AN IMPROVEMENT SCHEME FOR BIDA WALLED CITY
AND A DESIGN PROPOSAL FOR BANGBARA WARD

BY

BABA BABA BUSSU
B.Sc.(Hons), A.B.U. - Zaria.

A thesis submitted to the Post-Graduate School, Ahmadu Bello University, Zaria, Nigeria in partial fulfilment of the requirements for the award of Master of Science Degree in Urban and Regional Planning.

Department of Urban and Regional Planning,
Faculty of Environmental Design,
Ahmadu Bello University,
Zaria - Nigeria.

April, 1990

DECLARATION

I hereby declare that this thesis has been composed by myself and that it is the outcome of my research work. It has not been presented in any previous application for a higher degree. All the sources of information are specially acknowledged by means of reference.

BABA, B.B. Date: April, 1990

CERTIFICATION

This thesis entitled "An Improvement Scheme for Bida Walled City and a Design Proposal for Bangbara Ward" by B.B. Baba meets the regulations governing the award of the degree of Master of Science of Ahmadu Bello University, and is approved for its contribution to knowledge and literary presentation.

---------- Date: 21/1/91
Chairman, Supervisory Committee

---------- Date: 22/1/91
Member, Supervisory Committee

---------- Date: 24.01.91.
Head of Department

AHMADU BELLO UNIVERSITY
KASHIM IBRAHIM LIBRARY

---------- Date: 4-6-91
Dean, Post-Graduate School

ACKNOWLEDGEMENT

I wish to express my profound gratitude to my Supervisors, Dr. A.I. Lawan and Mr. D.J. Abin for their critical reviews, suggestions and comments which helped me immensely to the successful completion of this work. I also wish to thank the Head of Department, Mr. I.D. Suleiman, Dr. J.O. Popoola and the remaining members of staff for their invaluable contributions during the numerous review sessions.

My special thanks to Prof. and Mrs. J.A. Gana for their moral and financial support throughout my stay in Zaria. I am indeed grateful to them.

My sincere and unalloyed gratitudes and appreciations go to my guardian Alhaji Baba S. Taba, my uncles Mallam M. Shaba and Mallam Umaru and my brothers Alhaji U.N. Isa, Moh. Kolo, Ndako Alhaji Baba for standing by me at the trying moments of my life.

Thanks to Mr. Garba and Alh. A. Chado who took time to type and photocopy this work respectively within the shortest possible time. And to all those who contributed whether mentioned or otherwise, I say thank you and God bless.

Finally, I thank my Almighty God who led me through the path.

BABA, BABA BUSSU.

D E D I C A T I O N

To the memory of my late Father Mallam Ndako Batagi, whose remembrance has been the motivating force behind the struggle.

ABSTRACT

Urbanisation as a process of human agglomeration in multi functional settlements of relatively substantial size is not a new phenomenon in Nigeria. For some parts of the country it can be traced to as far back as the last millennium. What is new, however, is the growing failure of these centres to fulfil much of the expectations both of those who live in them and those who have to depend on them for services. However, within the context of this research, emphasis will be on the physical environmental conditions others not withstanding.

The Nigerian Urban areas are characterised by dilapidated physical structures and degenerated environmental quality. The growing environmental deterioration, more apparent now than before, in these cities and 3ida in particular justify an urgent need for action-oriented efforts aimed at advocating and inducing the acceptance of appropriate and workable planning solutions of urbanisation and the disfunction of physical planning itself, however, a thourough understanding of the socio-cultural, econo mic, political, technical and geopolitical factors that should condition planning for development is imperative.

In light of new social, political, economic and technolo-gical changes, there is need to incorporate some new ideas in order to improve the conditions in the indigenous cities. Therefore, the major problem confronting planners is how to imcorporate the modern aspect of physical planning into the traditional way of life with minimal but appropriate change in its distinctive landscape. The choice of the right strategy for dealing with the problems of indigenous cities also aroused This is because most *of* the strategies adapted to solve the problems of western Industrialized cities might not be relevant.

Therefore, there is a need to evolve strategies to solve the problems of traditional cities. Which ever strategy is adopted must not be in conflict with the existing culture and tradition of the people as well as their financial resources and local materials.

Bida walled city as an ecological unit; grows and in the process, parts become aged (due to old age, misuse or lack of care) and without regenerative actions, such parts decay and fall into dis-use. Furthermore, as a reult of poor sanitation, environmental neglect, lack of adherence to basic hygiene codes, and abject poverty, the environment is entirely unhealthy, filthy, crowded, and highly susceptible to any epidemics.

The research stressed that physical planning solutions to the walled city's problems would require greater governmental activity. The most pressing needs of mo3t residential areas are however, more and bettor designed access ways, roadside drainage facilities, more public water standpipes with bettor service, good sanitary facilities, well organized refuse collection point, and so forth. The willingness of the government to undertake these activities appears the most basic issue.

The situation in the city therefore, do not justify the strategy of redevelopment. However, the policy of rehabilitation and preservation strategies proposed would achieve much success if implemented through an on-going institutional set-up that encompasses technical experts, social workers and neighbourhood leaders, all cooperatively working with a well informed public.

Based on the main proposals presented, a design proposal depicting spatial arrangement of the major proposals has been considered in a selected ward. Administrative framework for the effective implementation of the proposals has also been taken into account.

TABLE OF CONTENTS

	PAGE
Title Page	i
Declaration	ii
Certification	iii
Acknowledgements	iv
Dedication	v
Abstract	vi-vii
Table of contents	viii-ix
List of Tables	x
List of Figures	xi-xii
List of Plates	xiii

CHAPTER ONE

1.0	INTRODUCTION	1
1.1	Statement of Problem	2
1.2	Aim and Objectives	4
1.3	Scope and Limitation	5
1.4	Methods of Data Collection	6
1.5	Methodology	6
1.6	Conceptual Framework of the study	8
1.7	Thesis Structure	9

CHAPTER TWO

2.0	REVIEW OF LITERATURE	13
2.1	Concept of Urban Renewal	15
2.2	Concept of Upgrading/Site and Services	25
2.3	Concept of Urban Blight	28
2.4	Techniques of Analysis of Urban Blight	30

CHAPTER THREE

3.0	BACKGROUND TO THE STUDY AREA	35
3.1	Physical Characteristics	35
3.2	Historical Development	42
3.3	The Indigenous City Fabric	44
3.4	Human Characteristics	50

CHAPTER FOUR

4.0	ANALYSIS OF THE EXISTING PHYSICAL ENVIRONMENT	59
4.1	Existing Landuse Pattern	59
4.2	Environmental Quality	66
4.3	Facilities, Utilities and Services	75
4.4	Housing Conditions	78
4.5	Spatial Distribution of Blight in the Walled City	82

CHAPTER FIVE

5.0 PHYSICAL PLANNING PROPOSALS 88

5.1 Proposals 89

CHAPTER SIX

6.0 A REA IMPROVEMENT PROPOSAL 105

6.1 Existing situation 107

6.2 The Improvement Process 133

6.3 Services Considered 134

6.4 Proposed Design Project 135

6.5 Phasing 140

6.6 Implementation 141

6.7 Conclusion 143

References 146

Appendix 148

LIST OF TABLES

TABLE		PAGE
4.1	Bida - General Landuse	61
4.2	Priorities for Improvement	84
4.3	Determination of Extent of Blight in Bida Walled city	86
4.4	Planning Action	87

LIST OF FIGURES

FIGURE		PAGE
1.1	Conceptual framework of the research	10
1.2	Thesis structure	11
3.1	Niger State in Nigeria	36
3.2	Location of Bida Niger State	37
3.3.	Bida - Temperature and rainfall	39
3.4	Bida - Existing drainage	41
3.5	Bida walled city in relation to the Urban Area	45
3.6	Bida - Stages of Growth	46
3.7	Planning process of Indigenous Planned Urban Landscapes	49
3.8	The Structure of Bida walled city	51
3.9	The main core area of Bida	52
3.10	Hierachy of Planning Units	53
3.11	Bida - Typical Compound	54
3.12	Bida - Age and sex structure	57
4.1	Bida - The Main Wards Efuzhi	60
4.2	Poor Ventilation	62
4.3	Bida - Location of Local Industries	67
5.1	Green system	90
5.2	Proposed Improvements on Drainage Channels	92
5.3	Proposed Refuse Collection Method	94
5.4	Proposed Public Latrines for Main Activities Centres	97

LIST OF FIGURES (Contd.)

5.5	Proposed Improvements on Pit Latrines	100
5.6	Proposed New Pit Latrines	102
6.1	Bangbara in Relation to the city	106
6.2	Bangbara - General Landuse pattern	108
6.3	Bangbara - Average Daily traffic volume	112-115
6.4	Source of Water	117
6.5	Water Availability, site and quality	118
6.6	Toilet facilities	119
6.7	Bathroom and Kitchen facilities	121
6.8	Refuse Disposal Method	122
6.9	Source of Light	124
6.10	Housing conditions	126
6.11	Spatial Distribution of Building Conditions	128
6.12	Proposed Improvement Measures	136

LIST OF PLATES

PLATE		PAGE
I	The city wall	55
II	The city gate	55
III	Open air commercial activity	64
IV	Road Congestion	68
V	Burrow pit-solid and liquired waste disposal site	69
VI	Unmaintained Public refuse facility	71
VII	Toilet in close proximity to well	72
VIII	Water logged street	74
IX	Closed public tap	79
X	Lack of roadside drainage	109

CHAPTER ONE

1.0 INTRODUCTION

From time immemorial, man has always striven to create conditions of his choice in order to be able to fulfil his mental, spiritual and material needs. His continuous struggle to improve his living conditions and in harmonious co-existence with his environment can not be over-emphasized.

The rapid growth of the world's population presents a fundamental international problem of our time. The startling pace of the world-wide drift to cities and towns is a special, and perhaps the most pressing aspect of this problem. The continuous migration of people into urban areas in search of better opportunities, better living and educational facilities, or in hopes of walking the corridors of power, is giving rise to many urban problems.

Human settlements in general and cities and towns in particular are a dynamic entity; it is constantly undergoing processes which lead to changes in the physical and non-physical attributes that constitute the settlement. These forces are more or less induced by forces operating both from within and from without. Moreso, throughout the developing world, cities and towns suffer problems of expanding populations with urgent needs and lack of basic amenities.

It is thus part of the task of the physical planner to study these attributes with a view to establishing certain criteria so as to introduce measures of controlling the way and manner space is being used in human settlement. By so doing, a befitting environment for working, living and recreation could be achieved.

Bida is no exception to these wide spread of affairs. Indeed as a traditional walled city, the problems are much felt with regard to accommodating contemporary planning standards and rapidly changing technologies and mode of urban life. Even more serious, though less obvious, is the inadequacy of certain traditional forms of urban planning procedure and administration to cope with current problems.

Therefore, this research work should thus be seen as an area requiring improvement to which proposals and a specific design proposal are being made alongside administrative framework for the implementation of the scheme. It is hoped that the procedure will be useful for such other urban areas (walled cities) with similar problems and development process.

1.1 Statement of Problem:

Bida is rooted in a traditional setting. Traditional building form and urban development have reflected the tight knit extended family way of life and social requirements.

It has been an administrative, commercial and agricultural centre over the years. By virtue of its dominance and role, people from different places come to live in it. Moreso, the walled part accommodates people with different life styles. Though predominantly Nupe speaking population, other ethnic groups exists. This heterogeneous nature of the population make quite different land uses and building demands to those accepted traditionally. In addition, the contemporary Bida walled city exhibits a diversified physical, economic and socio-cultural interaction which is reflected in the physical appearance of the city fabric such as architectural designs and worshipping places, etc. More importantly is the organic development of the walled city which is in tune with the period of traditional Architecture and perception of space. This symbolises greatly the historical processes and experiences that played a role in the shaping of the city.

With the ever changing development processes and techniques, the city would now require measures to revitalize its "life", and to raise its physical outlook to be in tune with the contemporary situation. The present physical outlook is manifested in general environmental deteriotation - bad drainage system or no drainage at all, unsightly street furniture, in-sanitary environment, dilapidated structures and insufficient facilities, utilities and services.

The degenerated environmental quality of the walled city not only endangers the public health, but also is a potential haven for crimes as it has been proved beyound reasonable doubt that such environment could create in man, absurd behavioural patterns. Thus, it becomes imperative not only to arrest this situation, but also to provide a conducive environment for dignified human living and peaceful co-existence.

The problems above therefore, constitute a challenge to the physical planner whose main objective is to create and sustain a functional, well integrated, clean and healthy environment for living, working and playing (recreation).

1.2. Aim and Objectives.

1.2.1. Aim.

To study and propose an improvement scheme for Bida walled city and suggest measures by which the scheme can be achieved in a selected ward.

1.2.2. Objectives.

In order to achieve this aim, the objectives of the study are:-

(i) To appraise urban renewal as a strategy for improving urban areas.

(ii) To review and evaluate the various approaches and techniques used in the improvement of urban areas.

(iii) To study the physical, social and economic conditions of the people.

(iv) To synthesize the different physical planning problems that necessitate improvement in Bida walled city.

(v) To propose appropriate improvement scheme for the study area.

(vi) To make a design proposal for a selected ward to show how the proposals can be achieved.

(vii) To propose an administrative framework for the implementation of the proposals.

1.3. Scope and Limitation.

The scope of the study covers the investigation of the physical planning problems that necessitate improvement in the walled city. Physical planning proposals for solving these problems will be evolved. In view of limited resources, the specific design proposal will be limited only to a selected ward soas to demonstrate the appropriateness of the proposals. The design is further limited to physical planning design.

1.4 Methods of Data Collection.

Data was obtained from two main sources. These are secondary and primary sources.

Information on the physical, historical and socio-economic background of the study area was collected from secondary sources which include books and studies.

Primary sources of information include personal observation and extensive field surveys on the existing levels of facilities, utilities and services. On the extent of blight, a compound to compound survey was conducted to obtain information on type of houses, building materials, roofing materials, etc. (housing conditions).

1.5 Methodology.

1.5.1 Reconnaisance Survey.

An extensive personal observation was undertaken with a view to making inventory of existing conditions and assembling of background data of the walled city fabric. These include assessment of physical environmental conditions relating to extent of blight, drainage, refuse disposal system, road conditions, accessibility and general environmental sanitation. Maps, sketches and photographs, etc. were used.

A detailed physical survey was carried out for the selected ward chosen for design.

1.5.2 Questionnaire Administration.

Three sets of questionnaires were designed.

(i) Compound Head Questionnaire.

To obtain the spatial variation of the physical environmental problems of the walled city. 10% of total number of compounds in each ward were systematically sampled. The compound heads were then interviewed on such issues as number of households, total number of people in the compound and their priorities for improvement. Four hundred and eighty-six (486) questionnaires were administered.

(ii) Household Heads and Residents Questionnaire.

These were specifically designed for the selected ward. For the household heads, twenty (20) percent of the compounds i.e. (58) fifty-eight were systematically sampled. All the household heads in each compound were then interviewed to obtain information on popuplation characteristics, housing conditions and socío-cultural characteristics, etc.

For the residents questionnaire, ten (10) % of the total estimated population of Bangbara ward were randomly sampled. The sample size was eight hundred and thirty-nine (839). Information was obtained on such issues, as priorities for improvement, ward condition and occupation, etc.

1.6 Conceptual Framework of the Study.

The living environment of cities and towns is affected in various ways by the actions or inactions of their residents. It would therefore, appear that the first hurdle to be overcome in dealing with an environmental crisis is to become aware of the existence and magnitude of the problem, the details of it, and causes of it before the problem can be alleviated or solved.

The conceptual framework below identify and structure the general ways by which the quality of urban environment can be determined or is influenced. Consideration is given to general inputs to quality of life and an optimal urban environment.

These include physical and social inputs. In the case of the physical aspects of the environmental quality, it is human use or misuse of a naturally occuring element that renders the natural element

by which the degrading effect is spatially dispersed. For example, water is a natural element that is essential to humans, but in many cases its quality is degraded by them, in which case the water becomes a vehicle for disposal of water pollutants that largely result from human activities. In the case of societal aspects of the quality of urban life, it is human beings impairment of systems of organisation and distribution that results in inequities in provision of the basic needs of a society.

In the Figure 1.1, the various components indicates each of the various elements that determine the quality of urban environment. The various parameters of quality of urban life have also been shown.

1.7 Thesis Structure.

The thesis is divided into three major parts. (Fig. 1.2) The first is the general introduction, which contains the nature of the problem. Also the aim and objectives, scope and limitation of study, methods of data collection and methodology. It also contain review of existing literature relevant to the study and explanation of terms.

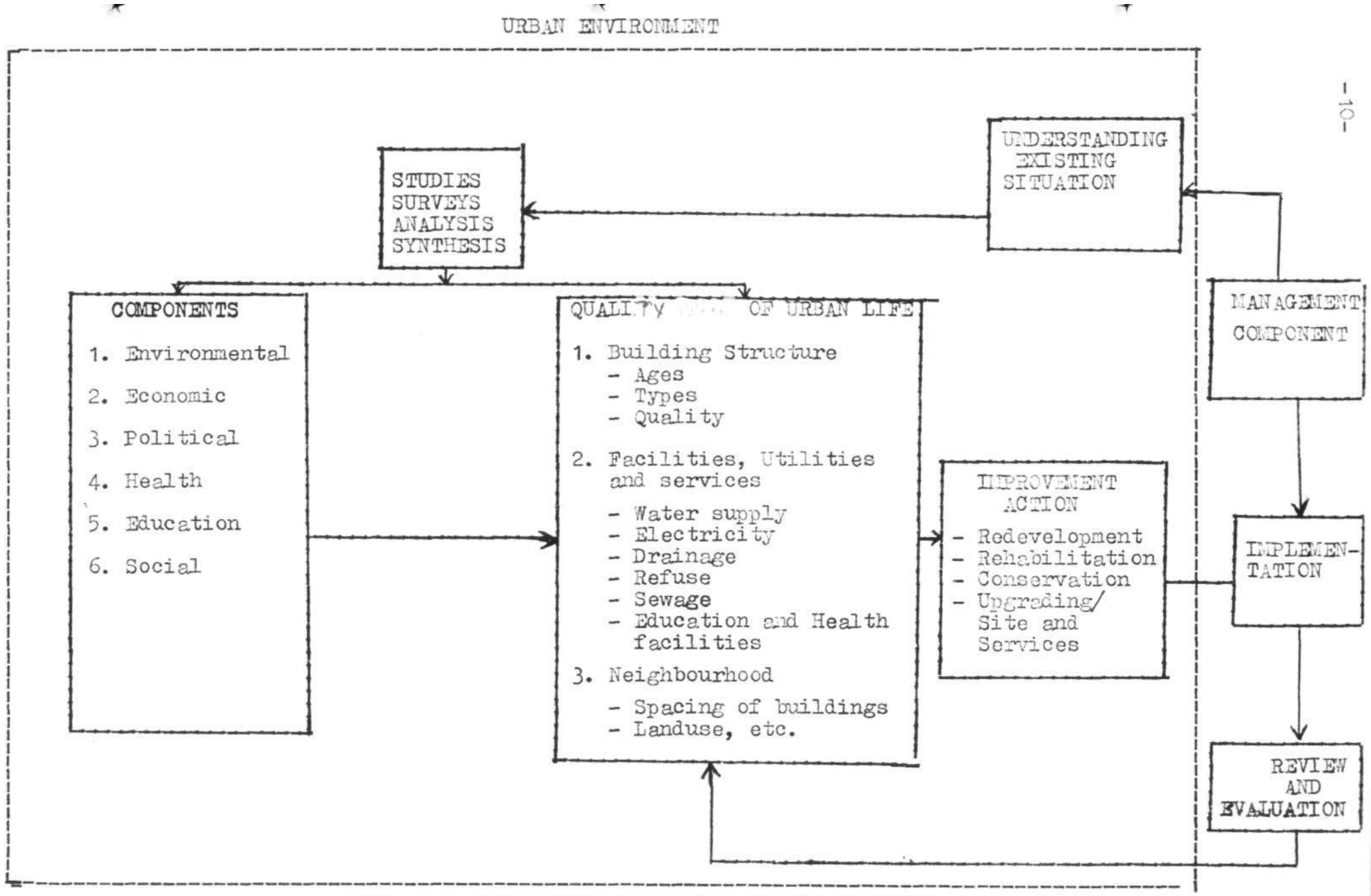


FIG. 1.1 CONCEPTUAL FRAMEWORK OF THE RESEARCH

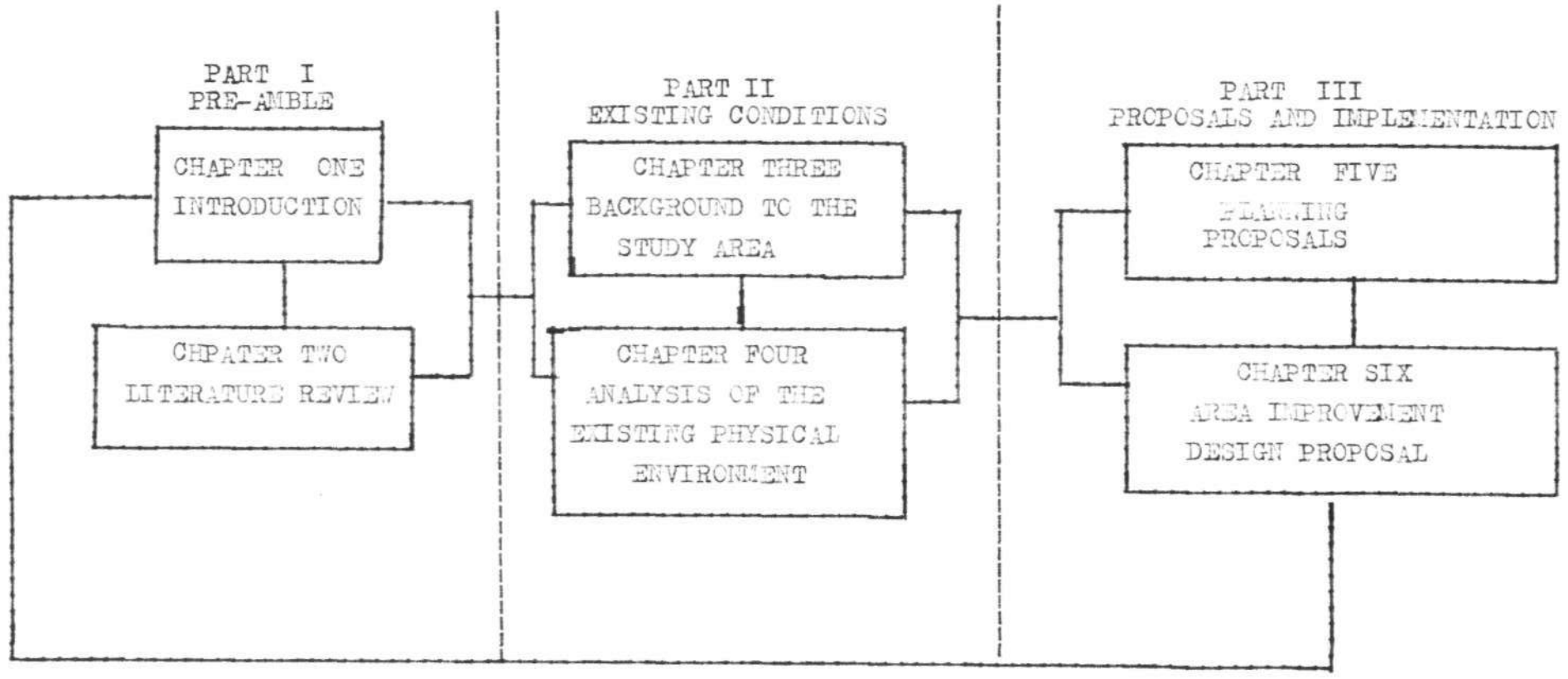


FIG. 1.2 THESIS STRUCTURE

The second part of the thesis gives the general background of the study area; which includes analysis of the existing conditions and the major problems of the city.

The third part containing the physical planning proposals, design proposal and administrative framework for the implementation of the improvement scheme.

CHAPTER TWO

2.0 REVIEW OF LITERATURE

The genesis of environmental problems particularly in human settlements cuts across physical, social and economic spheres of huamn endeavour.

Burrows (1968) simply refer to the term environment as "the surrounding ----- (of man, in relation to) ----- general comfort, convenience and aesthetic quality of the physical surrounding".

From the urban stand point, an ecological approach views man and the environment as interelating in the form of an ecosystem - the city. For an effective functioning of the city, certain demands (biological) such as water, space, shelter and waste disposal; or cultural - political or organization, economic system (including labour, capital, material, and power), technology, transport and communication, education and information and social and intellectual activities are placed on nature and man. The urban system can only be maintained with some degree of social, economic and political organization (Marcus and Detwyler, 1972). Any inadequacies in these requirements will progressively lead to marked urban environment degeneration and consequently lowering the the quality of urban life.

United Nations (1970) refer to a degenerated environment as "one in which not only the land, air and water are polluted but also one which is degrading to its inhabitants; depriving them of the opportunity to develop and utilize their full potential; denying them the minimum necessities of housing and sanitation; subjecting them to strains and stresses which cannot adapt to without adverse effect on their health and well-being; and not fulfilling their cultural and spiritual needs for repose, beauty and contact with nature".

Throughout the world, cities and towns suffer problems of expanding population, spatial expansion of buildings, traffic congestion, overcrowding, wornout buildings and insanitary environments and inadequacies in the provision of facilities, utilities and services. Variations in the quality of the built environment are a manifestation of long established and persistent inequality which stems from the economic organization of society. Market forces tend to concentrate those on irregular or low incomes in poor- quality, mainly older, areas. Obviously, improvement should be a continuous process for the effective functioning of the cities and towns.

Human societies have undertaken one form of housing and environmental improvement or other with the sole aim of improving the quality of life and liv.ability of human settlements. Abranis (1967) asserted: "Kings and

parliaments over centuries have widened streets, built parks, created new districts and made room for new rows of houses".

Overtime, various concepts and techniques have been developed towards improving housing and environmental problems of human settlements particularly cities and towns.

2.1 Concept of Urban Renewal

This is an all-embracing concept and is American in origin. The idea of urban renewal came into limelight as a result of public concern for housing deterioration in the United States. In the later years of the Great Depression of the 1930s, there arose increasing dissatisfaction with housing conditions in the United States, especially in Urban centres. In 1941 both Illi nois and New York passed laws on neighbourhood redevelopment which marked the first official action in the field of urban renewal although the term itself was not adopted then.

When urban renewal was introduced it began as a housing programme. Its antecedents were instituted in large degree to improve the welfare of the low income consumer of housing services. But later developments have altered the approach to make it more comprehensive giving more consideration to non-residential landuses as well.

The urban renewal concept has become a major force in urban environment improvement. However, there is no definite and acceptable definition as to what constitute urban renewal. One thing common to all the definitions is the base they take as the crux of the matter.

Burns (1963) defines the term as "the process by which large portion of a town say the whole city centre slowly renews itself and thereby gradually changes its character to fit into the needs of contemporary society".

