CITY-ELEMENTS

dept. UFP

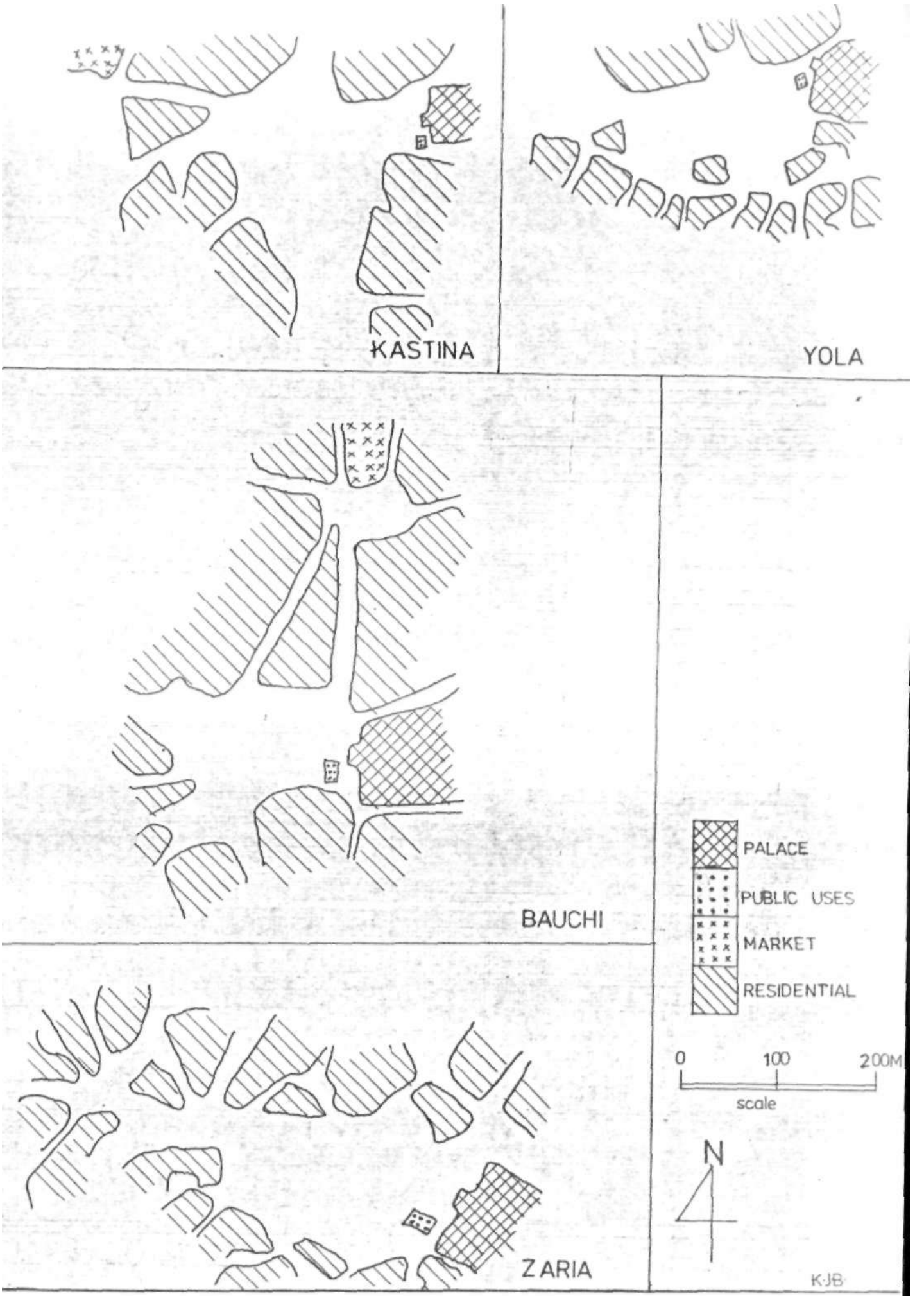
streets[11] . The conferment on the Fulani ruler of both administrative and religious leadership and consideration for his convenience also meant that the moseque be near the palace. The market, though centrally located within the framework of the principle, is generally a bit removed from the palace and mosque complexes. This was most probably because the Hausa-Fulani needed the markets only for regional trade and wholesale exchange while retail trade occured within the compound premises where most production work was done engaging the majority of people; and also for considerations of emir's security from disputes and quarrels that often ensured from themarket.

The palace as an element so centrally located and effectively linked to the other parts of the town consists of units ranging from functional and specific units such as dwellings of emir, his numerous wives, and dependants, to formal ceremonial and audience space-'dandali'.

There is a distinct layout pattern of these central elements of the Hausa-Fulani cities (see Fig. 2.6) in which the palace"..... is always located to the east to signify allegiance to Mecca where Islam originated", with the dandali in the frontage which is then flanked in the west by the Friday mosque its gibla facing east[12] . The market as mentioned above is located remotely from the other elements. This layout pattern which satisfied the religious and cultural needs and values resulted from the planning principles of grouping of like

11. Musa Ebuga (1979) "Selected problems of the Development of Nigerian City Centers" in (ed) S.K. Kulushrestha et H.Y. Bedawi Urban Field Seminars, U.R.P. pg. 18

12. M.L. Yunusa (1980) City Center for Greater Yola: An Approach to the integration of the traditional cities and the Modern Townships of the Hausa-Fulani Settlements of Northern Nigeria, unpublished M.Sc. (URP) Thesis, A.B.U. pg. 5



FIG·2·6 INDIGENOUS LAYOUT OF CENTRAL AREAS

functional elements: a principle which required locational expression of the functional relationship between the administrative/ religious symbols.

The design principle of monumentality was applied to the palace and mos que owing to the need to depict the palace as monument of official power through their individual architectural and locational characteristics (see plate 1) rather than their presence as walled enclosures; and to depict the moseque as a form indicative of God's might, and to impress the populace.

Accordingly, the few mosques built during the Hausa period characterized by heavy tower-minates but unacceptable to the Fulani reformers, were ",,,,,,mostly replaced by mosques with stair-minatrets (see Plate 2) during the 19th century.13 Also, even the smaller mosques located in other parts of the city could be identified by their distinctive architecture.

ii) Circulation system

The circulation system was developed on the principle of secondary significance whereby only the main arteries were actually planned which were the continuations, within the cities, of long-distance routes connecting cities with one another. They therefore extended from the city gates to the central elements of the city and gives a radial pattern for these major arteries.

The second order of streets which formed the boundaries of continuous residential cells evolved consequential to the allocation of the residential cells(the Unguwa). These passages between (or external to)

13. Allan Leary (1978) op. cit. pg. 275



PLATE 1 PALACE -~~KANO~~ Sokoto



The Old Mosque Bauchi

THE OLD MOSQUE- BAUCHI

Plate 2

the cells were residual, left over from the growing together of the surrounding cells, and used as a common ground, for market exchanges and public behaviour.

The third order of the circulation system"....which perhaps should not even be called streets: these were the interior paths within cells which served only to allow access to the individual dwellings within the large residential block.....in design they were intentionally short and dead-end (see fig. 2.7) only at a point of general access did there grow up limited commercial and service functions that served the needs of the highly localized cellular community"[14]

2.32 Principles at the level of Unguwa

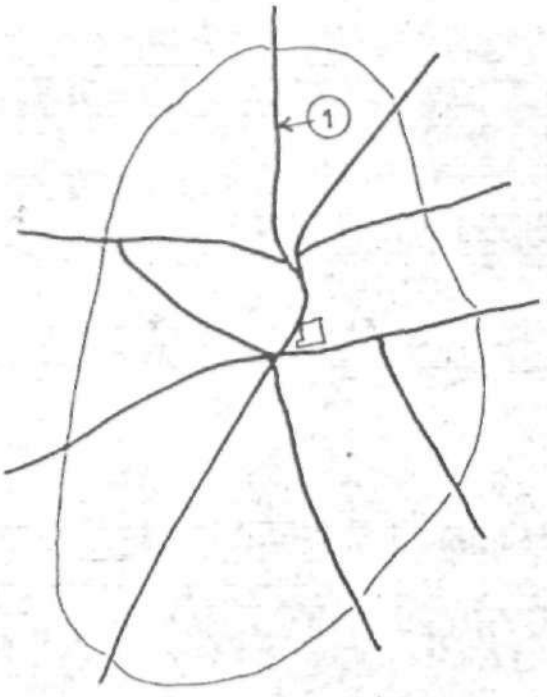
Within the built-up area of the Hausa-Fulani town, the principle of functional urban space hierarchy was evolved in keeping with the needs and values of graduated public and private religious and cultural life of the individual and the community. Application of the principle led to the development of a hierarchy of urban spaces from the main square-'dandali' in the centre, to the residential sectors(Unguwa) open space usually with a small mosque or prayer ground and an informal market, and then to the internal courtyard of the compound together giving a low building density which is a distinguishing character of these indigenous cities.

Second, at the Residential sector or Unguwa, Housing cluster, and compound levels, the Islamic religious requirements of segretation of domestic life and participation in community activities, and economic cultural requirements of occupational control and trade together spelt out needs of domestic privacy, communal sense of belonging, and occupational association. These needs resulted to the planning principle of balanced social homogenuity versus heterogenuity whereby in the urban organisation at those levels, equilibrium was to be maintained

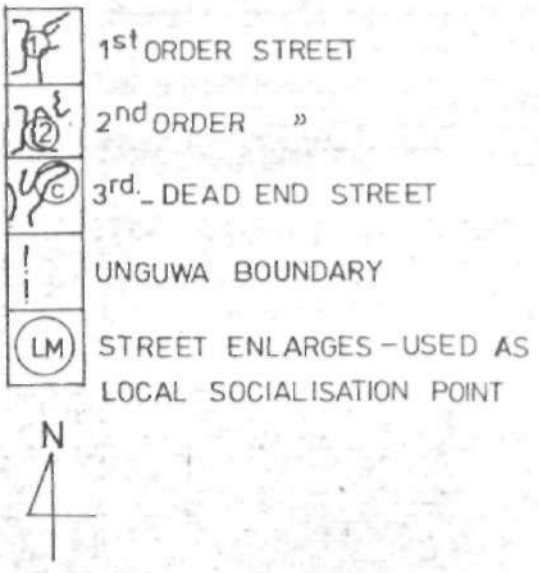
14. Abu-Lughod, J(1980) "Contemporary Relevance of Islamic Urban principles (extract)" in Ekistics vol 47 No 280 (1980) pg. 7-8.



PART OF UNGUWAN MAKERA SHOWING IRREGULAR STREET PATTERN



BAUCHI CITY SHOWING RADIAL PATTERN OF MAIN STREETS



KJB

FIG·2·7 INDIGENOUS STREET PATTERN

dept. URP

between strictly divided public and private life.

In accordance with this principle, the Unguwa were formed of relatively homogenous communities each bound by common religious, ethnic or occupational ties. Early migrants sharing common regional origins usually occupy or even build their own distinct quarters in the city. Although the Unguwa was a closely knit group, providing conciousness of social identityand security, there was always a balance matined between this social self-sufficiency and the Unguwa's participation in communal and economic affairs of the city as a whole. The Unguwa were a microcosm with rich and poor living alongside one another and sharing mosques, informal markets and communal cultural and religious spaces; resulting in a "....pattern of multiple nuclei, in terms of local residential community districts, and even city sectors"[15] Fig. 2.8 shows the structure of a Unguwa in Bauchi and in Zaria typical of the traditional organisational order resulting from the principles. Thus, although there is some degree of concentration of the officials and royal families near the palace, thisdid not constitute a separate Unguwa apart pockets of such families were found in different parts of the city or were deliberately spaced out by the emir[16]

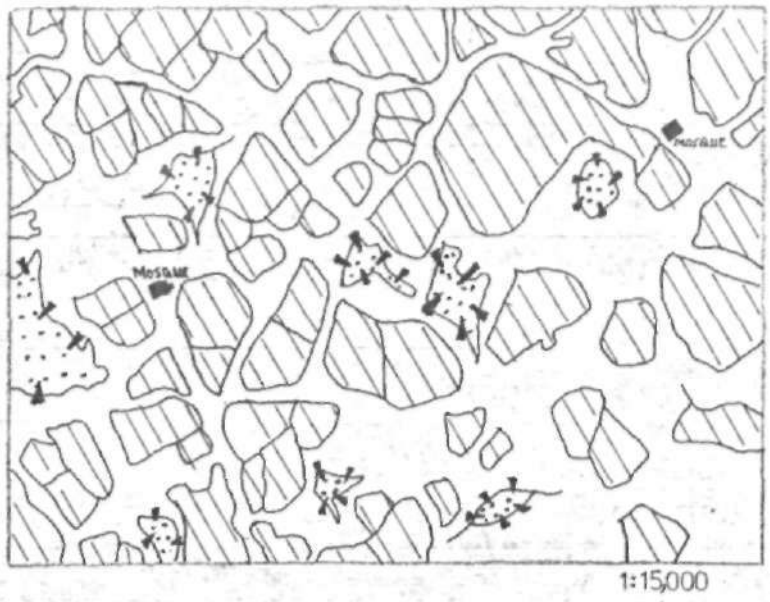
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15. The Master Plan for Abuja (1979) Op. cit p.g 68

16. The Master Plan for Abuja (1979) ibid p.g 69



UNGUWAN MAKERA, BAUCHI



UNGUWAN KUSFA, ZARIA

After URQUHART (1977)

RESIDENTIAL

PUBLIC USES

OPEN SPACES

PITS

KJB

FIG·2·8 STRUCTURE OF THE UNGUWA: INDIGENOUS SETTING

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The close ties within the Unguwa also spelt the need for spatial proximity and identity- the principle of close neighbourhood association This gave rise to the clustered plan concept by which the Unguwa developed whereby the residential areas grew by rational additions defined by marrow consequential streets and usable open spaces.

2.33, Principles at the level of Sashe

Making up the unguwa were groups of compounds each joined together by common external wall to form a housing cluster (Sashe). Like the unguwa, this is a social and physical unit and planned in keeping with the principle of balanced social homogenuity versus heterogeneity resulting into a physical layout similar to the Unguwa.

However, even within a 'sashe' other more intimate ties such as a group of families tracing origin to a distant father do occur. The outline of its usually continous wall produces something of a big compound with three to four compounds in it, usually having a recreational space in the frontage.

Also existing in relation to one another in accordance with this same principle are the individual compounds. However closely the individual is associated with life of the 'Sashe' and Unguwa, he also belongs to another unit: the family. The right and obligation of the family to live enclosed in its house or compound has led to a clear separation between public and private life. Yet, the compounds are linked and each compound is also linked to the 'Sashe and Unguwa by the footways, created by a technology which support animal and pedestrian modes of transport, to join the private areas with the public ones.

2.34 Principles at the level of the Compound

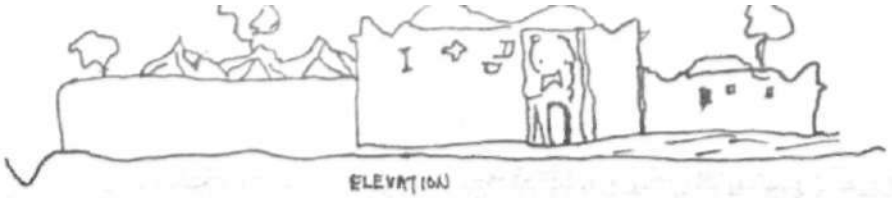
In the Islamic cutlure and religion, it is both the explicit and the implicit Qur'anic prohibitions that are the primary determining factors in the formation of a domestic unit(17) The Qur'anic injunctions on domestic privacy and seclusion and segregation of women[18] created commonly held beliefs and values about the nature of the family, its social rule and consequently attitudes regarding the functions of the house. This resulted in the wide application of the design principle of compartmentality whereby the compound is designed in an introverted form conceived from the inside outwards.

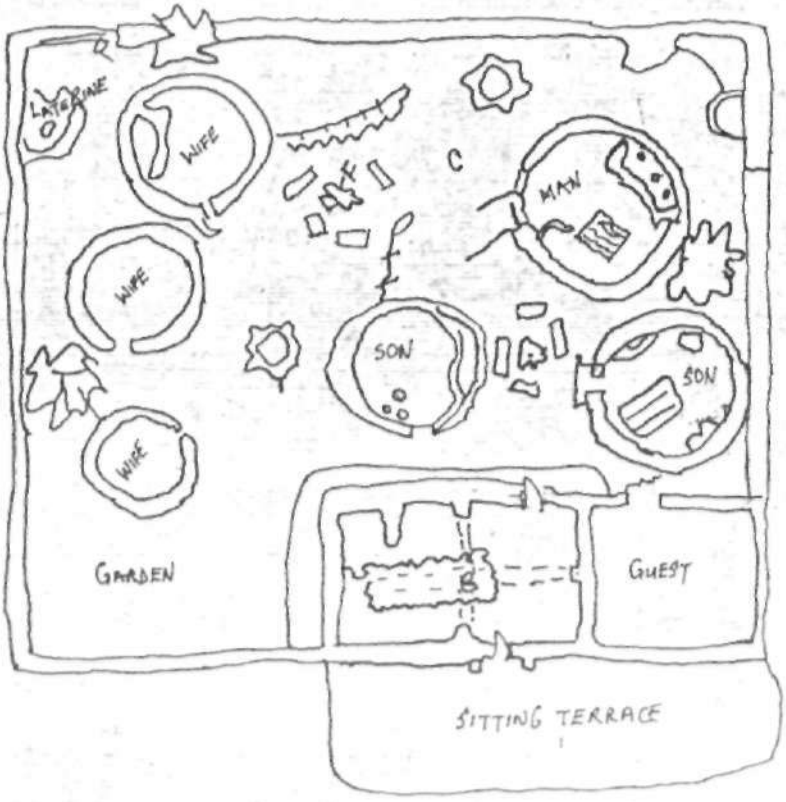
Even within the compound degrees of privacy are expressed architecturally 'Sassa'; the most fundamental division being between male reception areas and the 'harem'- the sacred area or family living area. Although these buildings were realised within the formal limitations of local building traditions, the special requirement of privacy was achieved in their design construction, and use, through compartmentalisation of the compound design. Accordingly, a typical Hausa-Fulani compound (see Fig. 2.9) consist of tall buildings and compound walls (that had a moderating influence on climate) with a limited number and small size windows at height above the line of vision of passers-by

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17. I. Mahmood (1976) Concepts and methods in Northern Nigerian Architecture unpublished B.Sc (Arch) Thesis A.B.U. pg. 8

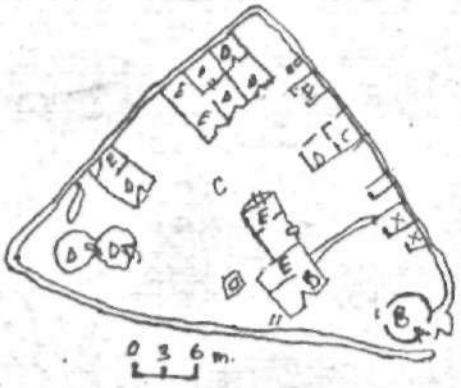
18. Holy Qur'an Sura xxxiii, 32-33 and Sura xxiv, 27.





SKETCH PLAN OF A HAUSA TOWN HOUSE

SOURCE: I. MAHMOOD (1976)



A COMPOUD IN ZARIA CITY SOURCE: SCHWERDTFEGER (1968)

A - ZAURE
B - MEN'S
C - COURTYARD
D - WOMEN'S ROOMS
E - COMP. HEAD'S ROOM
F - KITCHEN
X - SON(S) OR GUEST(S)

KJB

FIG. 2.9 TYPICAL HAUSA-FULANI COMPOUD STRUCTURE

dept U.P.D.

and compartments of progressive privacy and remoteness inwards to ensure seclusion and privacy. Often the compound(and the 'Sashe') had a single entrace, but a second entrance may be used exclusively by the womenfolk. The main gate of the house does not give immediate access, to the living areas, but leads into a passage with a sharp turn or covered so that it is not possible to see into the court from outside. Thus, the traditional need to entertain male guests, while at the same time bar them access to the females of the household, gave rise to the usually double reception rooms(Zaure) shown in Fig. 2.9, establishing a double circulation system. The men's reception room tended to be located adjacent to or directly accessible from, the entrance lobby of the house so that the visitors do not meet or converse with the female household or violate the 'harem'. Apart from being a place for relaxation and recreation, the reception (quest) room is used for religious discussion and instruction, or some craft. The combination of both the cultural-religious obligation to supply each wife with separate apartment and the usual custom of patrilocal residence of the married and unmarried sons and other relatives, creates needs that cystalize into the compartmentalisation principles and finding spatial expression in their physical separation (see Fig. 2.9b).

The living area (Harem) consisted of a spacious court-yard (sometimes with gardens and trees) with the women's quarters at the far corners near the kitchen when it formally exists. It is in the courtyard compartment that the women's family life is concentrated.

Other ways in which physical forms reflect theconcern for privacy"....are the placements of doors within the street, avoidance or the architectural treatment of windows on the street, and the limit on building heights throughout the city"[19].

1. Regulated by the application of the Maliki law, the principle of non-direct-door placement was used in which :

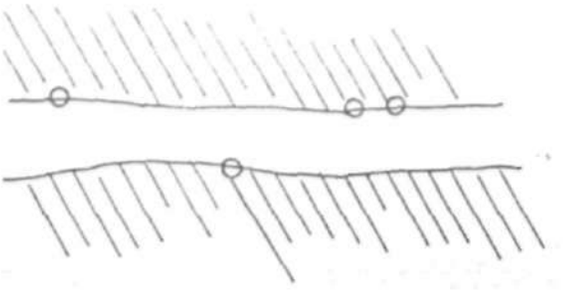
a) entrances can be near each other on the same side of the street but not opposite each other even for doors across the street

b) an entrance can be seen if the street is a dead-end street but not at intersections, c) entrances commonly is located at the house corner and not centrally (see Fig. 2.10).

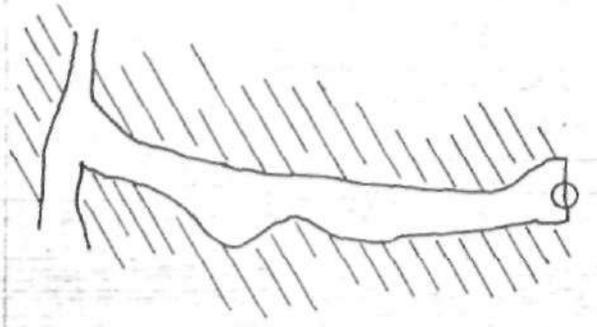
2. Although there was not direct restriction on building heights, the limitations of technology, and the considered damage in which neighbours are placed under the view of others through the windows openings together helped to restricted building heights to mostly single floors. The needs and values associated with cultural display of wealth and status were achieved through decoration principles. Within the framework of Islmaic design, D Hill and O. Graber have given the principles of decoration used as: the Ubiquity of patterns in time and space: the interchangeability of the same design from one medium to another; and the repetition of the same design at different scales[20],

19. Saleh Al-Hathoul "Urban Forms in Arab Muslim Cities (extract)" Ekistics Vol 47 No. 280, 1980. pg. 13

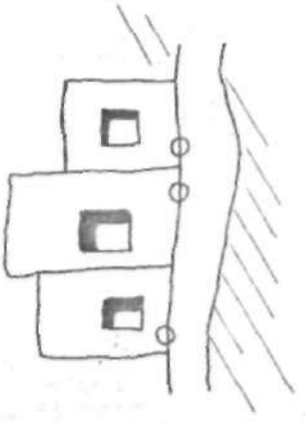
20. D. Hill and O. Graber, Islamic Architecture and its decorations (R. Maclehose Co. ltd, University Press Glasgow, 1964) pg. 82-85.



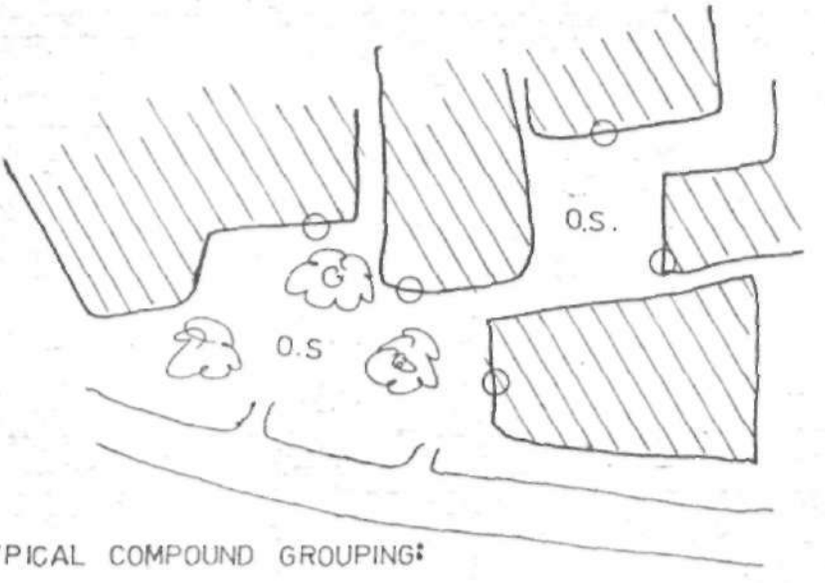
ENTRANCES ARE NOT DIRECTLY OPPOSITE EACH OTHER, BUT CAN BE NEAR EACH OTHER ON SAME SIDE OF STREET.



ENTRANCES CAN BE SEEN IF STREET IS A DEAD-END STREET, BUT NOT AT INTERSECTIONS.



ENTRANCE USUALLY AT COMPOUND CORNER



TYPICAL COMPOUND GROUPING:
ENTRANCES DO NOT OPEN DIRECTLY

KJB

FIG. 2.10 LOCATION OF INDIGENOUS COMPOUD ENTRANCES RELATED TO STREETS

often within the same building. For instance, the symbolic importance of the house entrance- the vulnerable threshold between the household and the public-was (like the city main gates the Jihad) often highly decorated doorway in line with the principles above (See plate 3).

The nature and pattern of changes, both of degree and of kind, experienced in these Hausa-Fulani settlements(with special reference to Bauchi town) is discussed in the next chapter.