Grebbler (1964) refers to it as "a deliberate effort to change the urban environment through planned, large-scale adjustment of existing city areas to present and future requirements for urban living and working".

The United Nations (1970) defines it as "a system for preventing the premature obsolescence of urban neighbourhood and facilities, it involves restoration of urban areas as well as the recreation of wornout areas".

Chapin, et al (1979) were of the view that "it is the form of recuperative change in the physical city by which the outworn or out moded structures and facilities and in time whole areas are altered or replaced in response to pressumes of economic and social change".

Thus urban renewal incorporates planned interventiion in economic regeneration and employment provision, as well as the long established preoccupation with housing and

environmental conditions. It should therefore be conceived as a comprehensive activity designed to counteract functional obsolescence of the urban structure as a whole and of parts and elements of it, and to revitalize continually all elements and parts of the urban area.

The term is used in a generic sense to encompass all these aspects of interventions. It comprises of three kinds of activities which include redevelopment, rehabilitation and conservation/preservation. In 1958, the International Federation for Housing and Planning stressed that "urban renewal can be effective if only the three activities above are conceived as part of a combined operation with respective activities undertaken simultaneously, as may be appropriate in the various parts of the city or town".

2.1.1. Redevelopment Approach.

Burns (1963) argued that "redevelopment is taken to mean the process which involves the clearance of property and the building of new structures according to a definite preconceived plan with a layout different from that of the area before the redevelopment was undertaken".

This involves wholesale acquisition and clearance of the physically worst areas of a town and then replan and rebuild completely as on a green field site. Critics have dubbed this as the "bull-dozer" approach to slum clearance. Usually, this takes place in slum areas which have generally unhealthy conditions, with majority of the houses unfit for human habitation, and gross inadequate utilities, facilities and services.

Manzoni (1955) asserted that:

------- the object of redevelopment, if it is to be successful, is to bring back an obsolete district to a high standard and this can only be achieved if the whole layout is changed with the provision of new roads, open spaces, and good shops, proper zoning, and all the amenities of a new and up-to-date development; to rebuild a few groups of houses in an already dingy setting will never do this - the whole area must be new and it must look completely different.

Many cities and towns have been subjected to this approach, partly as a re-assurance of complete slum clearance. Solutions to redevelopment problems must vary from place to place and from time to time, but we can learn much for the future by considering schemes of the recent past, and trying to understand their ideas, their mistakes and their lessons.

In Britain for instance, it was not until the end of the second world war that a policy of large-scale comprehensive redevelopment was established. However, the redevelopment scheme was limited to war damaged city centres and other blitzed areas. In the 1930s Leeds became noted for a rigorous slum clearance drive. The only major clearance project was West Street which was delayed through cost and procedural problems. Other redevelopment schemes include central part of Bristol, Coventry city centre and Birmingham, etc.

In other parts of the world both developed and developing countries, redevelopment have been/is being applied also on piece-meal basis. Among these are redevelopment of Rheims (France) which was badly damaged during the first world war. Others include redevelopment of central areas as was done in Warsaw (Poland) in 1945, the Anderston Cross district of Glasgow (Scotland), Tel Aviv (Israel) in 1962 and central shopping area of Stockholm (Sweden).

In Nigerian context, the approach has been employed to clear slums in Lagos, under the Lagos Slum clearance scheme, undertaken by the Lagos Executive Development Board (L.E.D.B.) in 1951. The approach was also applied to squatters' settlements along the western bye-pass of Kaduna town by the Kaduna Capital Development Board (K.C.D.B.) in 1977. During the period of 1973 - 1975 the Apongbon area

of Lagos Island was cleared of poor housing to make way for overhead bridges which the then Federal Government thought would help to ease traffic congestion to the Lagos Island Business Centre. In 1984, the then Federal Government of Nigeria embarked on mass clearance of what it termed "illegal structures" in the urban areas of the country.

This approach would appear at first sight to be the simplest way to urban improvement. However, there are a number of serious disadvantages especially with regard to traditional walled cities and towns of the world. In the context of the walled cities such a scheme could only be financed by public sector investment. The administrative procedures and compensation assessments can be expensive and time consuming. The money invested in acquiring the property is tied up and remains non-revenue earning until the sale or rental of the completed development. The development - being by definition completely new - requires a high level of investment in cash and manpower.

Traditional walled cities and towns in general because of their long and complex land tenure and cultural traditions, the approach may prove to be politically unacceptable at any price to the society and its many component individuals threatened by demolition and resettlement. The break up and disposal of these societies

by wholesale clearance can cause great financial and social hardship to the displaced persons especially at this time of economic reconstruction. Citizens to be affected by clearance are never involved in the operations and administration, neither are they allowed to air their views concerning the whole area of such an exercise.

Redevelopment is now out of fashion and a major justification for this change of approach is the argument that it involves 'massive and unacceptable dis ruption of communities' (HMNSO, 1973).

2.1.2 Rehabilitation Approach.

According to the United Nations (1970), rehabilitation connotes "the restoration of an area or buildings (that are structurally sound, but particularlly deteriorating) to their original functions or new one, and the provision of necessary facilities and services.

Burns (1963) defines it as "the process of putting existing buildings or existing areas) development back into a worthwhile state after they have become outdated and unsatisfactory".

Adepoju (1972) refers to it as "physical environment improvement at both the micro and macro levels". He further stress that at the micro level, the term refers to "the environment upgrading on an individual housing unit basis.

In this case, the defective houses are repaired, some are plastered and repainted, windows are added and cleanliness and good sanitation are promoted among households".

At the macro level, the term refers to "the process of neighbourhood revitalization through the removal of the worst houses, the repairing and construction of streets and the addition of parks and other spaces".

This approach therefore emphasizes the improvement on the state of the environment by rehabilitating blight structures and other facilities and utilities without outright demolition. Buildings are given face-lift when blighted, and their structural stability improved upon. Facilities and utilities are given such improvement where they are wornout.

The approach therefore accepts the existing buildings, land ownerships and infrastructure and improves them by a range of administrative, legal and financial investment policies. It is applicable to areas in which some degree of loss of original function is making itself seriously felt; or in which there are conditions that are likely to cause a deterioration of opportunities for sound economic activity or satisfactory living conditions, or in which buildings, though generally are structurally sound condition, have deteriorated because of neglect of maintenance.

This approach was introduced in 1949 in Britain when it was thought that the funds available for urban renewal could not be used to completely wipe out slums. This was the case with London and Birmingham, where, without major structural alterations, outdated properties take on a new lease of life.

The approach was also employed in a pilot study of Shahpin area of the old city of Ahmedabad in India.

Zubair (1980) in his unpublished research work, applied this method and made proposals and recommendations for the improvement of old Minna Township.

The approach also has its difficulties and particularly so in the congested parts of the traditional walled cities where much ingenuity and time will have to be spent in achieving the desired goals with minimum disturbance. Much experienced manpower will be needed to implement any such improvement scheme and to carryout varied negotiations with owners, landlords and tenants in order to achieve the most satisfactory method to individual compound and environmental improvement. In addition, the process of improving dilapidated structures never ends. Infact, it tends to be cummulative as more and more buildings need improvement as time rolls by.

However, the advantages of this methods far outweigh its disadvantages discussed above. It is selective in that the scheme only affects those most in need and creates

a unique opportunity for grassroots public health education. It relies on a system of helping people to help themselves to a healthier and better environment. Furthermore, the approach causes the least physical and social disturbance to the people and is likely to strengthen the sense of community which all too often is destroyed in the process of urbanization.

2.1.3 Conservation.

United Nations (1967) defines it as "the preservation of buildings, monuments, or landmarks in good physical condition due to their historical architectural and aesthetic values".

Conservation is applicable to areas generally suited for their function and of sound quality, in which buildings are being kept in good physical condition by means of proper maintenance (including repairs and replacement) and to areas of a great historical, cultural, or architectural value.

It consist in general of the protection of the quality of such areas by preventing the occurence therein of all kinds of conditions that have resulted in deterioration and obsolescence in redevelopment and rehabilitation areas.

2.2 Concept of Upgrading/Site and Services

There is no generally agreed definition of upgrading. World Bank Report (1979) define upgrading scheme as "intervention by government to speed up and coordinate the normal spontaneous process of urban improvement, by providing at least sufficient basic infrastructure to enable individuals to further improve their living conditions on their own initiative". Upgrading schemes are primarily concerned with improvement of conditions in the commonly held or public parts of an area.

The objectives of 'upgrading' and site and services' according to the World Bank Report (1979) are:

(i) To ensure that a town grows sufficiently to accommodate the growth in its population.

(ii) To ensure that housing conditions within the scheme are at least as good as the average of the town as a whole.

(iii) To ensure that the schemes are carried out at minimum cost and are therefore affordable by the low income group.

(iv) To ensure that the population displacement is minimized.

(v) To retain investment in housing stock and maintaining and developing the economic and social fabric of the community concerned.

In general terms, there is distinct variation in the application of the upgrading concept. On the one hand, it involves the upgrading of housing units and on the other hand, it deals with the provision of sufficient public facilities, utilities and services where they are absent and maintaining the ones available but not functioning well.

The former is used to upgrade slums and squatter settlements. Parry (1980) ascetain that "the approach was used by the United States of America Save the Children Federation in Colombo Sri Lanka". The main purpose of the approach is to tackle the much broader objective of physically upgrading shanty settlements housing while at the same time providing income and employment for the inhabitants but with the vital ingredient of apply only a level of basic resources which should be within their capacity to sustain.

The later is employed by the World Bank to improve urban areas based on the definition and objectives highlighted above. The Bauchi and Imo States upgrading/site and services scheme which are being financed by the World Bank under the Nigerian States Urban Development project (NSUDP) is limited to this approach.

The Bauchi scheme which commenced in 1980 was expected to cover a target population of 50,000 people. The scheme which was expected to provide both physical and social infrastructures include the provision of 2100 site and services. Plots in 120 hectares of vacant land in Makama area of Bauchi town. It also included the upgrading of 140 hectares of adjacent build-up area and infilling of 73 hectares.

The scheme has acheived some degree of success. For instance, it has acheived 100% success in the provision of serviced sites in Makama and also in the construction of schools, health centres and road/drains but in the sites only the road is poorly constructed. However, the scheme has some problems such as land acquisition, inadequate and irregular funding and incompetent and inexperienced contractors among others.

Both the approaches of upgrading/site and services concept when combined together is aimed at alleviating the suffering of the urban poor who form the bulk of city dwellers. It is therefore user oriented as it takes every aspect of the residents into consideration. It is very flexible and can be applied anywhere with some adjustments to suit different socio-physical environments. Moreover, the people are involved in the programme and that the financial burden is shared between the participants. The concept

has minimum level of dislocation. In otherwords, it is an approach which acknowleges the initiative and ingenuity of the urban poor and therefore tries to build on his energy to better himself. As currently being practiced in Nigeria, the upgrading/site and services concept lay less emphasis on housing improvement. Emphasis is being focused on provision of at least sufficient basic infrastructural facilities which allow individual to further improve their living conditions on their own initiative.

The main weakness of this concept especially in developing countries is its emphasis on the later approach. This entails an uncomprehensive improvement scheme which often lead to unsatisfactory area improvement.

2.3 Concept of Urban Blight.

The term "urban blight" often is used interchangeably with slum, but there appear to be differences between the two terms. While slum has both physical and social connotations - a particular social group occupying a discrete housing setting, blight is a somewhat less inclusive term, refering to physical characteristics of urban housing more than to the social characteristics of the occupants of such housing.

Breger (1967) states that "urban blight desgnates a critical stage in the functional or social depreciation of real property beyound which its existing conditions or use is unacceptable to the community". The major concern therefore, is the functional depreciation of real property (loss of productivity of the area involved).

Chapin (1972) view blight as "the premature absolescence and the physical deterioration of large areas; it implies the existence of deficiencies in the quality of structures and their environment".

The concept of blight can be extended to non residential areas, since they too can experience a lowering of functional attributes and values.

The degree and extent of blight determines the type of action to be applied. Thus different techniques to assess the degree of blightedness are applied in Britain and United States of America. In all cases some standards are set such as building conditions, housing densities, sanitation, street pattern, general environmental quality and availability of public facilities, utilities and services, and blight within an environment is measured against these standards.

2.4 Techniques of Analysis of Urban Blight.

2.4.1 Rough Screening Method.

This method identify's blightedness by examination of three factors namely (i) structure of plumbline (ii) deteriorating roofs (iii) Roofing and building materials. Other factors taken into consideration by this method are overcrowding, nuisance, poor maintenance and traffic hazards.

The procedure is such that a quick reconnaissance survey of the area is done and areas with serious conditions of blight as well as those which show marginal or no degeneration are noted. Housing conditions and levels of facilities, utilities and services are examined to determine their adequacy. An assessment of environmental conditions is then conducted. Based on the findings, final classification is then carried out to determine the level of blightedness in the different sectors of an area.

Levels of Blightedness		
First	Second	Third
Redevelopment	Rehabilitation	Preservation/ Conservation

The method is rough and the degree of roughness depends on the situation. However, it is quick and simple.

2.1.2 Multiple Index Method.

This method is based on consideration of variables namely household income, structures in poor condition, water supply, electricity, latrine, kitchen, occupancy ratio, etc.

The procedure is such that the percentage for each variables are worked out and then compared with a base value considered to have met minimum standard of living. For each area of study, the index is calculated using the ratio observed value and base value multiplied by hundred. The procedure is then repeated for other variables.

$$\text{Index} = \frac{\text{Observed Value}}{\text{Base Value}} \times 100$$

The greater the observed value to the base value, the poor the condition of the factor. The index values are totaled and divided by the average of the weight value. Zones are then categorized into degree of blightedness.

Degree of Blight and Planning Action

Degree of Blight	Score	Possible Planning Action
First order Blight (High Blight)	80+	Redevelopment
Second Order Blight (Moderate Blight)	75-80	Rehabilitation
Third Order Blight (Bligh Just Setling in)	70	Conservation

This method is more refined and detailed and best applied to residential renewal. However, it is cumbersome and time consuming.

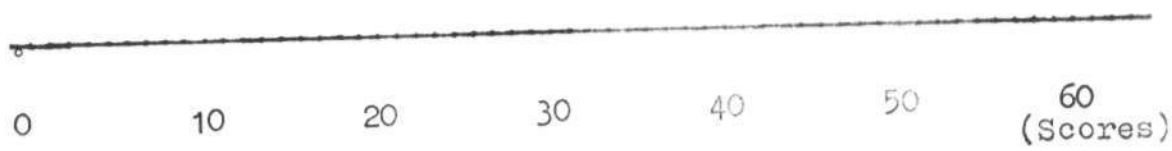
2.4.3 Weight and Exponent Method.

This method is based on consideration of variables such as building condition, overcrowding, facilties, utilities, and services, sanitation etc.

Weights are assigned to these variables based on the residents priorities of the zones. Scores are then assigned to all criterias ranging, for instance from 5 to 1 for all zones. Total weight scores for all the zones are then obtained. The

total weight score of each zone are then put on a scale to determine the type of planning action the zone required.

Scale



30	31 - 50	51 and above
A	B	C

Degree of Blightedness

Degree of Blight	Scores	Possible Planning Action
A. Very Bad Condition (Extreme Blight)	≤30	Redevelopment
B. Deterioration Started But not detrimental (Moderate Blight)	31-50	Rehabilitation
C. Deterioration Beginning (Slight Blight)	51 and above	Conservation

This method is also more detailed and reduces element of subjectivity. It has element of public participation and can be applied to residential improvement. However, it is also cumbersome and time consuming but relatively simpler than multiple index method.

CHAPTER THREE

3.0 BACKGROUND TO THE STUDY AREA

3.1 Physical Characteristics.

3.1.1 Location.

Bida is on latitude 9°06'N and Longitude 6° 01'E on the Nupe sandstone formation (Fig.3.1 and 3.2). It is located 19kms east of River Kaduna, along Mokwa - Bida road and about 84kms south-West of Minna the Niger State Capital.

The town is situated in a valley and uses stream tributary of Gbako River.

3.1.2 Climate.

A typical middle belt town, Bida experiences distinct dry Yikere and wet Zunzu seasons. The wet season which lasts for about 200 days starts from April to October. Average rainfall is 1227mm with July and September recording the highest rains of 226.3mm and 248.8mm respectively. The weather at this time is humid.

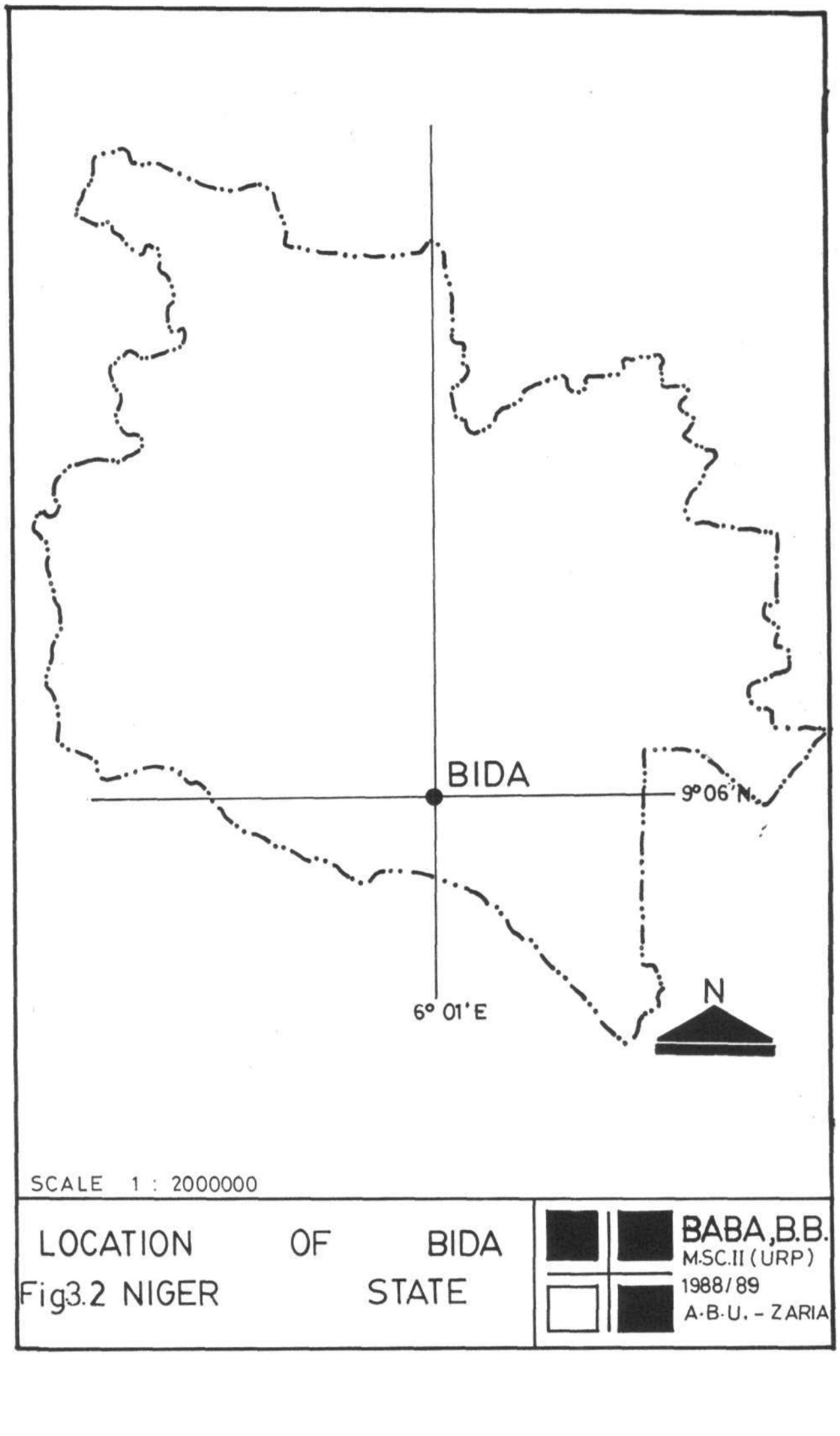
The cold harmattan winds usher in the dry season which gradually becomes hot between March and May, just before the rains set in.

The monthly temperature is highest in March at 31.1°C and lowest in August at 26°C. Bida is thus blessed with moderate climatic condition throughout



Fig.3.1
NIGER STATE IN NIGERIA

BABA, B. B.
M.SC.II(URP)
1988/89
A. B. U -ZARIA

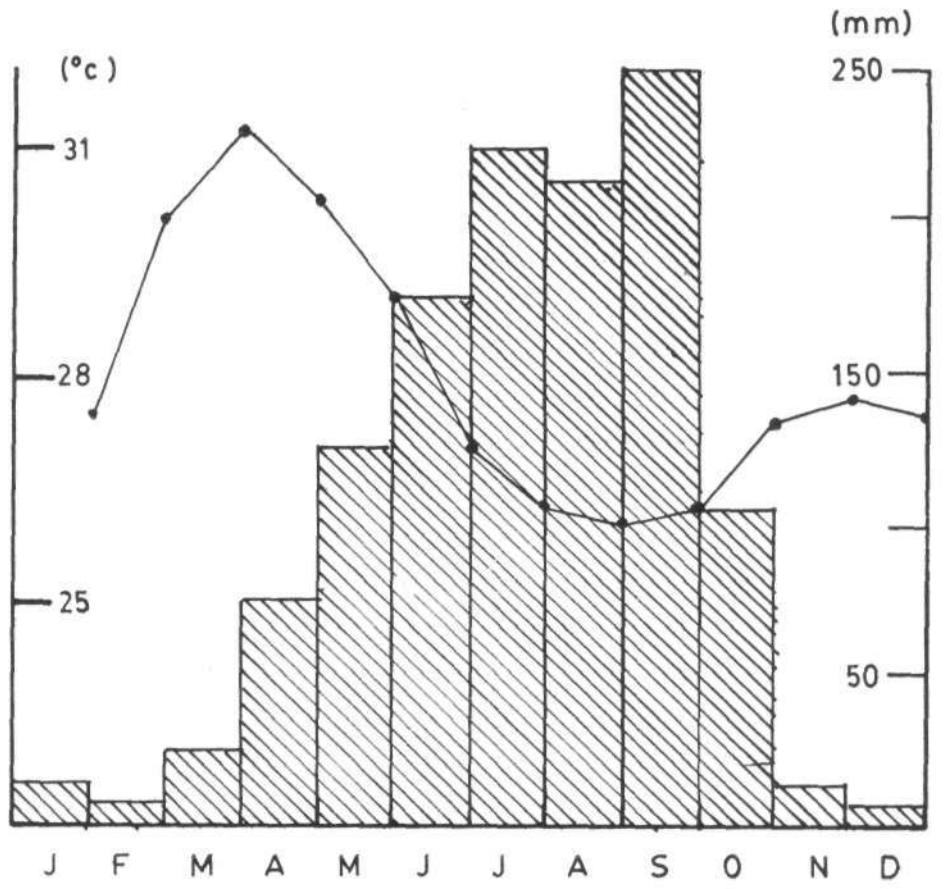

BIDA
9° 06' N.
6° 01' E
N
SCALE 1 : 2000000
LOCATION OF BIDA STATE
Fig3.2 NIGER
BABA, B.B.
M.SC.II (URP)
1988/89
A·B·U. - ZARIA

the year (Fig.3.3). But large temperature and humidity fluctuation could cause thermal movements in building. And unless proper expansion joints are made this could cause structural failure. Also some materials like timber do not resist large variations in moisture content without sustaining either structural or aesthetic damages. As such, unprotected timber should never be exposed.

3.1.3 Vegetation.

The whole area lies in a natural vegetation known as the northern Guinea Savanna. This zone is characterised by a predominantly grassland with trees and shrubs scattered here and there. Due to population concentration of this zone (from a long time back), human activities have profoundly modified local vegetation at places. The local vegetation of Bida shows high height grasses which has been shortened in many places by seasonal bush fire. Tree species predominantly Parkia filli Coidea (locust bean tree), Mangifera indica (mango tree), Azadirachta indica (Neem tree) and Sheabutter tree.

Most of these trees species could grow to a substantial height if they are guarded against bush fire and drought and could be used as weather shields and landscape elements. With development of forest reserves, plantations and nurseries; new species have been planted in most places with success.



SOURCE : Kowal and Knabe, 1972

Fig.3.3
BIDA - TEMPERATURE RAINFALL

BABA, B. B.
M. SC(URP)
1988/89
A. B. U - ZARIA

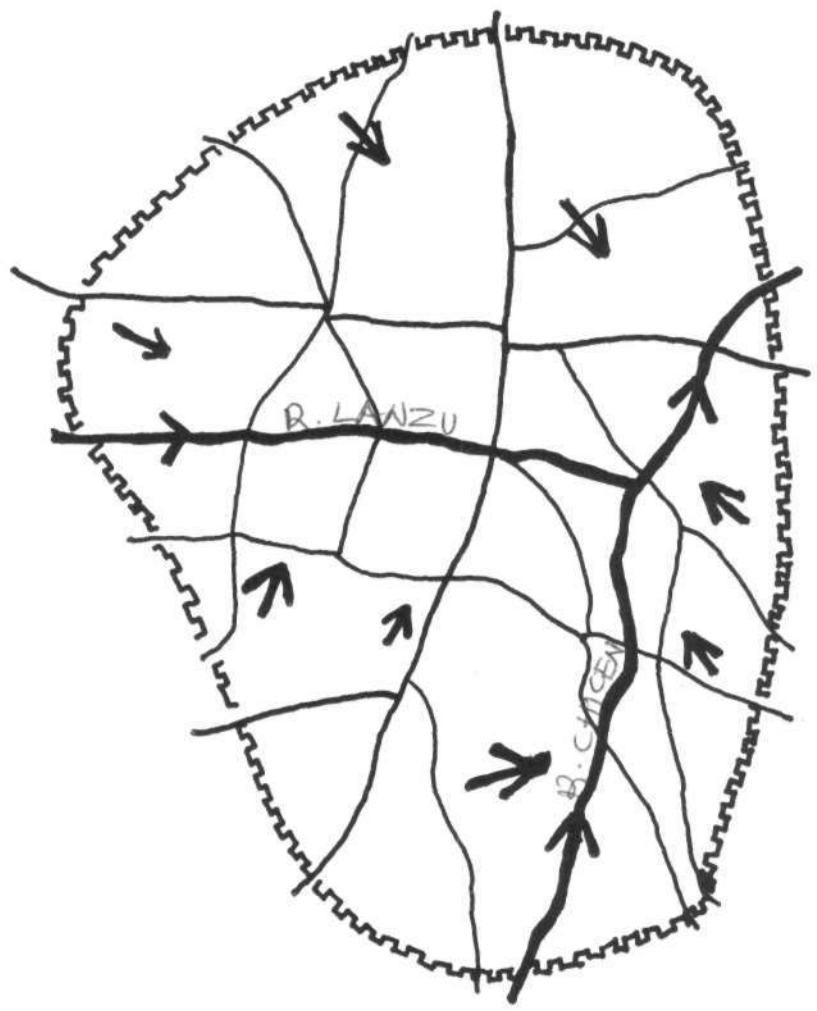
3.1.4 Relief and Drainage.

An area of hills and valleys occurs some three to four kilometres west of the present built up area. Occasional small steep mesas rise 20 to 25 metres above the well drained gently sloping lands between valleys.

Most gradients are around 1:40 rarely steeper than 1:20 except at the base of the mesas and along the edges of the valleys north and south of the town. The southern valley does not pass as far to the west as the northern one which forms a complete boundary from the western hills to the Gbako River (Bida Master Plan, 1980).

The scenery is fairly uniform since lithology and rock structure are not greatly variable. An important feature of the scenery is the existence of large areas of fadama.

The town is drained by the Chicen and Mussa streams with the third stream Lanzu which flows right acrosss the heart of the town (Fig.3.4). The importance of these streams is that they provide good irrigation opportunities for the inhabitants. Thus, they are both economic and social importance.



SCALE 1 : 16000

SOURCE : BIDA MASTER PLAN

Fig.3.4
BIDA EXISTING DRAINAGE

BABA, B. B.
M.SC(URP)
1988/89
A.B.U - ZARIA

3.1.5 Geology and Soil.

Bida lies within the Basement complex and the Nupe Sandstones formation. The former comprise coarse sands or sandy clays and the later comprise essentially horizontal beds of weakly cemented clays, siltstones and sandstones.

The soil in the area is made up of unpland soils and depositional soils. The upland soils overlie thick sandstone and the major part consists of gently undulating plains with very deep soils. Most soils were classified as ferrisols which normally occupy the higher elevations of the terrain and at lower levels (steep slopes pass into ferruginous tropical soils which in the valleys are replaced by weakly developed soils of depositional and hydromorphic soils).

Soils in the depositional areas are weakly developed alluviums or hydromorphic soils.

3.2 Historical Development.

The legendary foundation of Bida, which cannot be dated, is ascribed to three sources. Which ever be the true origin, Bida started rising slowly from a collection of huts to become a village and from the status of a village to become a town. The development activity responsible for the growth of Bida was its role as an agricultural, commercial and administrative centre for several decades.

The rapid physical development was however, as a result of the conquest of Bida by the Fulani in the later part of 18th century (1860). The town today has spread well beyound the traditional walls. Development within the walls has become more dense as farmlands have been built over with houses. Traditionally, the Nupe compound is highly developed with little free yard space left within the compound walls.

Bida is a town of contrasts with a compound and crowded core where trade and traffic and people compete for the little space left undeveloped and the outer areas where all the major institutions have been located often on extravagantly large and undeveloped sites structuring out along the four main roads leading from the town.

Essentially, Bida is a cross roads town functioning as magnet to all its surrounding sub-regions. It has been the centre of investment, both government and private, over the years. Institutions such as the Gbako Local Government Secretariat , the Wadata Official Palace, the Prison, the Hospital, the Works Yard and Government College are long established. These were all built in and immediately around the traditional town. A small G.R.A. was laid out on top of the hill to the south-west of the town and the Catering Rest House developed there. An air-strip along was built to the north-east and a commercial area set out along both sides of Zungeru Road immediately to the north of the walls.

Following this early development, Bida became the centre for much eductional investment. The Government Technical School, the Staff Development Centre and the Government Science Teachers' College were built in the 1960s out to the south-east of the town. More recently, the Federal Government has invested in a Federal Government Girls College well to the north off Zungeru Road and the Polytechnic off Doko Road in the south-west (Fig.3.5). Other major Federal Government investments have been the Army Barracks and the two housing schemes along Badeggi and Wuya Roads and the most recent scheme south-west of the G.R.A.

Bida has developed over a long period which can be delineated into three stages based on the physical characteristics and socio-cultural undertone of each growth (Fig.3.6). Within the city wall, it grew concentrically around the three cores outwards in various direction. Development outside the city wall have been located often on extravagantly large sites with the numerous modern residential houses springing up.

3.3 The Indigenous City Fabric

3.3.1 Urban Form and Structure

Varied opinions abound as to the meaning of form and structure. Among such, Lynch (1960) argued that "form" means the following types of city image - paths, edges, districts, nodes and landmarks while

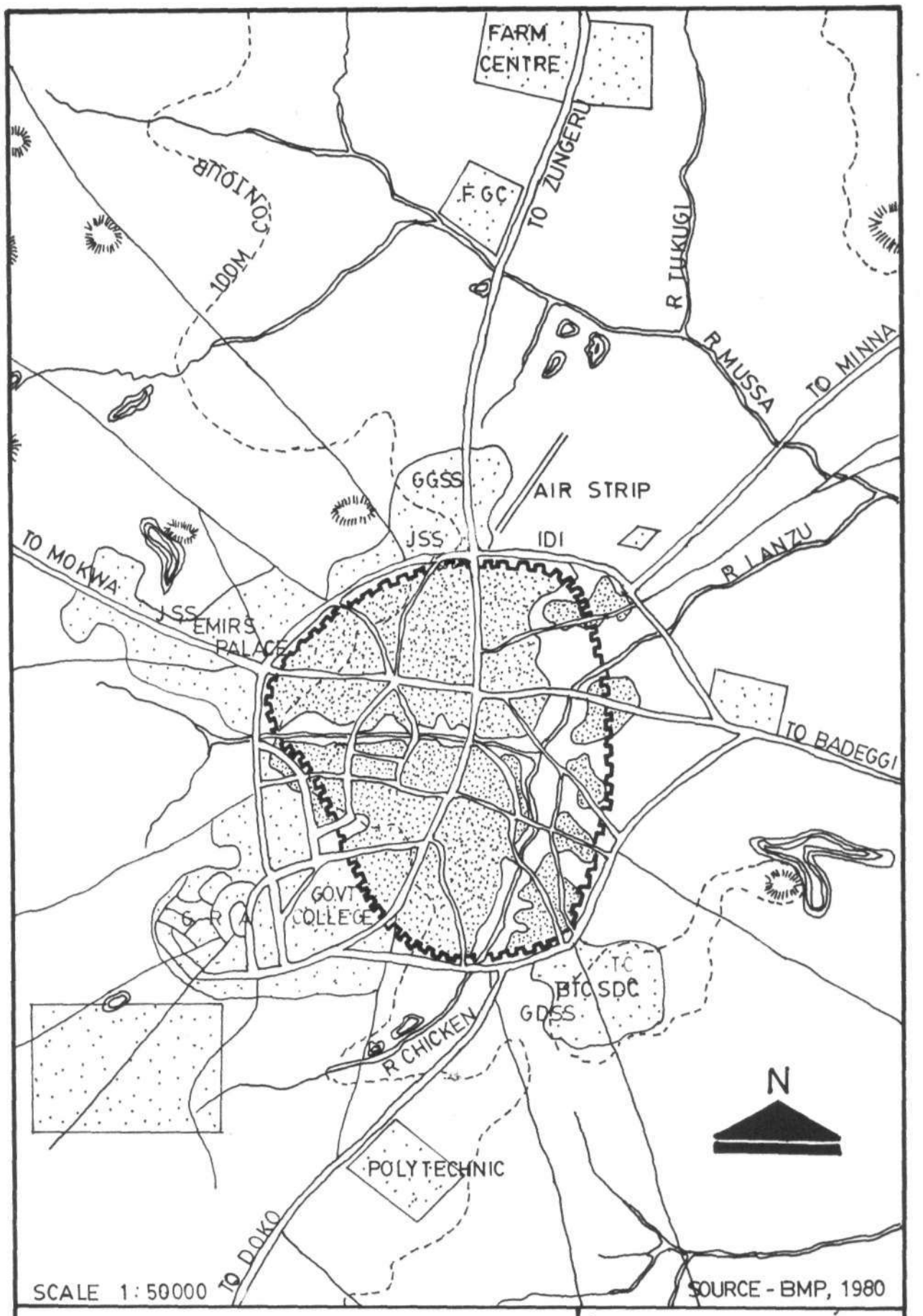
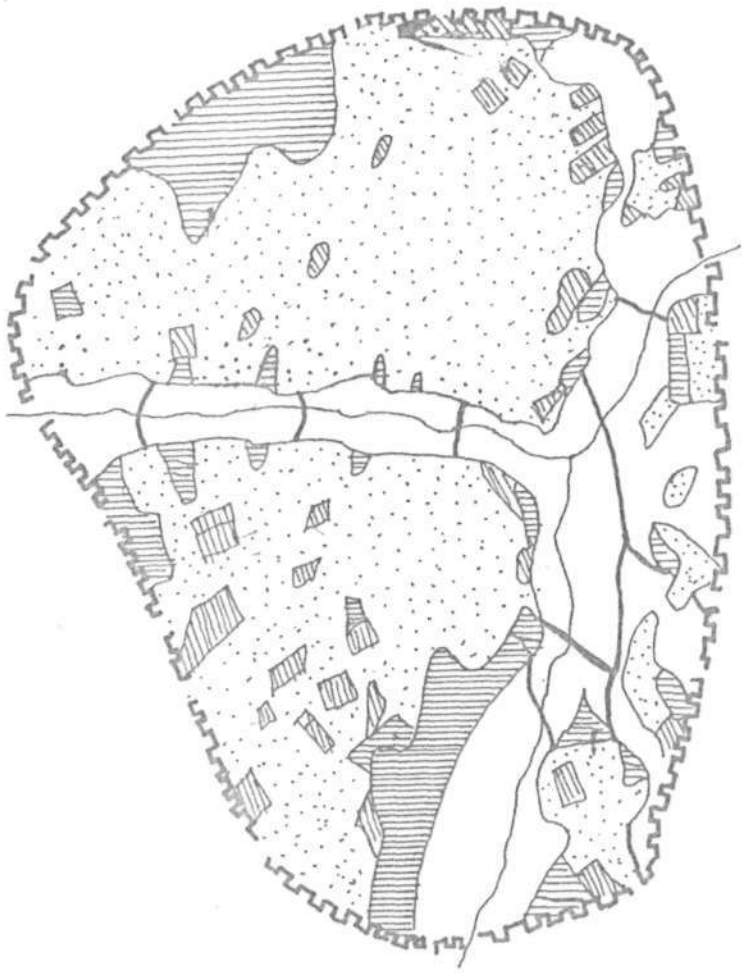


Fig.3.5 BIDA WALLED CITY IN RELATION TO THE URBAN AREA

BABA, B. B.
M SC(URP)
1988/89
A. B.U - ZARIA



PRE 1962

1962 - 1973

1973 PRESENT

ROAD

RIVER

N

SCALE 1 : 16000

SOURCE : BIDA MASTER PLAN, 1980

Fig.3.6 BIDA - STAGES OF GROWTH

BABA, B. B.
M. SC (URP)
1988/89
A. B. U - ZARIA

"structure" means spatial or pattern relations of the objects to the observer and to other objects. The form of the cities is therefore moulded by physical, socio-cultural, economic and technological forces. For any cultural group at any point in time maintains a unique pattern of the prevailing various forces. The interaction of these variables have unique spatial expression on the various city's landscape.

Bida w alled city may be viewed as a unique planned landscape," "------ 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 ----" (Urquhart, 1977).

The people involved (Over the long history) in the determination of form of this city have been able to meaningfully and effectively communicate between them; and the individuals contribution stood in direct relationship to the city's form, since they were bound by common traditions, technology, need and warfare means for protection, transport, and religion, within a bureacracy led by the Emir.

The present day Bida operate within social frameworks set by traditions, and codes that are carried over from eras, and also live and function within elements of urban forms originating from those earlier eras. The contemporary slight variations in details of the form and structure of the city particularly since the British colonial experi-

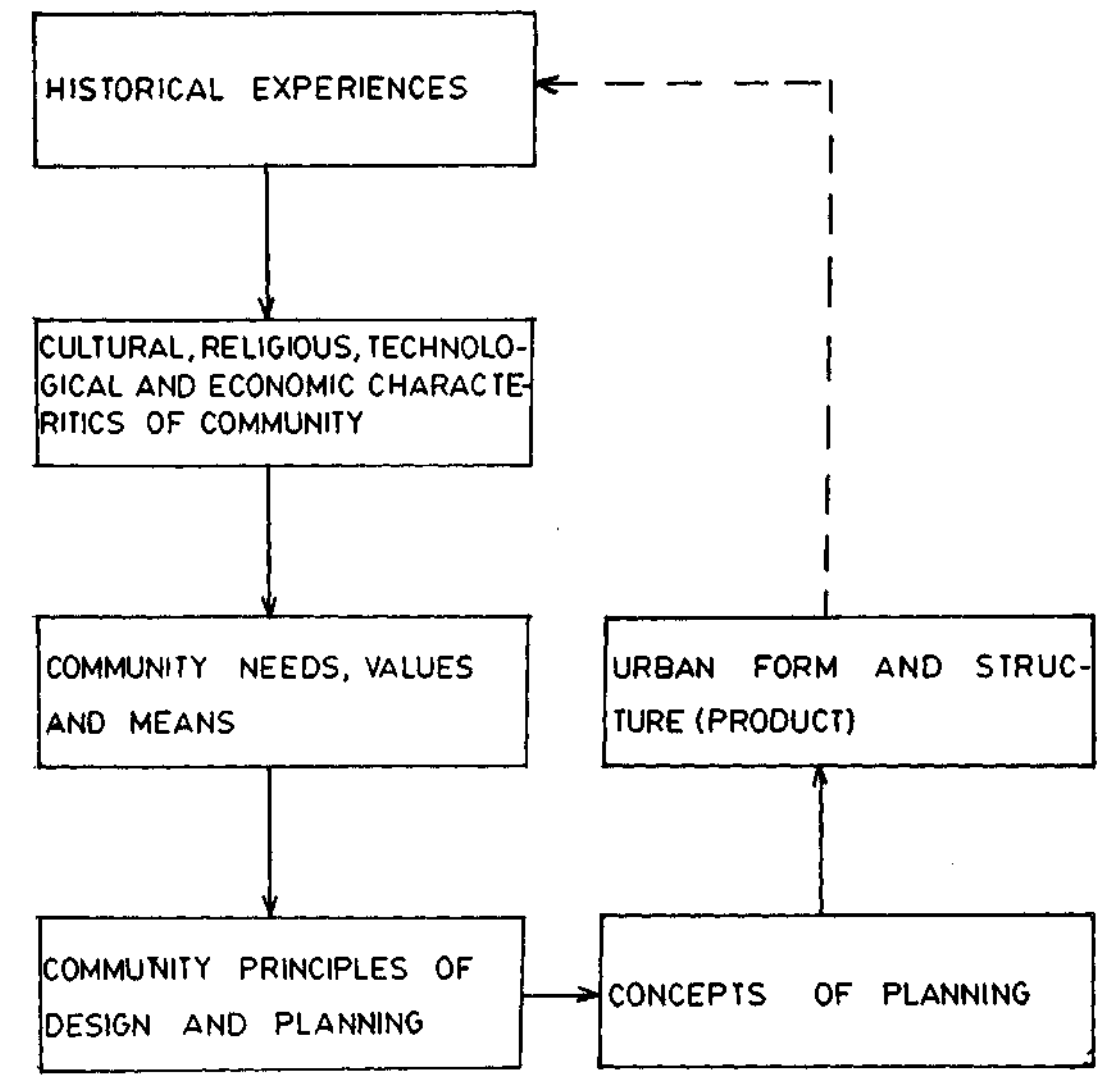
ence are due to the uniqueness of individuals, cultural groups, ideas and functions.

Hence, it is essential to understand what the indigenous 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. A clear concept underlying the design structure could then be perceived to set in motion the involved process of city building, rebuilding, and improvement and preservation of the city image and identity.

3.3.2 The Indigenous Planning Process.

It was the historical development that spelt out the cultural, religious and technology 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 Figure 3.7.

The structure of a city is a product or a function of various interacting factors and Bida is not an exception. The structure of Bida is made up of three dominant functionally related sub-structures. These include the three core, the residential sector and the network.



SOURCE : KALTHO, J. B. (1982)

Fig.3.7 PLANNING PROCESS OF INDIGENOUS PLANNED URBAN LANDSCAPES

BABA, B. B.
M.SC(URP)
1988/89
A. B. U -ZARIA

In the core are the Palace, the Mosque and the market (Fig. 3.8 and 3.9) performing specialized, distinct functions but yet related.

Surrounding the core is the residential sector made up of hierachy of planning units called efu ward, emi compound and gwala cluster of housing units or sections (Fig.3.10) each with its own leader or head. In Figure 3.11 is a typical Nupe compound. These various units are sustained and maintained by certain internal cohesive forces like kinship ties, occupational, social and economic interdependence.

The residential sectors depend largely on the core for their basic economic, political and cultural needs which are expected to be accessible to all parts of the residential sector.

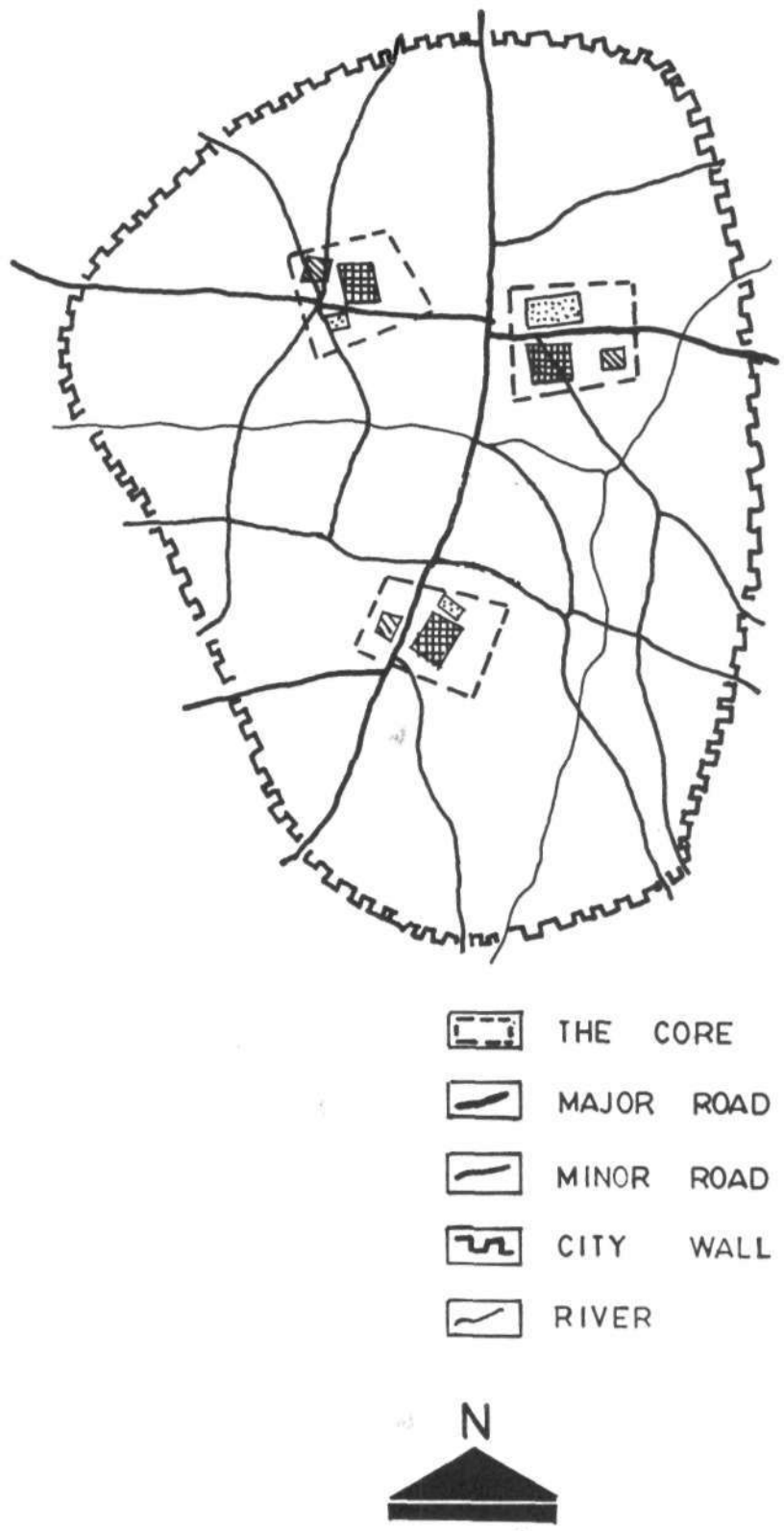
In addition to both the core and residential elements, network of roads and paths originating from the residential areas converge on the core.

The traditional city have been enclosed by a very high and extensive wall which can still be seen today (Plate I). This wall was estimated to have measured (19km) in circumference. The city gates are located at strategic places (Plate II).

3.4 Human Characteristics.

3.4.1 The People

Bida is a cosmopolitan town. The majority of the inhabitants are Nupes and Moslems by religion.



SCALE 1 : 16000

SOURCE: FIELD SURVEY, 1989

Fig.3.8 THE STRUCTURE OF BIDA WALLED CITY

BABA, B. B.
M.SC (URP)
1988/89
A. B. U - ZARIA

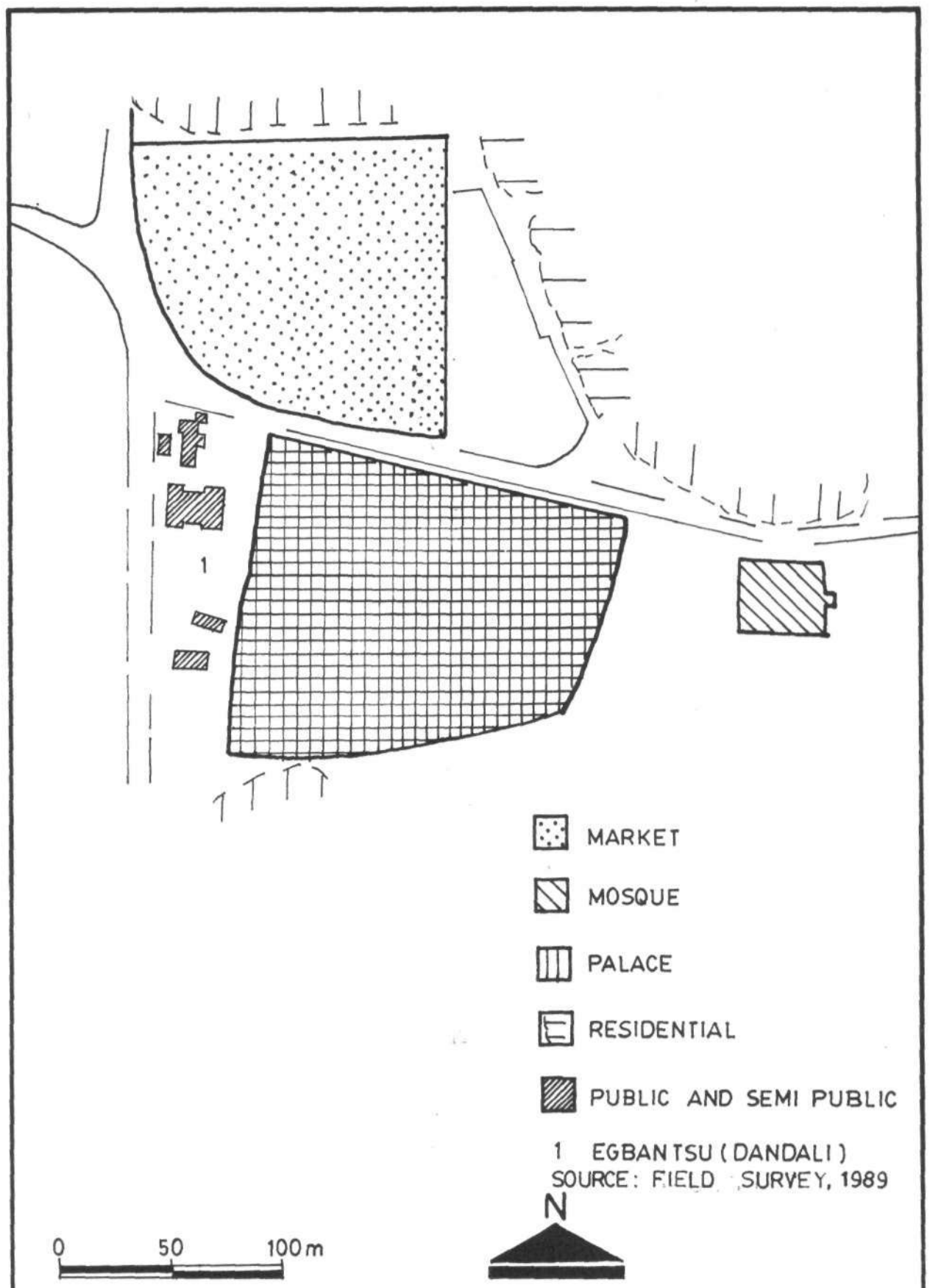
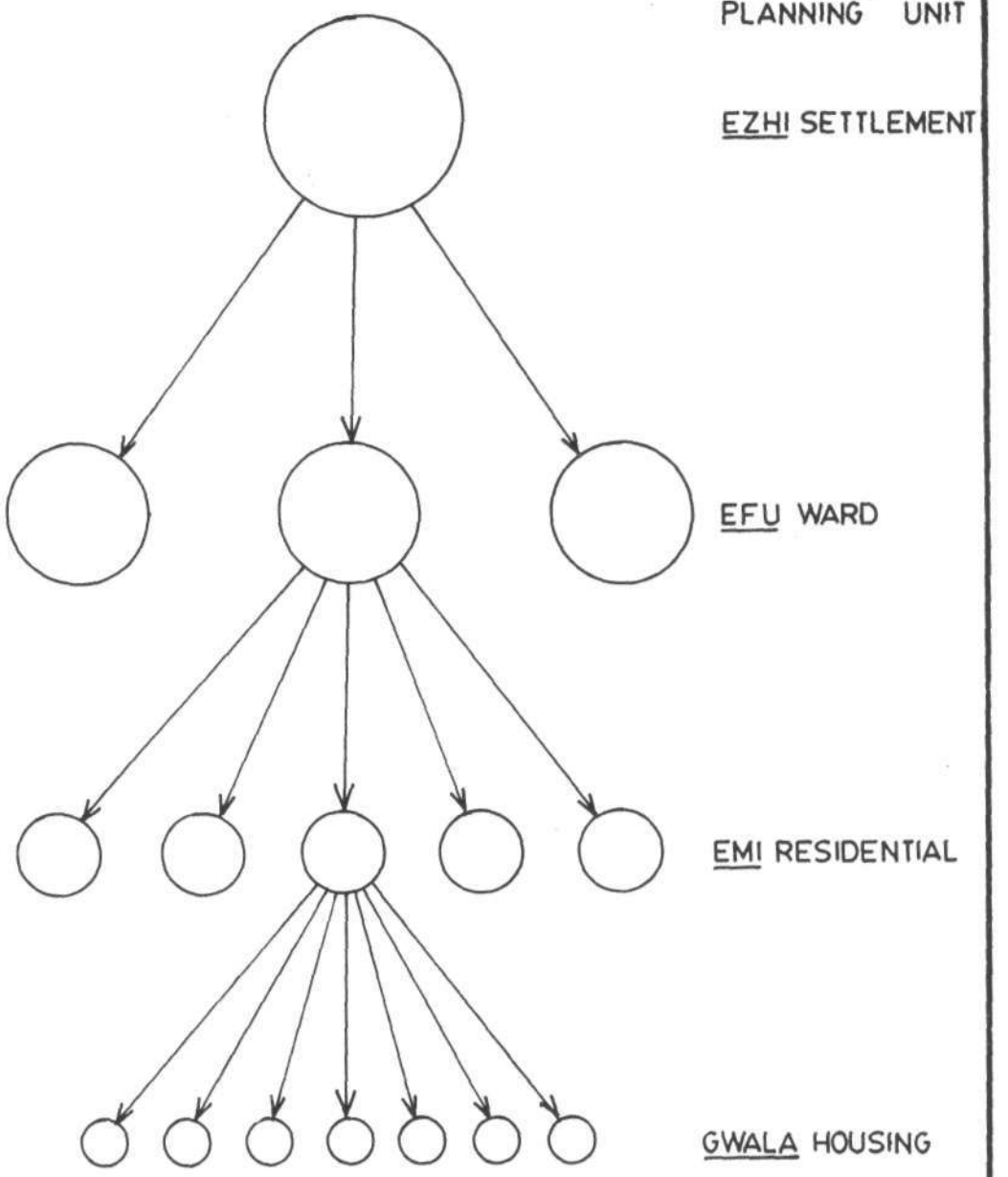