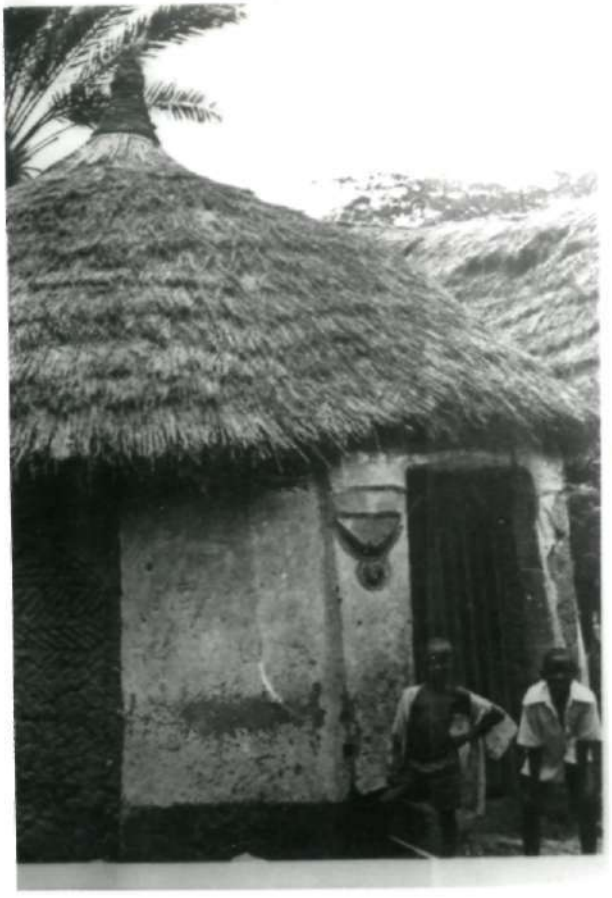




PLATE 3 INDIGENOUS DECORATED ZAURE FORMS

chapter 3

CHAPTER THREE

3.00 THE NATURE AND PHYSICAL PLANNING EFFECTS OF SOCIO-CULTURAL ADMINISTRATIVE AND ECONOMIC CHANGES IN BAUCHI TOWN SINCE THE COLONIAL PERIOD

3.10 Introduction

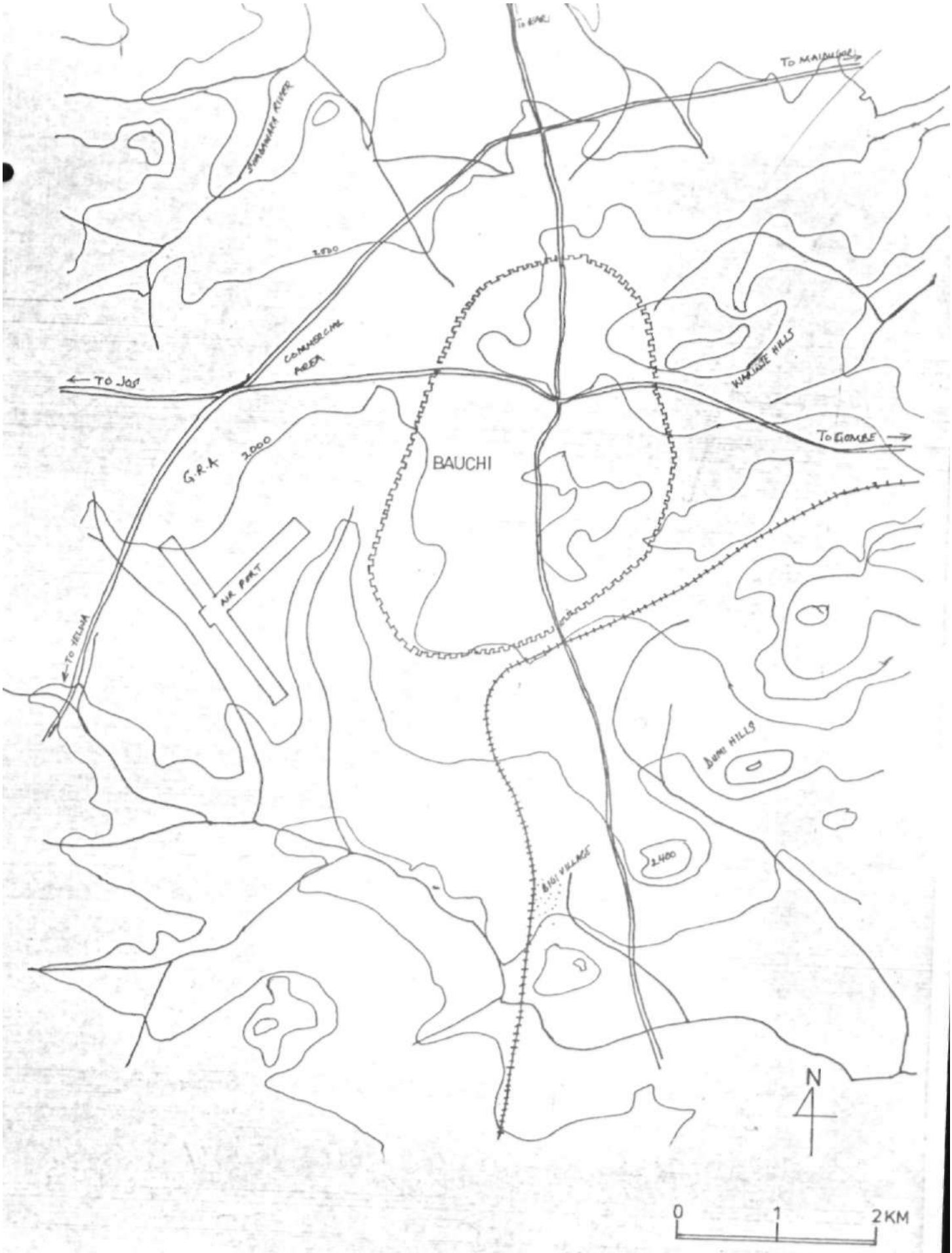
Bauchi town was founded in 1809 by Yakubu, one of Usman Dan Fodio's flag bearers. He chose a site which ".....had ample stretch of flat ground where enough houses could be built to accommodate the growing community, and at the same time afford plenty of room for cultivation and cattle grazing"(1) Also, the site was located in an area inhabited by people of diverse origins, the largest being the Gerawa, to whom Yakubu belonged, and who were neutral to his cause. It was surrounded with several inselbergs which offered protective advantage as these were difficult terrain for enemies and were used as military look-out posts (see fig 3.1).

The town rapidly grew at an unprecedented scale soon after its establishment owing to its consolidation and consequent attraction of people from Hausa-land and Borno. The town assumed the status also of a commercial centre as it was situated on the trade route linking Hausa-land with the Kasashen Bauchi up to the Benue, and other Caliphate towns.

Owing to the ".....continous importation into the town of political, administrative, and social ideas from Hausa-land, and also the ever-increasing presence of Hausa people in the town on a permanent basis and operating in all sectors of the society" (2), Bauchi ".....had no alternative but to grow as a satellite of Hausa culture" (3).

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(1) Mahmoud Hamman, "The City of Bauchi" in 'ed) C. Ashiwaju et. al. Cities of the Savannah Pg. 90
(2) Mahdi' Adamu (1978) The Hausa Factor in West African History Page 94
(3) Mahdi Adamu 1978), ibid Pg. 101.



FIG·3·1 BAUCHI: GEOGRAPHICAL LOCATION

dept. URP

The numerous people of several backgrounds were thus overshadowed by the Hausa and Fulani dominance and assimilation; and this way ".....Bauchin Yakubu subsequently became as much a Hausa town as any town in Hausa-land" (4).

Indeed, as a Caliphate town, Yakubu had started the town along the same planning and design principles as the other towns of Hausa-land under Fulani/Islamic influence. The first buildings to be erected were the Mosque, the Palace, the Compounds of the Judge, the Imam, and the Sarkin Yara. The compounds of the other senior officials of state were then constructed together with the town walls.....(with) four gates; .....(and) a moat was built round the capital on the model of the Prophet at Medina and the Caliph at Sokoto." (5) The compounds of the officials - usually clan heads or scholars - were spaced out and around each of them, the other buildings of their kins and clientele were fitted thereby evolving an organisational structure of anguwa, nurturing group solidarity.

In 1902, Bauchi came under colonial rule and subsequently suffered some temporary set backs in its growth.

Since that time, however, several changes have occured in the residents' socio-economic, cultural values, and the town's administrative status, with marked consequences for the physical growth and structural development of the town.

The chapter considers aspect of societal changes directly relevant to physical planning, and discusses the ways by which the changes are spatially accommodated in the city. The assessment of desirability or otherwise of the societal changes themselves is outside the scope of the

(4) Mahdi Adamu (1978) - ibid. Pg. 101
(5) Mahmoud Hamman, Op.cit. Pg. 91

thesis.

3.20 THE SOCIETAL CHANGES

The establishment of the British indirect rule two opposing patterns of development with varying degrees of emphasis in the various Hausa-Fulani towns. First, was the conservation of the old indigenous urban landscapes owing to the segregatory locational and planning action of the new overlords applying formal and European conceived planning principles which led to the development of new centers and European Residential Areas; and second, the obliterating orientation of the indigenous urban landscapes owing to the unleashing of new ideas, values and means through the colonial economic principles and of planning and design of urban forms. These patterns have continued since independence in 1960, in favour of the latter. (6)

These new ideas, values, and means came about through administrative/ political, socio-cultural and economic changes in the Hausa-Fulani society.

3.30 POLITICAL/ADMINISTRATIVE CHANGES

The indigenous Hausa-Fulani Cities (Birane) were capitals of emirates and each consisted of smaller (garuruwa), villages (kauyuka), and frontier garrisons. However, these emirate capitals fell under a wider administrative system of the British who set their garisons in these cities. Under this new organisation, the cities became emirate and/or provincial headquarters with wider roles.

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(6) F. Schwerdtfeger, (1971) "Housing in Zaria" in Shelter in Africa (ed) P. Oliver, (Perrie and Jenkins, London 1971 PG. 78

The fact that the satellite towns and villages to Bauchi were within the sphere of these administrative personnel and administrative facilities helped to reinforce Bauchi's control over them. This in turn strengthened the city's power status within the area, and helped to stimulate the city's growth as people were attracted by its administrative, commercial and religous opportunities.

After the Victorian independence in 1960, the city of Bauchi retained its position and a centre of authority which was further enhanced in 1976 when it was made the capital of Bauchi State. Although there was no increase in the area of its administrative control as a State Capital, its position was infact strengthened as it was once more given ".....a semblance of the prominence it enjoyed before the intervention of the British in 1902. (7) From that time the focus of authority and development was on Bauchi city as State Capital as compared to its earlier status as provincial capital within a wider regional context when development and authority was based in Kaduna.

As a result of these features, Bauchi city has gown in population from 38,074 recorded by the 1963 census to 70,000 in 1974 by the Max lock Survey, and to the present estimated population of 116,133 (1982) (see fig 3.2A). However, by 1974, before it was made a State Capital, Max Lock observed that Bauchi city had a fairly stable population. Thus, "....a high proportion has been born in the town or in neighbouring villages and growth is far less rapid." (8) The Max Lock survey (reported in Chapter

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(7) Mahmoud Harman, Op. Cit. Pg. 80

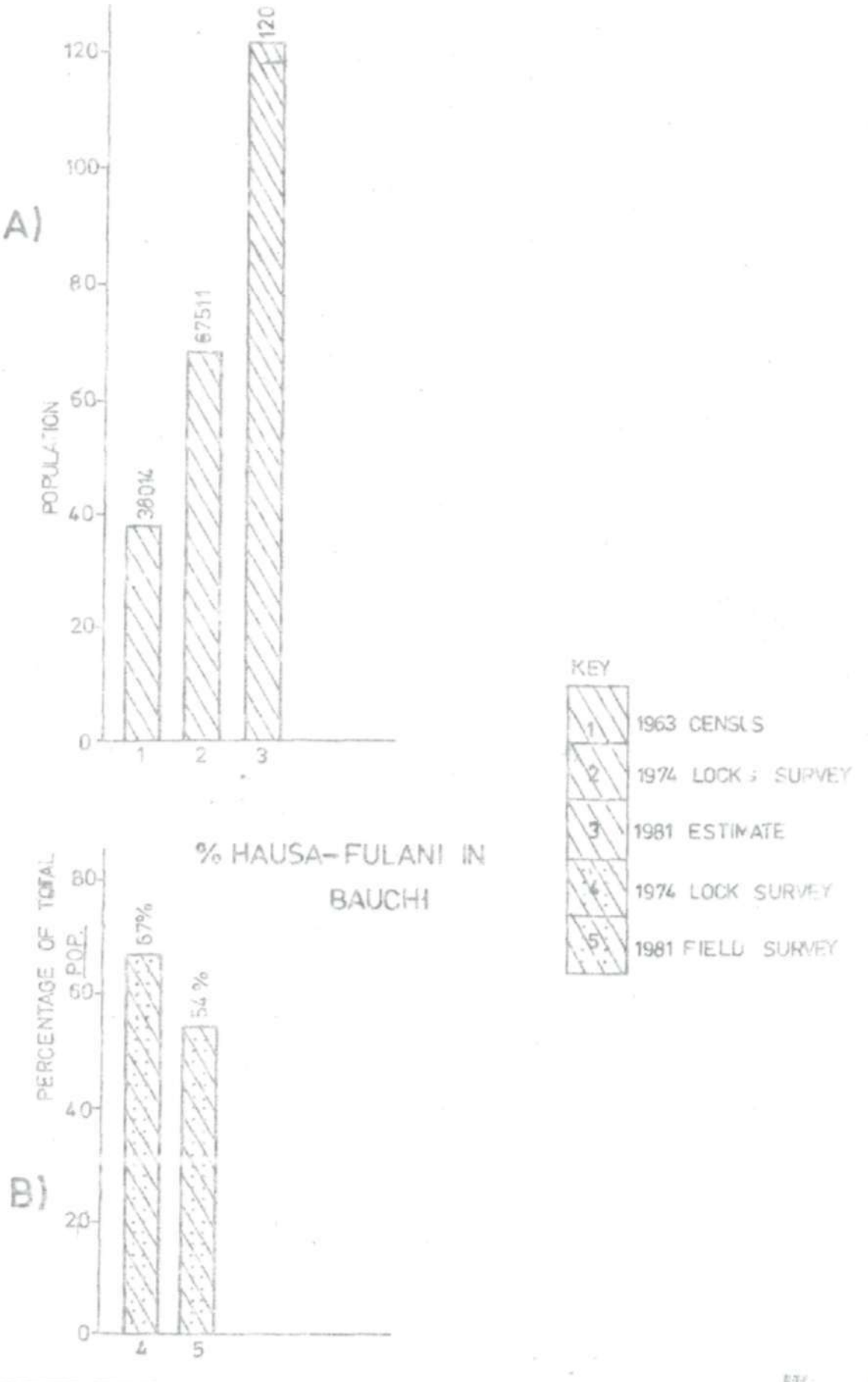


FIG 3-2 BAUCHI : POPULATION - CHARACTER

Seven of the report) showed that 67% of the population were Hausa-Fulani (by descent or by assimilation). The survey established that three quarters of those who came to Bauchi in about 1964 emigrated from within the Bauchi province while by 1970 this applied to only one quarter of the migrants. In recent times, especially since the creation of Bauchi State, the city of Bauchi has been receiving numerous migrants from within the State and other parts of the Country (see fig 3.2B) for the purpose of employment, education, and commerce resulting into the spatial expansion of the built-up area of the city.

Currently, the administrative position of Bauchi remains a State Capital, a position it is unlikely to relinquish nor add to. It would appear that in the near future another State may be created from the present Bauchi State and another State Capital being located within 200 kilometers of Bauchi City. This may reduce the administrative sphere of the city and consequently its rate of spatial expansion.

3.40 SOCIO-CULTURAL CHANGES

With colonisation came some changes in the culture i.e. the style of living with certain associated type of tools indicative of a stage of development of a group of people. The changes in knowledge, belief, art, law and custom of Bauchi residents thus resulted from the confrontation of the cultural elements of the British colonialists with that of the indigenous population.

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(8) Max Lock (1973 - 1976), The Master Plan of Bauchi - Pg. 7.1.2.

3.41 CHANGES IN EDUCATIONAL SYSTEM

In the area of education, a formal system of schooling was introduced by the colonialists in which carefully western-based knowledge was taught. Although the indigenous educational system continued in which the Malams taught Quara'anic and Islamic Literature in their compound premises (the Zaure) the importance of that system was dislodged by the new system. Products of the new system of established schools were absorbed into the new administrative structure as junior staff with certain privilodges, though minimal, which appealed to the indigenous educational content and system and sent their children into it, and largely alienated the new system.

After independence, the national and regional goverments continued to emphasise the western educational system largely in the form delivered by the colonialists. More Primary age going children began attending schools established. (table 1a)

TABLE 1A - CHILDREN IN PRIMARY SCHOOL

YEAR	CHILDREN IN SCHOOL	TOTAL NO OF SCHOOL AGE CHILDREN	NO OF PRIMARY SCHOOLS	CHILDREN IN AS % OF TOTAL CITY POPULATION
1974	2,813	17000	9	4.2
1975	6,784	26000	12	5.8
1981	11,856	43000	17	9.6

Before 1974, the educational situation was that "...most of the older generation in Bauchi have had only Quara'anic education, and even if we take all those of 15 years and over it is still the main form, especially for women." (9) From the larger proportion of girls of between 5-14 years who

went to school at the time, Hardiman rightly ascerted that "...it is clear that the coming generation of women will be on more equal educational terms with their menfolk," (10) at least at the primary school level. The indigenous educational system remained informal (with Twenty-three Quara'nic schools in 1974) and under individual direction of Mallams whose programmes were not centrally co-ordinated.

By deliberate policy of government, the situation today may be described as one of fusion of some aspects of the Islamic Educational system with the modern system. Privately run compound-based Islamic Instruction still exists; and pupils attend primary schools in which Islamic Instruction has been introduced or attend the Privately run Islamic Schools in addition. Some attend either of the two. Thus, presently, Western Education is widely highly valued especially when undertaken with religious teaching. The 1981 survey of Unguwar Mai Dage shows 90% preference for Islamic/Arabic plus Western education (see table 1b).

TABLE 1B - PREFERED TYPE OF SCHOOL

TYPE	PERCENTAGE OF H/H. INTERVIEWED
Islamic/Arabic	2.8
Western Education	7.2
Islamic plus Western Education	90.0

Associated with this is the development from the basically classless indigenous society, (11) of an elite class with new social values like that

(9) M. Hardiman,: in Max Lock Plan of Bauchi (1976) - Pg. 7.2.7
(10) M. Hardiman,: ibid. - Pg. 7.2.7
(11) P. Hill (1972) Rural Hausa: A Village and A Setting - Pg. 175-176
(12) H. I. Ajaegbu (1976) : Urban and Regional Development in Nigeria - Pg.27-28

of association, housing and recreation. (12) This trend is anticipated to continue and advance its articulation into the future of Bauchi city, especially as in addition to increasing percentage of its residents gaining Western education, there is a rapid rate of immigration of people of different cultural backgrouds who have attained some level of Western education and its values.

3.42 CHANGES IN RELIGIOUS BELIEFS

In Bauchi, as in the rest of Islamic Hausa-land, the Islamic religion and values continued to dominate the city religious life. Thus, only few Churches were established to cater for the Christian administrative staff, and missionaries.

The social status and values of infividuals and of the total city was seen in the light of Islamic standards. Accordingly, the city's ceremonial and festive system remained largely that established by the Jihad influence.

After independence, the religious position of Bauchi remained largely unchanged until after the Nigerian civil war and the creation of Bauchi State when some measure of religious heterogeneity was introduced in the city. This development was due largely to the immigration of Christian populations from the other parts of the State, and from Southern parts of Nigeria who came to Bauchi city for employment in government, industry and commerce.

Currently, this religious mixing, is very evident and is likely to continue in the future.

3.43 CHANGES IN FAMILY SYSTEM

Closely tied with increased involvement of the city's population in Western Education, and changing economic basis and relationships, is a significant aspect of social change: the changing family structure and organisation. In Bauchi, during colonisation, the indigenous pattern remained very strong, in which the residential unit - the household-consisted of many related parts of a family living in the same compound, for-instance, parents and married children or brothers who also ate from the "same pot" and paying allegiance to one head of the compound.

After independence, much of the traditional way of life and atmosphere of Bauchi city was still retained inspite of the changes in its administrative role and the related influx of people into the city from a wide range of ethnic groups and with different life styles. In 1974, Max Lock survey revealed that most people still lived in the physically large ".....compounds with 20 or more people, (and) retained their kinship relations and neighbourhood ties giving an overall impression of social solidarity based on a long tradition of inter-relationships..." (13).

On becoming a State Capital in 1976, the rapid tempo of economic activities, and Western Education hastened the rate of social change and alteration of the indigenous family system. Increased number of related parts of a family in compounds had separate rooms in which they sat and/or live exclusively of other members of their larger family in the dwelling.

At present, the extend family compound system is largely disappearing as a social and economic unit, in favour of nucleated (though family relationship is retained). Table 2 shows the decrease of household size and

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(13) Max Lock (1973 - 1976): Ibid. Pg. 7.5.1

increasing size.

TABLE 2 - HOUSEHOLD AND COMPOUND SIZE

	1974 LOCK SURVEY	1981 FIELD SURVEY
Household	5.6	4.8
Campound	10.3	17.6

Also, there is now limited residential sector community socialigation, except for group prayers and occasional festivities like S-alah, and night markets. Instead much more social and economic activities are done at compound or house, and city levels.

Although, sub-urban housing is now largely dis-favoured, there is a growing number of governmental and private development of such housing and of more separate close family units.

3.50 ECONOMIC CHANGES

3.51 CHANGES IN OCCUPATIONAL PATTERN

With regards to employment/occupation, Mahdi asserts that "one general observation that could be made on the traditional Hausa (or Hausa-Fulani) economy before the beginning of this century is that it was based on an elaborate system of agriculture and manually operated industrial production (of textiles, leather, dyeing, weaving, metal implements etc.) geared to both home consumption and export." (14)

The new colonial economy introduced was Urban-based. Emphasis was, however, immediately placed on agriculture and in particular the production of cash crops for export to Europe. Bauchi's economic mainstay remained its position as an administrative, service and educational centre. The poor

(14) Mahdi Adamu (1978) Op.cit. Pg. 10

quality of farm-land around the city accounted for the low involvement of the economically active population in full scale farming. Grain crops and other staples were, however, grown within and outside the town for internal consumption. In addition, major crafts practised both full-time and part-time included house repair, weaving and blacksmithing etc.

During the colonial period, the role of Bauchi as administrative and educational center provided bright prospects for employment for Malams; junior administrative/professional and clerical staff; and teachers for the newly established modern schools. These came from within the district/emirate, and and from Jos areas some of who gave unskilled labour in service activities. For Bauchi city, this was a period of introduction of new occupational bases and the increase in relative importance of some occupations from the traditional hierarchy.

This development was intensified after independence and especially when the city was made a State Capital. Accordingly, the cash economy and the consumer society which was introduced with colonisation and was just emerging in the first decade of independence, graduated into a sophisticated one during the 70s. During this time of general national economic boom based on petroleum export, the State Capitals including Bauchi city experienced a major shift in their economic structure. Farming for cash dwindled, other indigenous crafts or activities largely disappeared; and in Bauchi, only activities related to the new society like tailoring, brewing, corn milling (by grinding engine), photo-graphy, wood-work shop carpentry, and bicycle hire etc. received a boost. During this period, political power and trade

(Kasuwanci) were the two major avenues to wealth (arziki) in Bauchi as in the other Hausa-Fulani Cities.

Presently, though a significant proportion of the farming population still undertake some non-agricultural activity in the modern service activities, the bustling economy of Bauchi is based on commerce, manufacturing and service activities; a situation that will continue to advance.

3.52 CHANGES IN COMMERCIAL SYSTEM

The indigenous market system in Hausa-Fulani cities consisted of ".....the market place, ...(one) characteristic of which was, and still is, the strict observance of the buyers and sellers of the authority and arbiration of the Sarkin Kasuwa (the market officer) appointed .....by the Chief of the town" (15). The others include the openness (with trees and sheds of makeshift materials providing shade) of the market place. It is organised such that ".....people selling similar articles were accommodated in one section of the market.....(to) facilitate easier preview and price comparisons by the buyers.

Colonisation did not change much of the indigenous market system in Bauchi. The organisational and administrative structure remained largely intact, and most transactions were still subject to barter and bargaining and conditions of service determined by social class.

The market place was traditionally a wholesale exchange place largely for regional transactions. However, during this period, retail trade also became important and was carried on both traditionally by girls from house

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(15) Mahdi Adamu (1978) ibid. Pg. 10
(16) Mahdi Adamu (1978) ibid. Pg. 12

to house, and within the market place by small traders.

Also colonisation brought about the need for, and establishment of a new commercial area consisting of separate shops of specialised retail of goods; like co-operative shops of specialised retail of goods; like co-operative shop, book-shop and petrol selling; and other financial institutions like banks and postal services (see table 3).

With Bauchi becoming a State Capital came the increased development of retain premises consisting of shops and forming a continous front-age commercial development along the main city roads.

Presently, increased commercial activity has not only placed pressure of space in the central market but has led to the spontaneous growth of the trading areas out-side the city wall, and the establishment by government of a small market within the city wall.

3.60 CHANGES IN TECHNOLOGY

British colonisation brought with it a new technology - one based on the machine. Thus, when this technology was introduced, under the bias of superiority, it soon overtook the indigenous one as the people adopted and used it to the extent their economic positions allowed. The railway was extended to Bauchi in 1961-62. There was also the introduction anduse of Western building designs and building materials; like cement, corrugated and zinc iron sheets, steel iron roods, and the process of laying out of roads and sub-division of plots before residential development, began to replace the indigenous art in which the soft movement spaces come out as a consequence of, first, the residential development.

TABLE 3 Some Changes in the Spatial System

SPATIAL ELEMENT	PRE-COLONIAL	COLONIAL	POST COLONIAL
Landuse	Mixed landuse	Mixed in traditional parts/ Zoned in new parts	As for colonial
Market	Open, tree-shaded area centrally located	Some stalls built in old market. New commercial area established	Modern structures built in old market. Expansion of new commercial area
Access	Redestrian walkways	Grid system of motorable streets introduced in new areas	As for colonial
Common Spaces	Dandali and Unguwa common space, market, mosques	Playfields, entertainment centers, employment places	As for colonial
Unguwa	Based on ethnic, trade groups.	Retained in traditional parts based on economic/social groups in new parts	Increasingly becoming cosmopolitan' in old parts; based on income and social groups in new parts
Facilities	Centrally located and related to palace, mosque and dandali	Associated with city spatial nuclei	Based on population and political consideration
Dwelling forms	Compound type with double circulation system of design	Compound type in old parts; single-family in new	Compound type in old parts and increasing rooming housing in both old and new parts

After independence, the national intelligentia who managed government emphasized these foreign technological systems through the construction of roads for vehicular traffic, the importation of foreign building materials and personnel, and application of town planning principles of colonial origin. Motorable roads were constructed linking Bauchi to towns as Jos, Gombe, Yola, Zaria and Kano thereby enabling Bauchi to fit into the new motor transport technology. Within the city some of the main access lanes were widened and recently tarred. Simultaneously, the automabile ownership rate and traffic volumes increased rapidly (see fig 3.3).

Taxi service consisting of 27 and 3 private mini-buses serving an estimated population of 70,312 was introduced in March, 1974.

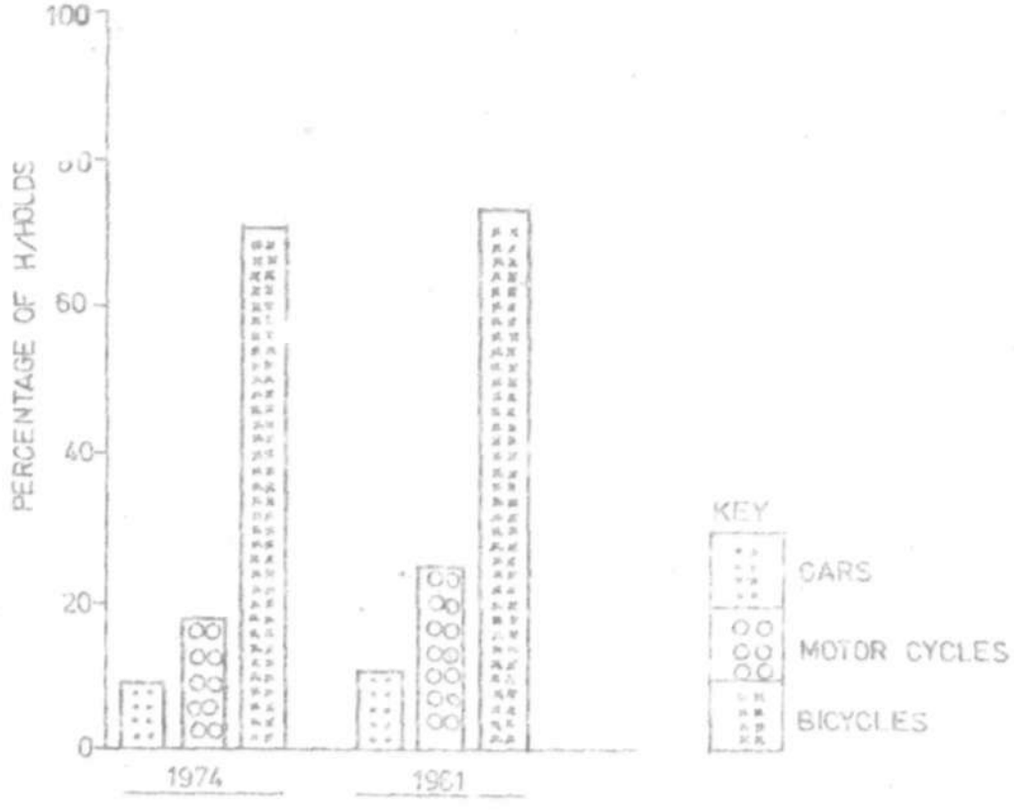
Air transport technology was also introduced to the area, and an airstrip was constructed in Bauchi of laterite runway catering for occasional flights by light aircraft.