Fig.3.9 THE MAIN CORE AREA OF BIDA

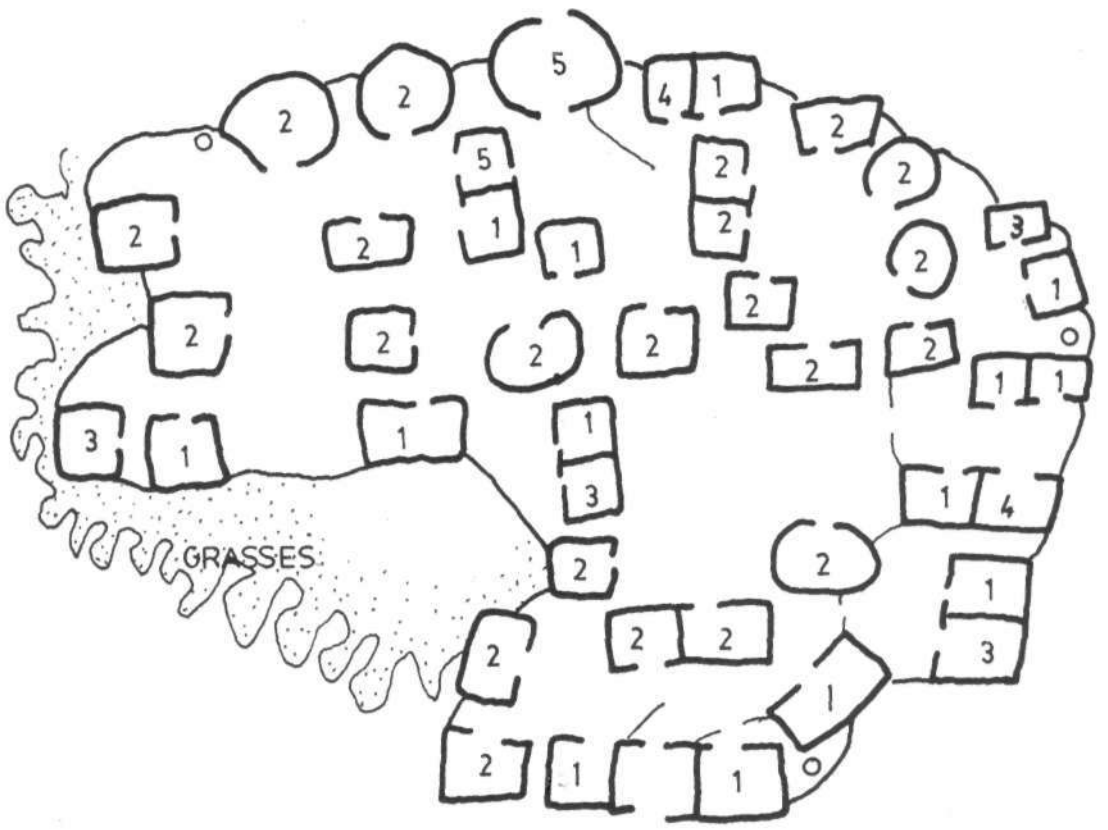
BABA, B. B.
M.SC(URP)
1988/89
A.B.U-ZARIA



SOURCE : FIELD SURVEY, 1989

Fig.3.10 HIERACHY OF PLANNING UNITS

BABA, B. B.
M.SC (URP)
1988/89
A.B.U - ZARIA



1 MARRIED MEN
2 FEMALES
3 CHILDREN
4 STRANGER
5 ENTRANCE HUT
o TOILET AND BATH

SOURCE : FIELD SURVEY, 1989

Fig.3.11 BIDA - TYPICAL COMPOUND

BABA, B. B.
M SC(URP)
1988/89
A B U-ZARIA



Plate I: The City Wall



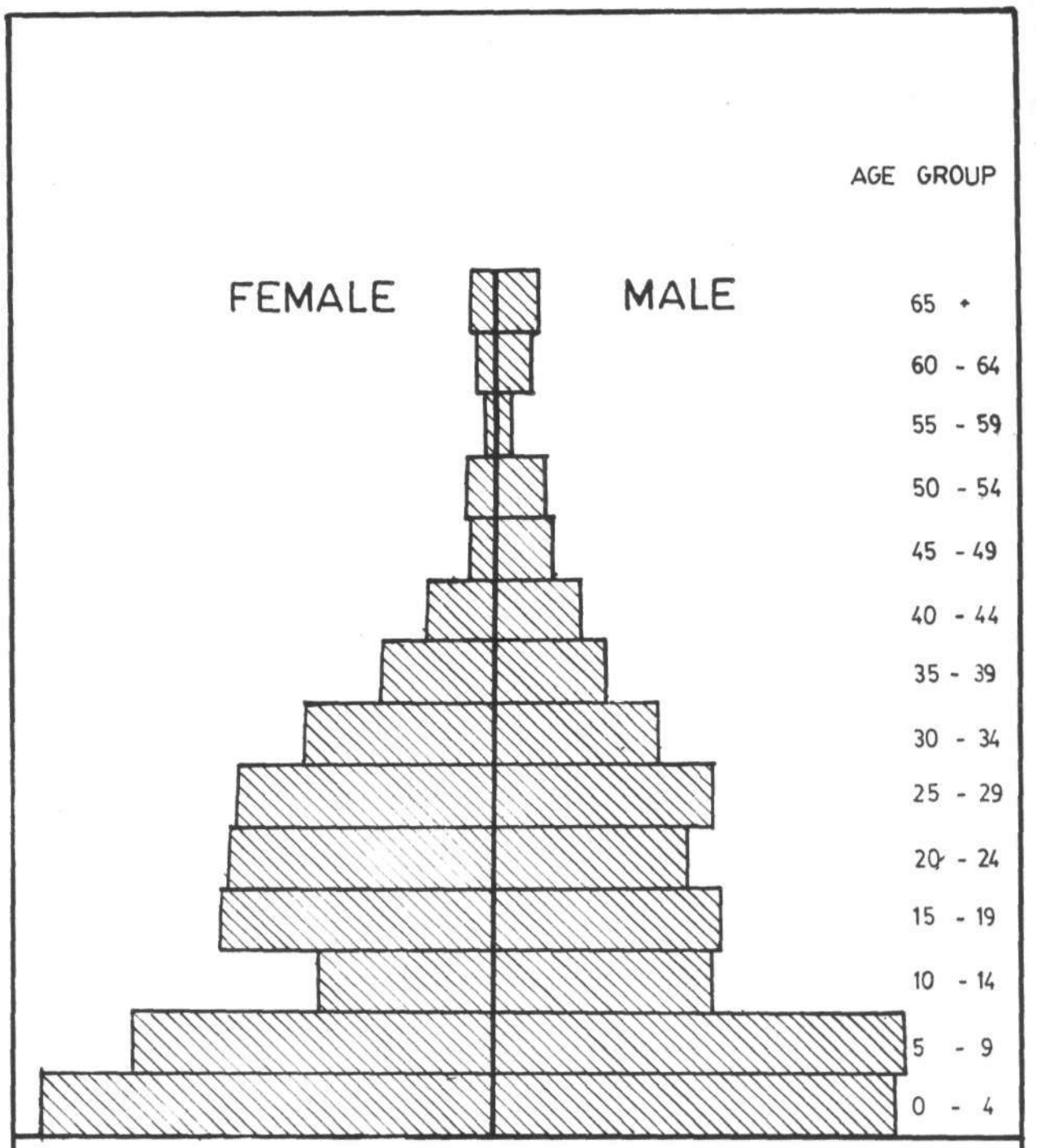
Plate II: The City Gate

The men dress mostly in embroidered big gowns with caps to match while the women would be seen in women clothes with head ties. Ethnic groups from other parts of the country who have settled mainly for commercial purposes are also noticeable in large numbers.

3.4.2 Population:

The 1963 census gave the population of Bida urban Area as 55,007 people. There is no official population statistics for the 1970s after the cancellation of the 1973 census figures. Max Lock Survey on population carriedout in Bida Urban Area in 1980 gave the estimated population figure as 76,000 people excluding the Nigerian Army.

The age-sex structure of the population of Bida as estimated by the Max Lock Group for 1980 is shown in Figure 3.12. Throughout the town as a whole, Bida's population generally follows the expected pattern of reducing in size as it grows older with few exceptions. Overall Bida is a sexually balanced town with 98 males on average for every 100 females. But this overall balance hides much inbalance and variation between the age groups. Generally, there is a dominance of males in the under 14 age groups and more females than males in the 15-54 age group. And then males come into a preponderance in the 55+ age group (Max Lock Group, 1980).



SOURCE : BIDA MASTER PLAN, 1980

Fig.3.12 BIDA - AGE AND SEX STRUCTURE

BABA, B. B.
M. SC(URP)
1988/88
A B U - ZARIA

The projected population for Bida based on the Max Lock assumed growth rate of 3.0% per annum for 1989 is 105,064 taking the 1980 estimated population as the base.

3.4.3 Economic Base:

Bida is situated in an agricultural belt. As a result of this location, agriculture form the dominant occupation around the area and infact throughout the whole Niger State. The following form the major agricultural produce in the area: rice, millet, guinea corn, maize, cassava, vegetable, etc.

Other forms of occupation include the tertiary and secondary sectors. However, the tertiary sector tends to employ more people compared to the secondary sector. This could be due to the fact that the younger generation are increasingly being attracted to the sector partly through the benefit of their better educational opportunities and partly because of the huge number of job opportunities made available in the tertiary sector by the public investment in Education and Social service by the Federal, State and Local Governments.

CHAPTER FOUR

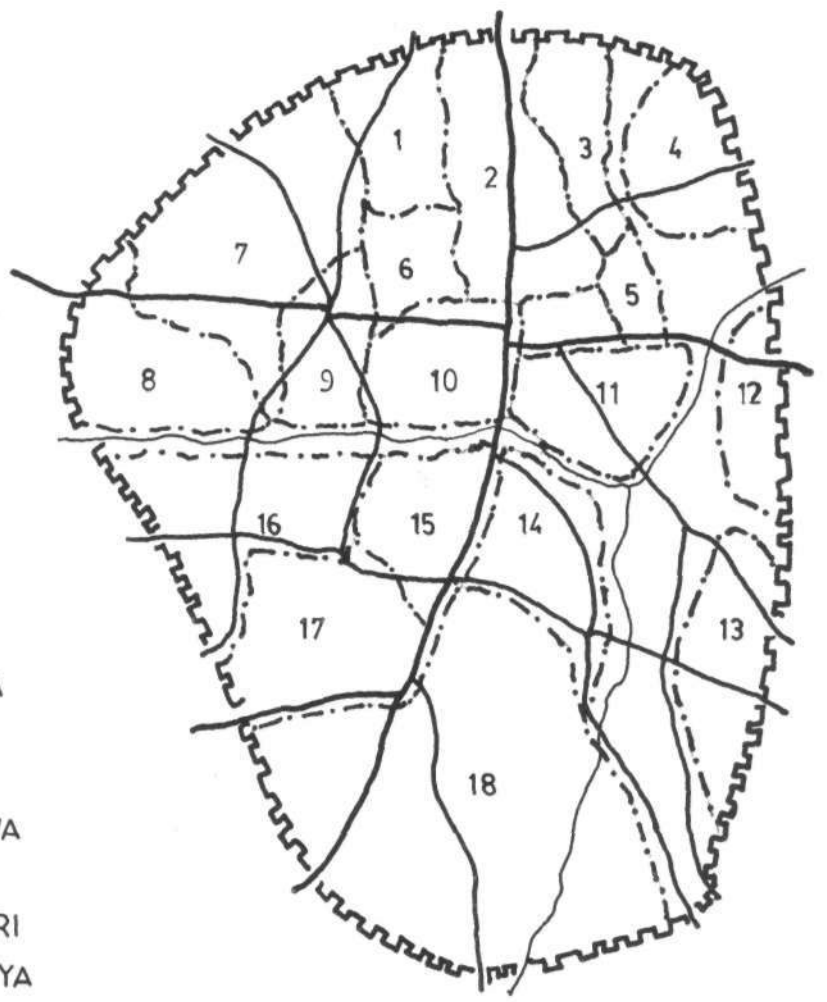
4.0 ANALYSIS OF THE EXISTING PHYSICAL ENVIRONMENT

The walled city is made up eighteen main wards (Fig. 4.1). The wards have essentially the same characteristics and development process.

4.1 Existing Landuse Pattern:

Out of the total area of 784.40 hectares occupied by the walled city, the bulk (617.23 hectares) is under residential landuse which amounts to 78.68% of the total area. This is at the expense of commercial landuse with an area of 13.47 hectares, public/semi-public 15.90 hectares and vacant/agricultural landuse 137.80 hectates thus occupying 1.71%, 2.05% and 17.56% respectively (Table 4.1).

The total area as shown in Table 4.1 is out of proportion. Two reasons could be due to this. First, deliberate siting of public/semi-public facilites outside the city wall accounts for high percentage residential area coverage. Second, the land tenure system may not permit public authorities to take over land for other uses other than residential use. Therefore, there is the need to balance in order to make the residential area more functional and livable for the people.



1 MOKOLA
2 ESSO
3 FOGUN
4 IYARUWA
5 LALEMI
6 EFUTURI
7 BANWUYA
8 EFUGYAYE
9 DZUKOGI
10 EFUTSUDZAN
11 LONCITA
12 BANGAIE
13 BANYAGI
14 DARACITA
15 LARUTA
16 DOKODZA
17 ZURUKU
18 BANGBARA

N

SCALE 1 : 16000

Fig.4.1 BIDA THE MAIN WARDS (EFUZHI)

BABA, B. B.
M.SC (URP)
1988/89
A.B.U - ZARIA

Table 4.1: General Landuse (Walled city).

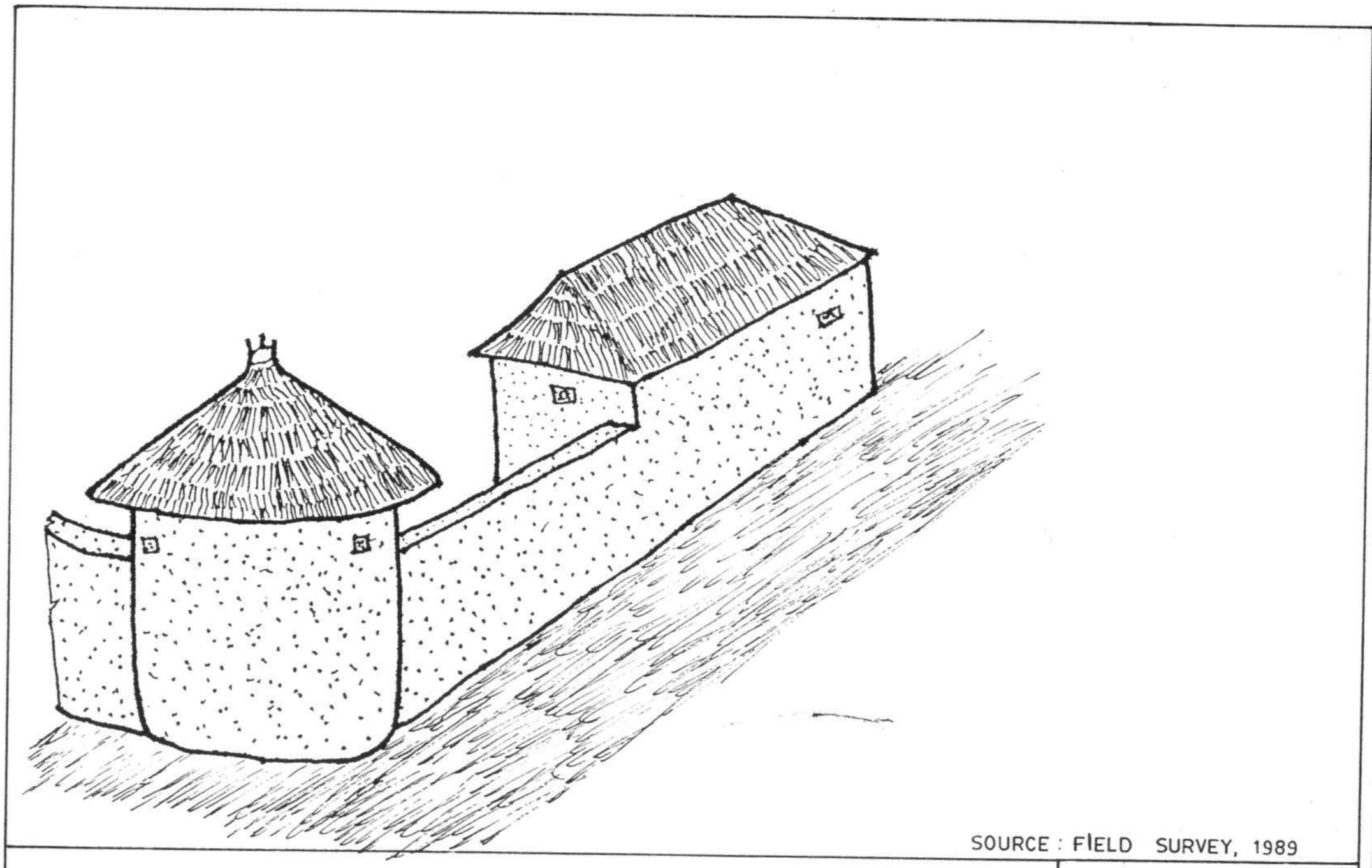
Landuse	Area in Ha	% Coverage
Residential	617.23	76.68
Commercial	13.47	1.71
Public/Semi-Public	15.90	2.05
Vacant/Agric. Land	137.80	17.56
Total	784.40	100.00

Source: Field Survey, 1989.

4.1.1 Residential Landuse

These are mostly Nupe compound type of houses which have been in existence for quite a long time. It is predominantly old and traditionally designed and built. Mud and cement plastered mud houses with corrugated iron sheets are common. Thatch roof could also be found. Many of these houses lacks the requirements for adequate ventilation (Fig.4.2).

However, some of these are gradually giving way to more modern houses with concrete materials especially along the major roads. Infilling of



SOURCE : FIELD SURVEY, 1989

Fig.4.2 POOR VENTILATION

BABÀ, B. B.
M.SC (URP)
1988/89
A.B.U - ZARIA

of vacant pockets of land is through the approval based on minimum standards required for the development.

The spatial organisation of the houses creates a continuous mass of structures with winding alley-ways, which form the circulation channels and drainage routes. Land development is randomly undertaken without any site layout to achieve orderly development, even at the periphery.

4.1.2 Commercial Landuse:

The commercial landuse of the walled city is characterised by a system of nuclei (see Fig.3.8) and ribbon-like commercial networks extending from these centres in various directions, along major roads. The centres include the big market Dzukoko, Dzuko-Etsu Umaru, Dzuko-Masaba and other smaller hierachy of ward Ffu level markets. Not only do these portray a lot of open-air commercial activities (Plate III), there are also shops. The markets are of daily schedules and close at night. Free hawking of goods in the open is common in these markets. Such markets are also centres of careless refuse disposal. Lack of basic facilities and services within the market further worsen the situation.



Plate III: Open Air Commercial Activity

A long the roads particularly major ones, goods sold range from conveinience, household provisions, electronic and building materials, etc both in retail and whole-sale. Open display of these items even right on the road haphazardly is a common practice and they contributed to refuse generation especially into the open drains.

Many of the shops in the walled city are actually within residential areas, while stalls of assorted goods are wide spread. Many of these are visually and physically unpleasant.

4.1.3 Public/Semi-public Landuse:

This encompasses all lands under public use including schools, dispensaries, worship centres, health centres and organised and unorganised open spaces. The largest land coverage is is by the unorganised open spaces and schools. Public/semi-public landuses should be the most accessible form of landuse for the residents but this is not the case in the walled city.

4.1.4 Vaccant/Agricultural Landuse:

This exists along the main streams (Chicen and Landzu) which are not suitable for residential development. Though, it is mainly used for agricultural purposes, it could however be harnessed for

recreational development which is non-existing within the city wall. The vacant spaces are often treated as dumping ground, thereby inhibiting development.

4.1.5 Industrial Landuse:

Defined industrial landuses are lacking. Mixed uses with residential are however predominant. These include numerous crafts, silver and gold smithing, etc. Others include brasswork and blacksmithing. The later is however poplluting (Fig.4.3).

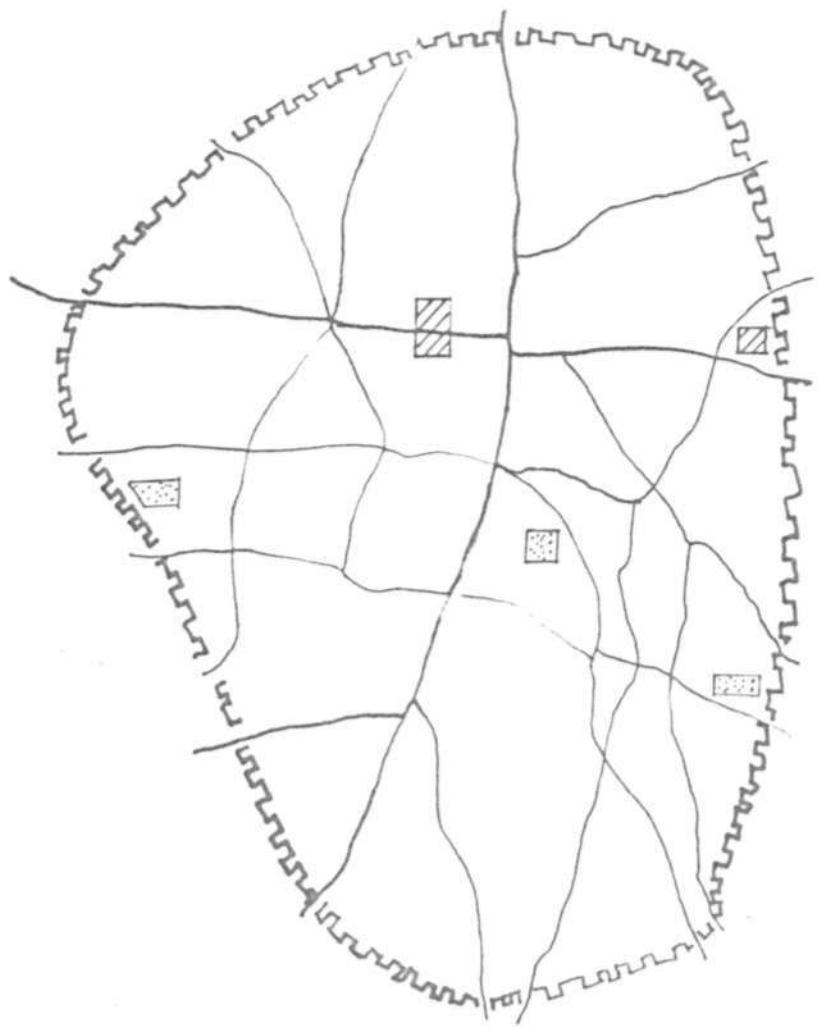
4.1.6 Transportation:

Accessibility to many areas in the city is very difficult, and in some cases, almost impossible by vehicles. The existing roads are narrow with poor alignment. Also the manner vehicles are parked along the roads often lead to traffic congestion (Plate IV).

4.2 Environmental Quality:

4.2.1 Burrow Pits:

The existence of numerous burrow pits which constitute both solid and liquid waste disposal sites serve as breeding grounds for mosquitos and other water borne diseases (Plate V). About 208 of such burrow pits exists within the walled city.



LESS POLLUTING (BRASSWORK)

POLLUTING (BLACKSMITHING)

N

SCALE 1:16000

SOURCE : FIELD SURVEY, 1989

Fig.4.3 BIDA - LOCATION OF LOCAL INDUSTRIES

BABA, B. B.
M.SC(URP)
1988/89
A.B.U-ZARIA



Plate IV: Road Congestion



Plate V: Burrow pit solid and liquid waste disposal site.

4.2.2 Solid Waste Disposal System:

Refuse is largely disposed haphazardly by open ground dumping. Refuse heaps of varying magnitude are to be found on public lands such as in market places (Plate VI), amusement grounds, on road sides and of course open drainage lines. The refuse is of different materials ranging from polythene, can and packaging items. There is largely inadequate organised form of refuse disposal. Those that are provided are not adequately maintained. Such dumps become health hazards especially during the rainy season.

This trend is not particularly healthy especially in the more congested areas of the city where such refuse have been known elsewhere to cause major disasters. Moreover, they are a source of air pollution especially where the burnt items also smell a lot. Sites of such dumps are visually and physically unpleasant.

4.2.3 Sewage Disposal:

The most commonly used sewage disposal system is the pit latrine. Almost every compound in the walled city uses pit latrine due to the shortage of pipe-borne water for the septic tank system of disposal. These are usually either sited close to kitchens or the open wells (Plate VII). Seepage



Plate VI: Unmaintained Public Refuse Facility



Plate VII: Toilet in close proximity to well

of latrine wastes into such wells becomes a very high probability. This constitute a health hazard in form of gastro-intestinal diseases due to poor locational considerations in many cases. Use of pit latrines especially on bare foot is a major source of contact with hookworm. The use of water system (septic tanks and soakaways) is still very limited.

Due to high demand on the toilet facilities and non-availability in some compounds, pressure often makes people to adopt alternative source which includes defaecation in quiet corners, near-by bushes, streams, undeveloped plots and even buildings not yet completed. All these do not only give bad image of the city but also constitute health hazards.

4.2.4 Storm Water and Roadside Drainage:

Bida is naturally blessed with good natural drainage system. In some instances, erosion had had impact on the drainage channels which has produced gullies within the city. With the exception of the north-south and west-east roads that cut across the heart of the city, most of the roads and streets lacks drainage lines often leading to water-logging (Plate VIII). The roadside drainage



Plate VIII: Water logged street

lines where provided are open drains simply dug out without concreting of their walls.