Layouts of new developments were undertaken on formal Western-based Town planning principles which culminated in the preparation of a "Master Plan" for Bauchi Urban Area in 1976.

Modern service-technology-line services-have been introduced to Bauchi. These include pipe-borne water, electricity, and drainage.

The air-port now serves the growing pressure and public demand for commercial scheduled flights using its long runway only. There is a plan to relocate it, and to raise its status to an international airport.

Modern types and building materials are being projected by Government through its housing programme, Town Planning specifications, ~~and specifications~~.



FIG·33 BAUCHI: GROWING RATE OF VEHICULAR OWNERSHIP

and establishment of Asbestos Company in the town, and Cement in Ashaka, without similar programmes for the indigenous building industry.

In addition, the new status of Bauchi city and the demand for manufactured goods, has prompted the establishment of modern manufacturing industries which include a meat factory.

3.70 ADJUSTMENT TO THE CHANGES IN THE URBAN SPATIAL SYSTEM

The political/administrative, socio-cultural, and economic changes outlined above as unfolding within the city of Bauchi are accommodated in various ways. It is the ways in which the spatial accommodation of the changes are effected that we now turn to. Though the spatial impacts of these societal changes are inter-related, they will be discussed separately for the purpose of clearity of analysis. This will be considered at the levels of the city, anguwa and compound or house.

These changes were observed above to have been rapid especially in the last fifteen years. The adjustment of the city spatial forms and structure in response to the changes, has been (is being) undertaken through deliberate government policy, and the direct actions of people in groups or as individuals. For, these actions ".....have an infinite capacity recognizeable or imperceptibly to transform or change some essential characteristics of (city forms and) the structure." (17) As Harvey has indicated, however, it should be noted that the accommodation process takes a relatively longer period to work itself out; and indeed ".....different parts of the Urban system have different capacities for

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(17) A. L. Mabogunje (1980) The Development Process: A Spatial Perspective Pg. 57.

adjustment. Some aspects of Urban organisation (and form) respond immediately whereas others respond very sluggishly." (18)

3.71 ACCOMMODATION OF ADMINISTRATIVE/POLICAL CHANGES

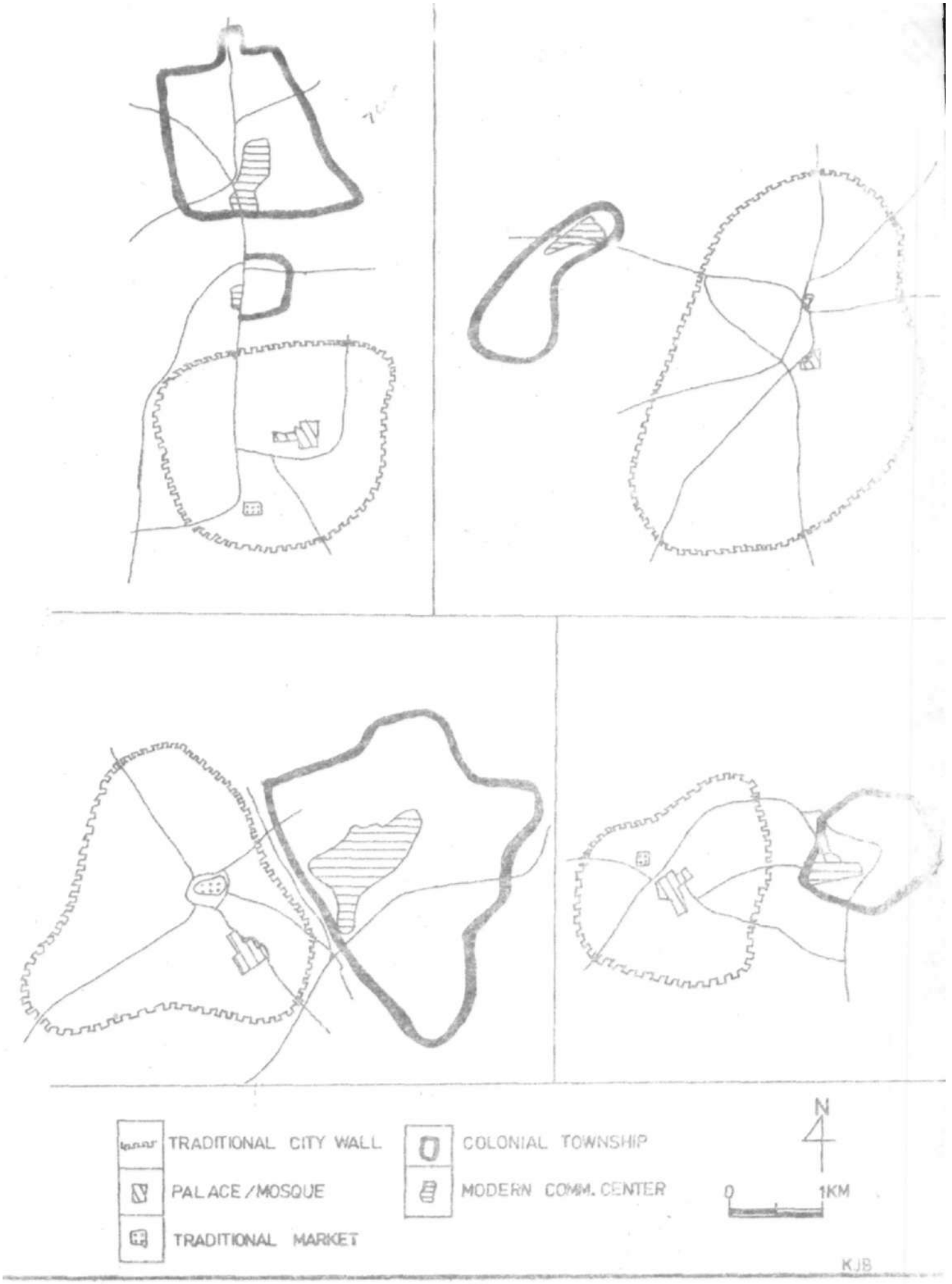
British Colonial period in Hausa-land and the related administrative changes was accompanied by definate Town Planning principles as contained in Lugard's Town Planning Ordinance of 1917 (19) and later publications by the 'Nigerian Government.' (20)

This period saw the development of three main types of cities in the area: the New Towns of colonial creation; the cities with dual centers, being the most common; and the superimposed cities. (21) Bauchi is a superimposed city in which there is no development of Sabon-Gari and Tuden-Wada districts. Migrants were and are largely accommodated within the traditional city. However, there is still the physical separation from the walled traditional city, of colonial and post colonial development of the Government Residential Area, Institutions and their housing areas, and the modern commercial and industrial areas (see figure 3.4A and B).

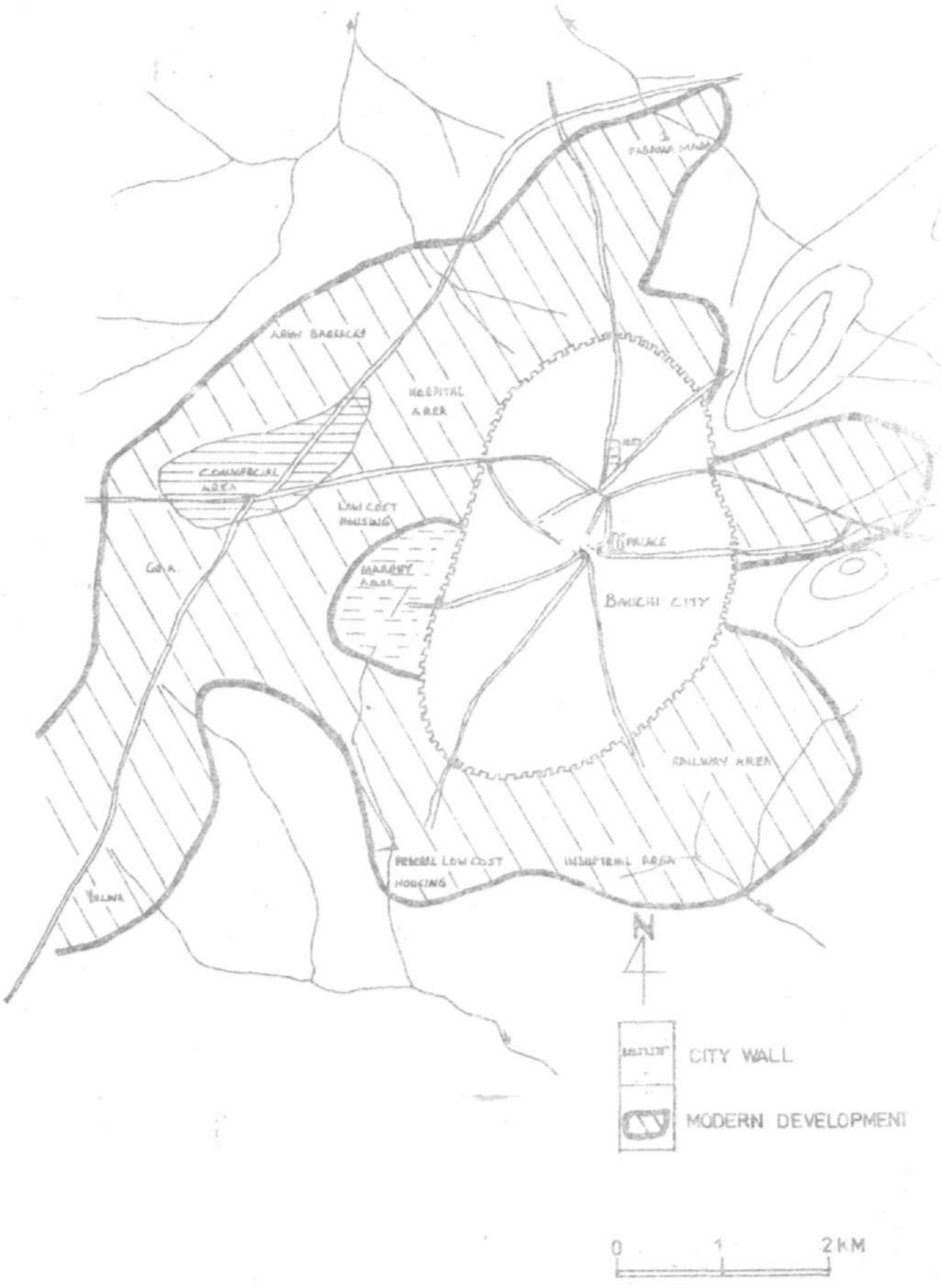
The "difference in the spatial confrontation of particular functions in the traditional and colonial society and economy, and the close physical juxtaposition of the two types was to produce a new and infinitely more complex urban form and organisation." (23) In all the Hausa-Fulani cities, the British rule and bureaucracy, like the proceeding Fulani rule, basically ".....dominated the larger planning units of the Township while the occupants

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(18) D. Harvey (1973) Social Justice and the City - Pg. 56
(19) Lugard, F. J. D., Political Memoranda (Frank Cass Co. Limited London (1970) Pg. 405 - 422.
(20) Nigeria, Procedure for the siting of Towns, Government Residential Areas, Business Areas and Government Buildings (Nigeria Government Publications, Lagos (1953).
(21) Mabogunje, A. L. (1980) Op.cit Pg. 153
(22) Mabogunje, A. L. (1980) ibid Pg. 162



FIG·3·4(a) COLONIAL INFLUENCE: DUAL NATURE OF SOME HAUSA-FULANI CITIES



K.J.B.

FIG·3·4(b) BAUCHI: EXTENDED AREA OF MODERN DEVELOPMENT INTEGRATED WITH CITY

of these units planned for and gave character to the smaller elements of the urban landscape." (23) On the other hand, ".....the traditional rulers and the indigenous population have continued to play an important role in the management and major decisions about the (indigenous areas of their) towns and cities." (24)

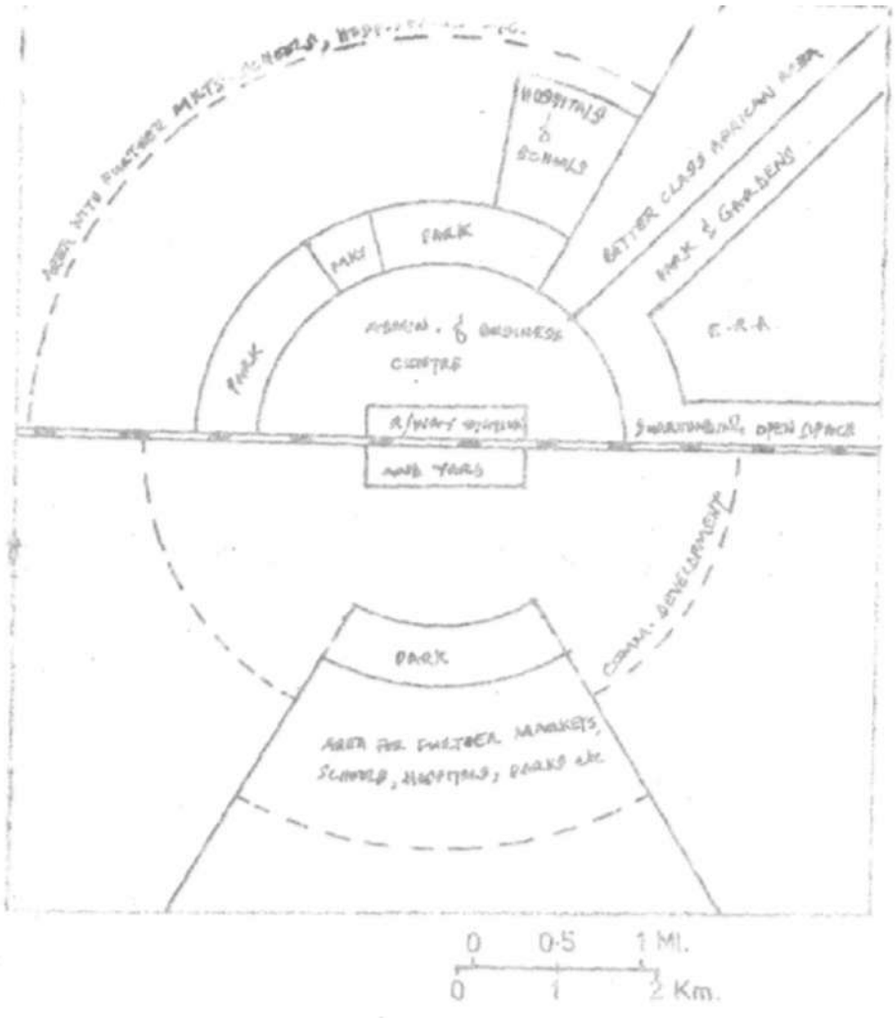
Within the broad framework of Lugard's administrative principle of municipal responsibility, the Planning principle of residential segregation was derived and widely applied. The principle of segregation expressed the false European value of superiority over the Africans and need for authority mystification. Its application led to the establishment in the new towns such as Jos and Kaduna of cantonements and Government Stations where the Europeans lived with the Business Area offices and facilities closely related, and African residential areas segregated by a "Building Free Zone." In the indigenous towns, the development of these colonial areas adjacent the old with limited interaction ensured segregation of not only the Europeans from the African working class but also the segregation of both the Europeans and the African junior administrative and service staffs and traders from the indigenous Hausa-Fulani of the walled city.

The main physical units are shown in figure 3.5. For a superimposed center like Bauchi (see figure 3.6), there would have occured more complete disintegration of the old for the new. In the areas of these new developments, the principle of Zonation was introduced. This was in keeping with the high value the Europeans attached to their home town Planning practice in which there was separation between place of work, residence and leisure. Thus, the application of this principle led to the functional segregation of African Residential Areas, European Residential Areas (E.R.As), Administrative, commercial, Industrial uses, and cemetry by natural features or barriers. In Bauchi, distance also served as barrier between the units that

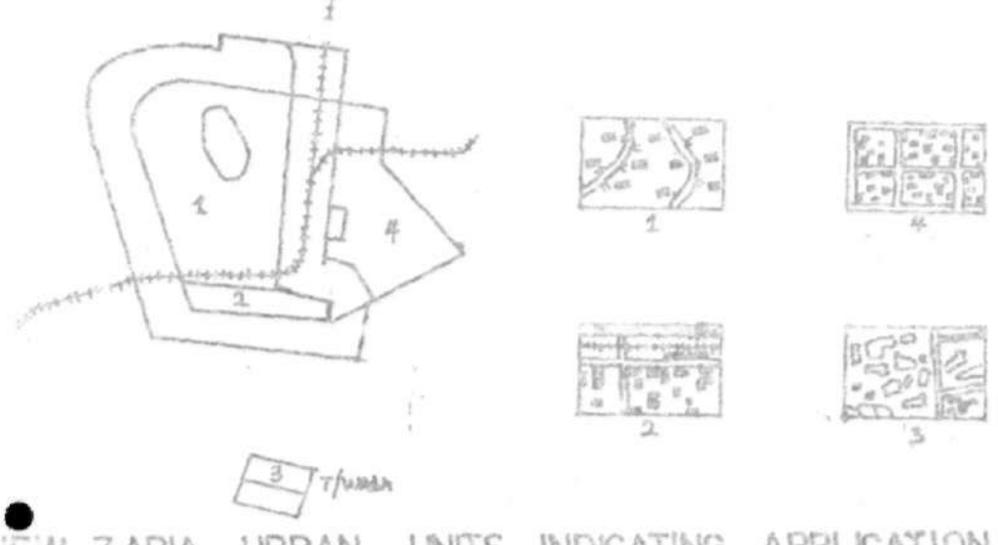
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(23) Urquhart, A. W. Planned Urban Landscapes of Northern Nigeria (A.B.U. Press, Zaria, 1977) Pg. 2

(24) Ajaegbu, H. I. (1976) Op. cit. Pg. 42



A PROPOSED SCHEMATIC LAYOUT OF 1939 FOR NIGERIAN TOWNS

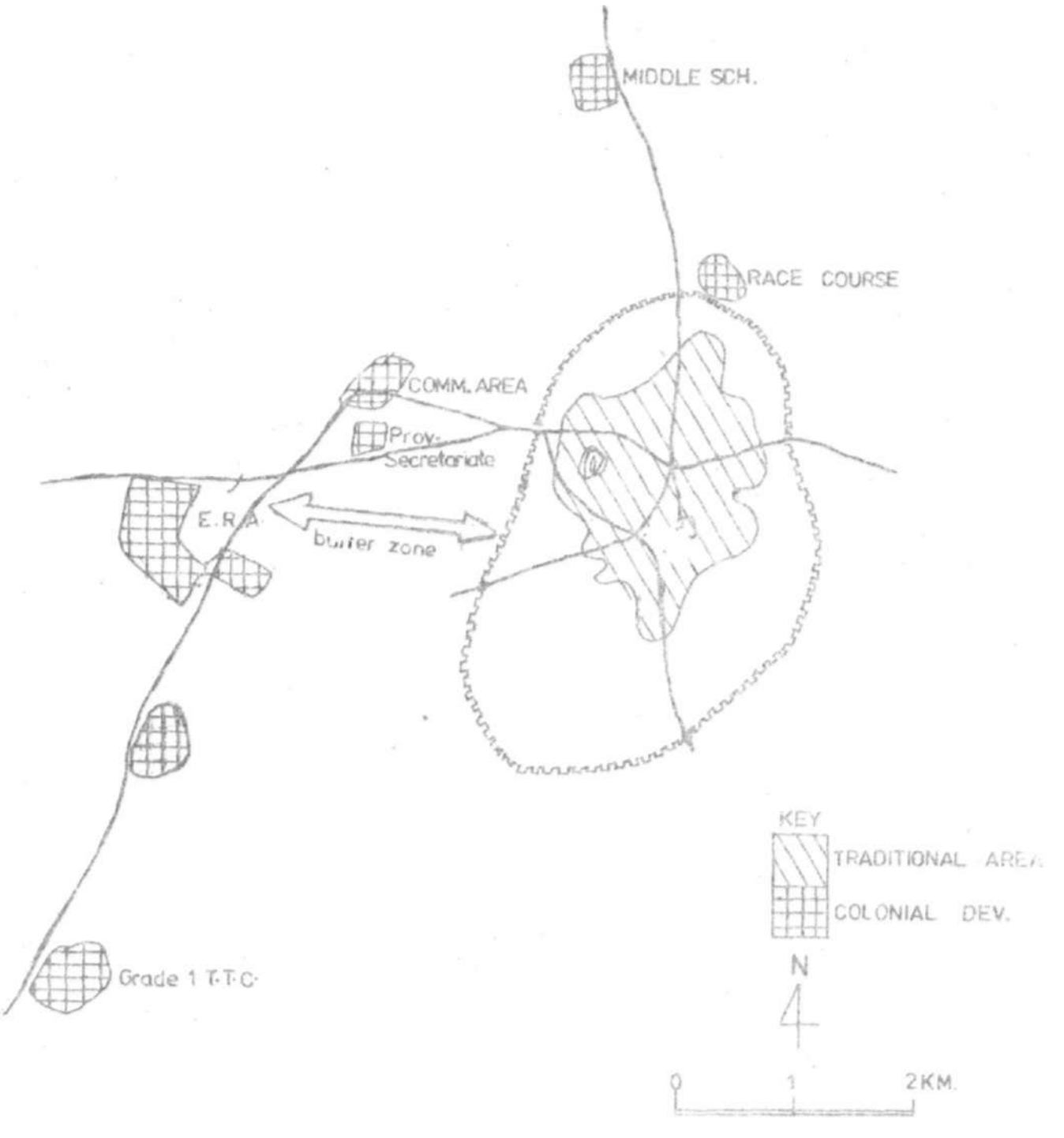


NEW ZARIA URBAN UNITS INDICATING APPLICATION OF ABOVE SCHEMA

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1. EUROPIAN RES. AREA
2. COMMERCIAL AREA
3. SABON GARI — AFRICAN RESIDENTIAL AREA
4. TUDUN WADA — N NIGERIAN RES. AREA

FIG·3·5 ZARIA TOWNSHIP: AN EXAMPLE OF COLONIAL URBAN DEVELOPMENT Source: URQUHART 1·7?



KJB

FIG·3·6 BAUCHI : RELATIONSHIP OF INDIGENOUS AND COLONIAL ELEMENTS

were created (see figure 3.6).

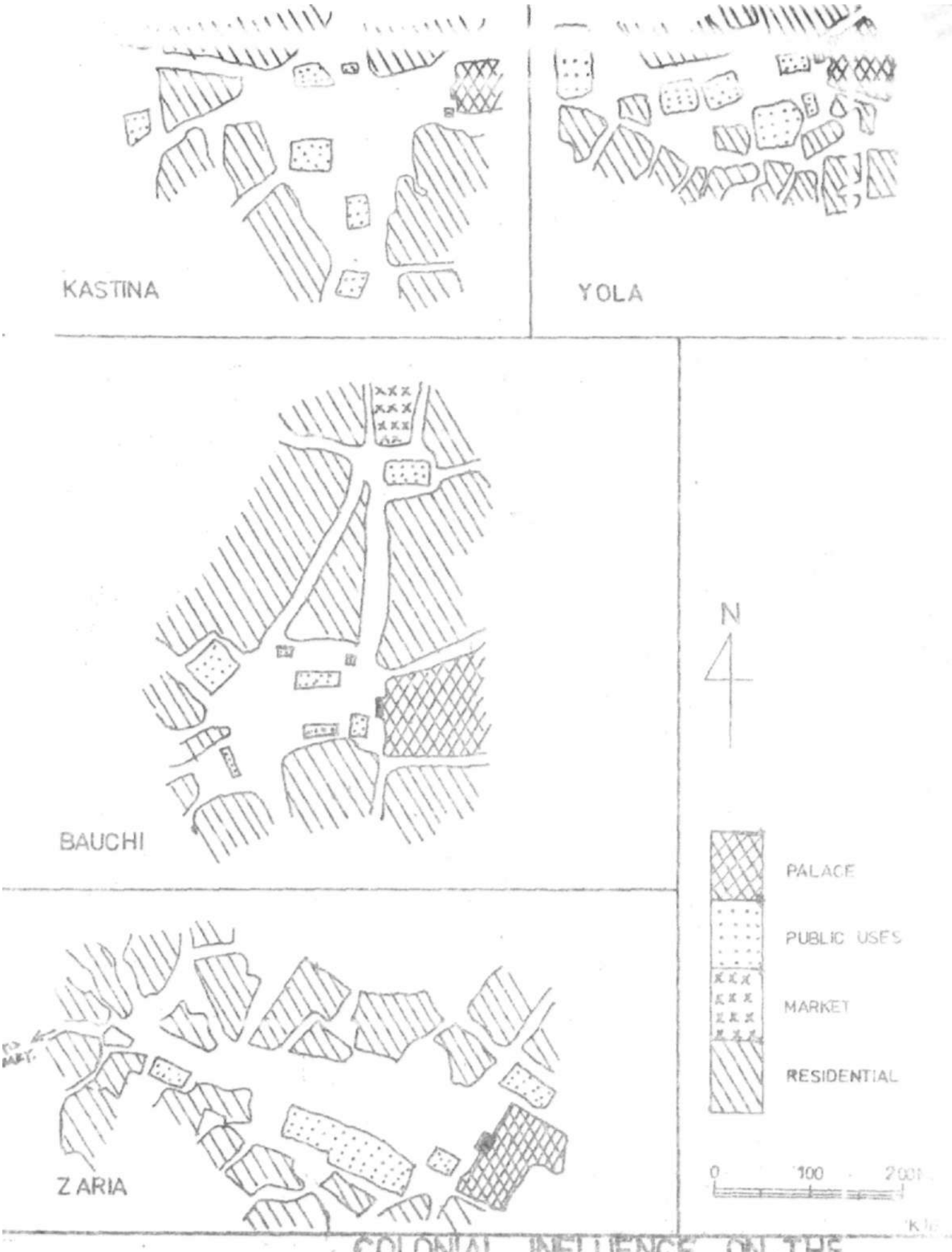
Because the traditional authority had a say in the decisions concerning the old centers, the colonial principles of residential segregation and zonation were not applied in the walled city. This ensured the continity in the earlier principles by which they developed (discussed in chapter 2). This is shown by the virtual permanence and maintenance of the indigenous urban forms. However, the town wall, largely unmaintained, is now only an imaginary barrier between social groups. The absence of internal wars of the cavalry type, the deliberate prohibition by the British of its maintenance, and the transfer of the principle of community security and survival to the national level makes the primary role of the town wall obsolete, and has became a source of building material for the traditional builders.

Also, the introduction of the Native Authority arm of administration and the new organs of maintaining law and order required buildings: Offices, Court, and Prison Yard. In Bauchi, these were accommodated in the central area of the city where the colonialist believed these were needed (see figure 3.7). The result of this was that despite the achievement of functional relationship, these led to the encroachment on the dendali - the traditional ceremonial and audience space.

The increase in population of Bauchi following its being made a provincial capital was easily accommodated within the walled city with minimal growth of the built-up area. The provincial secretariate was accommodated outside the city (see figure 3.7) thereby helping to establish the new spatial nuclei of the urban area.

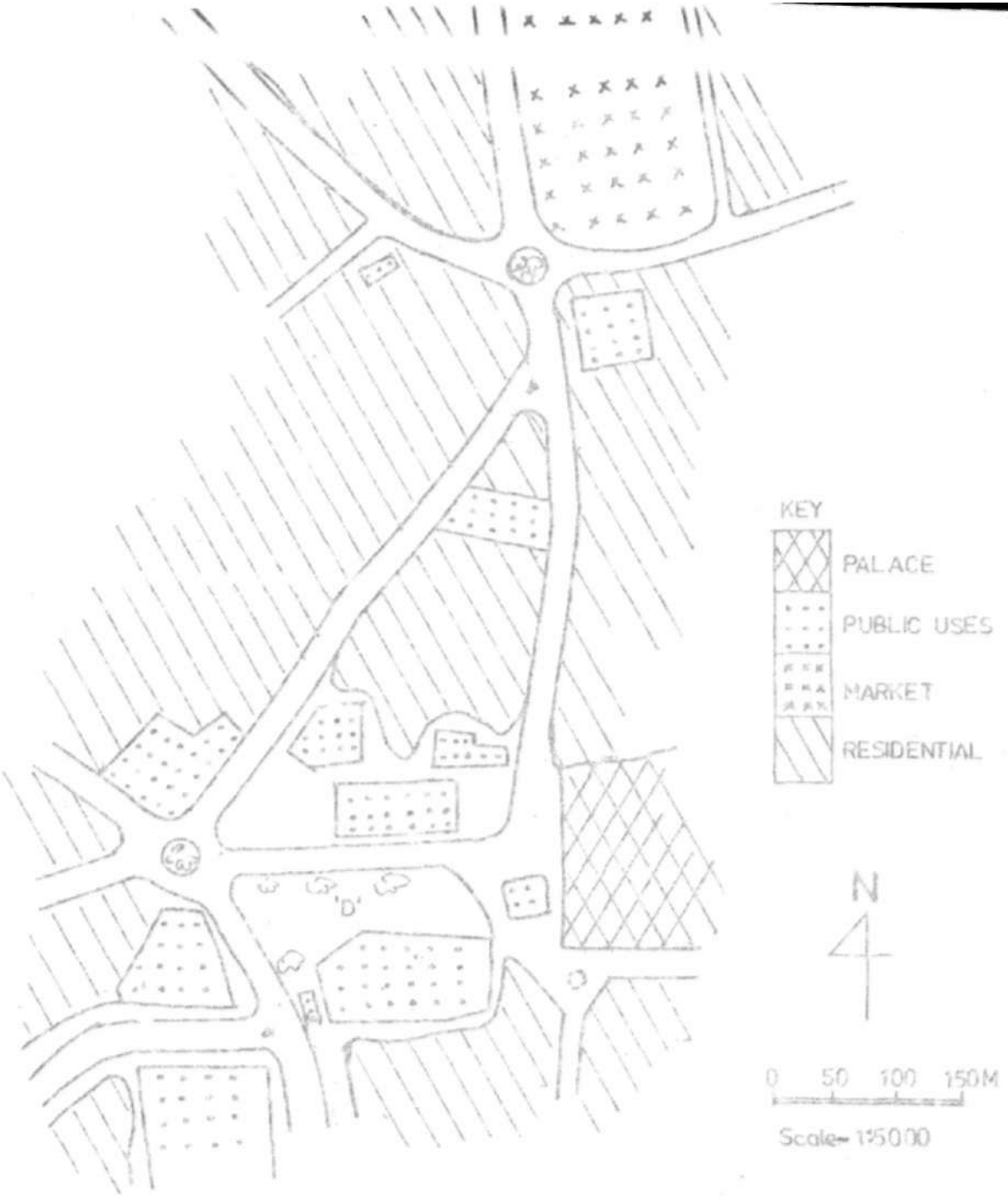
Independence did not bring administrative policy changes beyong replacement of the colonialist by the national intelligensia, and introduction in 1968 and increase in 1976 of a S-tate Government structure. However, as shown in fig. 3.8, several changes have occured in the layout of the central area. New public buildings like the Ministry of Works W-orkshop, Sharia Court, Scholarship Board and new Local Government

(25) Max Lock (1973-1976) Op. cit. Pg. 5.3.7



FIG·3·7 LAYOUT PATTERN OF THE CENTRAL AREA OF SOME HAUSA-FULANI CITIES COLONIAL INFLUENCE ON THE

Source: M.YUNUSA



BUILDING OF MORE PUBLIC STRUCTURES AND ROAD CONSTRUCTION

HAVE OVER-LOADED AND DISRUPTED THE DANDALI.

BAUCHI:

FIG·3·8 CONTEMPORARY CENTRAL AREA

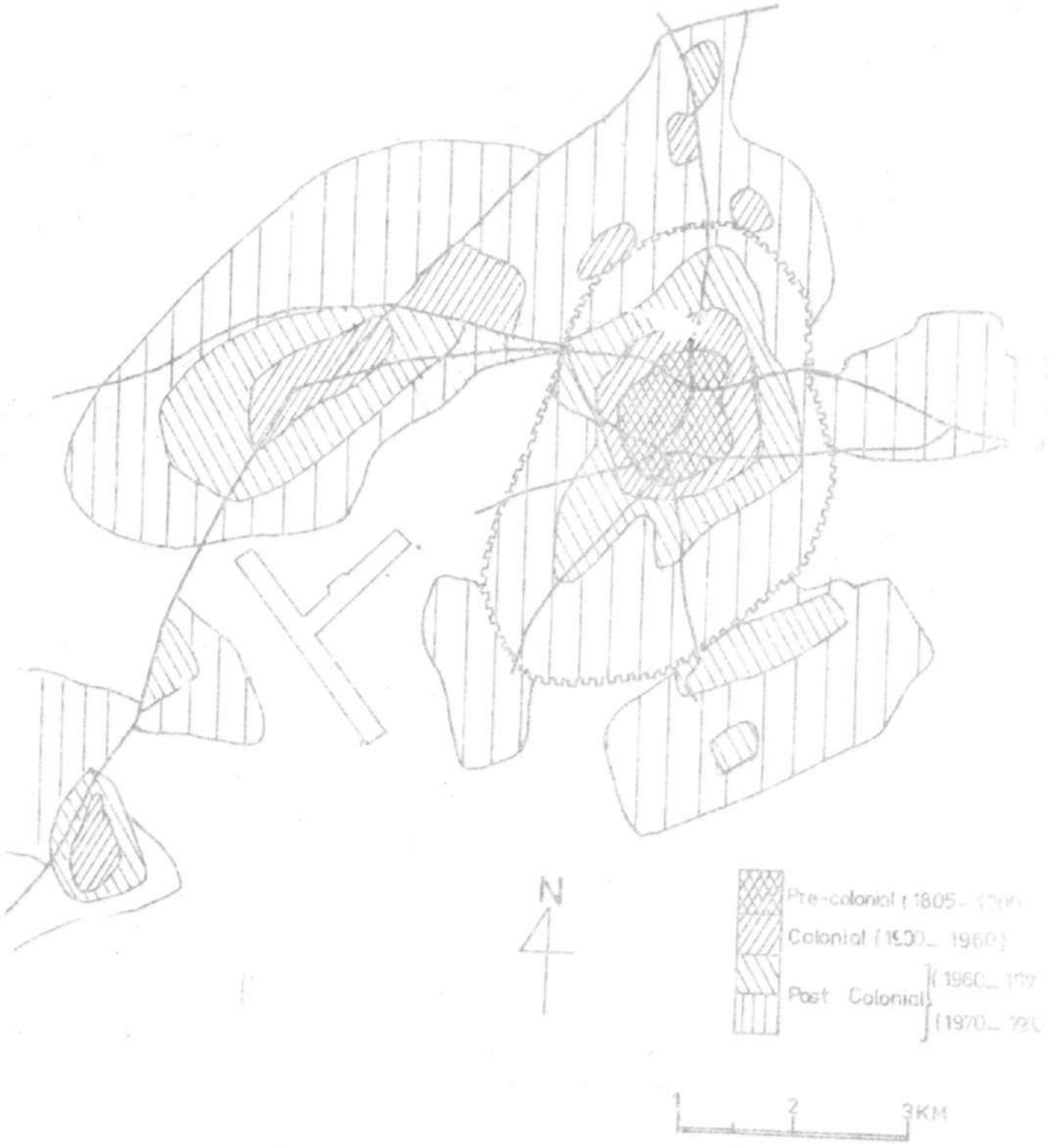
secretariate have been built. Together, road construction and roundabout and these buildings have encroached and disrupted the dandali despite the fact of continuance of its traditional role.

When Bauchi was made a State Capital in 1976, its new administrative status and consequently, commercial and industrial roles led to the rapid growth in population. Much of the population was accommodated within the city leading to rapid infilling of the open spaces. Thus although there was in 1974 ".....still many open areas within the walls particularly in the South of the town" (25), the rapid infilling mainly to provide rental accommodation for the large numbers of migrants had by 1978 largely covered much of the area. Presently there is limited open space in the walled city to develop as housing (see figure 3.9).

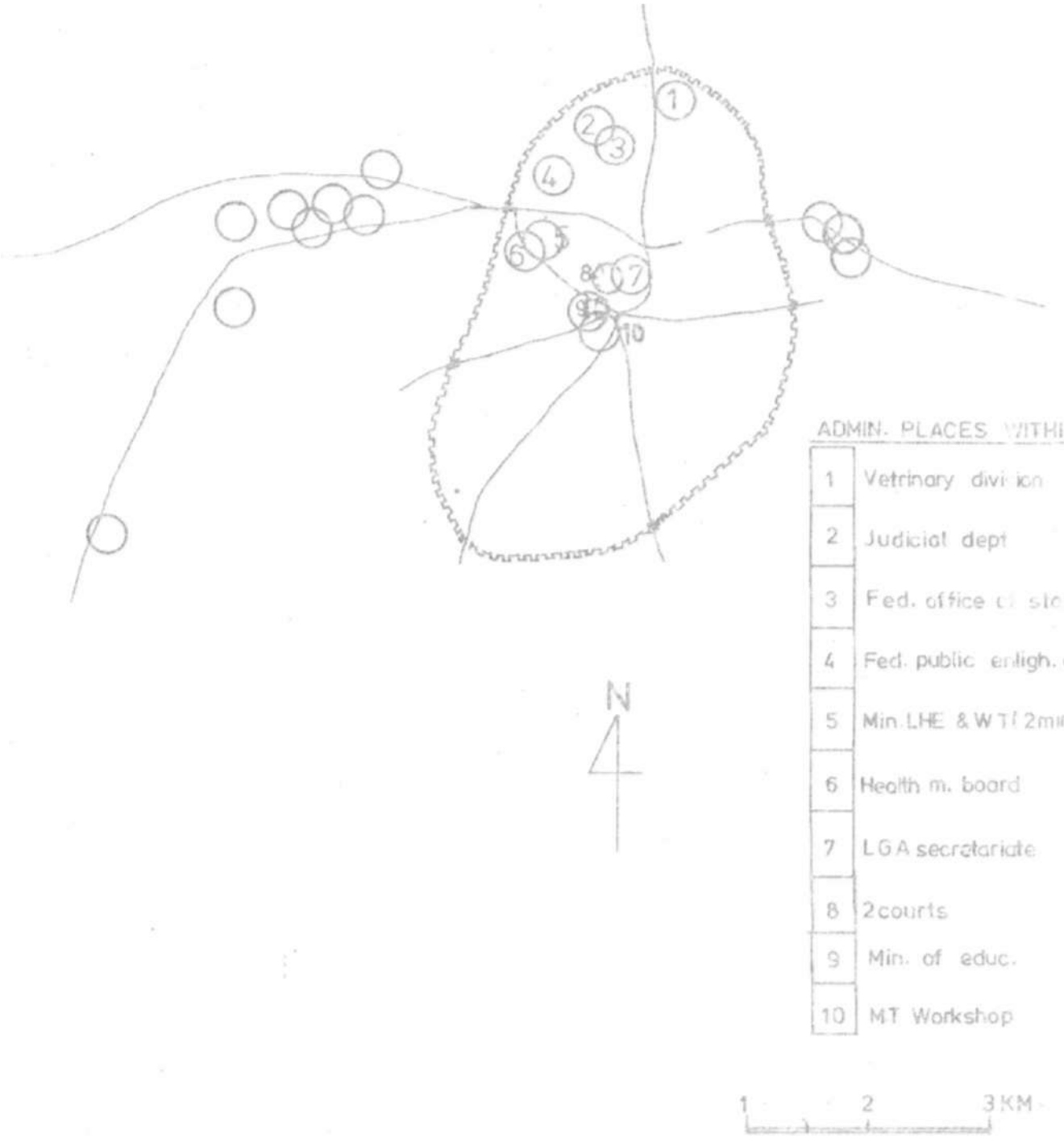
The provincial secretariate building was used as the new State Capital administration area. However, as shown in figure 3.10 the various government ministies had to be accommodated both within and outside the walls. Also, new establishments that came with the new administrative status of the city like police and Nigerian Army areas, low-cost Housing Estates and Government Reservation Area (G.R.A.) Extension were accommodated outside the city wall thereby widening the new developed nuclei of the Urban Area. One of the most recent administrative establishments is the House of Assembly and the Legislators' housing, also accommodated outside the town on Gombe Road.

The future trend of growth owing to the administrative position of Bauchi will continue as new government organs are expanded and new ones established in accordance with the political and administrative status of the town and of the new Political/Administrative requirements.

At the level of Angwa, two main effects of the administrative changes are evident in the old city of Bauchi. First, owing to the



FIG·3·9 THE SPATIAL GROWTH OF BAUCHI 1805 - 1982



K-J-B

FIG·3·10 BAUCHI : LOCATION OF MODERN ADMIN./MINISTRIES

emphasis placed by the colonialists mainly on maintenance of law and order, the colonial administration replaced the spatial and social units - the Anguwa - with the ward system which consisted of two or more Anguwa (see fig. 3.11). The ".....size and significance (of the ward) had little relevance for the problems operative at the neighbourhood (Anguwa) level. This lack of social and historical continuity is no doubt partly responsible for the parlous conditions of most (of our) pre-colonial urban centers....." (26)

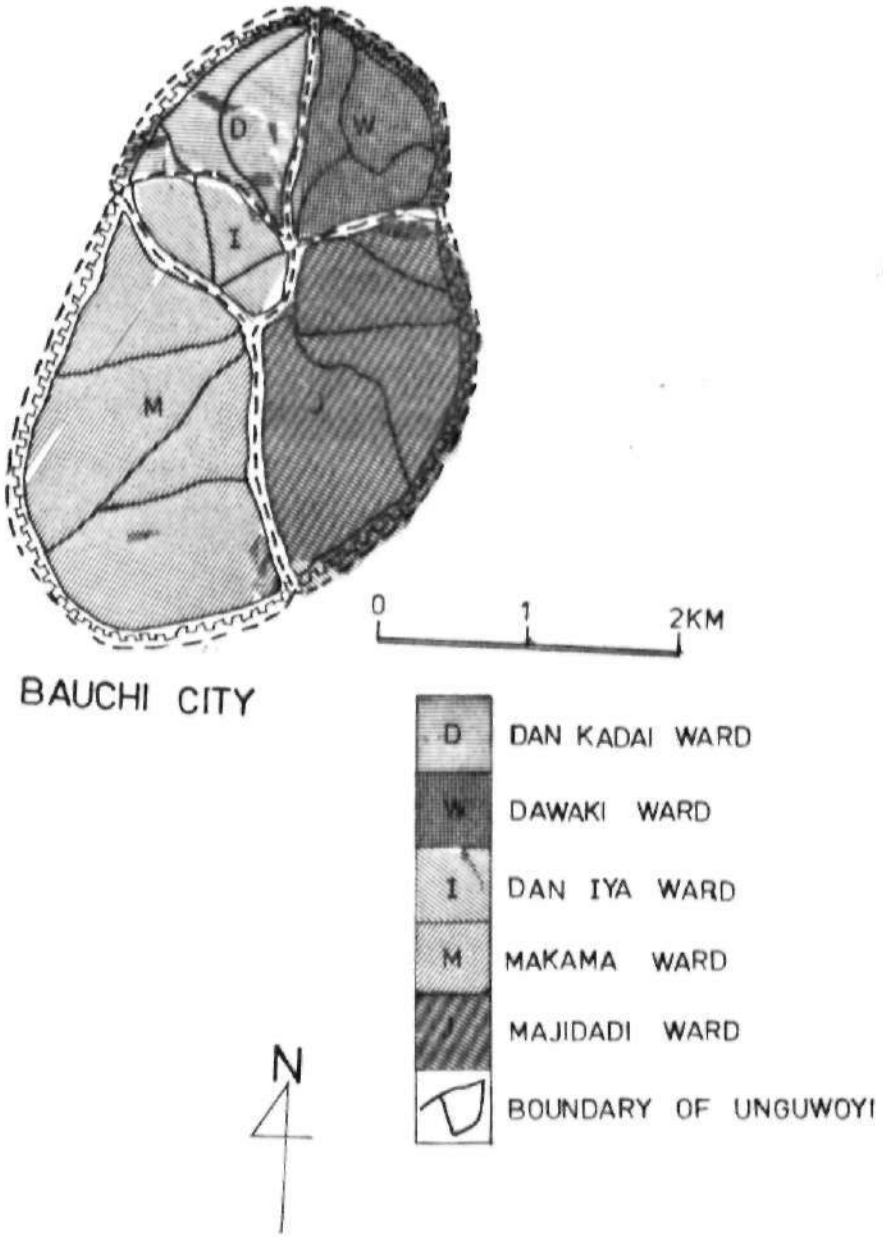
Second, the massive immigration into the town and their accommodation largely in the walled city, led to the spatial mixing of residential location. After analysing the 1974 ethnic composition of the city, Max Lock established that although there was still the kin and clientele cells of residential units, the Hausa-Fulani".....predominated at the traditional central core round the Emir's place, but the rest of the town was becoming increasingly cosmopolitan." (27)

Presently, high proportion of tenant households in the city has produced substantial mixing of residential location; and the concentration of single family houses and rooming houses away from the city core where the largest numbers of tenants live (see figure 3.12 and table 4).

TABLE 4 - DECLINING RATIO OF COMPOUND TO ROOMING HOUSE-TYPES

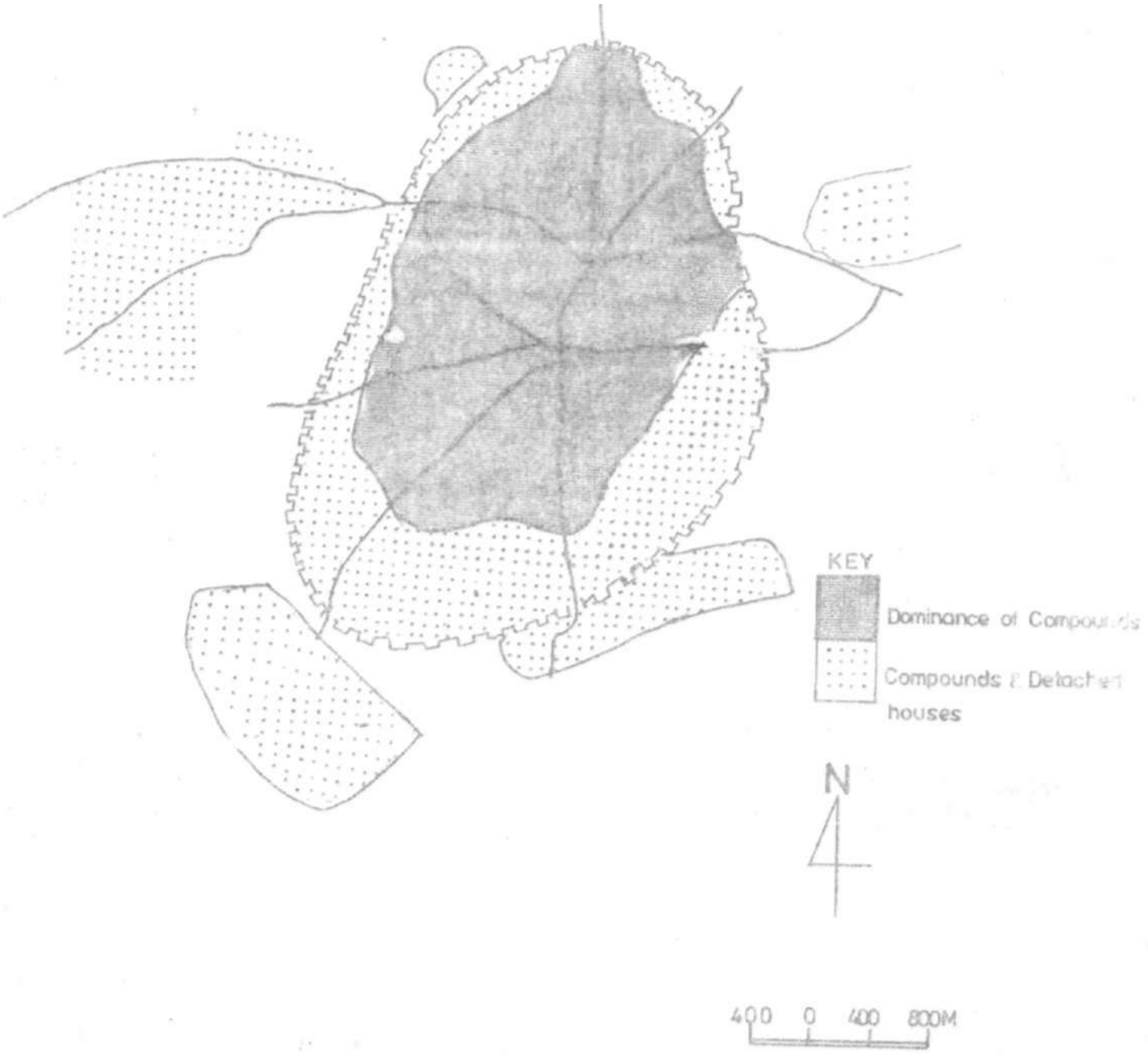
	ROOMS PER DWELLING	% OF ONE-ROOM DWELLING	% OF DWELLINGS RENTED
1974	3.4	18.9	11.2
1981	4.6	20.1	30.9

(26) Mabogunje A. L. (1980), Op.cit - Pg 216



KJB

FIG·3·11 THE WARD SYSTEM: COLONIAL INTRODUCTION



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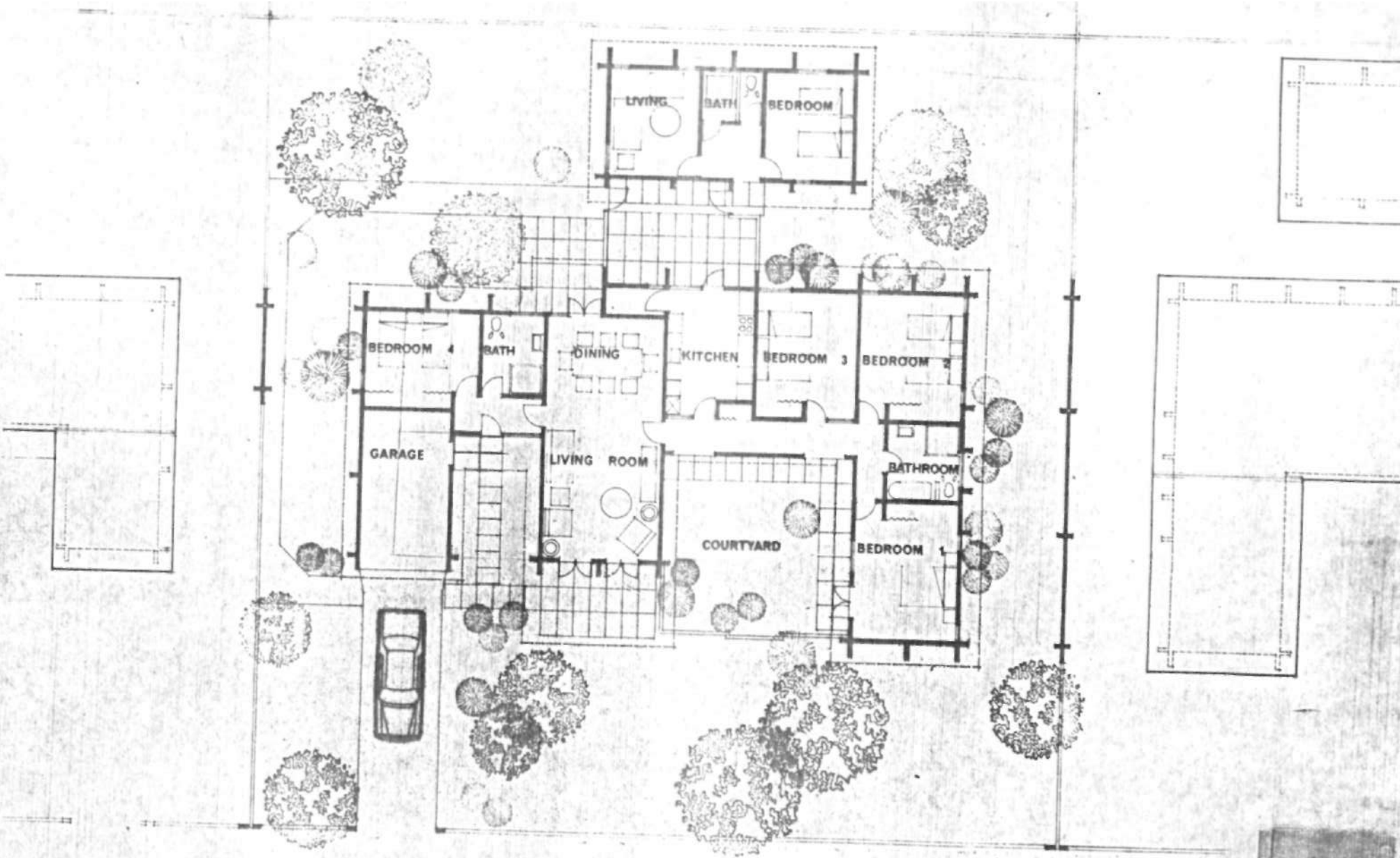
FIG·3·12 BAUCHI: SPATIAL DISTRIBUTION OF HOUSE TYPES

With regards to the new residential sector, foreign conceived needs and values of maximum European privacy and confort required for self gratification and mystification of authority led to the planning of the E.R.As. along the broad principle of generous, unstraggling development in accordance to which guidelines and standards were given by the British Governor with respect to houses and gardens, outbuildings, roads and trees, and sanitation. The result was the application (largely after the garden city concept) in which European semi-detached house types were built in very spacious plots on a layout of grid iron street pattern. The area was also provided with a public open space that contained the administrative and recreational facilities, well landscaped and well maintained.

Since the colonial administration was concerned only with housing the small number of administrators, little impact was made on the spatial scene of Bauchi town at the compound level. However, current government housing programmes which has its roots in the recent past, has led to the development of large parcels of land outside the city in the south and west as Federal and State Low-cost Housing respectively, and other scattered institutional housing areas. The Government's use of single family housing designs (see fig. 3.13) has made an impression on the city population; and low-cost - and Government Reservation Area (G.R.A.) - type construction are now being built by the people who consider these to be the "accepted modern" housing, though mostly offered for rentage. The compound

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(27) Max Lock (1976) Op.cit - Pg. 5.11



FIG·3·13 FEDERAL LOW-COST HOUSING DESIGN FOR BAUCHI: LITTLE CONSIDERATION FOR TRADITIONAL REQUIREMENTS

type, however, is still predominant in the walled city.