Many of the open drains for roadsides are also used as drainage for domestic wastes. Open as they are, all sorts of refuse and sand easily drift in to these, get them blocked to the brim leading to overflow of water and other lighter effluent into the streets especially during the raining season. This does not only constitute an unsightly phenomenon but it also leads to fast deteriotation of the roads. The consequent stagnation of water promotes all sorts of disease vectors and very bad odour, while also constituting visual degeneration.

4.3 Facilities, Utilities and Services:

4.3.1 Health Facilities:

Presently, there are the General Hospital, six Local Government Clinics and four Private Clinics within the city wall. Comparatively, the town is very well served with health facilities.

However, they are without problems. The General Hospital has its accompanying problem of congestion The wards are not provided with mosquito nets, and neither are the windows provided with mosquito protection gauzes. The surrounding of the wards are not kept neat at all, thus making the surrounding

very untidy. The clinics has problem with parking space. Taxis and other vehicles are usually parked on the street and thereby creating enormous problems to other road users. The number of Local Government Clinics are not enough to cater for the large and growing population.

4.3.2 Educational Facilities:

The walled city has 23 primary schools and numerous in-house Quranic schools. Other primary, Secondary and tertiary institutions located outside the city wall serves the city population as well.

4.3.3 Transportation Services:

Pedestrian traffic is relatively very high judging from the numerous cris-crossing of footpaths as against motorable roads. There is actually no separation of vehicular traffic from cyclists and pedestrians, hence a lot of conflicting use of the few motorable roads. There is no proper system of road hierachy within the city.

4.3.4 Socio-Cultural Facilities:

There is a general shortage of socio-cultural facilities except religious facilities. There exist numerous smaller mosques and three Central mosques near the ruling houses. Churches, though fewer, could also be found. Apart from sports fields wholly owned

by primary schools, there are hardly any sport and recreational facilities for the general public.

Other services include prison services, Nigerian Police Station and a Postal Agency.

4.3.5 Electricity Supply:

Electricity is supplied to Bida by NEPA with a direct 132kva connection to the National grid through Minna and Shiroro. The sub-station along Zungeru Road transform down 11,000 Volts for distribution. The electricity line follow major roads and streets in the city. However, not all houses have electricity but it is available for whosoever wants it connected.

There is no problem of supply except that the nature of laying over head cables leave much to be desired. The absence of street lights makes the area completely dark, dull and dead.

4.3.6 Water Supply:

Water is supplied from three major sources; from wells, rivers/streams and pipe-borne water supplied by Niger State Water Board. The quantity supplied from wells and rivers is difficult to determine, however, irregular supply through pipe-borne water could account for the use of these alternative sources. There are instances where public taps provided are completely out of use

(Plate IX). Use of other sources of water supply could therefore constitute a health hazard.

4.3.7 Telecommunications:

There exist a complete town wide distribution system. Though, NITEL is willing to connect telephone service to any household, however, few connections are made.

4.4 Housing Conditions:

4.4.1 Residential Density:

Most of the residents of Banin Bida are indigenous. It is a city where there is a tradition of living in tight packed compounds often with extended family. A high percentage of the buildings formed within the city are of traditional type and above 90% of these are occupied by extended families. The net residential density is 216 persons per hectate. Max Lock Survey (1980) revealed a high room occupancy rates. Over two-fifth of the people (41.1%) were estimated living at an average occupancy rate of over two persons per room. One in twenty persons at more than four persons per room.

4.4.2 Housing Types:

There are two house types in Banin Bida; semi-detached and compound types. The compound type



Plate IX: Closed public tap

involves the grouping of more than two housing units into a single compound. The current trend is towards the mixing of both traditional and modern houses within the same compound. Traditional compound type, however, predominantes.

4.4.3 Dilapidated Structures:

Causes of these are identified as oldage, especially when viewed in relation to the materiáls (mud) used for building them. Other reasons are lack of maintenance, environmental factors such as moisture, temperature and solar radiation which manifest themselves especially where the workmanship is poor. The use to which such buildings are put also affect them.

Buildings designed as residential, are commonly used for small scale industrial enterprises such as bakery, pepper/corn grinding, etc. Here vibrations from machines cause both abrupt settlement in the buildings as well as causing major cracks in them. Obnoxious gases emitted from these machines also cause flaking of points from the walls, thus resulting in blight.

In the design and actual construction, proper levels of foundations are not determined by experts. The result is that many land-owners simply dig a manageable depth where weak concrete is poured as foundation and this later result in major cracks

and substandard building failure.

4.4.4 House Construction:

The most common material for building houses is mud i.e., mudwalls, the majority of which are plastered with cement. Mud is excavated from the nearest burrow pit and transported to the construction site. Roofs are made from metal sheets. Few houses are built of concerete blocks and relatively few have thatched roofs. The frame of a thatched roof is constructed either of bamboo or raphia palm stem and tall tree branches tied together with bonds of straw or locally woven ropes.

Metal sheet and timber are increasingly being used for window and door covers. The material commonly used for doors is metal sheet and timber. Metal is used much more than timber in the city because it is cheaper than timber. Window covers are of similar materials as well.

4.4.5 Housing Environment and Amenities:

The level of environmental sanitation is generally low. There is inadequate system of waste disposal. Pits, from which mud was taken for building houses, are dug behind the compounds (see Plate V).

The basic amenities in the compounds include, pit latrines, water taps or surface wells and kitchens. Some modern houses contain additional amenities such as shower or bathrooms, tap water, electricity and in very few cases telephones.

4.5 Spatial Distribution of Blight in the Walled city:

In chapter one, the basis of the urban environmental problems has been highlighted. The quality of urban environment particularly residential quality depends on the factors that manifest it. One type of factor dealing with the degradation of the quality of urban life considers natural elements that provide inputs to the lives of urban dwellers, whereas the other type focuses on human resources and their many ramifications that bear on dignity, peace of mind, pursuit of honest labour, and the opportunity for individual development and betterment. Thus, the situation can be viewed not only along physical perspectives but also the social, political, education, health, economic and management undertones.

However, within the context of this research, the physical manifestations that brought about this varied problems are examined. The ward serve as the basis for determining the extent of blight.

Considering the techniques of urban renewal reviewed and evaluated in chapter two, the area under study and limited resources available, the rough screening and the weight and exponent method were used in the assessment of the degree of blightedness of different structure is divided into three groups and each group is given its weight score.

Degree of Blightedness	Weight Score
First order (a) poor	1
Second order (b) Fair	2
Third order (c) Good	3

Six physical environmental variables were identified on the field to be the most serious problems of the study area. Based on these, the sampled compound heads of the respective wards were interviewed to ascertain their prioties for improvement (Table 4.2) in additon to the personal observation.

Table 4.2: Priorities for Improvement

	Variable	No. of Respondents	Percentage
1.	Building condition	120	24.80
2.	Facilities, Utilities and Services	96	19.70
3.	Sanitation	80	16.44
4.	Road condition	71	14.66
5.	Drainage	67	13.80
6.	Maintenance	52	10.60
	Total	486	100.0

Source: Field Survey, 1989.

Weights were then assigned to the priorities. The maximum weight any factor can attain no matter how important is 5 and minimum is 1.

1.	Building condition	5.0
2.	Facilities, Utilities and Services	4.5
3.	Sanitation	4.0
4.	Road condition	3.0
5.	Drainage	2.0
6.	Maintenance	1.0

The scale below is used to determine the type/ magnitude of planning action a ward deserves based on its total score.

0 10 20 30 40 50 60 70 80 90 100 (scores)

Degree of Blightedness		Planning Action
(a)	First order (≤20) poor	Major Improvement
(b)	Second order (21-40) Fair	Moderate Improvement
(c)	Third order (≥ 41) Good	Minor Improvement

Based on the above, the following results were obtained (Table 4.3). When the scores were placed on their respective positions on the scale, six, eight and four of the wards were found to be characterised by very poor, fair and good conditions respectively. Accordingly, planning action to be adopted for each is shown in Table 4.4.

Table 4.3

DETERMINATION OF EXTENT OF BLIGHT IN BIDA WALLED CITY
(WEIGHT AND EXPONENT METHOD)

WARDS	1			2			3			4			5			6			7			8			9			10		
VARIABLES	a	b	c	a	b	c	a	b	c	a	b	c	a	b	c	a	b	c	a	b	c	a	b	c	a	b	c	a	b	c
BUILDING CONDITION	5.0			5.0			5.0					5.0	5.0			5.0			5.0				5.0		5.0			5.0		
FACILITIES, UTILITIES & SERVICES	4.5			4.5			4.5				4.5		4.5			4.5			4.5				4.5		4.5			4.5		
SANITATION		4.0		4.0			4.0				4.0		4.0			4.0				4.0			4.0		4.0			4.0		
ROAD CONDITION		3.0		3.0			3.0					3.0			3.0	3.0					3.0	3.0					3.0	3.0		
DRAINAGE	2.0			2.0			2.0				2.0		2.0			2.0			2.0				2.0			2.0		2.0		
MAINTENANCE	1.0			1.0			1.0				1.0		1.0			1.0			1.0				1.0		1.0			1.0		
TOTAL	12.5	7.0		19.5			19.5				11.5	8	16.5		3	19.5			12.5	4	3	3	16.5		14.5	2	3	19.5		
WEIGHT SCORE	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
TOTAL SCORE	12.5	14		19.5			19.5				23	24	16.5		9	19.5			12.5	8	9	3	33		14.5	4	9	19.5		
TOTAL SCORE	26.5			19.5			19.5			47			25.5			19.5			29.5			36			27.5			19.5		

11			12			13			14			15			16			17			18		
a	b	c	a	b	c	a	b	c	a	b	c	a	b	c	a	b	c	a	b	c	a	b	c
	5.0				5.0			5.0	5.0			5.0				5.0			5.0			5.0	
	4.5			4.5			4.5		4.5			4.5			4.5			4.5			4.5		
	4.0			4.0		4.0			4.0			4.0				4.0			4.0			4.0	
		3.0			3.0			3.0		3.0		3.0					3.0			3.0		3.0	
	2.0			2.0			2.0		2.0			2.0				2.0		2.0				2.0	
	1.0				1.0		1.0		1.0			1.0				1.0			1.0				1.0
	16.5	3		10.5	9	4	7.5	8	16.5	3		19.5			4.5	12	3	6.5	10	3	4.5	14	1
1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
	33	9		21	27	4	15	24	16.5	6		19.5			4.5	24	9	6.5	20	9	4.5	28	3
42			48			43			22.5			19.5			37.5			35.5			35.5		

TABLE 4.4 Planning Action

Ward	Action
Esso	Major Improvement
Fogun	
Lalemi	
Efuturi	
Efutsudzan	
Laruta	
LALEMI Mokola	Moderate Improvement
Banwuya	
Efugyaye	
Dzukogi	
Darachita	
Dokodza	
Zuruku	
Bangbara	
Iyaruwa	Minor Improvement
Loncita	
Bangaie	
Banyagi	

CHAPTER FIVE

5.0 PHYSICAL PLANNING PROPOSALS

For any proposal aimed at alleviating the physical conditions of the study areas to be successful, it must take into cognizance the peculiar historical and locational characteristics of the areas as well as the nature and the extent of their physical planning problems. The application of the Weight and Exponent Method in the determination of the extent of blight in the study area has shown its spatial distribution (Table 4.4).

Based on the findings in chapter 4, the greatest long term benefit to the greatest number of people will come through a policy and programme of rehabilitation and conservation rather than wholesale redevelopment. These two activities does not lead to a total destruction of the housing environment and disruption of the existing pattern and social organization. It lead to less economic and socio-cultural loss to the people compared to redevelopment. Also, the activities will enable most of the people to retain their houses and the housing environment they have lives for decades.

However, the action closest to redevelopment that will be proposed is in respect of the creation of certain public uses such as organized spaces, parking areas and the construction of access roads and drains. Also within

the context of this is the demolition of worst structures which are beyound repair.

5.1 Proposals:

5.1.1 Preservation of Urban Design Elements:

It is proposed that urban design elements city wall and gates, the mosque, palace and market developed from the indigenous planning principle of community survival and security and later of expressive leadership power and wealth should be preserved as historic urban design elements through legislation prohibiting further destruction of such elements. The undestroyed parts of the city wall should be protected and further development prohibited by leaving a green belt around the city wall (Fig.5.1).

5.1.2 Burrow Pits:

It is proposed that all burrow pits within the indigenous city should be filled-up with laterite and converted to other uses. Further excarvation within the city should be prohibited.

5.1.3 Urban Network:

Access Roads and Drains: There should be the widening and asphalt surfacing of the laterite road network and where there is none, a road network should be designed with respect to the existing

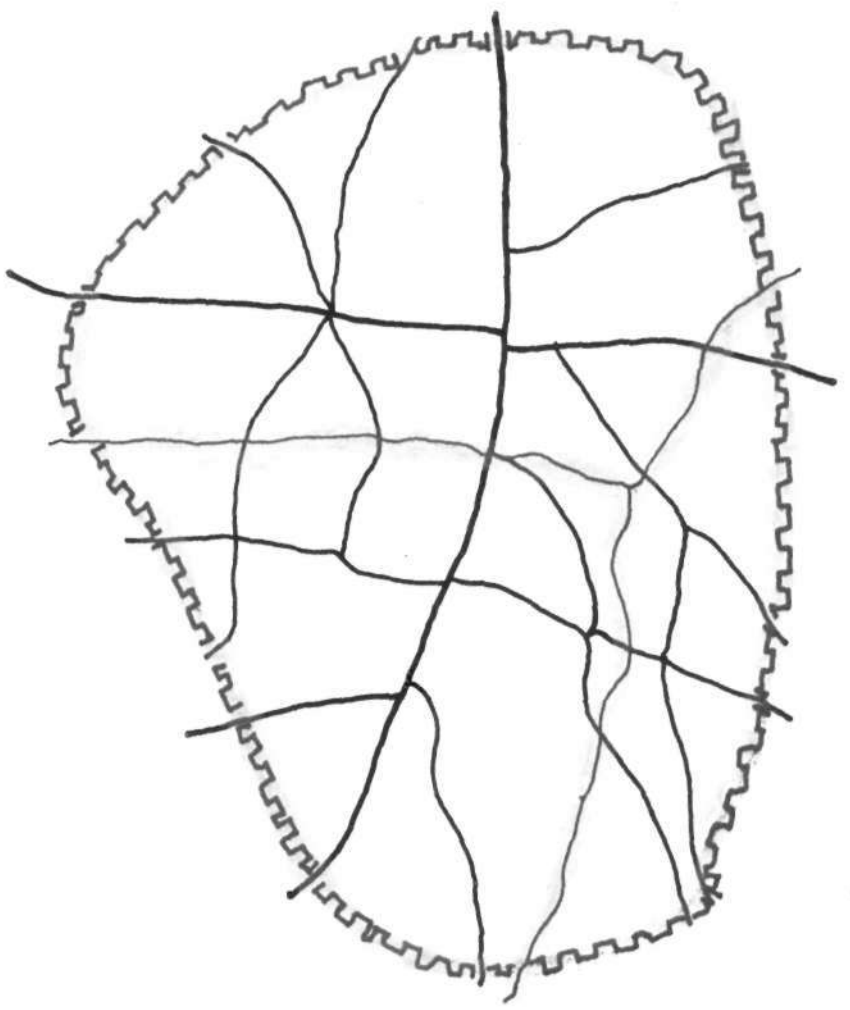


Fig.5.1 GREEN SYSTEM

BABA, B. B.
M.SC(URP)
1988/89
A.B.U - ZARIA

layout. On all roads, adequate provision should be made for pedestrians and as we are dealing with an already built up area, parking should be off-street so as not to obstruct the passage of traffic. It is proposed that the right of way (R.O.W) should be 5 metre minimum.

Roadside drainage should be constructed along all roads and streets. These drains couls be open or covered, concrete or non-concrete. In the high density activity centres, the drains should be concrete covered. The discharge of water into open drains are particularly favoured in Bida because of the various slopes that tend towards various water courses - the Landzu, Chicen and Mussa rivers.

In constructing additional drainage lines, certain standards have to be ensured considering the existing situation. The side of the drain nearer to the road should be upraised to prevent vehicles crossing over which has been a major cause of blockage (Fig.5.2).

In linking the house drainage with the street drainage adequate care should be taken to ensure that all forms of affluent waste from households are retained within the house, Hence, a narrow pipe of not more than 8cm diameter is proposed while a strong wire mesh has to be integrated at the inner points of departure from house if open drains lead directly from the house. This can be done by encouraging the residents to use either concrete

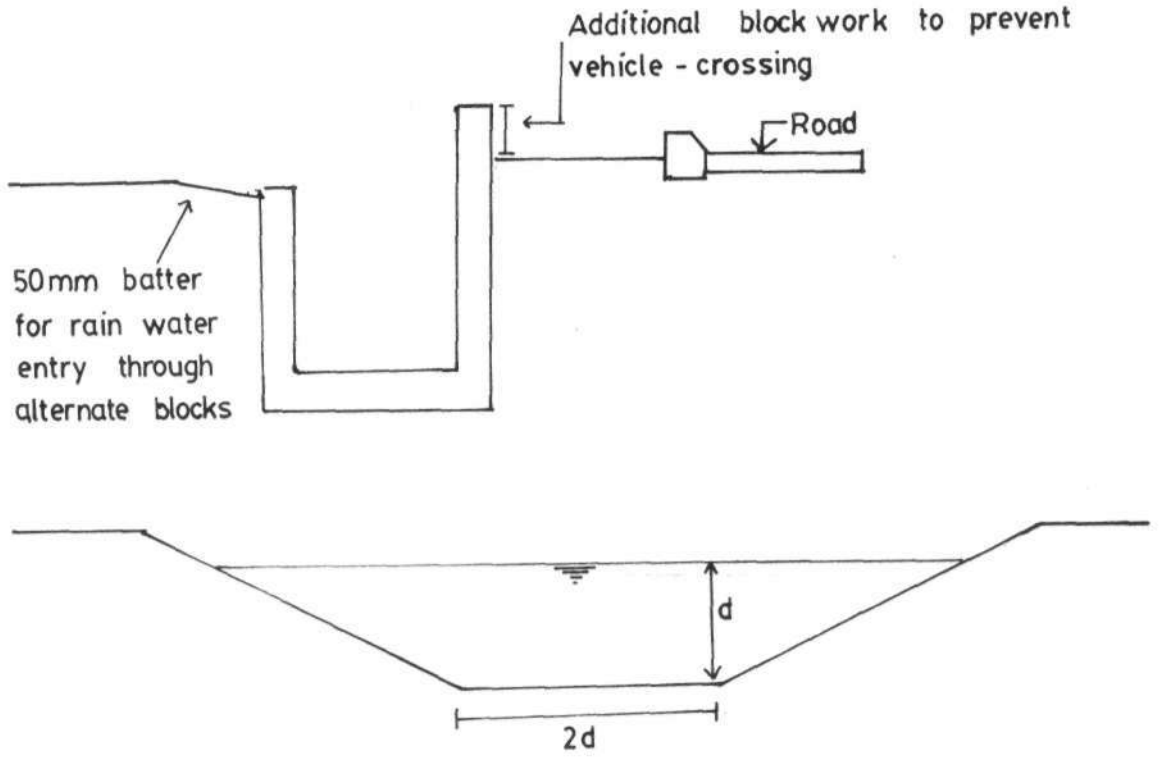


Fig.5.2 PROPOSED IMPROMENTS ON DRAINAGE CHANNELS

BABA, B. B.
M.SC(URP)
1988/89
A.B.U-ZARIA

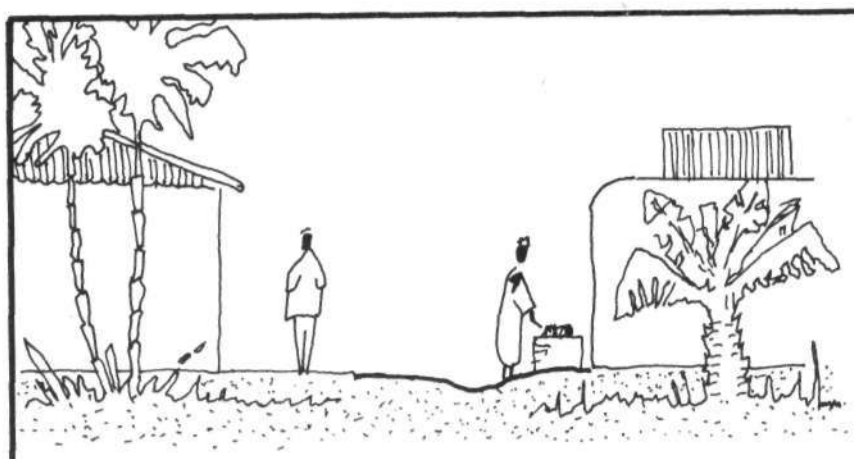
blocks of pipes or pre-cast concrete in channelling the waste water.

Prior to the actual construction of adequate concrete drains, for all the roads and major foot-paths, certain design modifications need to be made on minor and non-concrete drainage channels to make them more capable of handling both peak flood flows and low volume flows as well as increase their velocity (Fig.5.2). The drains should be such that they are directed towards the rivers where they will flow at self cleansing rate to the main River Gbako.

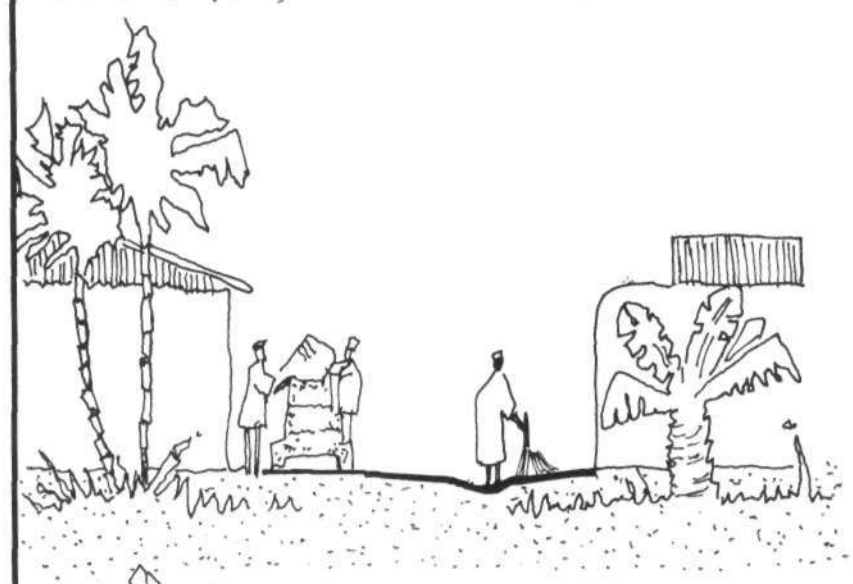
Effor should be made to check gullying along storm water drainage ways. It is therefore proposed that where such occur, open concrete drains should be provided.

5.1.4 Refuse Collection and Disposal:

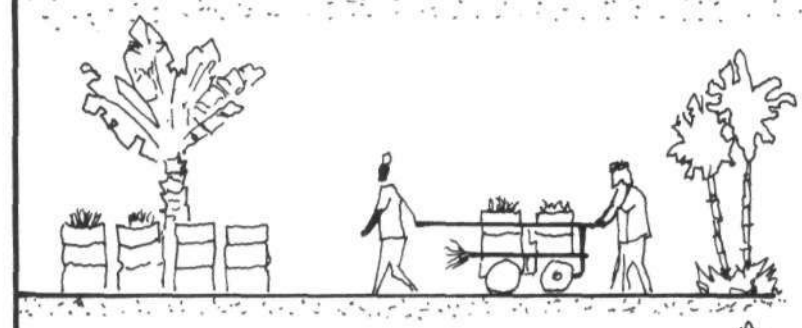
It is proposed that the present system of open refuse dumping should be discouraged and such sites reclaimed for other uses. An organised system of refuse collection and disposal should be established for efficient refuse management. In view of this and considering the nature of the area, an efficient refuse collection method is proposed (Fig.5.3). In this oil drums are placed at least



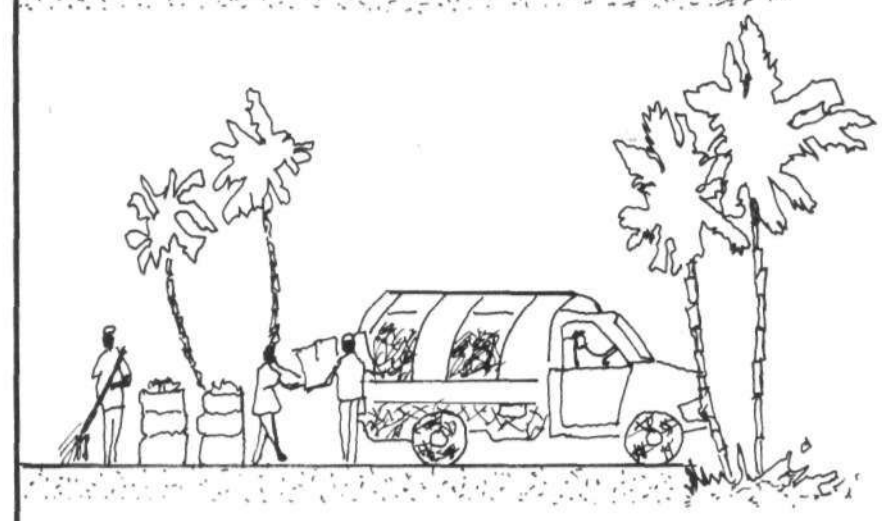
STAGE 1
COMPOUND TO BIN



STAGE 2
BIN TO HANDCART



STAGE 3
TRANSFER AT VEHICLE
COLLECTION POINT



STAGE 4
TRANSFER TO COLLEC-
TION VEHICLE

Fig.5.3 PROPOSED REFUSE COLLECTION METHOD

BABA, B. B.
M.SC(URP)
1988/89
A.B.U-ZARIA

50m interval into which the residents dump their refuse (Stage 1). Since most of the areas will not be accessible to collection vehicles, labourers of the local council will go round at least every other day and empty the refuse into drums carried on handcarts (Stage 2) and then transfrer it to vehicle collection points (Stage 3) from where it is emptied into collection vehicle every two days (Stage 4). Thus, collection points are proposed at a radius of 200m which on the average will be about 6 minutes walking time to such a point.

For the purpose of refuse disposal, the sanitary land fill is proposed for use in Bida. The large burrow pits located outside the urban area should be used for such purposes. However, for feature requirements, it is recommended that land be reserved on the outskirt along Bida-Mokwá road. Such sites should be reclaimed later for other uses. The siting should be such that it is located away from the communities.

5.1.5 Other Facilities:

Health: It is proposed that the Local Authority should provide clinics in addition to the existing ones in the area. However, consideration must be given to population threshold when planning such.

This will go along way in reducing the hardship suffered by residents, particularly women as a result of the absence of such services.