Elsewhere, the 'Sabon Garis', new towns, and especially the E.R.As. had houses designed according to the principle of free standing housing owing to the needs and values of individuality and house privacy which are a result of the cultural characteristics and influence of the British. In the E.R.As. the typical British house form was built and ".....independence was underlined by the gab between each houses..... (and) in the history of the residential street or square (characteristic of the 'Sabon Gari') individuality is far more common than unity....." (28) However, these houses were lacking in the application of decoration as a factor of urban design which characterized the indigenous compound.

In the Tudun Wada areas of cities with dual centers such as Zaria and Kano, the layout was prepared by the colonialists in the grid pattern street planning, but the residents being largely Islamic Hausa, Fulani, Kanuri from other parts of the North, retained the compound forms and building system very much like those of the old city cores. This indicates that the needs and values set by the force of Islamic religion and the resultant principle of compound design were still strongest. Infact, with influx of 'strangers' in these areas, the need for privacy may have increased.

3.72 ACCOMMODATION OF SOCIO-CULTURAL CHANGES

The spatial planning implications of the socio-cultural changes were accommodated both inside and outside the city wall. First, we noted above (part 3.22) that not

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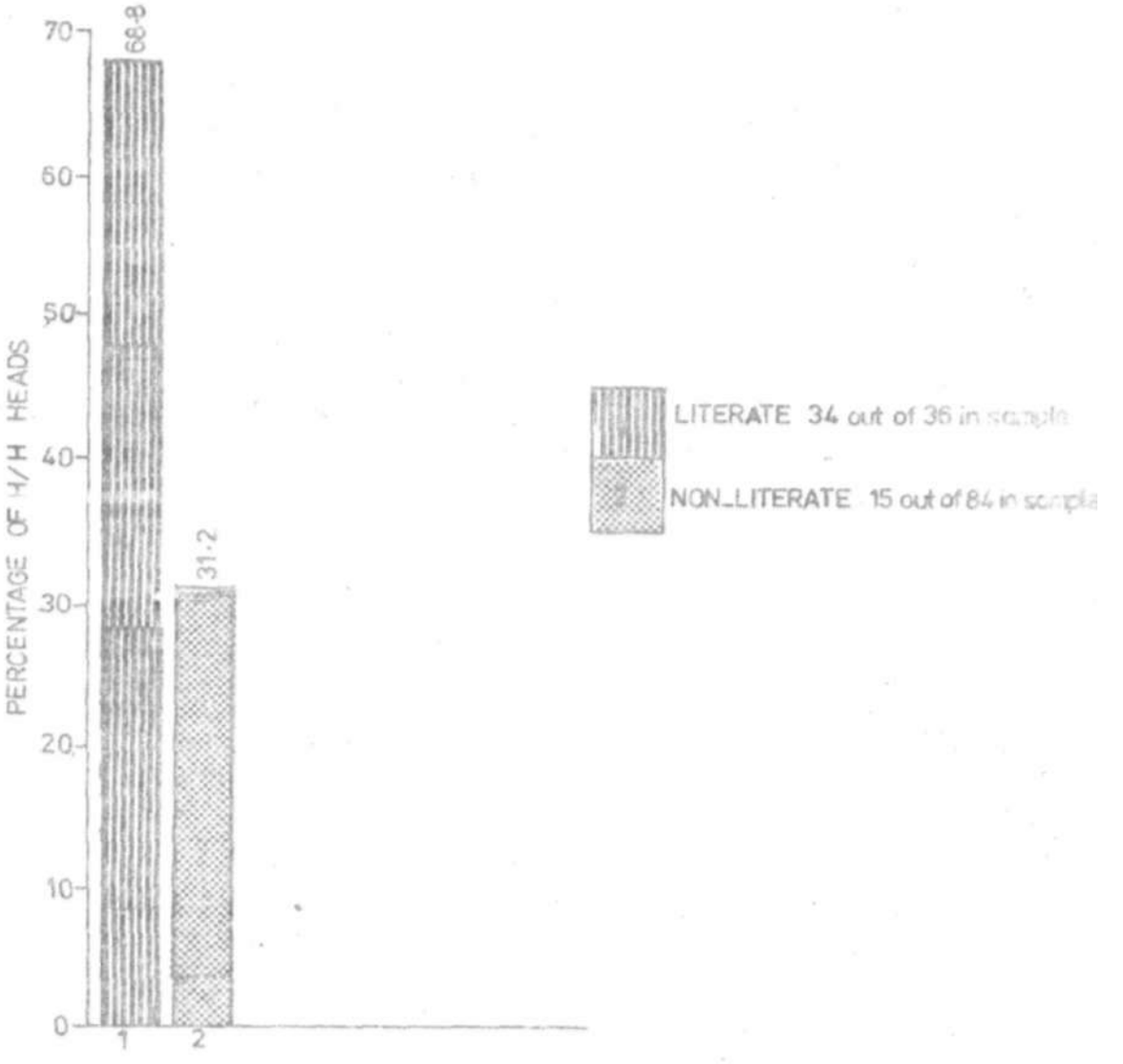
(28) Cantacuzino, European Domestic Architecture (Studio Vista Ltd., London, 1969) Pg. 86

nnly are a larger proportion of children of school-going age being educated in both Qura'nic and modern schools, but also that more and more people are turning to a Western type of education. This has meant in physical terms the increase in space use for the increased number of schools at all levels and expansion of existing ones.

Accordingly, a blind workshop and 14 primary schools have been established on crowded sites within the city wall one of which (Kofar Pada Primary School) takes up part of the Dandali space; and 14 Post-Primary schools with generous sites were accommodated outside the city 8 of which were established in the last six years (1975 - 81).

The close relationship in the 1981/82 survey sample between owner-ship of separate close family units in the walled city and educational/economic status of the individuals is an indication of a spatial accommodation of values associated with the educational chages. Figure 3.14 shows even more direct corelation of future relationship between level of education/economic status and preference and intention to build the so-called Government House-type ('irin na gwamnati').

Second, the traditional recreational life of Bauchi which was largely indoors or in small spaces (and dandali) within housing areas related to shade trees was slightly de-emphasized with colonisation. The golf and polo ground which needs large space, introduced by colonialists, was accommodated outside the wall beyond Ran gate. Since the 70s increasingly more people have required 'modern' sport facilities for foot-ball, hockey, running, club sports like tennis, rugby etc. The spaces needed for these were accommodated outside the city, mainly associated with institu-



FIG·3·14 UNGUWAN MAI-BAGE : INTENTION BY
HOUSEHOLD HEADS TO BUILD MODERN HOUSE

tions (schools, Army, Police, etc.), and the Tafawa Balewa Stadium outside Wunti gate. This extravagant method of provision of modern recreational spaces is currently prevalent and is going to continue into the future as more and more people require these facilities.

Third, increasing numbers of immigrant Christian populations into Bauchi has led to the establishment of Churches which are exclusively accommodated outside the city wall with a concentration to the West of the city between the specialist Hospital and the modern commercial area. (29)

Also, since the immigrants are accommodated within the city wall, a substantial degree of mixing has been effected not only of ethnic groups but also of religious groups, and consequently of residential location.

3.73 ACCOMMODATION OF TECHNOLOGICAL CHANGES

Introduction of a new transport and building technology which the residents adopted produced several planning implications. Increase in bicycles and motor vehicles since independence used both within and outside the city wall meant that the pathways earlier used for pedestrian and animal movement were widened and realigned for the new transport mode. Some have now been tarred and other fitted with street lights.

Motor transport also brought the need for a motor park which was located near the central market to which it is functionally related. An airport beyond Kofar Nasarawa, now operating commercial schedules, shows increasing adoption of air transport technology.

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(29) M. B. Bwilwa, "A critical evaluation of the applicability of the models of internal city structure to Bauchi town." Paper presented in M.Sc (URP) seminar, 1980 Pg. 4

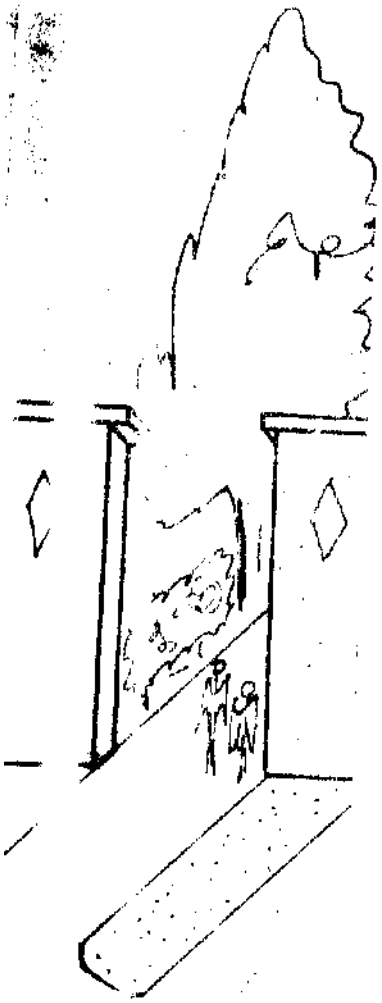
Also, social value change in Bauchi led to the de-emphasis on traditional medicine and the establishment of modern medical units: a Local Authority Dispensary in Wunti Street and Maternity Clinic behind the Emir's Palace, several patent medicine stores and 4 private clinics with trained doctors all accommodated within the town wall. In addition, a 180 bed General Hospital was established, later expanded, and in 1977 raised to the status of specialist Hospital with eye and detal clinics and schools of nursing, midwifery and health technology. These were accommodated outside the city wall, and unfavourably located near the Tafawa Balewa Memorial Stadium.

The new building technology adopted was accommodated through the new designs, use of new building materials on new buildings, improvement of existing buildings, and the provision of house facilities.

The new mosque which takes up a substantial area of the Danladi built in 1975 is of concrete and modern design. Similarly, the new market blocks are of concrete and new design. The four main city gates (Wunti, Ran, Wase and Wambai) rebuilt of concrete (maintaining the traditional design) in 1973 have again been destroyed during recent road works (see fig. 3.15A and B).

The government and institutional housing schemes employ the new building designs and western-based layout patterns. These appear to work well for Government Reservation Area (G.R.A.) buildings as the occupants have developed social values of family living much like those of the colonialists proceeding them. However, most people have been shown

FIG



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FIG 3·15b TRADITIONAL CITY-GATE DESIGN
DESTROYED_CONTEMPORY SITUATION

to be largely Moslems in Bauchi, and uphold the values and needs of domestic privacy and women seclusion and segregation. Accordingly, the indigenous compactly developed areas held on to the principle of compartmentality in their building designs. The decline in traditional building skills and personnel in the building industry due to their disuse follows from the emphasis on Western concepts of design applied in most building construction required by modern Town Planning; and undertaken by government.

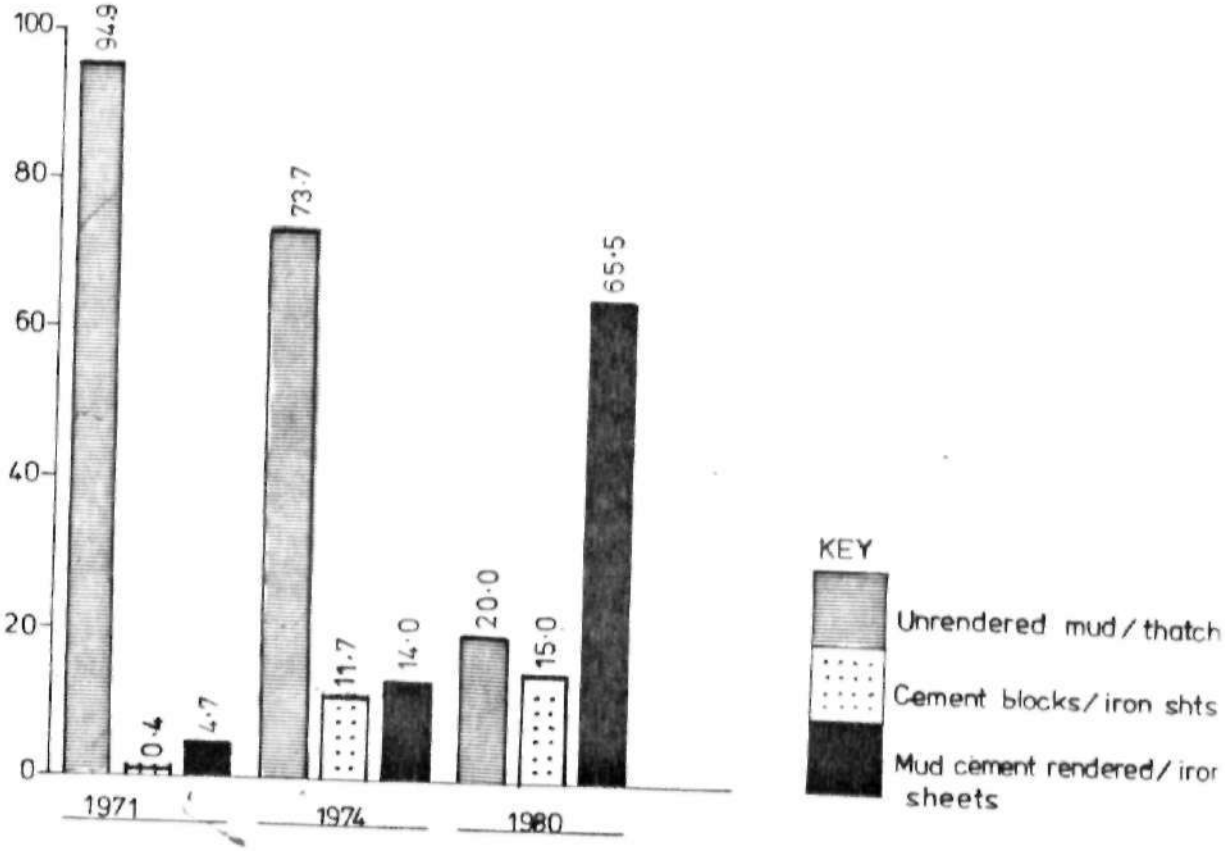
Within the traditional core, mud and thatch were the wall and roofing materials used. The 1971 - 1972 Housing Enquiries of the Federal Office of Statistics (F.O.S.) show increasing use of modern building materials in Bauchi. (30)

By 1974, Max Lock survey established a further increase in the use of the modern materials in the walled city. (31) Since becoming a State Capital, Bauchi has rapidly changed owing to rapid adoption of new building technology. Much investment has been undertaken by individuals improving or rebuilding their existing properties or building completely new ones (see plate 4). Presently, currugated iron and asbestors has virtually replaced thatch as roofing materials, and about 65% of the buildings of mud construction have been rendered with cement (see fig. 3.16, and plate 5).

There has also been a rapid rate of house connection of facilities like pipe bourne water, electricity, and provision of toilet facilities. While the surrounding bushes served as toilets, and wells as source of water (Yakubu set the pace in digging large numbers of wells), figure 3.17 shows that

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(30) Tony Seymour (1978),: Housing Conditions in Towns of Northern Nigeria: A review of existing Data. Pg. 4-5
(31) Max Lock, (1973 - 1976), Op.cit Pg. 5.3.2



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FIG·3·16 BAUCHI: BUILDING MATERIALS USED



PLATE 4. MODERN HOUSING CONSTRUCTION WITHIN CITY RESULTING IN DESTRUCTION OF CITY WALL.



PLATE 5 COMBINATION OF TRADITIONAL AND MODERN BUILDING MATERIALS ON COMPOUND.

this has been rapidly changing since independence.

Thus, the compound in the old city cores has been most affected by changes since independence. The changes include increased application of new building materials, and the breaking of the family system resulting into "growth by fission." Also street widenning and surfacing sometimes leading to dislocation of individuals and sisruption of residential sectors as the principle of maximum vehicular accessibility is increasingly being emphasized, is a continuing pattern (see fig. 3.18 and plate 6).

Within the new residential sectors the houses have continued to vary considerably in width and to some extent in height (depending on what each family can afford) providing a continued change between horizontal and vertical emphasis as well as a broken sky-line.

The idea of the building free zone surrounding the Government Reservation Area (G.R.A.) has, as a matter of Policy, been abolished and they are being redensified in many of the cities, including Bauchi.

3.74 ACCOMMODATION OF ECONOMIC CHANGES

One aspect of economic changes since colonisation is dwindling of indigenous crafts. This means that residential premises are no longer extensively associated with industrial activities. Instead, a formal industrial area has been set to the south beyond the railway station where the new industrial establishments are located. These include the Steyr Motor Assembly Plant, Asbestos Company, Meat Factory, etc.

Increase of retail trading activities as a common employment following reduced emphasis on farming, has been



PLATE 6 DISRUPTION OF UNGUWA THROUGH ROAD WIDINING REVEALING DESTRUCTION OF COMPOUNDS.



PLATE 7. LACK OF REFUSE DISPOSAL FACILITIES: BURROW PITS USED AS REFUSE DUMPS.



PLATE 6 DISRUPTION OF UNGUWA TIROUGH ROAD WIDINING REVEALING DESTRUCTION OF COMPOUNDS.



PLATE 7. LACK OF REFUSE DISPOSAL FACILITIES: BURROW PITS USED AS REFUSE DUMPS.



UNGUWAN MAKERA-
BAUCHI (1982)

K-J-B

FIG·3·18 STRUCTURE OF UNGUWA DISRUPT
BY RECENT ROAD WORKS

accommodated within the residential premises and market. Within the residential area, the introduction of retail activities has formed a ribbon of residential cum commercial area along the streets within and outside the walled city especially along Mallam Yakubu Street (Wunti Street), Adamu Jumba Street (Kobi Street) and Madaki Hassan Street (Wase Road). Increased trading activities led to the expansion of the central market, establishment of small market by the Local Authority in Makama Ward; and the growth of unplanned markets on Wunti gate and near the specialist Hospital serving areas outside the wall. Also, a modern commercial area commercial area consisting of buildings of specialised financial functions like banks, co-operative shop, book-shop, petrol selling stations, e.t.c. outside the wall on Jos Road, was established during colonial times, and now expanded.

There has also been a general improvement in people's income owing to the improved national economy and of more varied job places in the city. This has aided the acquiring of new technological systems available to the people in housing construction and purchase of motor vehicles, and acquisition of other services and facilities.

Not only have we to identify the physical changes, and their underlying socio-cultural, adminstrative, and economic changes, but formulate realistic development proposals for the planning of new areas and/or replanning of the existing parts of the city of Bauchi or indeed any other Hausa-Fulani city. This will be based on assessment of the extent to which earlier design and planning principles may be considered valid or otherwise given the contemporary character of the

chapter 4

CHAPTER FOUR

4.00 PLANNING RECOMMENDATIONS AND PROPOSALS

4.10 Introduction

Not all changes identified in chapter 3 are desirable, and hence the need for planning intervention not only to regulate physical form but also to creatively participate in chanelling change within the complex physical environment. Accordingly, attempt is made at identification of aspects of life that have been changing minimally thereby retaining the forms and structures (core elements) that resulted from their expectations and relations. Then, we would observe how the disappearance of some elements are opposed to those demands; if elements in transitory stage which are likely to disappear within the framework of our time horizon, are undesirable; and to what extent emergent elements resulting from expectations of the new urban culture, are desirable or otherwise.

The above findings constitutes the assessment of the desirability or otherwise of the physical changes since colonial times. Also, they will guide in the assessment of the extent to which earlier planning and design principles may be considered valid or otherwise, and which new set of principles may be applied in planning of new areas and replanning of existing parts of Bauchi town or any other Hausa - Fulani settlement.

4:20 CONTEMPORARY HAUSA - FULANI SOCIETY

The Hausa-Fulani society as shown in the above synthesis for Bauchi, is clearly graduating into the threshold of modernity. On the one hand educated/rich and marginally literate groups have adopted and are diffusing modern technological, social and cultural value, but retain some of the traditional, and religious values; the traditonal, on the other hand, are aspiring to adopt some of the nontraditional ideas and skills and accordingly some indigenous manufacturing and craft are dwindling in size and importance.

The main characteristics of the contemporary Hausa-Fulani society which have broader influence on planning and planning decision can be summarized thus:

(a) tacit respect for the Emir's traditional position, but not necessarily as Imam also,

(b) disintegrating compound as family residential unit in favour of nucleated, but family ties retained,

(c) larger Islamic populations and strong adherance to Islamic injunctions on purdah system; value depiction of religious piety in religious buildings and spaces; limited residential sector community socialisation instead, social and economic activities largely done at compound and city levels,

(d) western education widely highly valued especially if undertaken with religious teaching,

(e) uphold segregation of indigenous centres from non-indigenes, compromised mainly for rented residential housing not owner-occupier;

(f) moderate mixing in residential location in new centres, between people of different ethnic and religious lineages, but persistent lack of it in the indigenous areas except super imposed centers,

(g) disfavour suburban style of housing environment; and prefer mixed landuses;

(h) larger part of population either engaged in full-time government service, or combine that with trading, some traditional crafts, and full-time trading.

4.30 APPRAISAL OF SOCIETAL AND PHYSICAL CHANGES

Changes in degree constitute minimal changes that are associated with core elements of the city. Changes in kind has, on the other hand, led to the disappearance of some indigenous city elements and others at the transitory stage on a gradual process of disappearance. The fact of additions of new values in society and their marriage with indigenous values has produced a third group of elements: emergent elements.

The indigenous societal characteristics which have had only minimal changes are discussed, against which background the physical changes discussed in chapter 3 will be assessed.

4.31 Lasting Societal Characteristics/Core Elements:

First, the respect for Emir's authority, though no more as Imam also, has remained. The emir thus remains the rallying point and the palace and dandali remain the expressions of this authority and significance of the institution.

Second, the depiction of power of the Emir, and of piety in religious buildings and related spaces are still upheld.

Accordingly, the monumentality of the palace and mosque are retained. The newly built mosque in Bauchi, as in other Hausa-Fulani settlements, is even more monumental than the old one: and improvements on the palace has made it a more dominant element than the in the past.

Third, strong social and religious ties are still maintained in the indigenous areas of the city for which reason there is a strong attachment to residential location within the city wall which defines the indigenous areas.

Fourth, social and cultural gatherings like the durbur are common; and religious ceremonies like Salah and recently Christmas using the same spaces as streets and dandali.

Fifth, Bauchi has retained and extended its role as a commercial center. According, the market place has continued to retain its location and role.

From the above, it is obvious that at the city level, the city wall and gates, Palace and dandali, mosque and market are core elements as the needs and values which independently fueled their development are still operative.

Sixth, homogeneity on basis of ethnic, religious and trade in the various residential sectors (unguwanni), with mixing of residential location of people of different economic levels has remained to a large extent in the indigenous areas. The unguwa is thus still a physical and social unit of the indigenous city.

Seventh, the population while experiencing some ethnic and cultural mixing, has remained largely Islamic with strong

adherance to the Islamic injunctions on domestic privacy and purdah system. This, in view of the general disfavour of suburban style of housing and preference of spacious compounds, has meant the retention of the compound as the common form of dwelling.

In a recent study for the preparation of the Zaria Master Plan, the Department of Urban and Regional Planning Ahmadu Bello University, noted that the most imageable forms or elements of the Zaria urban lanscape were the main streets, Birnin Zaria, city wall, Emir's place, general hospital, A.B.U., Main Campus, Civil Aviation Training Centre, CAST, Kongo Campus, N.T.C., Gaskiya Corporation, Kufena Hill. With a greater concentration of these in the Zaria City, it indicates that despite the changes in the structure of the society the people largely remember and cherish the indigenous forms more.

In the residential environment, it was found that people's preferences was in favour of the visual attributes of 'newness' and 'tidiness' and of large houses and spacious compounds, which indicates that although the residential sectors and compound forms are the most affected by these changes of the contemporary society, there is still a strong attachment to the indigenous forms. For, one main advantage of the traditional compound is its flexibility and user satisfaction. In the same vein, schwerdtfeger has noted in a study of house forms in Zaria that "..... it must be stressed that (inspite of the fact of)..... the substantially increased life expectancy and the undoubted comfort of well-built modern houses constructed on modern models with permanent building materials, (it) will make it unlikely that the compound head who inherited such houses will abadon them

and build their own, though accelerating changes in the traditional patterns of compound occupancy and subsequently in the structure and size of co-residential kinship groups."[1]

It is thus evident that the core elements of the city consist of the city wall/gates, palace, dandali, Friday mosque, market, and compound. Thus, changes that tend towards elimination and disruption of these forms are likely to be enforced or unperceived, and are ultimately undesirable.

4.32 Desirability or Otherwise of the Physical Changes

Societal changes in Bauchi have been spatially accommodated at various levels, in different ways. However, the accommodation process and the resultant physical forms are not all together suitable to the needs and values of the people, and the development of the town.

The process by which societal changes and the resultant forms have been accommodated in Bauchi, consist of enforcement, percieved adoption, and unperceived adoption.

(1) Undesirable Changes

The enforced changes or what King refers to as dominance-dependence power relation was largely due to government direct action or through the institutional framework whereby certain ideas, and physical developments are undertaken through official decision.

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(1) F. Schwerdtfeger Traditional Housing in African Cities; A comparative study of houses in Zaria, Ibadan and Marrakech (1982) page 312

At the level of the city, the enforced changes include, first, the undesirable deliberate prohibition by the British of the maintenance of city walls. Although the needs of society which under lay the building of the city walls had changed by colonial times, the traditional strong identity which residents had to their cities and the strong socio-cultural and religious ties amongst them would have spelt the need to keep the identity of the cities and thereby retain and maintain the city walls and gates.

Second, the encroachment on the dandali owing to the construction during colonial and post colonial times of Local government offices, prison yard, court etc. thereby disrupting the traditional space-dandali.

Third, is the development of the new city nuclei without physically and functionally integrating it with the indigenous parts. The result is the problems posed for efficient planning of the city with such confused".....economic base, functions and morphology (and growth) following the imposition of the new alien structure on the tradional base"[2]

The development of the urban areas have been piecemeal which ".....has simply meant that new elements are added to the urban landscape with little or no attempt having been made to integrate them with already established units. These units, each in its own pattern, each with its own designer or planners, grow by simple addition, expanding into adjacent areas where possible, leap-frogging to other locations when confined by neighbouring urban units"[3].

2. Ajaegbu, H, I. (1976) Urban and Rural Development in Nigeria pg. 44

3. Uruhart, A.W. (1977) Planned Urban Landscapes of Northern Nigeria pg.88

Fourth, a new road system has been superimposed on the city as government undertakes massive road widening and construction programmes in the city. The road network is alien in both pattern and scale. In scale as related to the buildings since the motor vehicle is in view, and not the pedestrian; and in pattern as the flexibility of walkways is made rigid and grid-like.

At the level of the Unguwa, the new road system has resulted in the disruption of the physical organisation of the residential unit (Unguwa). Its undesirability being the fact of its unconforming pattern and intrusion into residential areas which was hitherto a close-knit and compact unit.

Also, the introduction of the ward unit of administration since the colonial times whereby the ward-head related more directly to the Local Authority than the unguwa-heads (mai unguwa) was one of the "tragedies" of colonial administration. This was not in conformity with the indigenous spatial organisation of community life in the Hausa-Fulani city with the attendant negative implications for urban planning and management. This in turn is reflected in the poor environmental conditions of the city in terms of drainage, refuse collection and disposal etc. which were carefully taken care of in the indigenous social organisation hierarchy in the city spatial system.

The space requirements of modern development necessarily requires their accommodation outside the compactly developed indigenous areas; but only is their development unintegrated with the indigenous areas, the layout concept of residential areas is undesireable. They are foreign conceived and provision of access relates to the motor vehicle and ignores human needs.

The undesirable changes at the compound level include the outright adoption of foreign patterns of housing and house layout which is seen as a mark of the status quo. The new forms of which include free standing residential units, and collective units consisting of single rental rooms with shared facilities (gidan hire) are forms ".....which public opinion and architects themselves find fragmented"[4]

Within the indigenous areas the increased sub-division of the compound, owing either to the growth and decline of co-residential kinship ties or to provide rooming rental accommodation, is undesirable for it is the single action that would lead to obliteration of the indigenous city character and identity.

Regarding the increased use of modern building, materials, Urbanowicz has indicated that one can object to their use "..... as not satisfactorily fitting with the indigenours detail patterns and not responding to the climate conditions, but the general concept of modernization, careful finishing and a good maintenance could be given as an example of a good solution of the problem of adjusting the traditional compound to modern life requirements" [5].

(ii) Desirable changes:

Some of the changes in the spatial system of Bauchi city, however, are desirable. These include the modern planning principle as applied in the allocation of land suitably located, and planned for industrial development.

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(4) Urbanowicz, B.A. (1980) Selected aspects of House form in Zaria Urban Area, Page 22

(5) Urbanowicz, B.A. (1980) ibid Page 204-5

TABLE 5 a MODERATION FORCES ON INDIGENOUS PLANNING AND DESIGN PRINCIPLES AT CITY LEVEL AND THEIR CONSEQUENT APPLICABILITY

FORCES	RESULTANT PRINCIPLE PRINCIPLES	RESULTANT FORM(S)	CONTEMPORARY STATUS OF FACTOR	APPLICABILITY OF PRINCIPLE
Wars and Insecurity	Community Security & Survival	City Walls and Gates	Absent on inter-city basis	Not applicable
Culture Religion	Expressive Leadership power and wealth	Decorative city gates	Expression of power and wealth done through adoption of modern housing and vehicle ownship.	Partly applicable
Islamic religion: segregation of domestic/communal life	Centrality of location	Mosque palace and market in city centre	Still operative	Applicable in Traditional centre.
Religion culture: Roles of Emir Ceremonial public life.	Grouping of like central elements	Close location of mosque, palace dandali and market abit remote	Largely operative	Applicable in Traditional Centre.
Religion Culture: depiction of official power, and piety.	Monumentality	Monumental mosque and palaces	Still powerful	Applicable
Religion Culture graduated public and private life	Functional urban space hierarchy	Hierarchy of Urban spaces: Dandali to courtyard	Largely operative	Applicable

TABLE 5b MODERATING FORCES ON PLANNING DESIGN PRINCIPLES AT RESIDENTIAL AREA LEVEL AND THEIR APPLICABILITY

FORCE	RESULTANT PRINCIPLE	RESULTANT FORM(S)	CONTEMPORARY STATUS OF FACTOR	APPLICABILITY OF PRINCIPLE
Culture: Ethnic and religious ties	Balanced social homogenity versus heterogenuity	Unguwoyi: as physical and social units	Unguwoyi in tradional areas, but not administratively significant. Absent in new areas.	Applicable
British culture	Segregation by residential location	E.R.A. and African residential areas separated by by green belt; and these separated from indigenous areas	No direct segregation: ERA(now GRA) still exist, but integration with other city sectors made by spatial growth and policy	
British culture/ Technology	Zonation	Commercial, industrial, leisure and residential landzones	Some degree of separation of leisure, employment and residential places in new areas; landuses largely mixed in indigenous areas	Partly applicable
British Culture	Unstraggling layout pattern	Landscaped spacious plots and grid	Not upheld, but landscaping appreciated	Partly applicable

4:42 Recommendations:

The following recommendations arise from the above considerations:

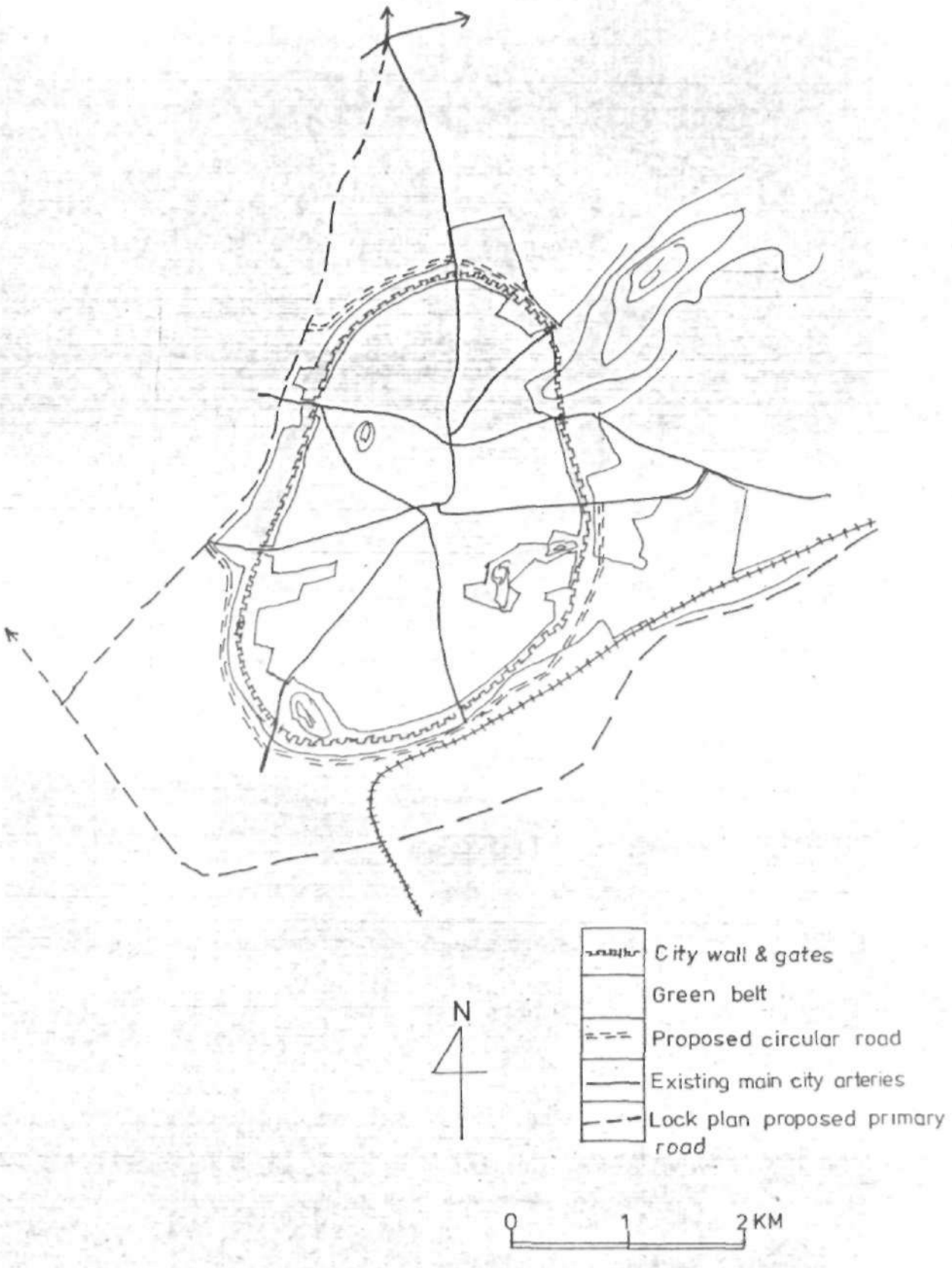
(A) 1. City wall and gates, developed from the indigenous planning principle of community survival and security and later of expressive leadership power and wealth, which are no more applicable, should be

a) left out in planning of modern areas;

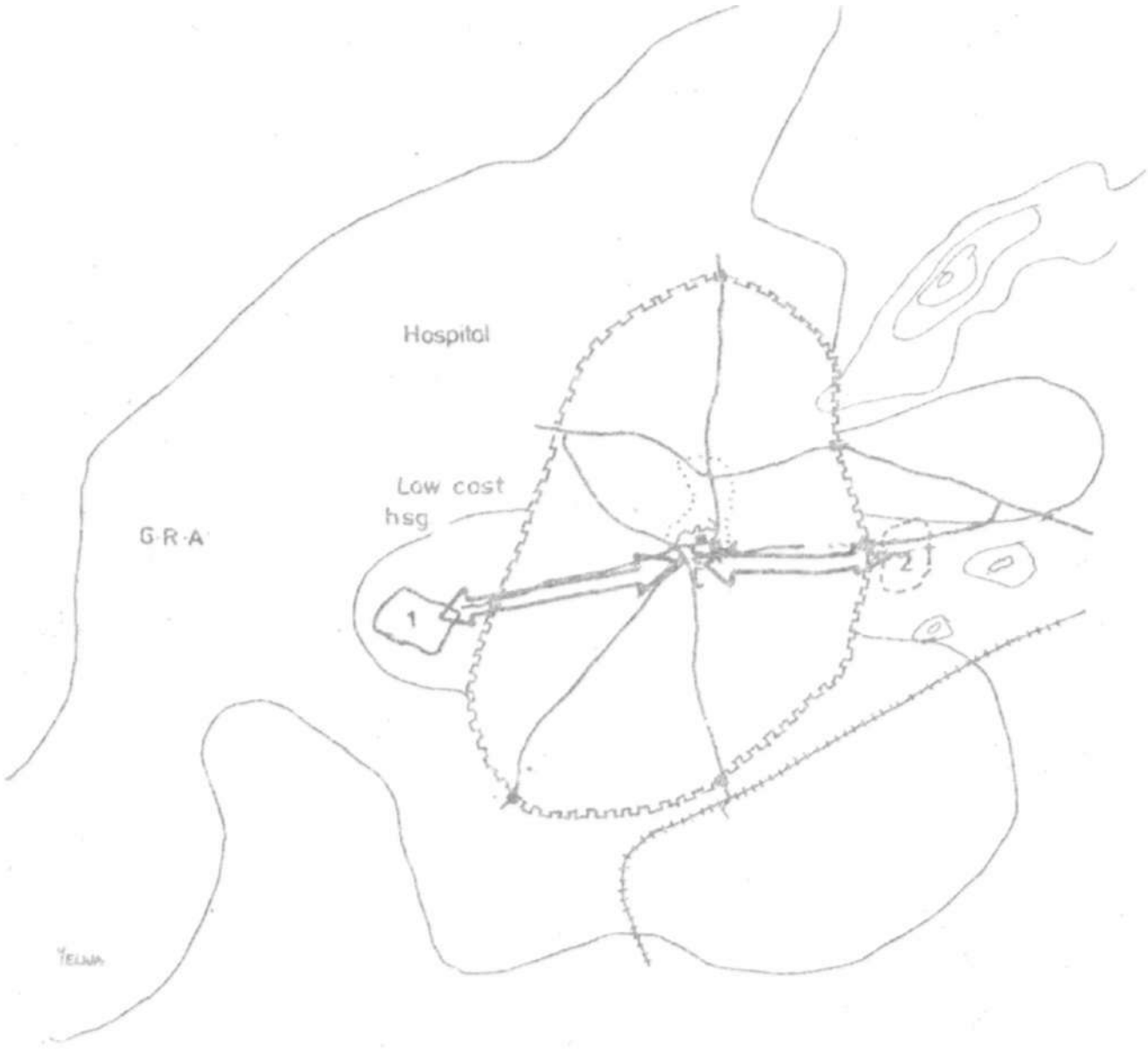
b) preserved as Historic Urban Design elements in indegenous areas, through legislation prohibiting destruction of city wall: and deliberate planning policy requiring the reconstruction of city gates where they have been destroyed: and leaving a green belt around the city wall (see figure 4:1)

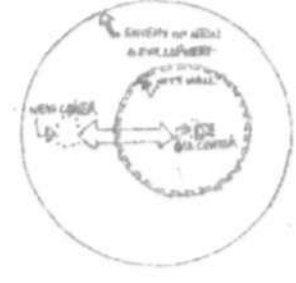
2. Centrality of location principle by which the mosque, palace/dandali, and market are located in the geographical center of the walled city has been shown to be in operation in indigenous areas. Accordingly, their centrality should be retained and maintained in the traditional areas. Contemporary administrative and legislative arms of government should be located such that its functionaly linked with the indigenous center (see fig. 4.2).

3. The layout of indigenous centers also show the operation of the principle of functional grouping of like central elements where there is the close location of palace/ dandali, mosque; and the market a little remote. The principle is recommended to be retained in the indigenous areas, and to be used in design of modern city centers and community centers. This is congruent with the modern concept of community center and city center design of the non-Hausa world.



FIG·4·1 PRESERVE THE CITY WALL : GREEN BELT AROUND





THE CONCEPT

N

Traditional central area

1 Lock plan proposed new town centre

2 Alternative posible location

Integration axis

0 1 2 KM

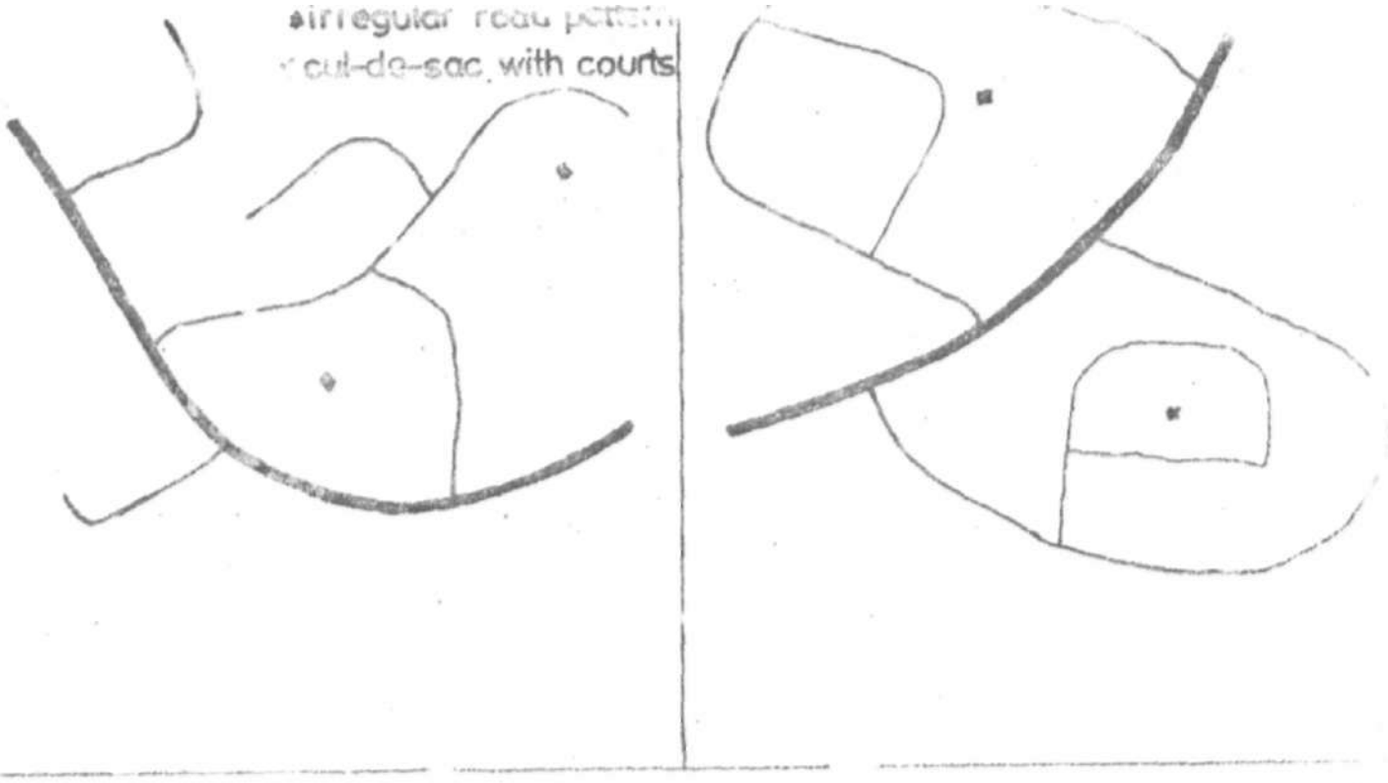
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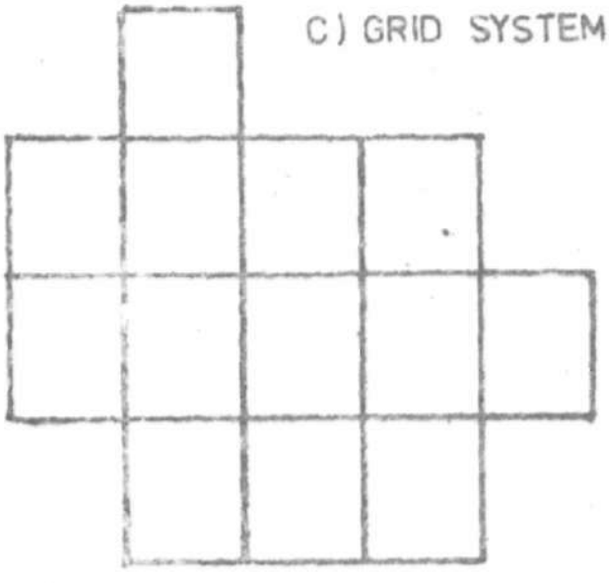
FIG·4·2 INTEGRATION OF TRADITIONAL AND NEW CENTERS.

4. The planning principle of functional urban space hierachy by which a graduation of spaces from the public areas at city level- the dandali-to the private compound courtyard, are still valid. This hierarchical spaces should be retained in the indigenous areas by planning control over encroachment of these spaces, defining them clearly in the field, and providing the relevant co munity facilities in these spaces. In new area planning the principle should be applied which is indeed congruent with modern planning requirements.

5. In the face of rapidly growing vehicular mode of transport, the indigenous road system is largely falling into disuse. However, improvement of such pathways during upgrading should be made without disrupting the social groups. This should involve limited through-roads, and adjusting road widths to the scale of existing development i.e. standards will be less generous than in new areas. In the planning of new residential areas, curvilinear and loop road network is recommended (see giguro 4.3). Modern city planning is thus rightly moving away from the error of the grid iron plan of undifferentiated blocks cuty by cross roads. Abu-Lughod has observed that " the superiority of highly differentiated types of circulation systems is now fully accepted in Western city planning....."[7]. Thus, the precinctual concept of planning is being widely applied. In our proposal, the planning should be with foot and cycle tracks in the interior of the residential blocks (the ungwa), secondary roads between such residential cells, and

(7) Abu-Lughod, Janet op. cit. Page 10.





C) GRID SYSTEM... *straight roads
*no cul-de-sac
*regular street & blocks pattern

[NOT RECOMMENDED]

K-J-B

FIG-4-3 A) & B) RECOMMENDED ROAD CONCEPTS

the primary or district roads being the existing roads leading from the central area on to the gates and joining different cities or major activity areas outside the city wall.

6. The design principle of monumentality of important public buildings like palace and mosque has been shown to be valid still. Accrodingly, these forms should be maintained in the indigenous areas. This should be employed in the design of the modern secretariate and community mosques, to be used as urban design elements.

7. The principle of expressive leadership power and wealth by which decorative city gates and house entrances were developed is not currently applicable. Power and wealth are expressed thorough adoption of modern housing forms and motor vehicle ownership.. However, this undesirable trend should be moderated by encouraging decoration of gates and entrances in the indigenous areas, and requiring that in modern building designs submitted for planning approval, such decorated entrances be provided for as may be desired. This enriches the urban design quality of the area as in indigenous environments.

B) 1. At the residential area level, the increasing cultural mix notwithstanding, the unguwoyi still remain physical and social units. Thus, it is recommended that the ward system be abolished in the indigenous areas in order to restore the indigenous system (Ungwa) which most effective in planning according to Abu-Lughod's principle of "smaller systems" of social and residential organisation[8].

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(8) Abu-Lughod, Janet ibid Page 10.

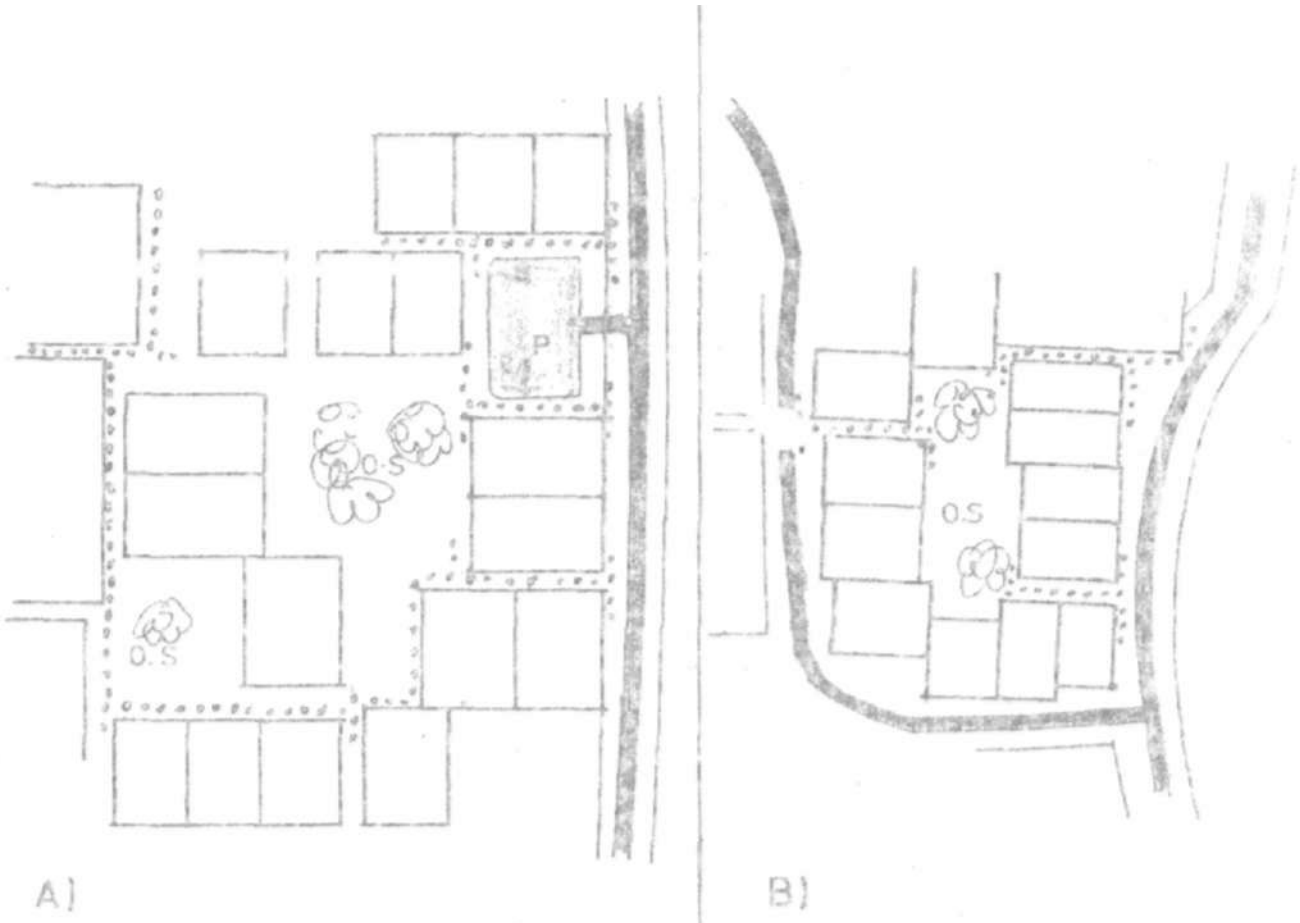
Mabogunje has also shown the importance of the indigenous spatial units on the basis of social relation in the management of the city[9]. In the new areas, the principle should be applied by developing it into the concept of the clustered plan by which dwellings are arranged in clusters around organised semi-public spaces with house entrances adjusted for privacy considerations (see fig 4.4). This concept creates usable open spaces for neighbourhood interaction and children's play; and separates heavy traffic from pedestrians; and street area is reduced thereby reducing costs.

2. Unlike in the indigenous areas where the strong force of religion, kinship, and ethnicity has produced mixing of households of distinct income levels, the current layout system separates people along income levels. Since the later situation of the principle of segregation of residential location is largely invalid, we recommend that G.R.A. layouts be of less generous plot sizes for the high income groups; and mixing or integration of medium and low-income groups be undertaken in other residential layouts. Different plot sizes may be provided in the layout for these groups owing to different ability to develop the plots. The choice of plot sizes should depend on the existing average compound sizes and areas, and on current trends of plot-spaces use in each locality of the Hausa-Fulani. Given the situation for Bauchi, the following plot sizes are recommended: 15m x 30m, and 30m x 45m for low/medium income and high income respectively.

Existing G.R.A.s should be redensified to ensure effective use of space, in view of present poor maintenance of space in G.R.A.s developed on the principle of generous unstrugling design.

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(9) Mabogunje, A.L. (1980) op. cit. Page 215.



A) RECOMMENDED RESIDENTIAL LAYOUT PLAN ALTERNATIVE

K-JB-

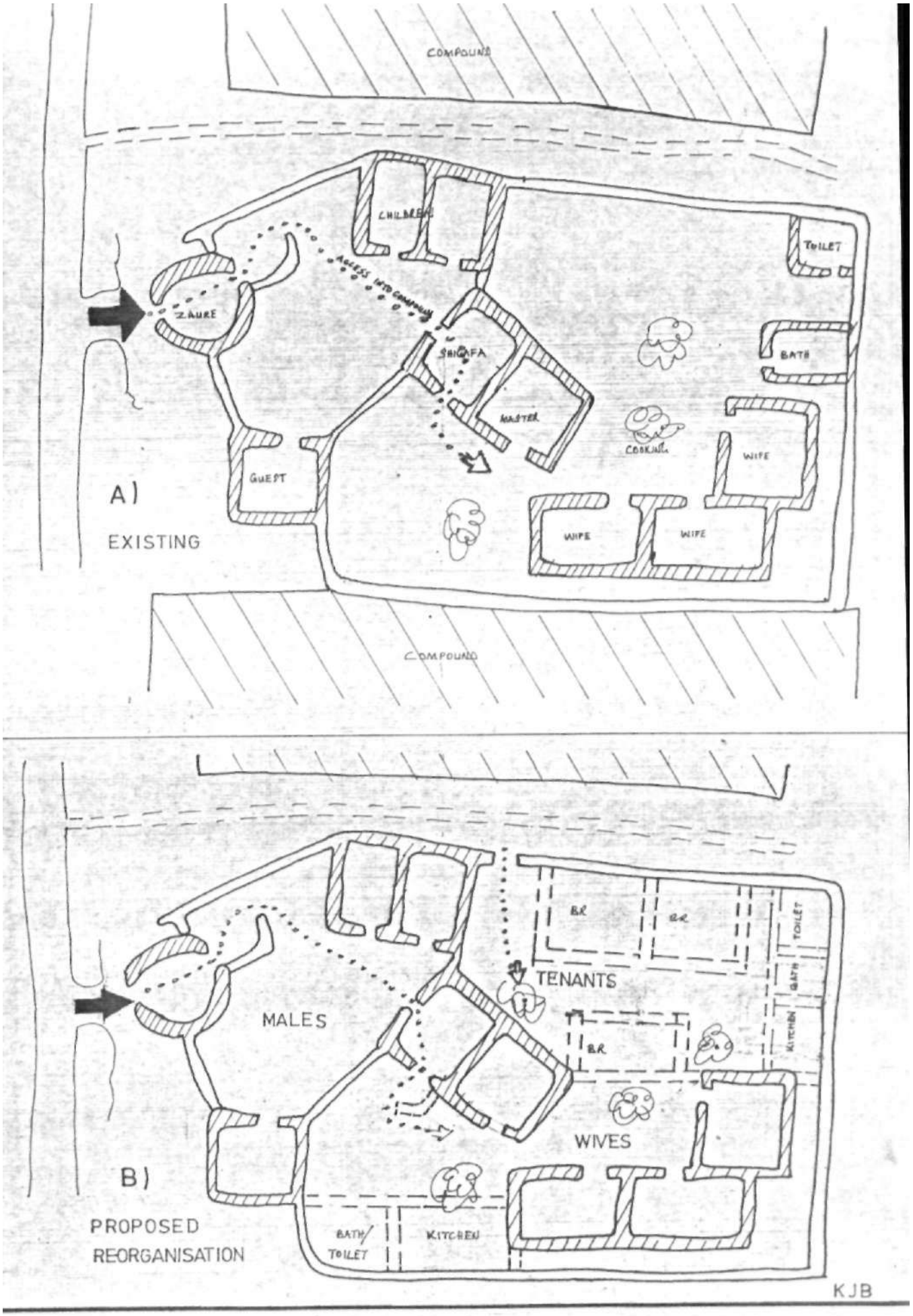
FIG·4·4 CLUSTERED PLAN CONCEPT

Owing to the fact of mixed landuse of residential cum commercial used in both indigenous and modern parts of the town, the colonial principle of zonation should apply only to modern obnoxious industries and residential and formal commercial areas. However, mixing of residential and traditonal industries and/or commercial uses should be catered for in new layout designs by providing larger plot sizes along commercial streets and near markets.