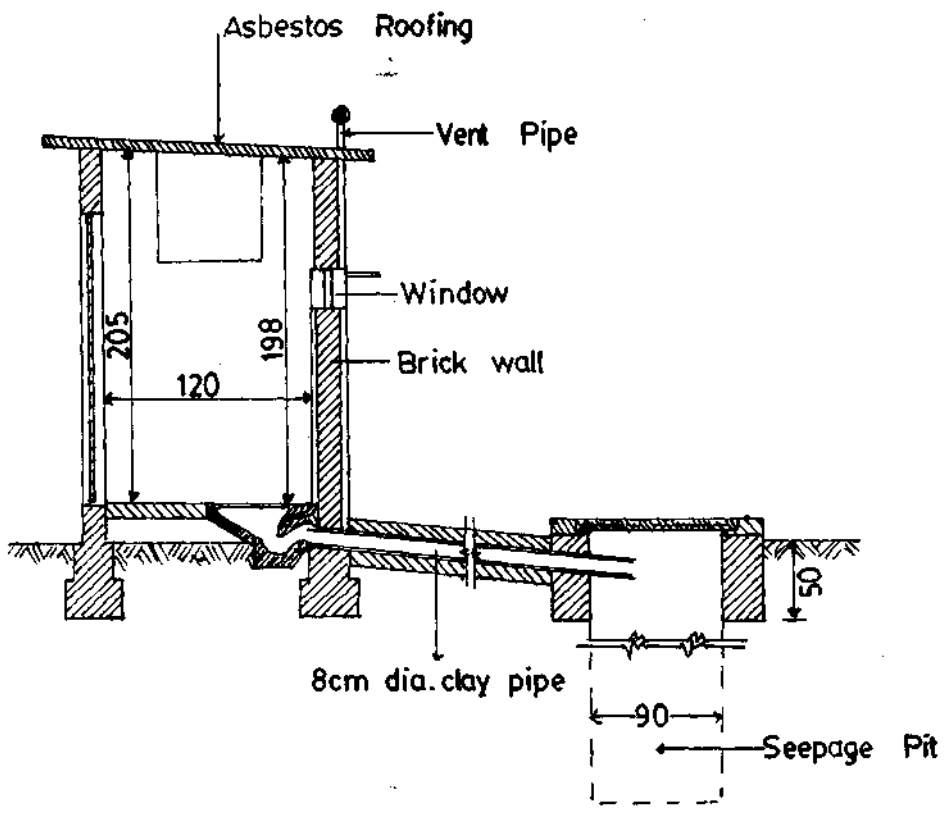
Public Conveniences and Organised Open Spaces:

Public toilets should be provided to stop people from defecating anywhere. Their location should be as close to the main activity areas as possible for easy access.

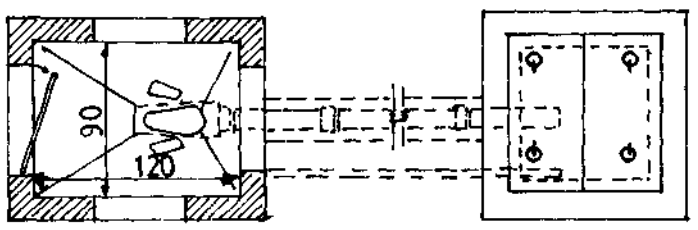
Such toilets should be provided at a standard of 1 (water closet) per 150 customers/patrons. A design of proposed modest public toilet is shown in Fig.5.4. In future, such toilets should be extended to residential areas. Such places should be locked at night to prevent the usual defecation around the premises. Alternatively, it should be fenced.

All amount of money to be determined by the authorities could be charged for the use of such convenience, this money is to be used in its general up keep in terms of settling light and water bills and wages to the caretakers of such places.

It is proposed that Bus stop shades should be constructed at strategic points especially junctions and activity centres. This will reduce the hardship of waiting for transport and act as a cover during intense sunshine and rainfall.



SECTION



PLAN

Measurements shown are in centimetres

POUR-FLUSH AND SOAKAWAY SYSTEM

Adapted from Wagner and Lanoix (1958)

Fig.5.4 PROPOSED PUBLIC LATRINES FOR MAIN ACTIVITY CENTRES

BABA, B. B.
M.SC(URP)
1988/89
A.B.U-ZARIA

There is also the need to create some 'breathing spaces' within the areas. This can be done by utilizing the existing incidental open spaces. Alternatively, where land is not available as in the more congested areas, it is proposed that the Local Council in conjuction with the local planning Authority should issue a notice stopping the maintenance of house with serious structural problems. After sometime, such house will become inhabitable during which the affected residents should be duly compensated and the site cleared. In this way, land will be be available even for other public uses such as parking spaces.

5.1.6 Housing Environment and Amenities:

It is proposed that housing improvement should be the sole responsibility of the residents because direct physical action in people's houses by government/philanthropic institutions may not be feasible. Being unaware of the magnitude of their housing and environmental problems probably due to lack of education, it is therefore proposed that residents should be mobilized for self action. For instance, the unkept latrines and bathrooms of most houses, and the indiscriminate disposal of refuse in front of houses and at their rear

or streams, are defects that the residents themselves can remove through their own efforts.

Thus residents may be enlightened to improve the ventilation in their rooms, sanitary quality of their toilets and kitchen and the general use of space in the interior of the house. For example, the danger of having a pit latrine near a well or a kitchen should be emphasized. In such cases, wells should be sealed up and another provided if need be with a minimum of 30m away from the toilet/kitchen. It is proposed that pit latrines should be gradually phased out over a very long period. The need to be gradual about this motive arises from the fact that pit latrines are cheap to construct technically and economically. Moreover, with adequate measure taken, they need not be unhygienic. Hence, it is proposed that while they are used, pit latrines are improved to meet the health and sanitary standards.

Therefore, all pit latrines are required to possess an adequate lid to cover the pit and prevent all form of unbearable odour arising from them (Fig.5.5). Moreover, a 5c.. .tuminous roofing felt with an overhang of about 30cm which prevents any maggot from climbing to the mouth of the pit should be fitted just below the present concrete cover on which lid rests.

Other forms of improvement include a ventilation pipe leading out into open air with screen to reduce the nauseating steam from inside the pit at each opening.

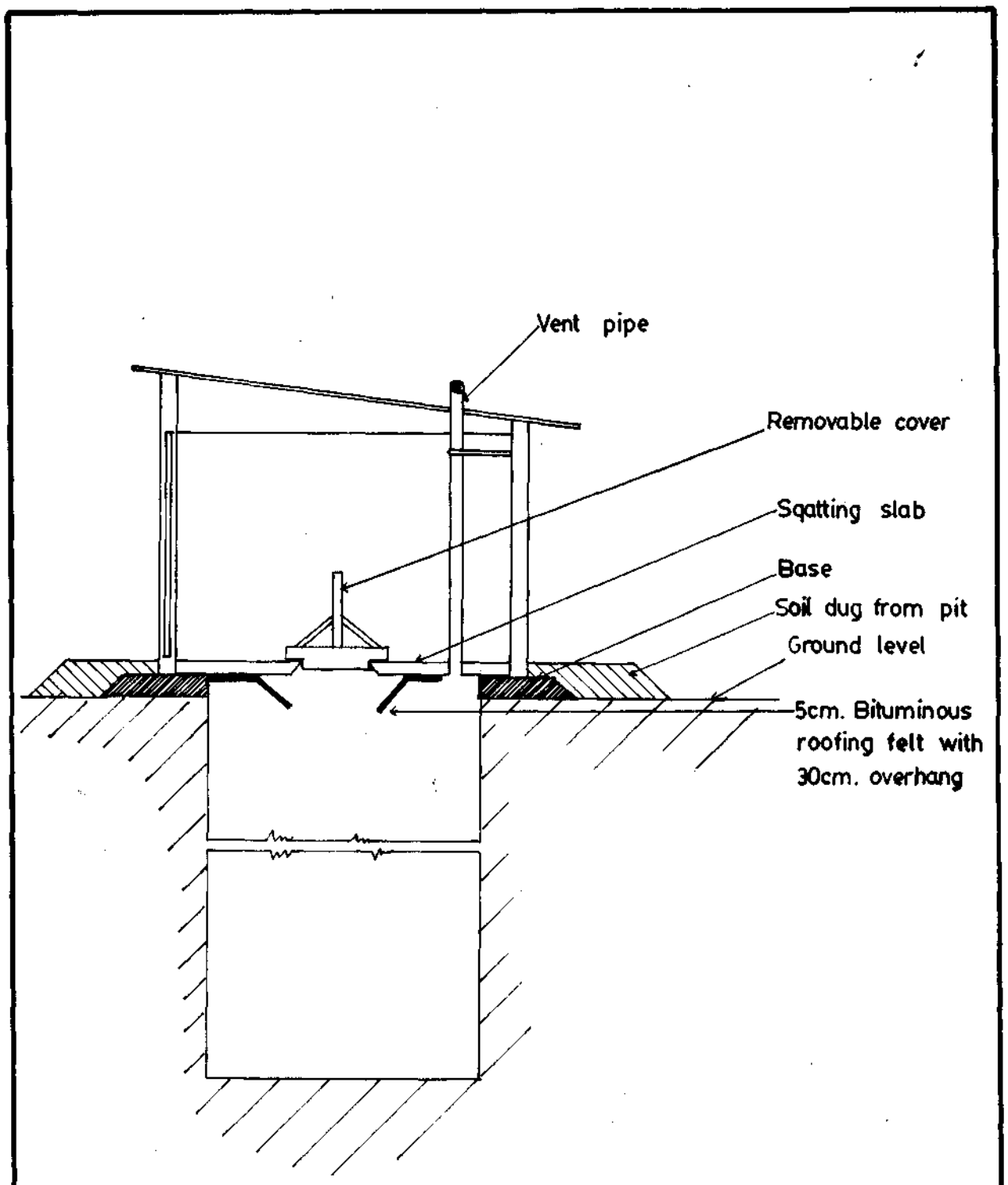


Fig.5.5 PROPOSED IMPROVEMENTS ON PIT LATRINES

BABA, B. B.
M.SC(URP)
1988/89
A.B.U-ZARIA

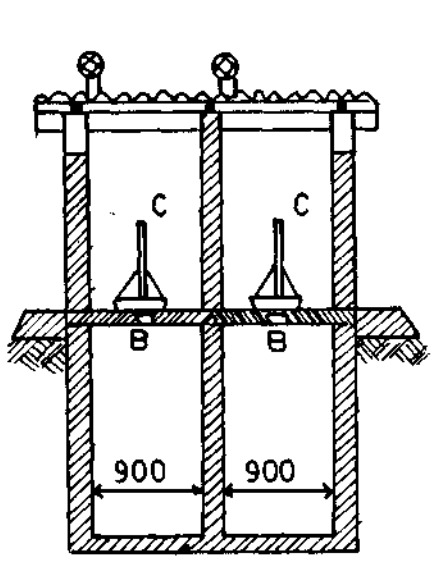
Furthermore, instead of the present practice of changing the site of the pit on filling up with little consideration of side effects (e.g. due to the position of well), in future, water seal should be fitted to the pit and connected to a displaced soakaway. Alternatively, a vacuum vehicle should be used to empty the filled up pit. Also, for future development of pit latrines, it is proposed that Double - vault compositing latrine should be encouraged (Fig. 5.6).

Houses without facilities such as pipe-borne water, electricity, e.t.c. may be encouraged to have such by easing the procedure for connection. Residents should be encouraged too to plant trees preferably economic trees.

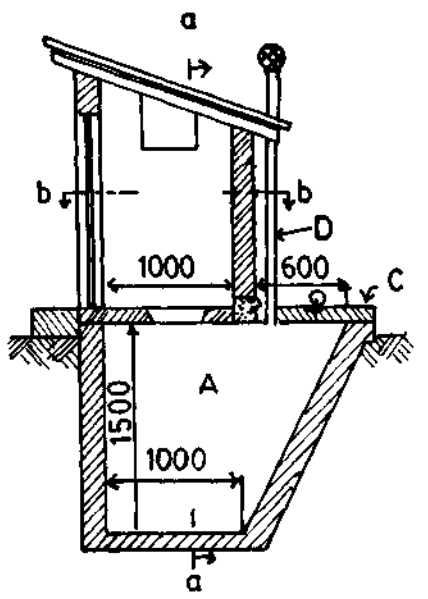
However, the residents will not shoulder any of these domestic responsibilities, unless they are aware of the social and health implications these unsanitary attitude can cause in their environment.

They therefore need to be enlightened so as to get them aware and involved in the scheme. This awareness and involvement can only come about through upgrading of the values and goals of good environmental sanitation.

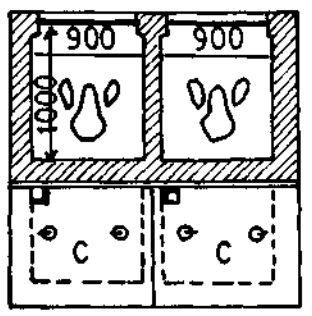
This embraces direct persuation by social workers, explanation of basic health issues, discussions, and meetings at community levels, utilization of the opinions of community leaders and exhibition projects and a more diversified use of communications media such as documentary films to be shown to the public, radio discussions, televisions and posters.



section a - a



Measurements are shown in mm



section b - b

A Two vaults

B Sqatting slabs

C Removable covers

D 200mm vent pipe, black, with fly screen

DOUBLE - VAULT COMPOSTING LATRINE

Adapted from Wagner and Lanoix (1958)

Fig.5.6 PROPOSED NEW PIT LATRINES

BABA, B. B.
M.SC(URP)
1988/89
A. B. U- ZARIA

In exceptional cases where the property poses danger to the residents, the government should acquire such property for redevelopment and pay compensation accordingly. Furthermore, the government, the community or the individual philanthropist may aid the residents in the form of technical assistance and advise, offering of loans, or buidling materials, etc to facilitate the improvement of such houses or community project development.

5.1.7 Planning Standards:

Planning standards for land development should be revised to reflect the peoples socio-cultural backgrounds, their economic status and the level of building technology. The standards should be flexible enough as to allow people to design and build what they want as long as they have satisfied certain technical standards such as proper ventilation, set back, building height and orientation among others. Efforts should also be geared towards promoting use of local materials and traditional building techniques.

5.1.8 Development Control:

It is proposed that the practice whereby land development precede plan approval in some

instances should be discouraged through legislation prohibiting such practice. Residents should be made to be aware of the implication of such practice through participation indecision making and public enlightenments.

Every undeveloped piece of land within the city wall should be under Local Planning Authority which will plan and co-ordinate the use of such land. Further encroachment into the green areas of the two rivers (Chicen and Landzu) should be prohibited. This will retain the good scenery along the rivers as well as providing the vegetal needs of the city population.

5.1.9 Rural Development:

It is proposed that the countryside should be developed alongside with the urban areas. Infrastructural provisions such as water, electricity, etc. should be provided. Agriculture should be encouraged and diversified and small scale agro-based industries should be established to provide employment to the people and ready market for agricultural produce. If properly co-ordinated, this will greatly reduce the influx of rural people in search of jobs and thereby enhancing the efficiency and management of urban infrastructure.

CHAPTER SIX

6.0 AREA IMPROVEMENT DESIGN PROPOSAL

To demonstrate the applicability of the general improvement proposals in the preceding chapter, a design proposal for the improvement of a ward 'Bangbara' is being undertaken. It comprises nearly 134.4ha and is bounded by the city wall in the south, Lyagi Road in the East, Laruta and Daracita wards in the North and Zuruku ward in the West (Fig.6.1).

The Area was known to be subject to particularly poor conditions of accessibility, drainage and environmental sanitation due to its physical characteristics. A further factor in its selection was that it had been one of earliest development dating back to the pre-Fulani jihad. Moreso, over fifty percent of secondary and tertiary institutions in Bida are sited immediately outside this part of the walled city, hence significant number of staff and their families and students resides here in order to commute within shortest time. Increasing population of these institutions could mean more demand for off-campus accommodation within the area. More importantly, it is an opportunity to control the haphazard in filling of the existing open spaces.

These above not withstanding, the design proposals presented here could be more or less adopted for other wards within the walled city.

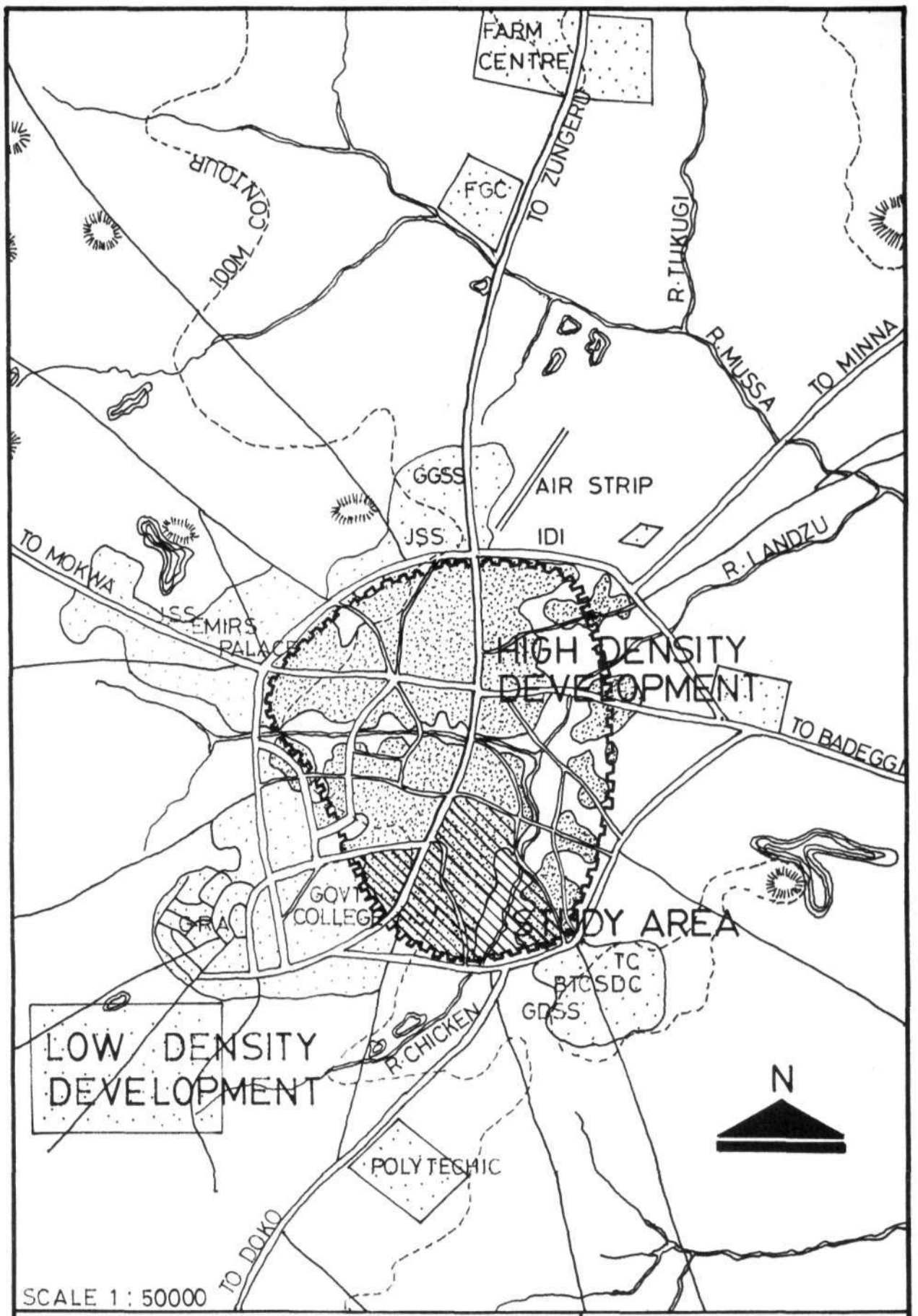


Fig. 6.1 BANGBARA IN RELATION TO THE CITY

Physical and social conditions in the area were examined in detail in surveys carried out during the field survey, 1989.

6.1 Existing Situation:

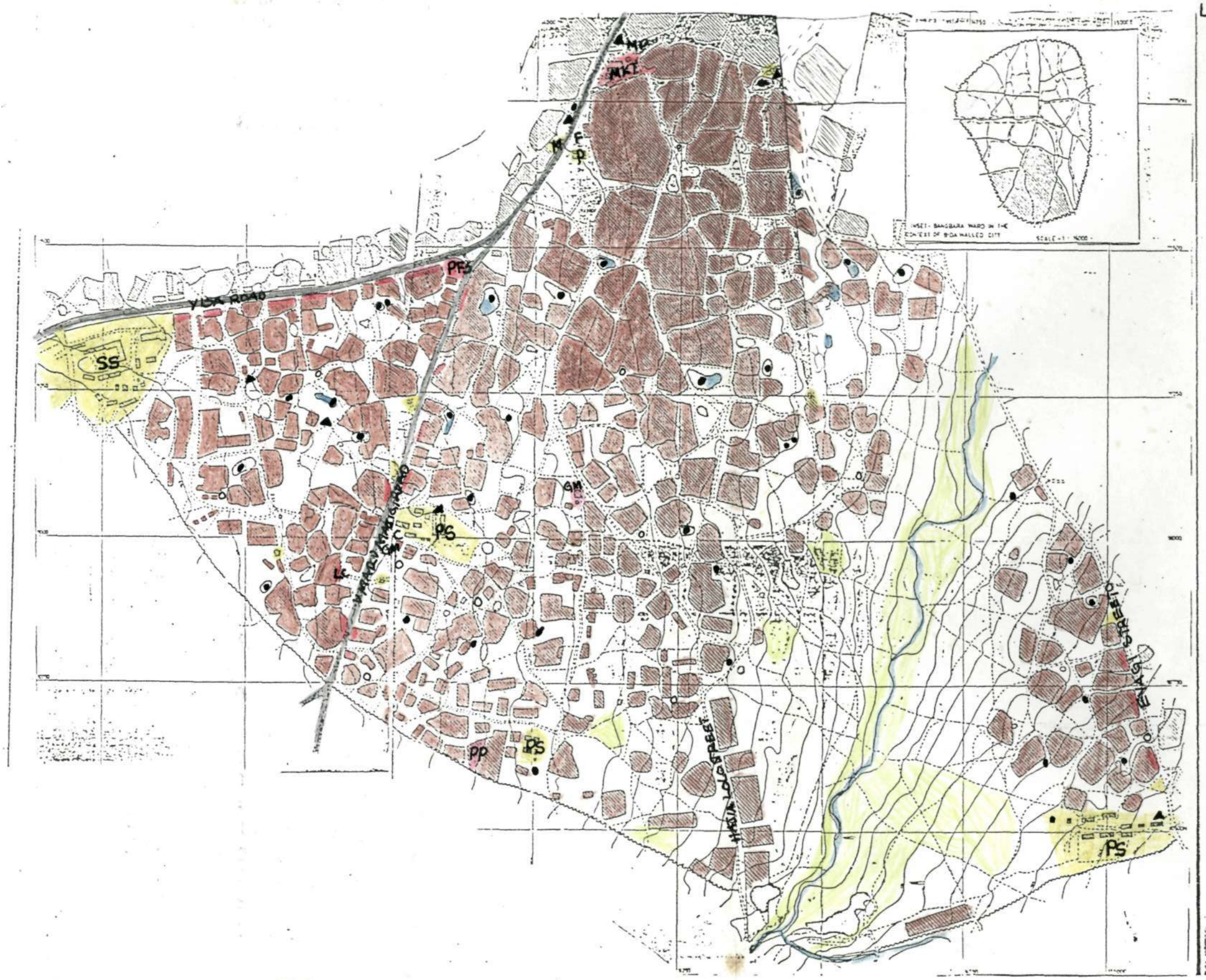
6.1.1 Landuse:

The general landuse pattern of Bangbara is shown in Fig.6.2. There is however a predominance of residential landuse over all other landuses. This is not unconnected with the fact that the area is essentially residential.

6.1.2 Access, Circulation and Transportation:

Existing Access and Road Condition: Bangbara is linked to the core area of the ward by two tarred roads and two laterite streets. These are Yisa Road and Umaru Majiga Road, and Majiya Lolo Street and Dyagi Street respectively. The rest of the area is penetrated by earth alleys and footpaths. There is no regular pattern of streets, but the whole area is crisscrossed by trodes in all directions made by the local people (see Fig.6.2).

With the exception of the tarred roads, the streets are narrow and could hardly accommodate two motor vehicles simultaneously. Road hierachy is virtually non-existing. In addition, the general lack of artificial drainage lines (Plate X) and



EXISTING SITUATION
LANDUSE FACILITIES UTILITIES AND SERVICE

LEGEND

- RESIDENTIAL
- COMMERCIAL
- PUBLIC SEMI PUBLIC
- INDUSTRIAL
- GREEN AGRICULTURE
- OPEN SPACE
- RIVER
- ROAD
- MOTORABLE PATH
- FOOT PATH
- BORROW PITS POND

PFS PETROL FILLING STATION
MKT MARKET
M MOSQUE
PS PRIMARY SCHOOL
SS SECONDARY SCHOOL
C CLINIC
P PARKING SPACE
F FILITIES (DANDALI)
PP PRINTING PRESS
GM GRINDING MACHINE
LC LOCAL CRAFT
o OPEN REFUSE DUMPING
O PUBLIC WELL
PUBLIC TAP

FIG.6.2

BIDA WALLED CITY : BANGBARA WARD



Plate X: Lack of Artificial Drainage

regular maintenance along some of these roads and street worsen the situation. Erosion also has its impact during the rainy season with resultant gradual wearing of the tarred surfaces and creation of pot holes along this access ways. Where no drains are provided, sullage runs along streets and paths. Many drains provided do not work because of lack of maintenance. Both problems lead to unpleasant conditions, breeding of moisquitos and inconveniences to pedestrian and vehicular traffic.

These two issues (Access and drainage) are critical because so many other aspects of improvement depend on them. Solid waste collection, drainage, commercial services and security are all dependent to some degree on access. Sullage, local and lateral drainage, and to some extent access, depend on efficient main drainage. Localized drainage problems caused by sullage and local storm discharge do exist and can be solved on a local basis.

Traffic Characteristics and Composition: In order to assess the traffic around Bangbara, a traffic survey was conducted at specific points along the roads and streets. Tarred roads attracts more traffic with Umaru Majigi Road having the largest volume of traffic (12013) Visa road followed with 10071. Hajiya Lolo Street and Dyagi street attracts 2479 and 3405 traffic volume respectively.

Comparing the respective volume of mode of transport, motorcycles dominate the roads and streets and account for up to 40.0% of the total volume of traffic. Taxis make up 29.9%, private cars 17.2%, and Buses/others and bicycles 11.76% and 1.3% respectively. The average daily traffic volume along these roads and streets has been shown in Fig. 6.3.

In view of this significant volume of traffic and its increasing tendency, access conditions should be improved to contain the traffic volume. There is also the need to construct new access ways. But in doing so, minimal demolition should be a guiding principle.

6.1.3 Facilities, Utilities and Services:

Information were collected on the existing levels of facilities, utilities and services. The spatial distribution of these items are shown in Figure 6.2.

Water Supply: In Bangbara, the main sources of water supply are wells, used by 67.9% of the households. Tap water ranked second accounting for about 16.3%. There is however significant number of households (9.2%) using the Chicon River compare to water seller

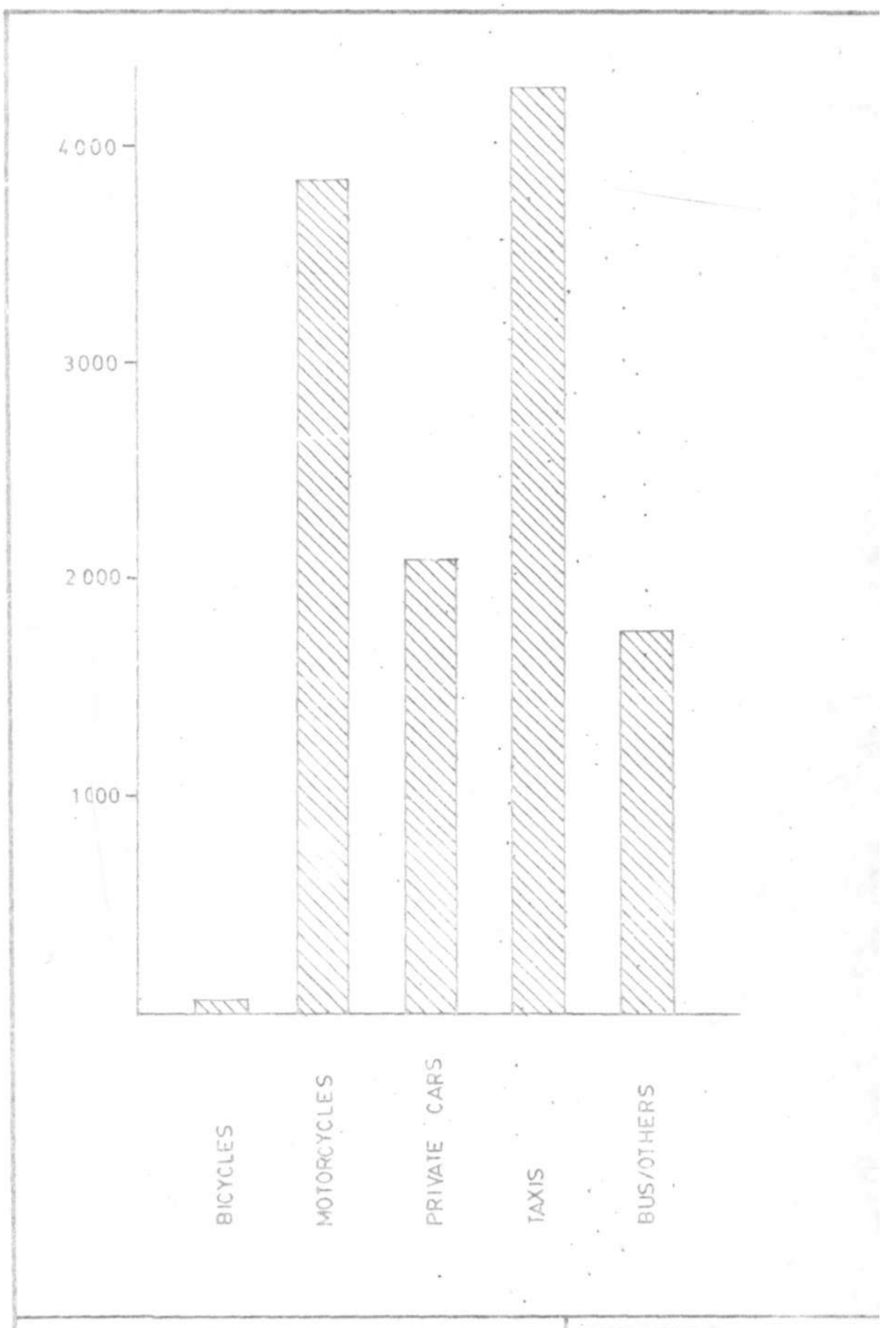
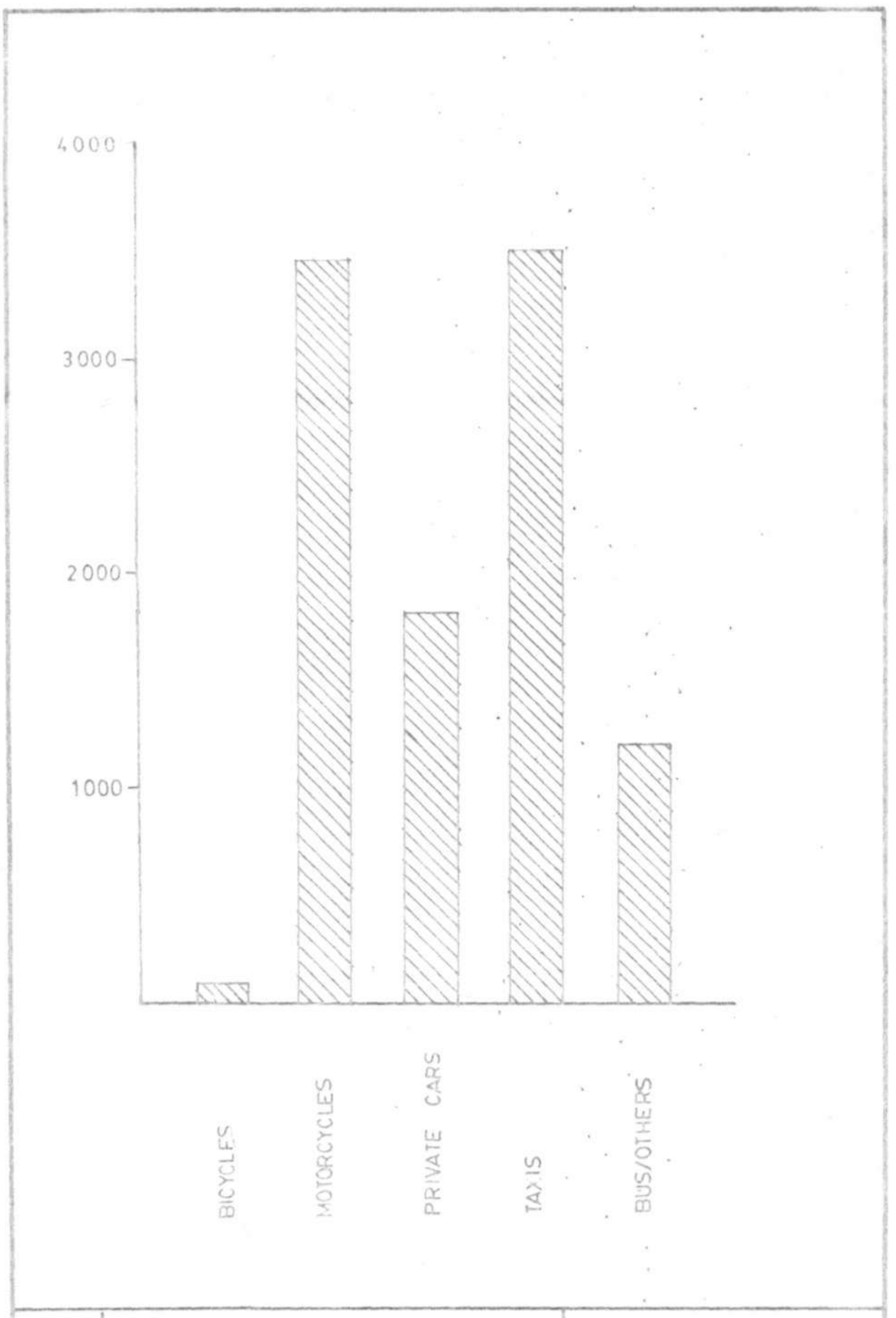


Fig.6.3[a] AVERAGE DAILY TRAFFIC VOLUME (UMARU MAJIGI ROAD)

BABA, B. B.
M.SC (URP)
1988/89
A.B.U - ZARIA



b
Fig.6.3 AVERAGE DAILY TRAFFIC VOLUME (YISA ROAD)

BABA, B. B
M.SC (URP)
1988/89
A.B.U - ZARIA

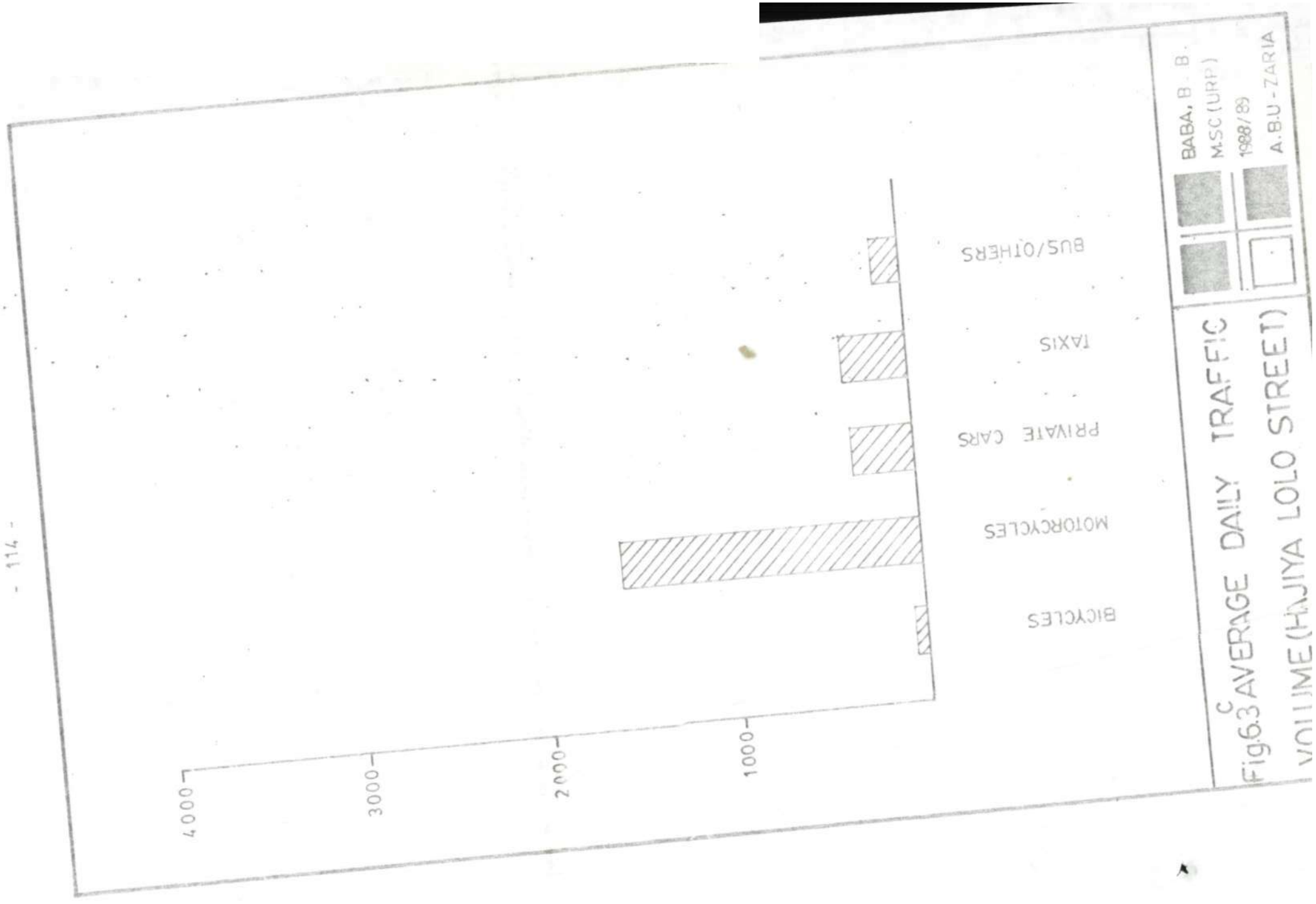


Fig.6.3 AVERAGE DAILY TRAFFIC VOLUME (HAJIYA LOLO STREET)

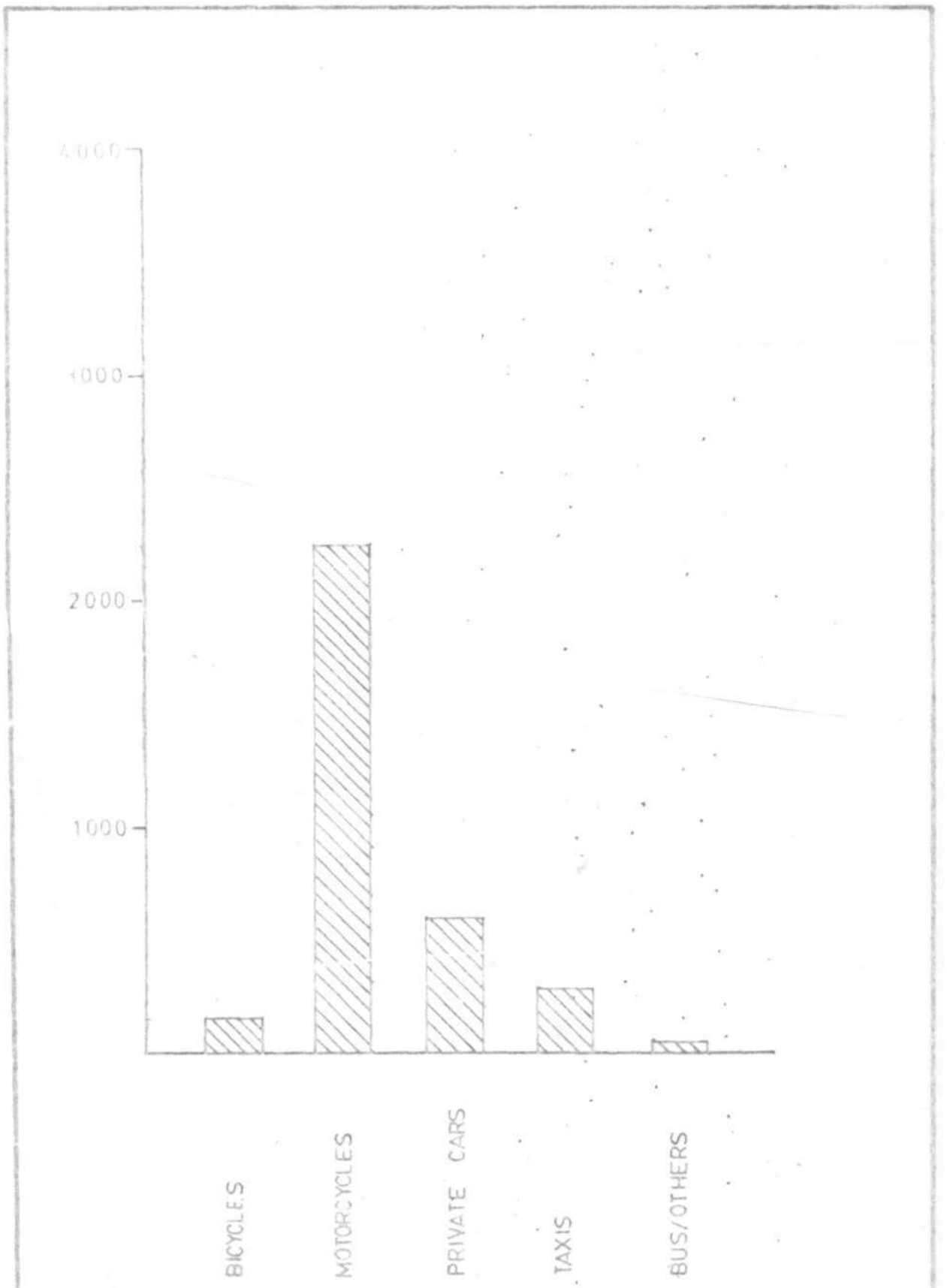


Fig.6.3 AVERAGE DAILY TRAFFIC VOLUME (EYAGI STREET)

BABA, B. B.
M.SC (URP)
1988/89
A.B.U - ZARIA

and tank which constitute 4.5% and 2.1% respectively (Fig.6.4).

About 53.0% of the households responded that water is always available which could be probable be from wells (Fig.6.5a). 71.0% of them gets their water supply within the compound and the remaining 29.0% outside the compound probably from public wells, taps and river etc. (Fig.6.5b). Furthermore, about 83.4% of the respondents considered their source of water to be good (Fig.6.5c).

The bulk of the area is therefore not served with a water supply network. The response to the availability and water quality could not be unconnected with the fact that the residents are unaware of the implications of these main sources. In addition to this, only seven (7) public taps exists in the area which is grossly inadequate. The problem is therefore to ensure the availability of pipe-borne water to the residents via public and private connection to ensure area efficiency.

Toilet Facilities: About 87.4% of the households had toilet facilities available to them while 12.6% had no use of toilet facilities in their compounds at all (Fig.6.6a).

The main type of toilet used in this area is the pit latrine (76.3%). Only 23.7% of households had the use of a fully connected flush water closet. No bucket latrines at all were recorded in the survey (Fig.6.6b).

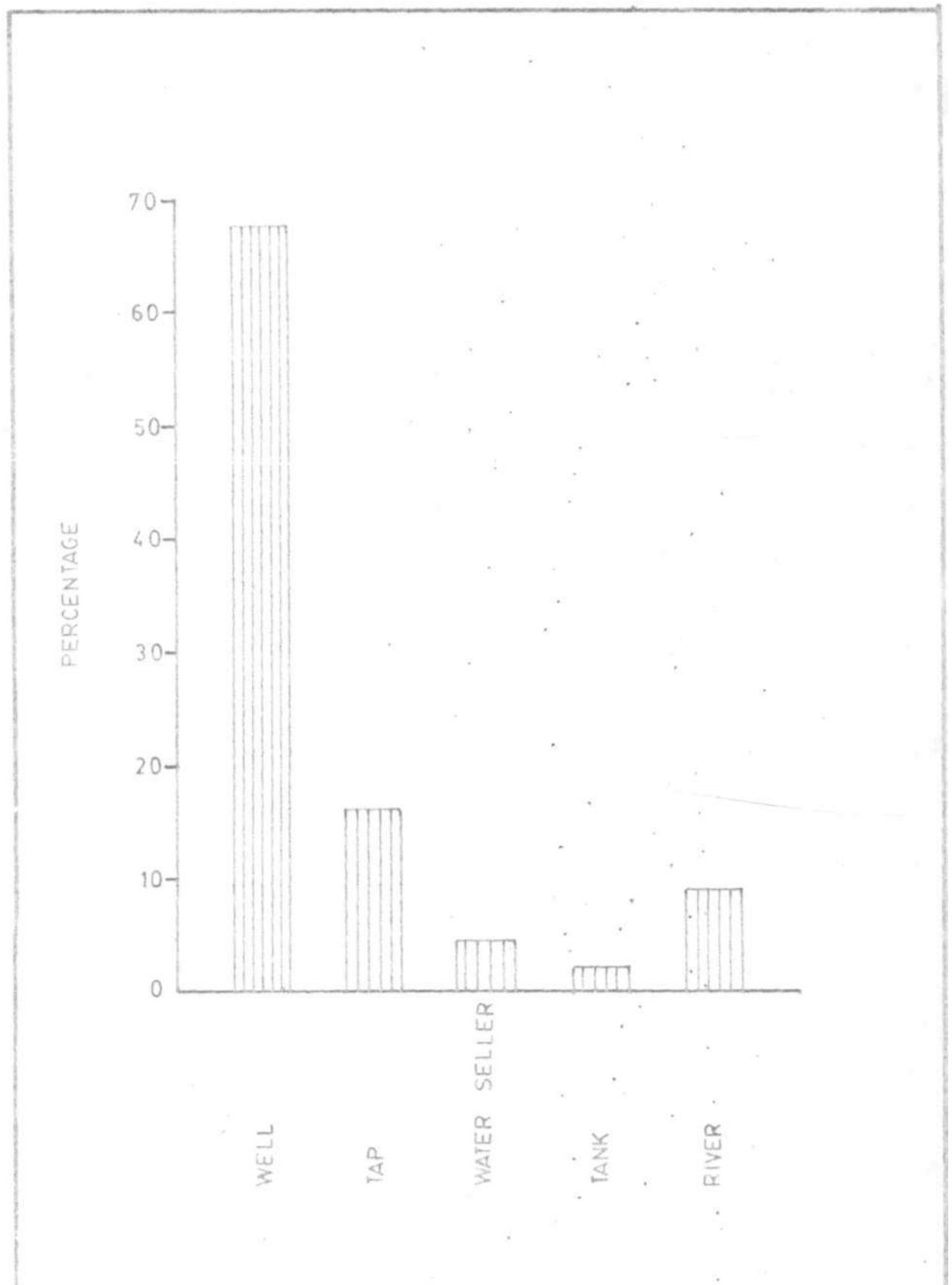


Fig.6.4 SOURCE OF WATER

BABA, B. B.
M.SC(URP)
1988/89
A.B.U - ZARIA

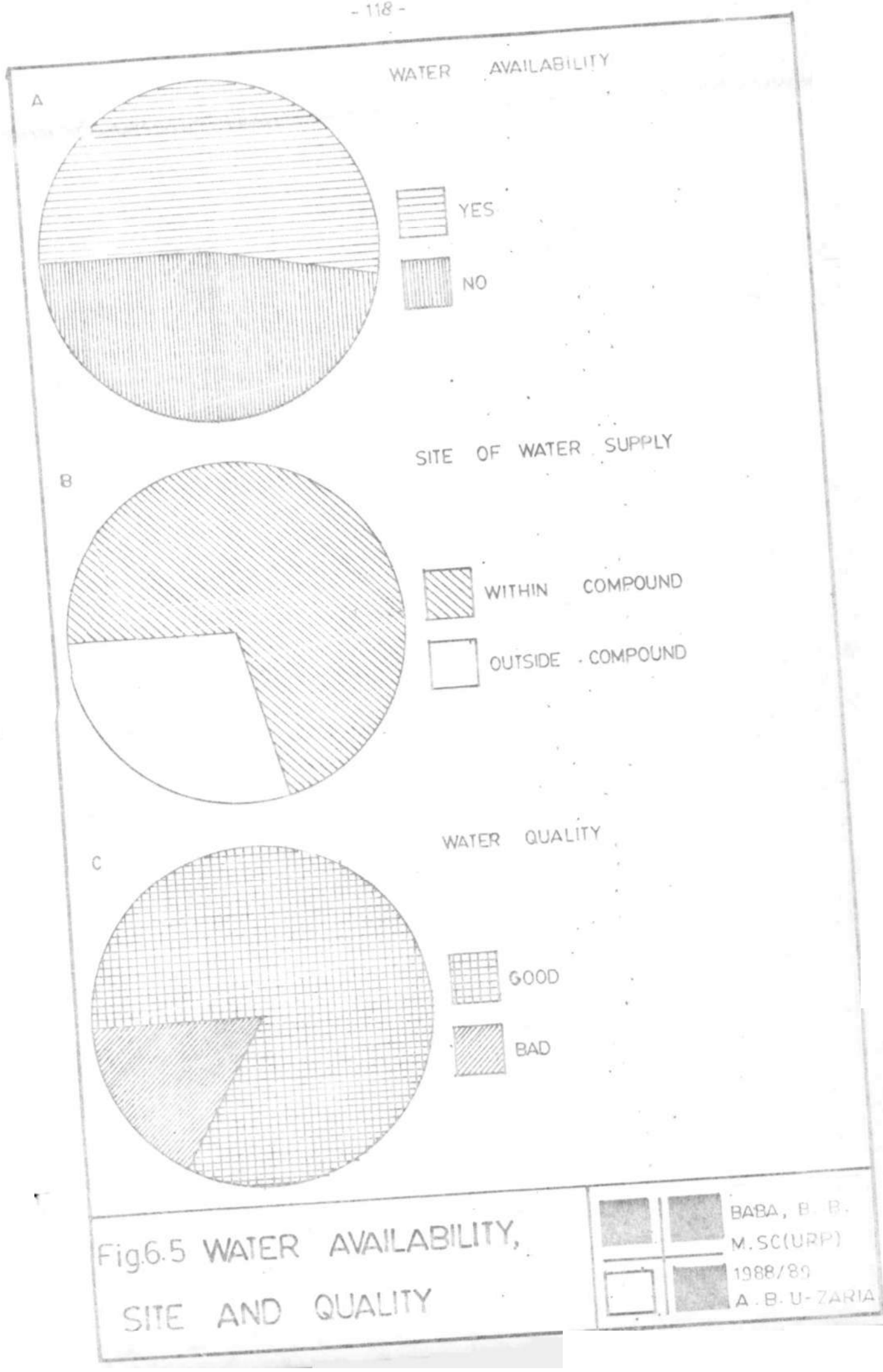


Fig.6.5 WATER AVAILABILITY, SITE AND QUALITY

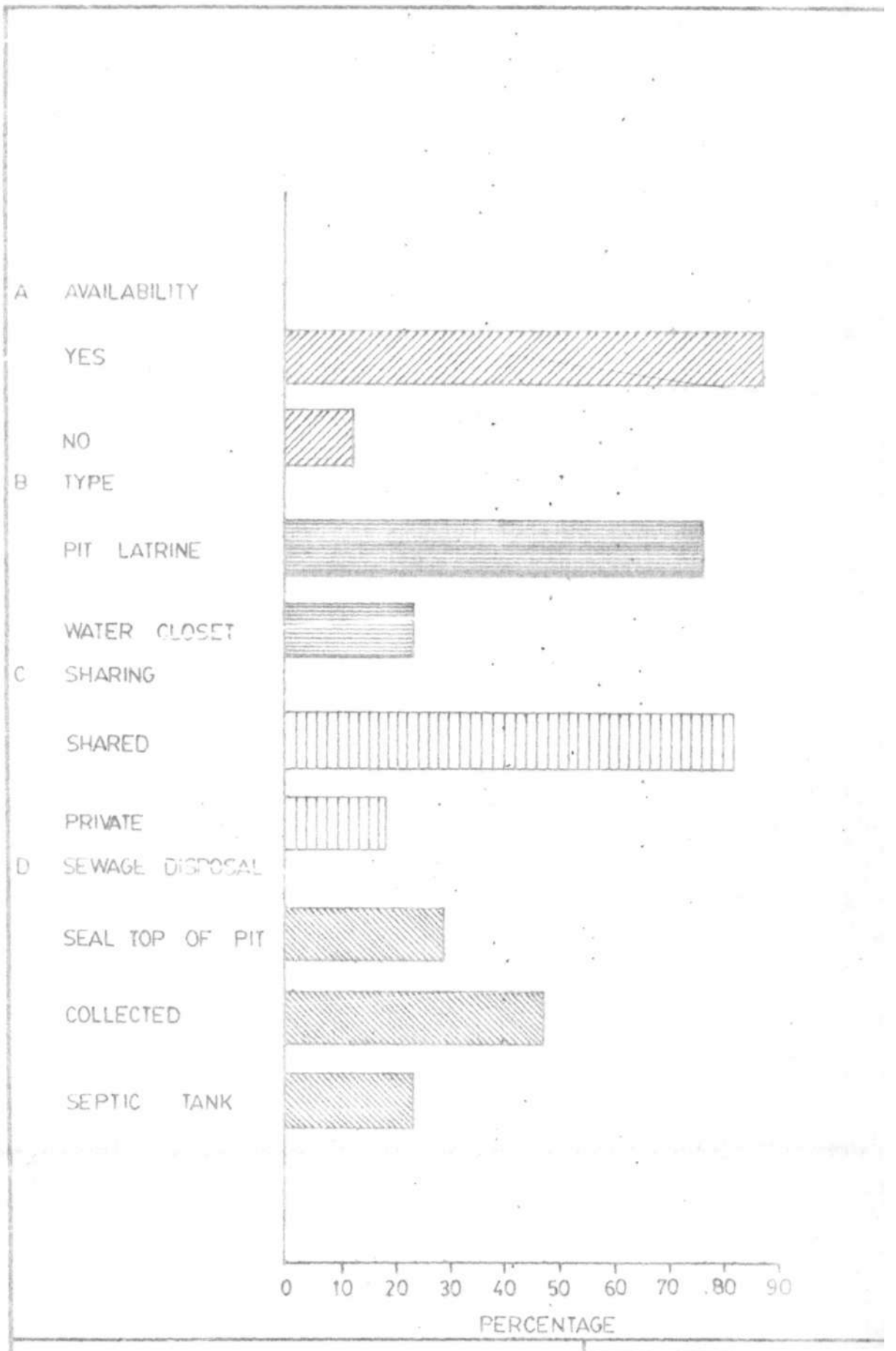


Fig.6.6 TOILET FACILITIES

BABA, B. B.
M.SC(URP)
1988/89
A.B.U-ZAR

Sharing of toilet facilities is tolerated among the households living in the same compound. 81.8% of households with some form of toilet facility in the compound were sharing that toilet with other households in the compound (Fig.6.6c). Only 18.2% of the hoseholds use their toilet facilities privately.