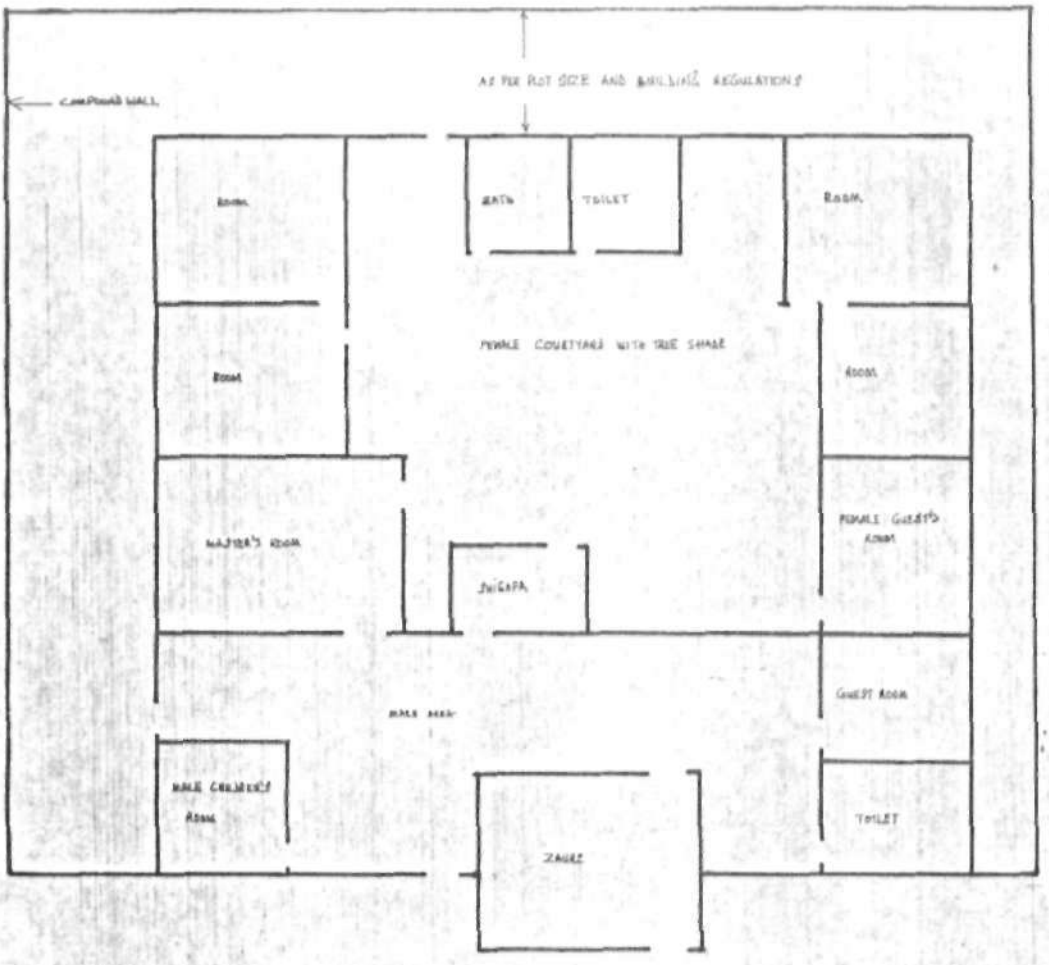
C) 1. At the compound level, the principle of compartmentality of compound design is still valid in the indigenous areas which is largely Islamic. The resultant compound form should thus be retained for the high user satisfaction, and preservation of the city identity. Thus, the breakdown of the traditional compound owing either to growth and decline of co-residential Kinship ties or to provide rooming rental accommodation. Should be such that the external outlook of the compound is not altered, see figure 4.5, the fact of increasing level demand for new plots on new sites outside the city wall by traders and modern cities, and the high trend of adoption of modern building materials and house facilities, all require that building plans approved by planning authorities for the new areas should be:

(a) the modern design

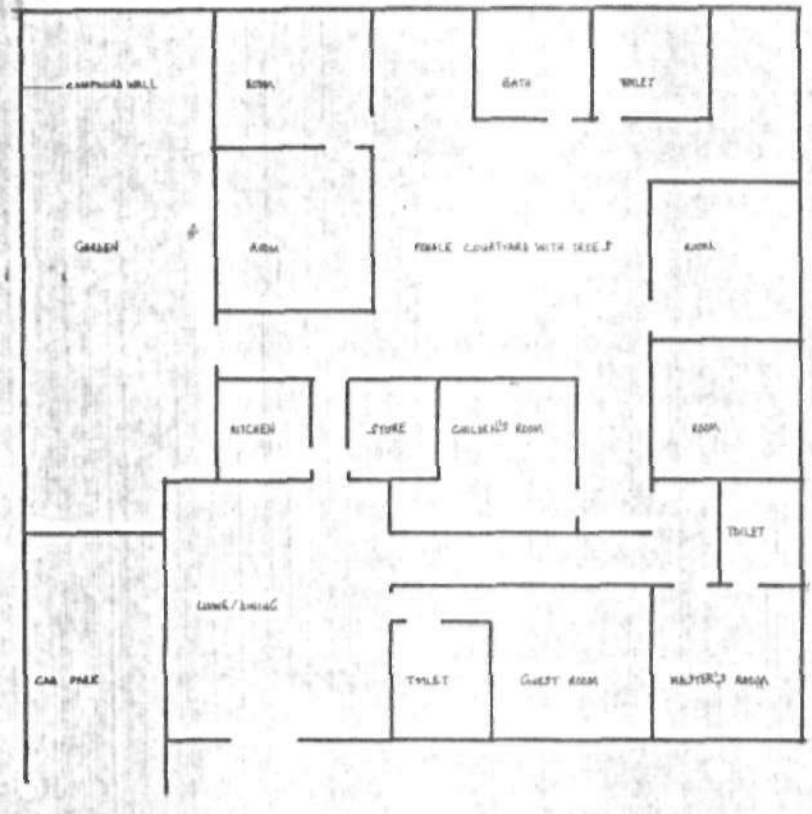
b) the modernised traditional compound design (see fig. 5.6) is inremental, flexible, and having elements of both traditional and modern design requirements.



FIG·4·5 COMPOUND RE-ORGANISATION FOR RENTAL & OWNER OCCUPIER



A) PROPOSED COMPOUND LAYOUT FOR TRADITIONAL AREAS



B) PROPOSED COMPOUND LAYOUT FOR NEW AREAS (MUSLIM TYPE)

4.43 Conclusion

The Hausa-Fulani have over the centuries of their history established a strong urban tradition of distinct urban forms and organisation . Their towns and cities rarely comform to the geometric sysmmetry of urban planning. However, the settlements are neither fortuitous nor amorphous in their organisation, and reveal a consitent underlying order of hierarchical sequences of access and enclosure responding to patterns of social intercourse and allegiance particularly to the cultural - Islamic society. However, with the coming of the colonialists a new set of principles were introduced which have been in use since independence.

However some principles have been identified which are still relevant in the modern context, the combination, modification, extension of which should lead to appropriate design concepts that can be applied to upgrading schemes in the old centers; the design of new town centers [10], and the layout plans of new residential areas.

The next chapter is an attempt to apply some of the genral recommendations in an upgrading scheme for a residential area (Unguwa) of Bauchi walled city.

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10. The integrated approach has been applied in the design of a city center for Greater Yola by Yunusa, M. L. and the Master Plans for Gaya and Bichi by the Department of Urban and Regional Planning, Ahmadu Bello University.

CHAPTER FIVE

5.00 DESIGN PROPOSALS AND IMPLEMENTATION PROGRAMME

5.10 INTRODUCTION

An upgrading and related sites and services/infil programme should ideally be taken at the total walled city scale. Ad-hoc approach such as is undertaken here is for the purpose of demonstrating the principles recommended in chapter 4. It is, nonetheless, related to existing town road network hierarchy, and utilities, facilities distribution to ensure both area improvement and town efficiency.

5.20 EXISTING SITUATION

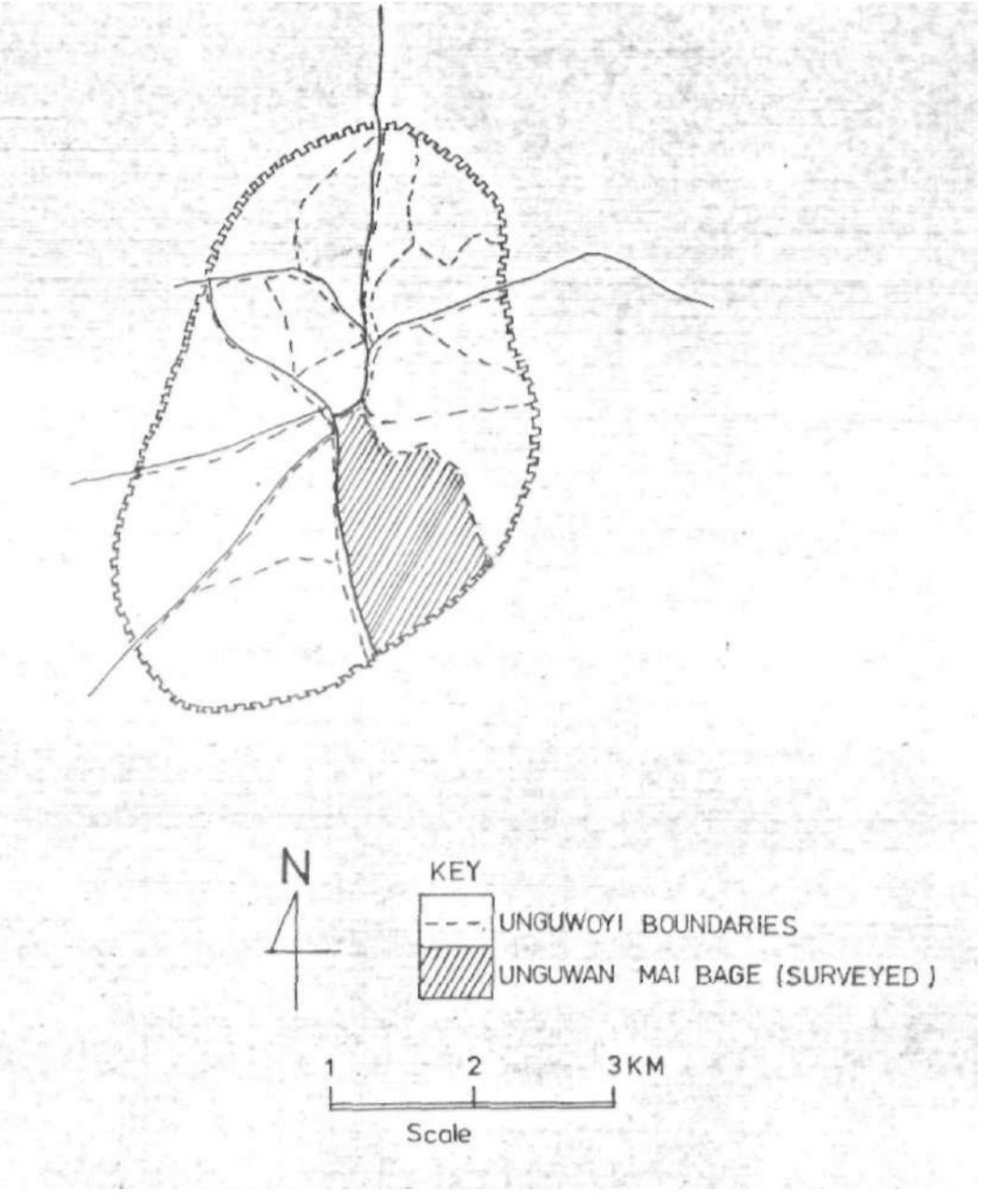
5.21 POPULATION CHARACTERISTICS

The surveyed Unguwa (see figure 5.1) has an estimated population of 12000. The 1981 field survey shows that 60% of the owner occupier compounds give their ethnicity as Hausa-Fulani. Others are largely tenants.

5.22 LAND-USE

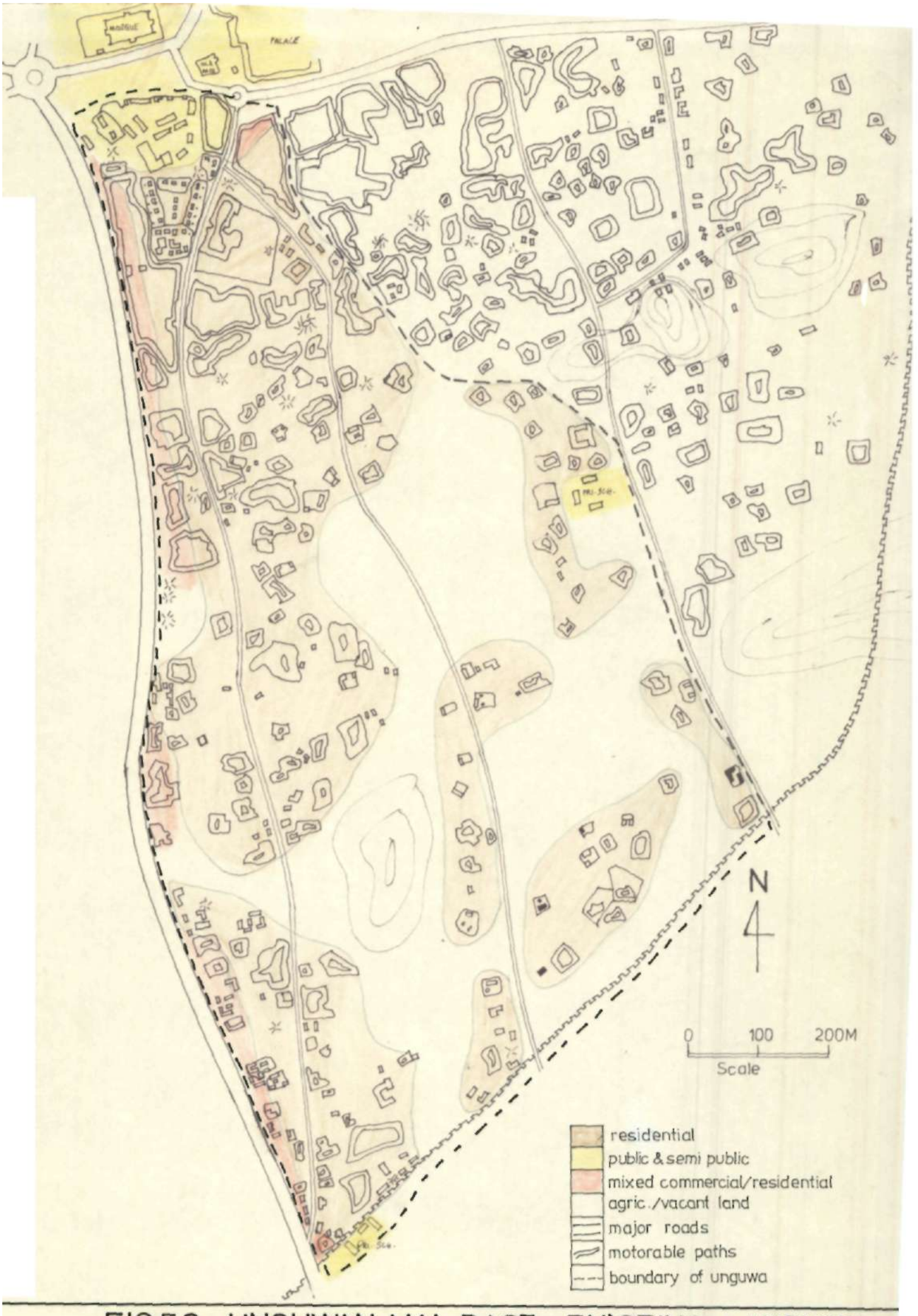
The area consists of compact development to the West and North, and some open spaces to the South having scattered rapidly-built rooming houses to meet the demand for retal accommodation.

The landuse (see figure 5.2) shows the following proportion of land for the existing uses; as described in table 6.



K.J.B.

FIG·5·1 BAUCHI CITY – SHOWING UPGRADING AREA



FIG·5·2 UNGUWAN MAI-BAGE: EXISTING LANDUSE

Table 6 - Proportions of Land under Various Landuse.

LANDUSE	% OF EXISTING DEVELOPED AREA	EXISTING ARE IN HECTARES
Residential	54.5	53.9
Commercial	0.0	0.0
Mixed uses	4.4	4.3
Recreational	0.1	0.1
Public/Semi Public	3.5	3.4
Access	3.5	3.4
Vacant Land	35.0	35.9
Total dev. Land	100	101.0

Qualitatively, the landuses consist of: (i) access:- Footpaths developed incidental to the construction and growth of the various compounds, are dominant. Vehicular movement on these paths is difficult and in places impossible due to poor alignment and narrow widths.

(ii) The compact area reveal the character of indigenous compound organisation - the clustered form, but the newly developed areas near the city wall reveal disorderly development.

(iii) Commercial use: Is mainly concentrated along the major roads, largely mixed with residential uses.

(iv) Community services: The Unguwa depends on facilities peripherally located in adjoining Unguwoyi such as a traditional market in Unguwan Jahun, a clinic in Unguwan Nata-ala, and other city level facilities. There are two crowded primary schools serving the area, both

operating two shift systems, but some 30.5% of school going children in the study Unguwa attend school at Kofar Pada and Unguwar Borno primary schools.

(v) Environmental quality: Numerous burrow-pits exist and constitute breeding places for mosquitoes, and refuse depot. No organised refuse collection exists in the area.

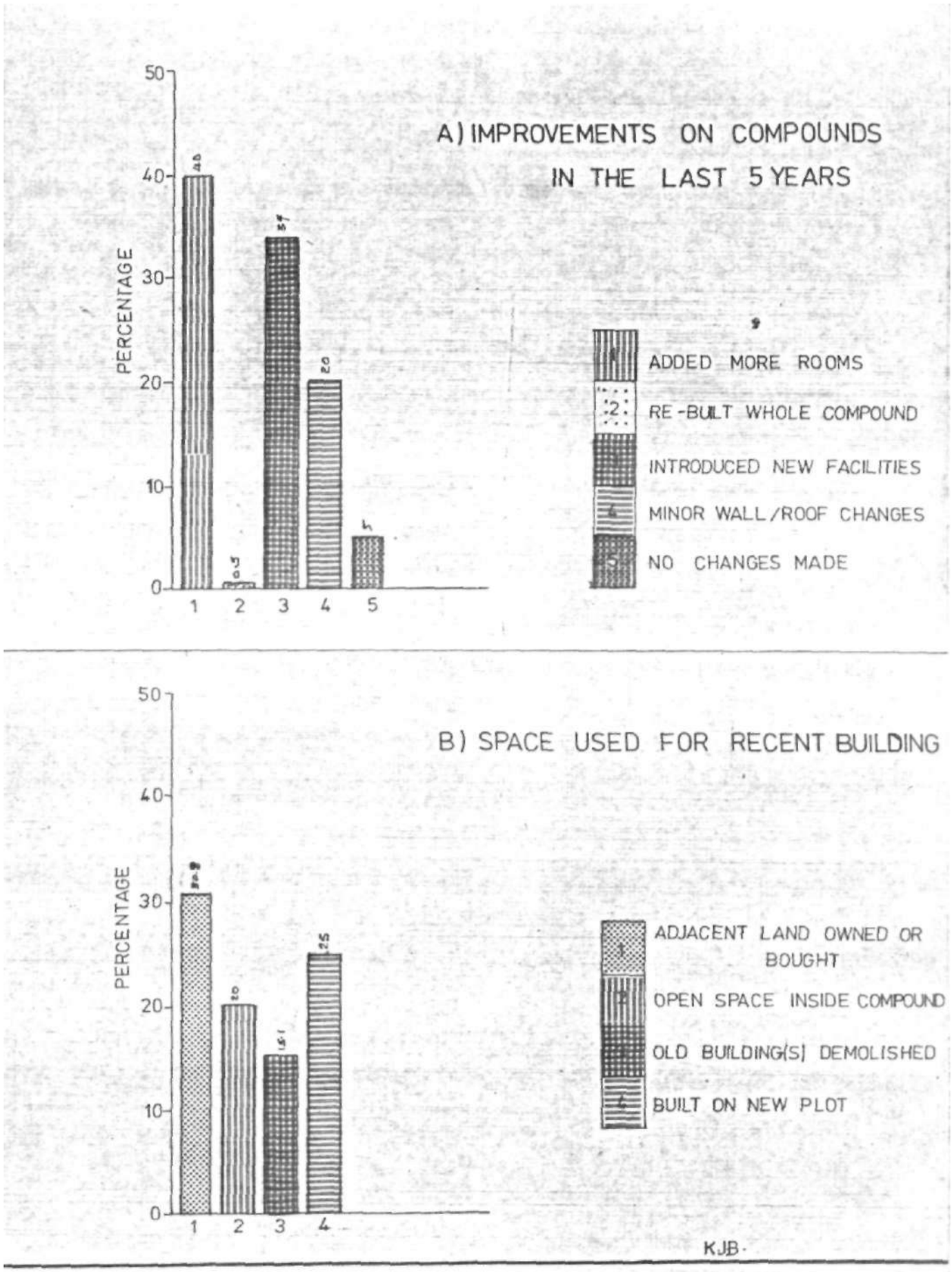
5.23 HOUSING CONDITIONS

Only 15% of the houses are semi detached; and the compound house-type forms 75% of the dwelling types, 21.2% of which were partly rented.

The buildings of mud with cement plastered walls, and zinc roofing forms about 70% of the housing stolk of about 1,200, housing about 12,000 people and a residential density of about 200 persons per hectare.

From figure 5.3 (a), it is evident that addition of more rooms, introduction of modern facilities and changes on walls and roofs are the most common individual improvements being made on dwellings. This forms a direction and a resource for the upgrading proposals.

The space used for recent buildings, as shown in fig. 5.3(b), largely consist of land adjacent to compounds, being incidental spaces during earlier construction work and which were the movement spaces. Also, former open spaces inside compounds are being encroached upon through further superimposition of new buildings, observed largely in retal accommodation. These indicate situation of increasing building density, and of occupancy ratio and consequent overcrowding on house utilities and services. The high rate of building on new plots is related with a high degree of unplanned



FIG·5·3 CHANGES ON TRADITIONAL COMPOUND

infilling of spaces within the wall, indicating the need for immediate acquisition of undeveloped land for proper development control.

The intoded type of building materials and means of undertaking the construction work shown in fig. 5.4(a) and (b) shows prefered conbination of modern and traditional building materials, and of employment of separate tradesmen to ensure untilization of both modern and traditional building skills for economic reasons.

2.24 SERVICES, UTILITIES AND FACILITIES

(i) - Water supply: Two major sources of water is available in the area. These are wells, within compounds, and pipe bourne water connected to few houses, or bought from vendors.

(ii) - Electricity Supply: Supplied by NEPA, 75% of dwellings in the area have electricity connections, and mainly for reasons of affordability are the others not connected.

2.25 PREFERENCES

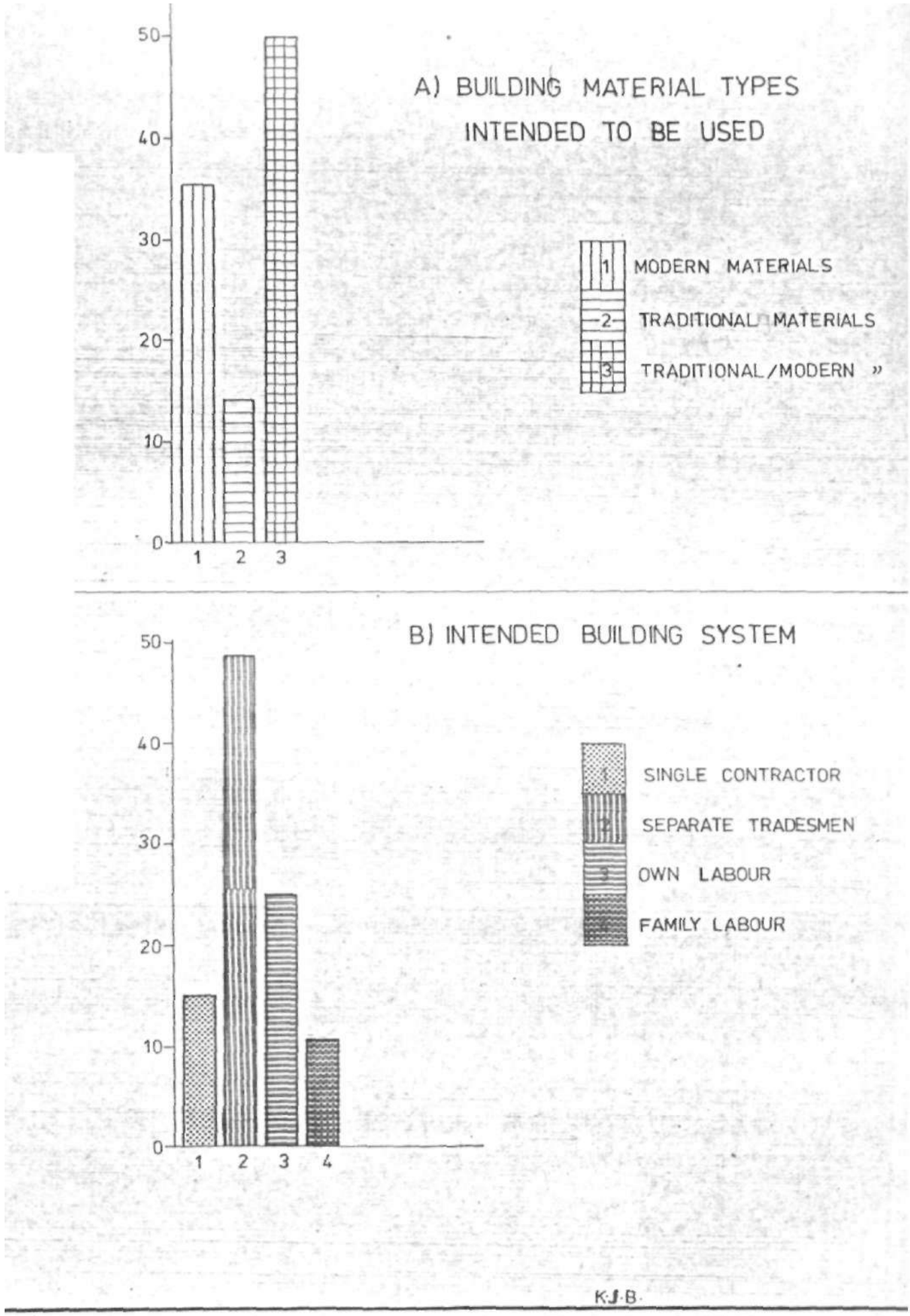
The respondent's order of priority of improvements and of provision of social facilities is shown below:

(A) Improvement order of priority

1. Roads
2. Refuse collection
3. Waste water disposal
4. Drainage

(B) Social facilities order of priority

1. Stand pipes
2. Clinic
3. Electricity
4. Others



FIG·5·4 BUILDING MATERIALS & SYSTEM PREFERED

In the household servey sample for the area - Unguwan Mai Bage, table 7 shows 50% preference to own plots within the city wall. Coupled with the unplanned nature of current development in the area, an area to the south (see figure 5.2) has been laid out for residential and mixed residential and commercial development.

TABLE 7 - PREFERENCE OF RESIDENTIAL LOCATION

LOCATION	PERCENTAGE OF H/H INTERVIEWED
Within walled city	50
Outside walled city	39.6
No desire to own plots	10.4

5.30 PROGRAMME ELEMENTS

5.31 MAJOR DESIGN PRINCIPLES

Based on the principle of minimum disturbance; selective infrastructural development, the upgrading and the related sites and services programme has been designed. The standards used are in view of the concept adopted here of incremental (step by step) upgrading. The context of application of the recommendations is therefore a ten year period (1982-1992).

(A) - UPGRADING AREA

1. The pedestrian character of upgrading area is to be maintained and improved. The disturbance and disruption of the local community resulting from demolition, and vehicular intrusion, are minimized:

(i) The high priority placed by the community on improvements to access will take the form of surface upgrading and juction improvements in preference to road widenning.

(ii) - Priority is given to pedestrians and two wheeled vehicles.

2. Available open spaces are to be acquired for provision of community services.

3. Refuse collection which also has high priority is to be provided within easy access of residents, and collection vehicles.

4. Sanitary designs, and compound internal reorganisation design, to raise sanitary levels and provide for increasing partly rental housing respectively are to be provided. The options are prepared for individual selection and implementation according to onwer's needs and priorities.

(B) - SITES AND SERVICES AREA

1. The clustered plan concept of layout is employed esuring that:

(i) - The plot groupings are in the traditional compact 'sashe' organisation with hierarchical useable open spaces enclosed for children's play and recreation. Social inter-relationships to be considered in plot allocation to ensure social cohesion.

(ii) - Vehicular intrusion is minimal.

2. The cirvilinear road system with occasional street openings, adopting the traditional concept of soft lines of access, is used.

3. Community services and public utilities are provided based on the concept of Unguwa as a social/physical unit, and the compound clusters (sashe) as its sub-units.

4. Line services are provided in close association with the access system to effectively serve the area, and ensure individual connection.

5.32 FACILITIES AND INFRASTRUCTURE STANDARDS

ROADS

i - District roads giving access within residential areas.....15m ROW 6m carriage way; tared.

ii- Service roads serving residential areas .....9m ROW 4m laterite surface.

iii -Footpaths, cycle tracks.....2m, NO construction

STORM WATER DRAINAGE

i - Outfalls.....Existing 2 earth drains one on each side of district roads as main outfalls.

ii - Service roads.....2 earth drains

iii - Footpaths.....None.

WATER

i - Network design.....90% single tap connections 10% public tap system.

ii - Public stand pipe.....1 location/50 house holds.

iii - Connection pipes to new plot boundary and existing compounds.....12 mm.

ELECTRICITY

i - IIKV supply to transformer stations within site .....800m of all areas.

ii - L. T. distribution.....within 50m of all plots to permit individual connection.

COMMUNITY

i - Primary/Quoranic Schools.....MWD of 500m radius, 1 primary school of 3 streams/3,500, plot 180m x 120m

ii - Clinic or dispensary.....1/Unguwa, 100m x 100m (1.0ha).

iii - Traditional market.....1/Unguwa

iv - Mosque.....1/sasha or 200 plot 30m x 30m (o.o9ha).

SITE AND SERVICE/INFIL

-Residential Plot size.....35m - x 20m ($700m^2$)

-Residential cumcommercial plot.....45m x 30m ($1350m^2$)

-Gross density range.....10 - 15 plots/ha

-Refuse disposal stations.....Every 250m along road access.

-Sanitation.....Pit laterine systems on plot.

-Foul drainage.....Soakaway on plot

The standards used are adjusted for limitation of space within the area and is based on similar proposals for the Sokoto town and World Bank's Makama - Bauchi, upgrading schemes.

5.33 SCHEDULE OF REQUIREMENTS

Table 8 gives the schedule of requirements for the whole area considered as a unit of planning.

UTILITY/SERVICE/FACILITY	1981 pop-12,000 POPULATION		ADJUSTED STANDARD
	EXISTING	ADDITIONAL REQUIRED	
Piped water supply			
Electricity			
Dispensary	None	1	1/10,000 (MOH ideal= 1/5000)
Maternity clinic	None	1	1:1200
Primary Schools	2	1	1:3500 (ideal 1:3700)

Separate Quoranic Schools	9	Encourage use of Zaure
Blind workshop	None	1
Adulty Education	None	1
Public TV Statid	None	2
Mosques (small)	6	1
Residential sector center	None	1
Playfields	with prmary schools	with primary schools
Traditional market	None	1

TABLE 4 PROPOSED UTILITIES, FACILITIES AND SERVICES

5.4 THE DESIGN

5.41 PROPOSED LANDUSE

The proposed land use (figure 5.5) resulting from considerations of development constraints and schedule of requirements is described in table 8 below.

TABLE 8 - PROPOSED LANDUSE RELATED TO EXISTING SITUATION

LANDUSE	% OF EXISTING DEVELOPED AREA IN HECTARES	EXISTING DEVELOPED AREA IN HECTARES	PROPOSED % OF DEVELOPED	PROPOSED AREA IN HECTARES
Residential	54.5	53.9	66.3	67.0
Commercial	0.0	0.0	1	0.95
Mixed use	4.4	4.3	10	10.1
Recreational	0.1	0.1	2.6	2.6
Public/semi public	3.5	3.4	6.5	6.4
Access	3.5	3.4	7.7	7.6
Vacant land	35.0	34.9	6.1	6.2
TOTAL	101.00		100.00	101



FIG·5·5 PROPOSED LAND-USE

5.42 HOUSING AND FACILITIES IMPROVEMENT

(a) Housing - The recommendations made in chapter four regarding improvement of existing housing applies here. Details of improvement of structural stability is proposed to be drawn by the technical personel on the implementation committee.

(b) House Facilities - The proposed house design considers provision for modern house facilities and utilizes both modern and traditional building materials. Individual house connections of piped water and electricity is proposed to be undertaken according to affordability.

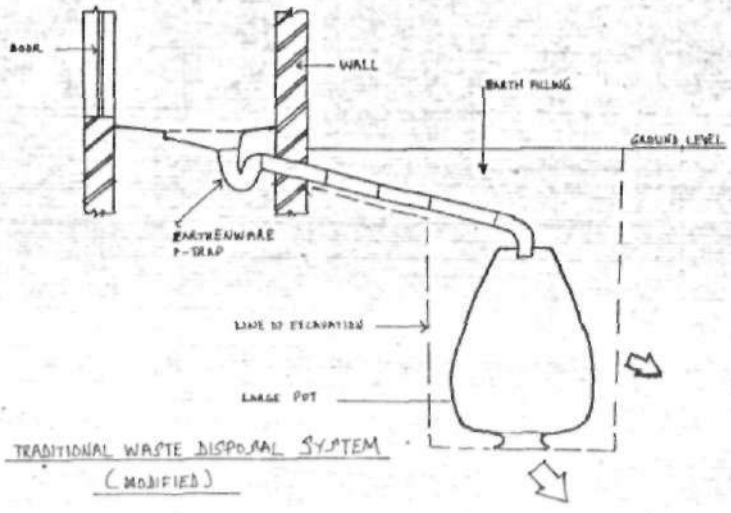
Several alternative sanitation systems exist, based on a recommended pit latrine system (see figure 5.6), from which residents can chose.

5.43 RESIDENTIAL LAYOUT

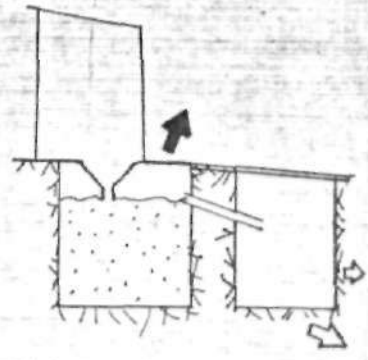
Residential layout design and services - The layout design proposed (see figure 5.7) is based on the design principles recommended, and will cater for first time owner occupiers from within the Unguwa given the high percentage of intention to own plots. The line services and access hierarchy and pattern has been integrated with the upgrading area and the existing district road leading to Kofar Wasai.

The sites and services/infil area has been integrated with the existing built-up area by - co-ordination of the system of access, and regularization of buildings of good condition into the layout pattern.

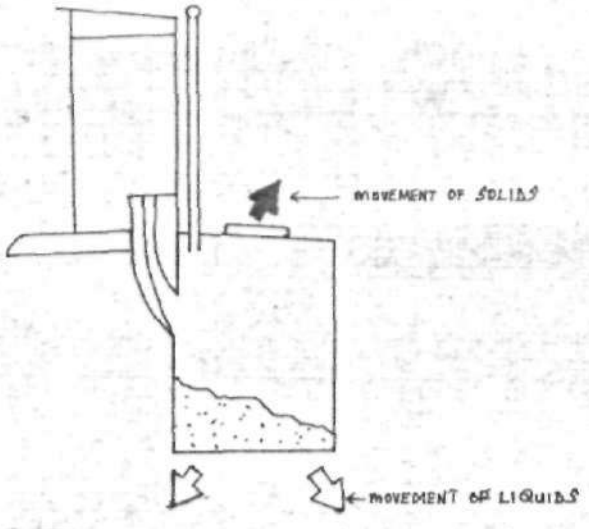
Figure 5.8 shows the concept of local street improvement and related tree planting and segregation of pedestrians from motor vehicles.



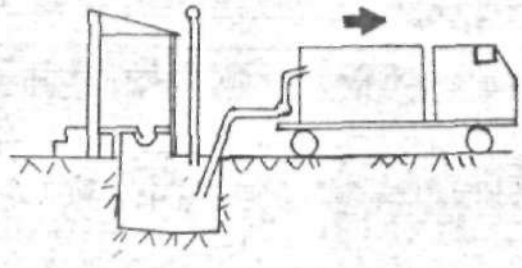
TRADITIONAL WASTE DISPOSAL SYSTEM (MODIFIED)



POUR-FLUSH LATRINE: AQUAPRIVY, SOAKAWAY



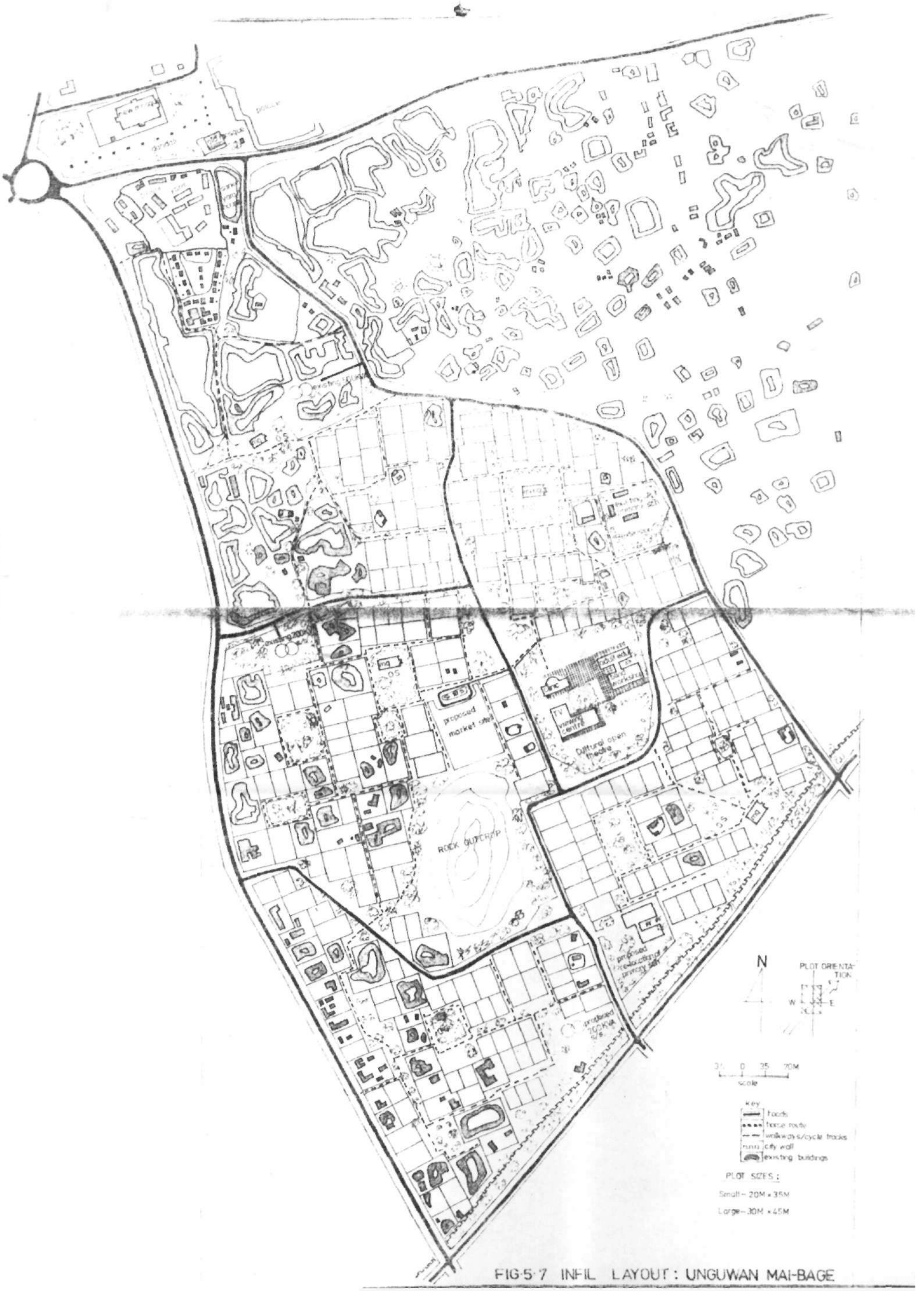
REED ODOURLESS EARTH CLOSET



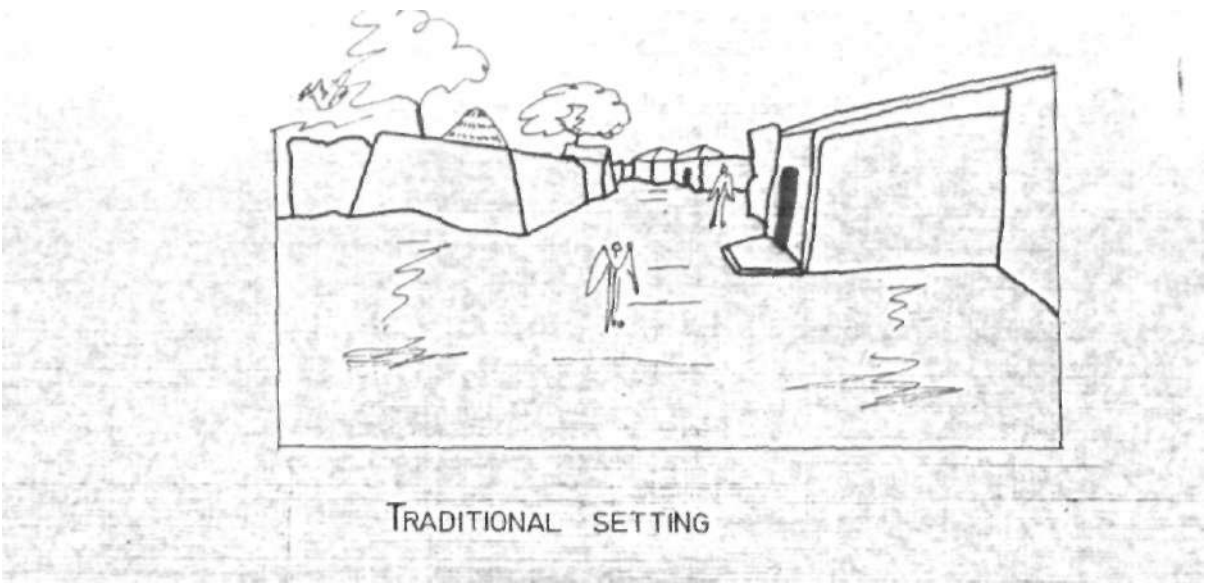
VAULT AND VACUUM TANK

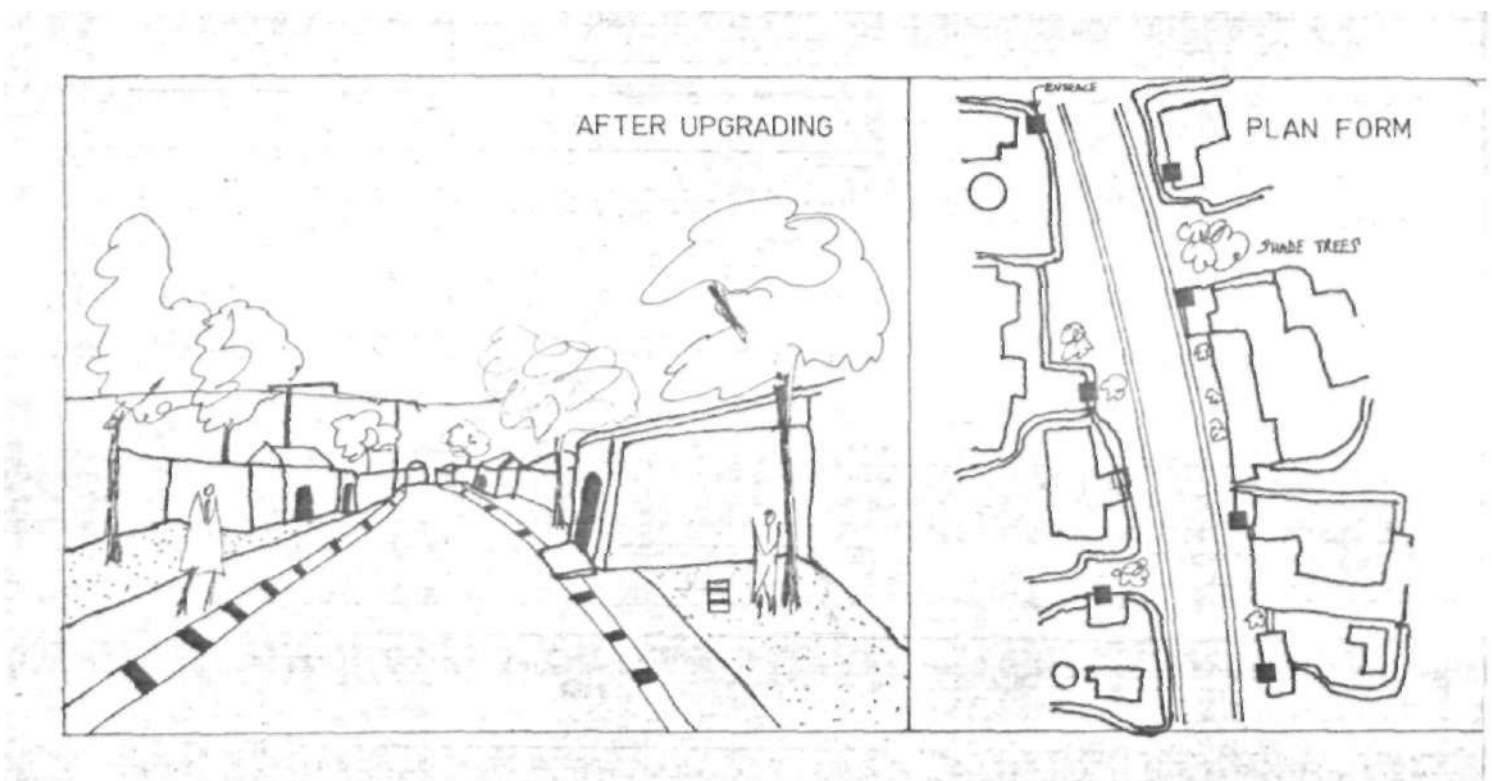
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FIG·5·6 ALTERNATIVE SANITATION SYSTEMS



FIG·5·7 INFIL LAYOUT : UNGUWAN MAI-BAGE





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FIG·5·8 UPGRADING OF RESIDENTIAL AREA

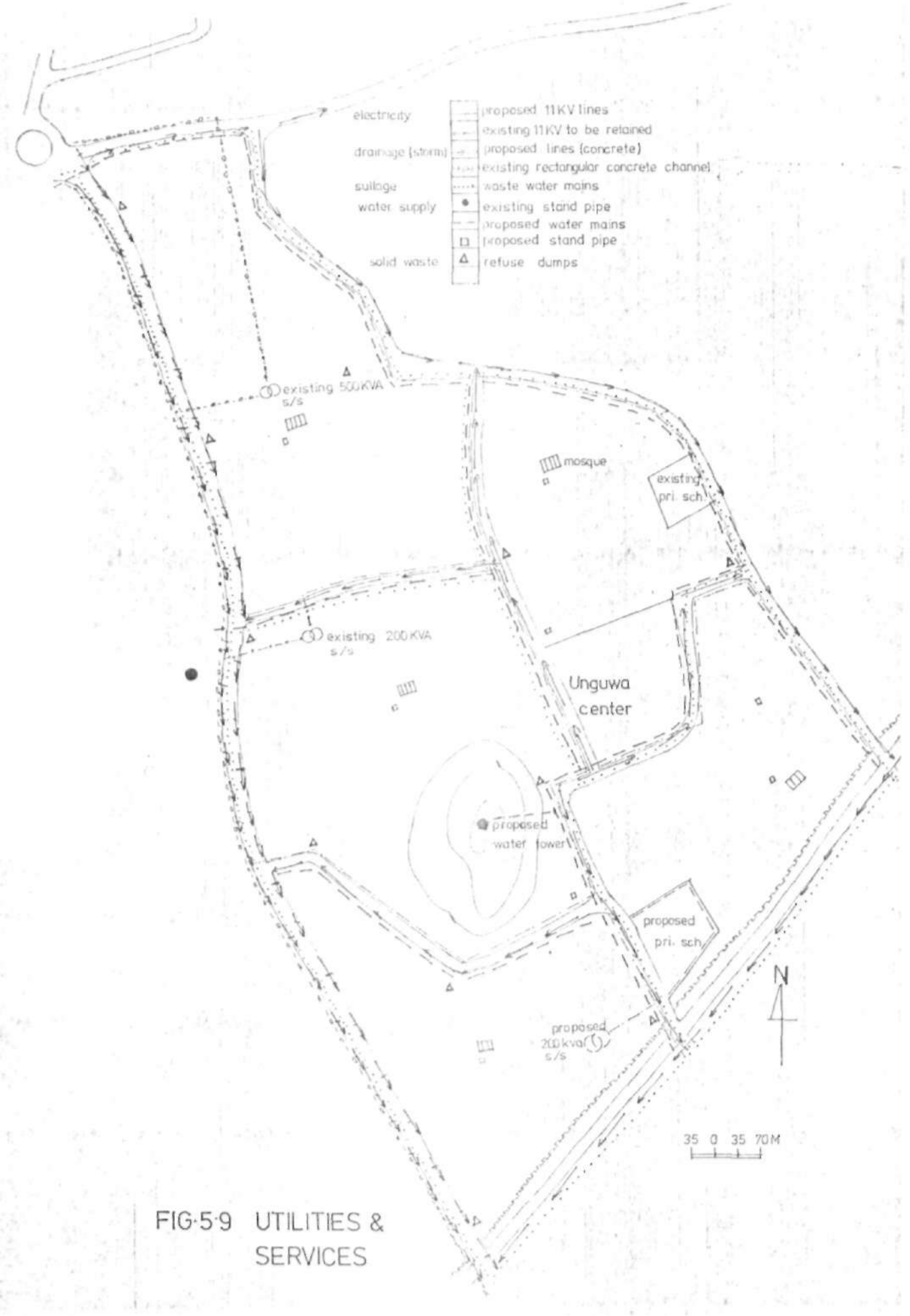
The proposal for provision of electricity, water drainage, and of refuse collection is shown in figure 5.9.

5.50 POLICIES AND IMPLEMENTATION

Building codes as they exist now are not only unrealistic and excludes a majority of people, but add significantly to the costs of shelter. It is suggested therefore that development of the area is to follow the "graduated approach" recommended by the 1980 U.N Seminar of experts on building codes and regulations in developing countries. This approach includes the sliding scale of standards to which residents could progressively attain as their purchasing power improved; that is, a balance is maintained between costs and affordability. Table 8 shows an example of progressive steps with regards to infrastucture:

TABLE 8 - IMPROVABLE INFRASTRUCTURE STANDARDS

FACILITY	STEP 1	STEP 2	STEP 3	STEP 4
Water	Stand pipes, e.g istand pipe per 100 people	Stand pipes e.g istand pipe per 50 people	Individual connections - stand pipe on plot	Individual connections multiple outlets with storage capacity
Sewage	Pit laterines double vault ventilation	Pour flush Acqua privyor sealed laterine	Pour flush septic	Water carriage system
Roads	Graded and rumped all - weather bus routes	Lateritized or compacted - gravel all weather bus routes	All weather bus routes, sealed and chipped access roads	All sealed all weather foot ways
Drainage	Earth drains designed for 5 years storm	Earth drains 5 years storm	Line inverts for 5 years storm	Lined inverts
Electricity	Full Provision with communal center connections, and sec. lights	Full Provision with individual house connections		100% individual connections and normal street lighting at long intervals



FIG·5·9 UTILITIES & SERVICES

For the sites and services area, first time owner - occupier rather than tenancy is to be encouraged through deliberately planned plot allocation process. This will reduce the current inequitable landlord system with the associated high rentage and undersirable living conditions.

5.52 - IMPLEMENTATION PROGRAMME

The implementation principles proposed here are:

1. An agency with executive powers, which itself undertakes the capital works to be charged the task of project implementation.

2. Utilization of the tradition, in which the social units are mobilized, under local administration coinciding with the basic physical unit - the Unguwa - for their own self existence, in individual extension works and environmental management.

The management structure for the implemantation of the proposals is to consist of:

(a) A community improvement committee (CIC) - as a unit of the Bauchi state Development Board. It is to consist of skilled professionals who would undertake capital works and offer technical advise to people involved in the programme and ensure that other programmes under NEPA and Water Board e.t.c. are undertaken and co-ordinated.

(b) Responsible to this committee is the Community Development Group (CDG) which will be headed by a local Government representative and to consist of the Unguwa head and other representatives from the community appointed by the Unguwa-head. The group is to be transitory between the people and the C.I.C.

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