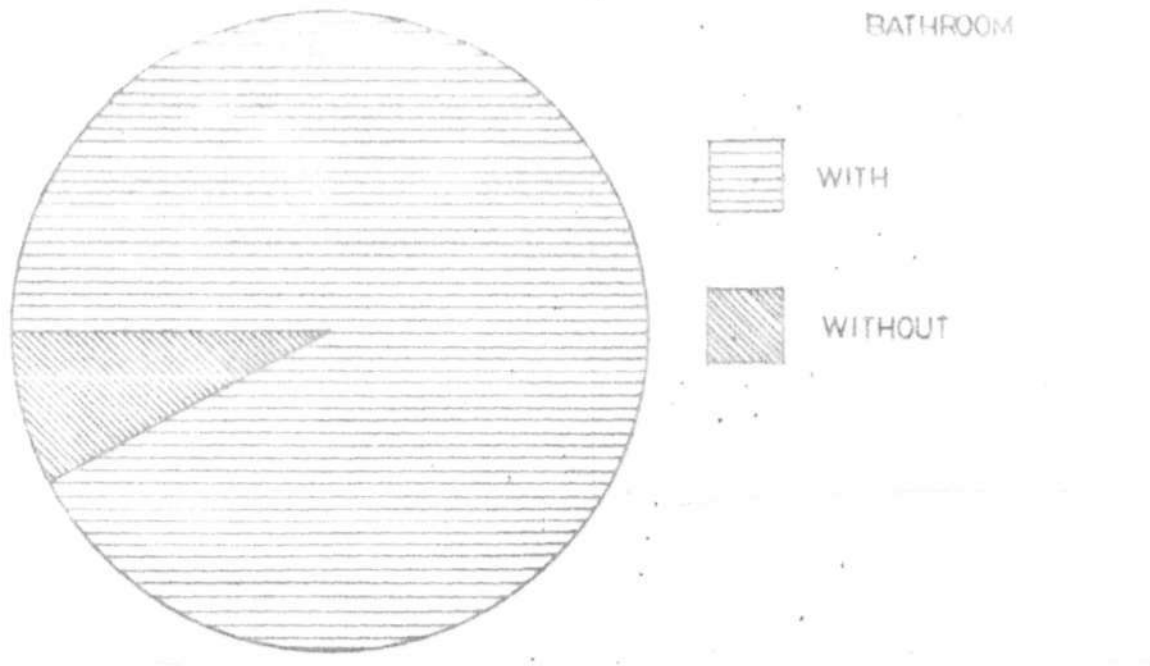
According to the households, the mean life of a pit latrine is five (5) years. When full, the usual practice of sewage disposal is either to seal the top of full pit latrine (29.0%) or to arrange for it to be collected (47.5%). Use of septic tank (23.7%) is also significant in disposing off sewage (Fig.6.6d).

The existing pit latrines causes nuisance and health hazards, within compounds and to the surrounding area, by smell, flies and mosquitoes.

Bathroom and Kitchen Facilities: In Figure 6.7, the proportion of households without bathroom is relatively small (7.8%), compared to those with it (92.2%).

All the households have kitchen which varies from open space type (18.1%) to room type (81.9%).

Refuse Disposal: The method of rubbish disposal used by the compounds in the household survey is shown in Fig.6.8. The majority of respondents (89.2%) use open refuse dumping method. 7.5% and 3.3% use either dustbin and burning methods respectively.



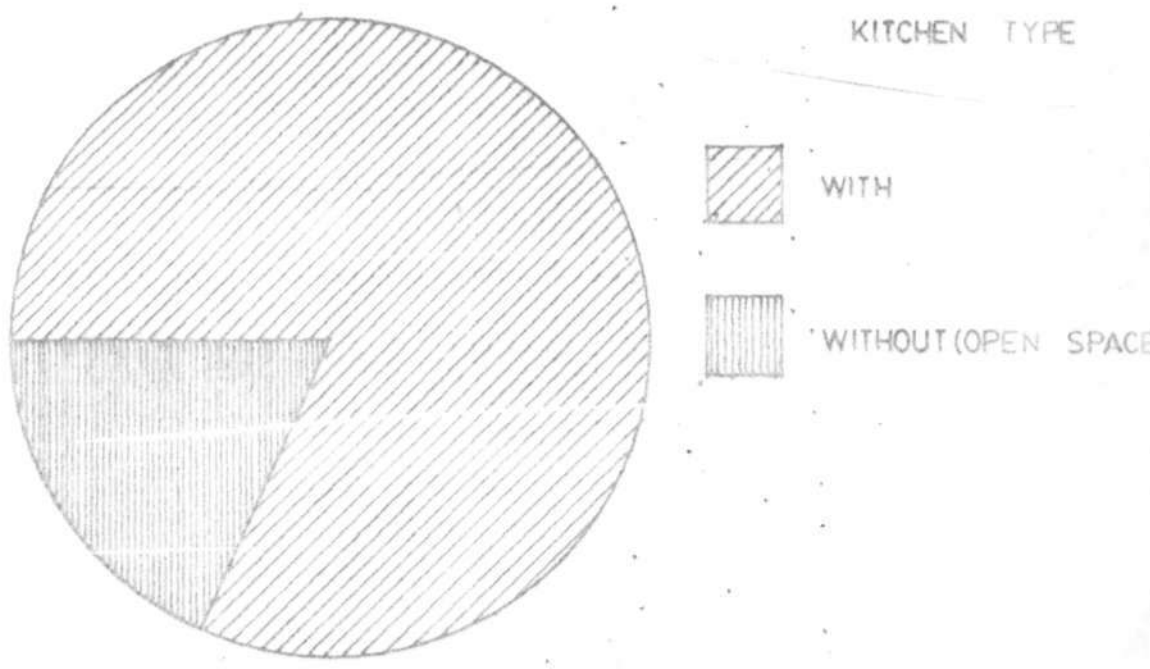


Fig.6.7 BATHROOM AND KITCHEN FACILITIES

BABA, B. B.
M.SC(URP)
1988/89
A.B.U-ZAR

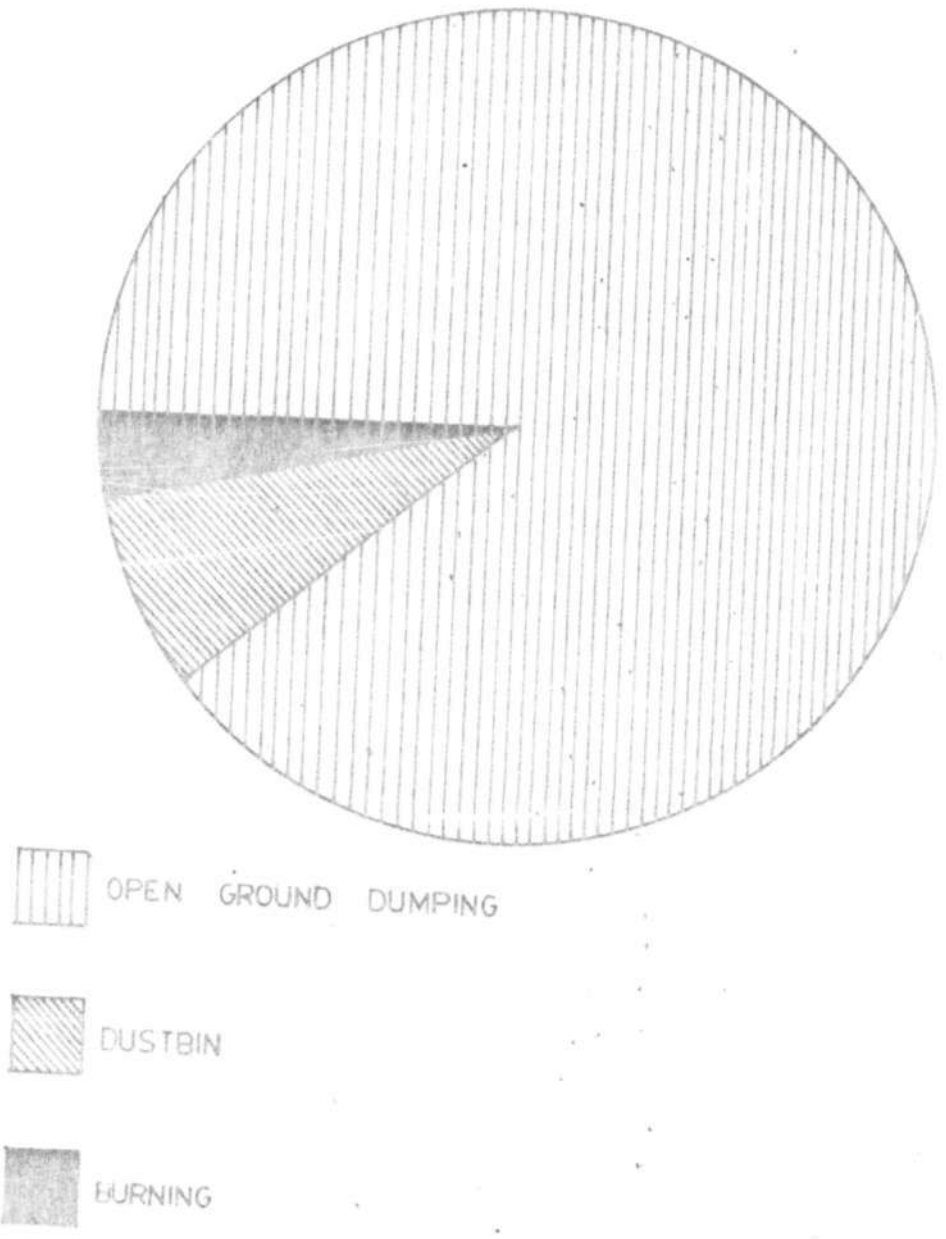


Fig.6.8 REFUSE DISPOSAL METHOD

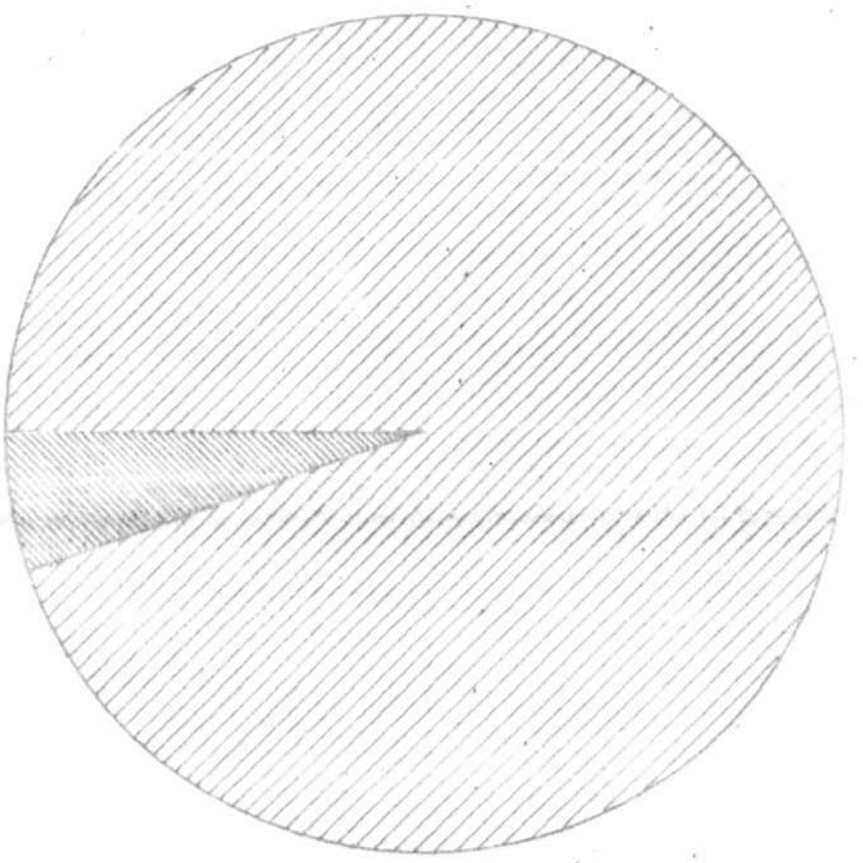
BAFIA, B. B.
M.SC(URP)
1988/89
A.B.U-ZAR

There is inadequate collection service and roads too. Collection points are also insufficient. Only one collection point exists which is located close to the market probably to serve the market and closer areas. Location of this creates unpleasant condition due to lack of proper maintenance. Irregular collection from this points adds to the situation.

Source of Light: Two main sources of light have been identified in the area during the survey. These include electricity and bush lamp. About 94.7% of the households use electricity while a relatively small proportion (5.3%) use bush lamp (Fig.6.9).

Street Lighting: No street lighting in the area. The installation of street lights can assist in security particularly in areas where people congregate at night. Lighting should be designed for the benefit of pedestrians rather than motor traffic for which a much higher lighting level is needed.

Post and Telecommunication: The area have no postal agency. It depends on the one provided for the whole town located in the central area of the walled city i.e. in front of Usman Zaki's Palace. There exist only a single telephone linealong Umaru Majigi Road. No public telephone booths and only nine connections are tapped from this main line.



ELECTRICITY

BUSH LAMP

Fig.6.9 SOURCE OF LIGHT

BARA, B. B.
M. SC(URP)
1988/89
A. B. U-ZAR

Police Post: No Police post exist in the area.

Education and Health Facilities:

Three (3) Primary schools

One (1) U.P.E.

Two (2) Full stream primary schools

There exists numerous Quranic schools.

One (1) dispensary exist.

Recreation: Apart from the Fili-Etsu open space in front of the Emir's Palace, there exist no organized recreational sites within the area.

6.1.4 Compound (Housing) Conditions

Age of Dwelling Units: From the field observation together with compound heads response, the ages of the compounds were recorded (Fig.6.10a). Generally, the ages of the dwelling units varies from 1 to over 60 years. About 62.2% of the dwellings are over thirty-one years of age. 37.8% had their ages ranging between one and thirty years.

Nature of the Compound: There are two basic categories of compound form. Observation shows that 68.9% of the compounds were in traditional form while 31.1% were made up of modern form (Fig.6.10b)

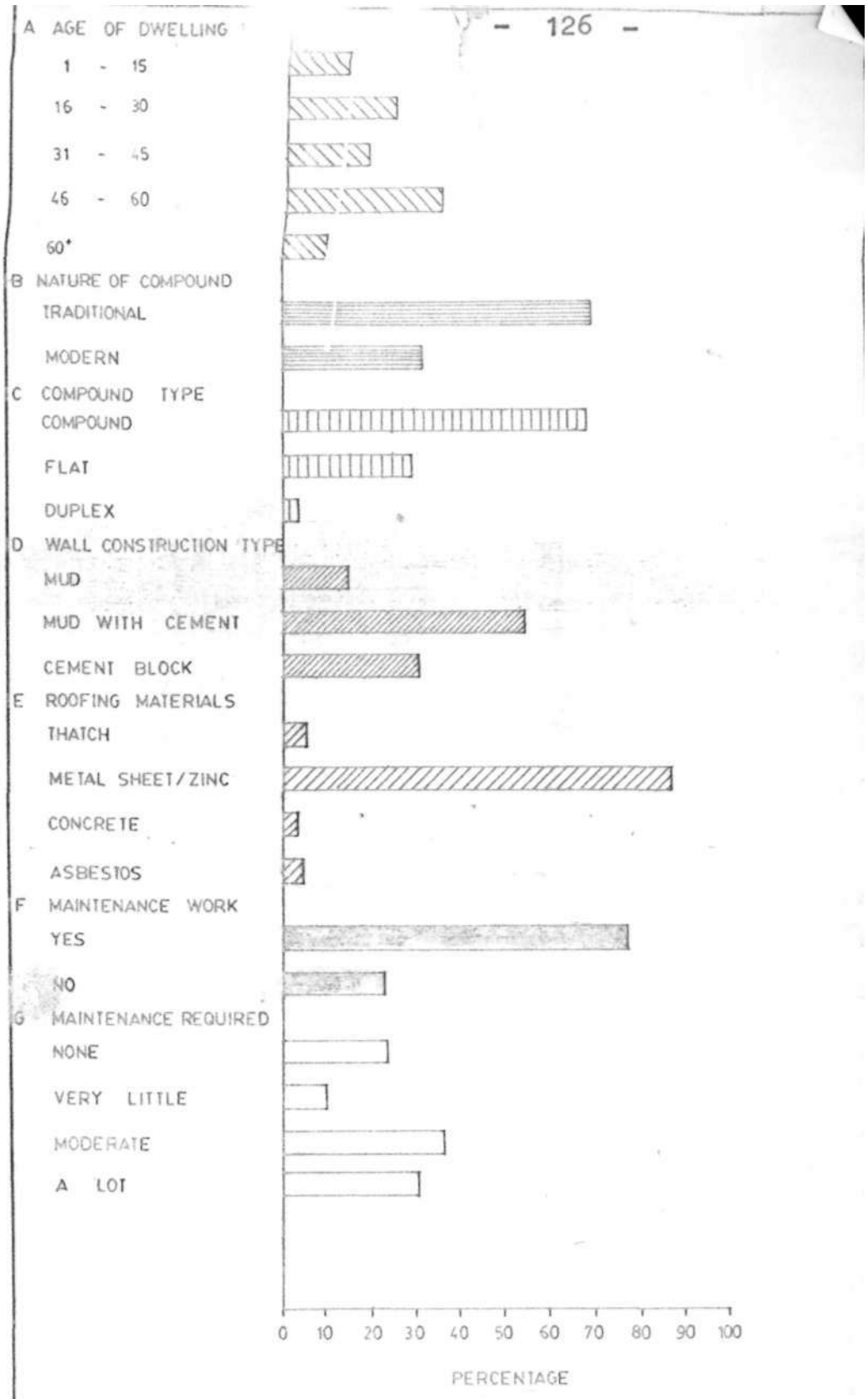


Fig. 6.10
HOUSING CONDITIONS

BABA, B. B.
M.SC(URP)
1988/89
A.B.U-ZARIA

Compound Type: The compound type of house is the most dominant. 67.9% are of this type. Flats and duplexes (storey buildings) constitute 28.8% and 3.3% respectively (Fig. 6.10c).

Type of Wall Construction and Roofing Materials: The wall categories are mud, mud with cement plaster, concrete and those for the roof include thatch, metal sheet/zinc, concrete and others. 14.7% of the compounds are built of mud, 54.2% mud with cement plaster and 31.1% with cement blocks (Fig. 6.10d). Only 4.1% of the roofing materials is asbestors. 3.9% and 5.2% are concrete and thatch respectively. The most widely used roofing material is metal sheet/zinc which account for 86.8% (Fig. 6.10e).

Maintenance Work: About 76.9% of the households indicated that maintenance is needed in their compounds (Fig. 6.10f). They were further asked whether the buildings were in good condition or not by recording the amount of maintenance required (Fig. 6.10g). About 23.1% of the compounds are in good condition, while about 9.8% and 36.1% needed very little and moderate maintenance respectively. 31.0% however, required extensive maintenance. Fig. 6.11 indicates the spatial distribution of building conditions.

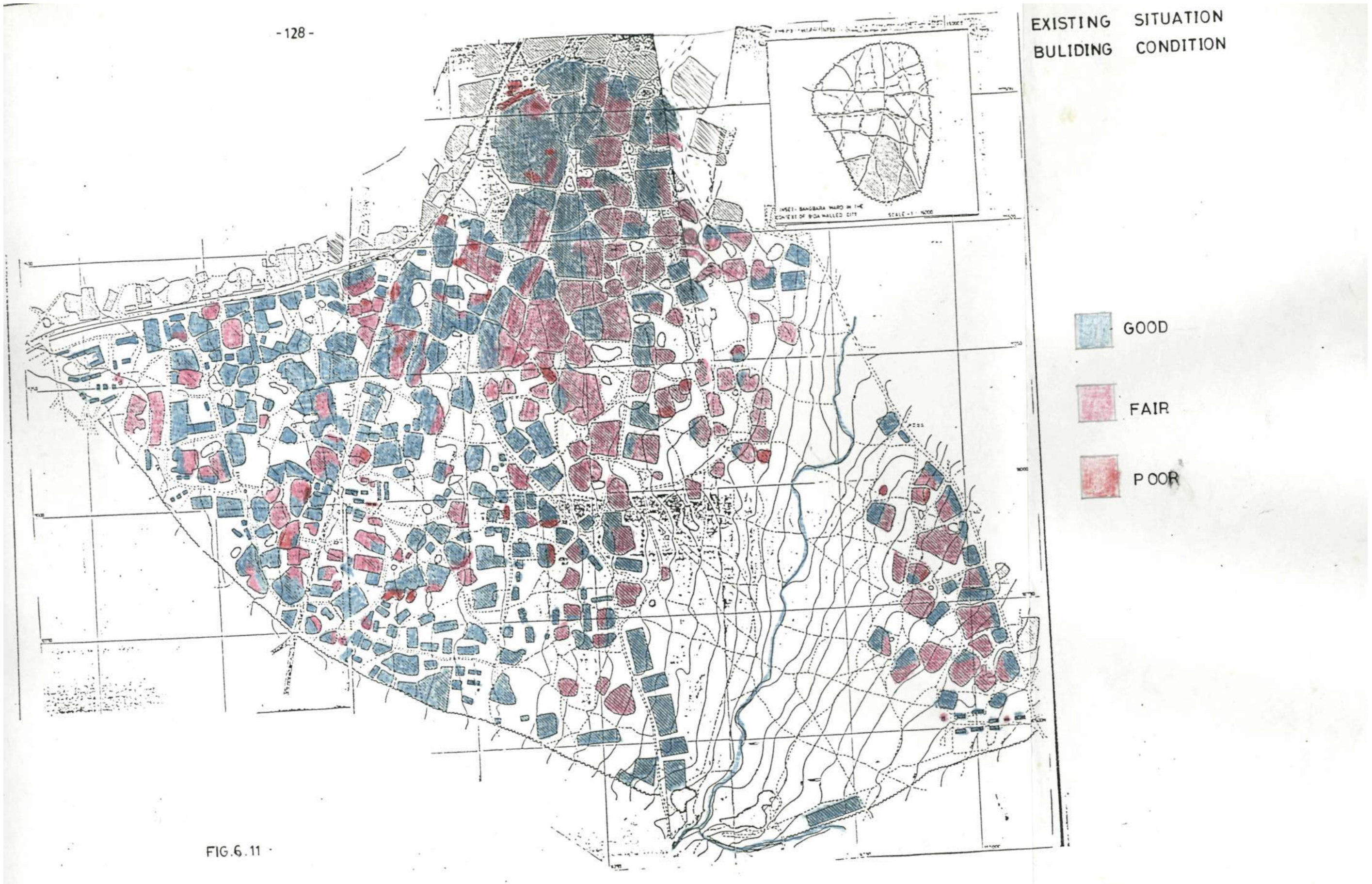


FIG.6.11

BIDA WALLED CITY : BAGBARA WARD

Almost all the households (98.1%) indicated their sources of finance for house maintenance is through income from various occupational pattern. Average monthly expenditure on house maintenance ranges from ₦10.00 - ₦55.00. However, over one-third (67.4%) of the respondents indicated that the amount is grossly inadequate and suggested that loans in form of materials and cash should be made available to them.

6.1.5 Population Characteristics:

Size: Based on the 58(20%) sample compounds surveyed, it contains 263 households with a population of 1,683. The average size of household is thus 6.4. Since the total number of compounds in the ward are 289, therefore, the estimated total population is 8,386.

Age Distribution: In the area, over a third of the population (male 35.7% and female 36.4%) is under 10 years of age. The 0 - 4 age group is slightly dominated by male 45.8%) whereas that of female is 45.0%. In the 15 - 54 age groups, females (51.6%) slightly dominate males (50.1%). In the age group 55^{+}, males (4.1%) dominates females (2.8%). In the main working age group (age 25 - 44), there is slight proportion of men (26.7%) over women (25.2%).

Within the working age group, the practice of polygamy among other factors could as well form the basis for the slight domination of females over males. This mean that less people will be engaged in any communual effort involving physical strength such as access maintenance, etc. However, women too can assist in financial aid though not likely because of the fact that they to a greater extent depend on their male counterpart for their livelihood.

Sex Distribution: The overall Male - Female ratio in the area is 54:46, showing only a moderate predominance of males over females, which is more than accounted for by the proportion of male than female children aged 8 or less and adults age between 20-29.

6.1.6 Socio-Economic Characteristics:

Land Acquisition: Land acquisition in the ward is predominantly through inheritance (79.7%). Significant number of households (14.1%) purchased the land and very few (6.2%) acquired the land through gift.

Choice of Locality: Though the ownership of land (58.1%) predominate in the choice of the ward, proximity of the area to the work place (30.7%) is also significant. Choice of the ward via relative/ ethnic group (11.2%) is relatively insignificant.

Building Permission: Most of the households (82.2%) built their houses without permission. About 17.8% obtained permission from the Local Planning Authority and non from the ward head.

Type of Tenure: About 73.5% of the households own the houses in which they live in while 17.8% are tenants. 8.7% are however living free i.e. they are neither tenants nor do they own the houses.

Household Type: Single person households constitute 16.3% of household type. The husband and wife/wives, Nuclear family and Nuclear family with other relatives are made up of 21.1%, 48.4% and 14.2% respectively.

Household Size: Of the total sampled population, 16.3% are one person household size. About one-third (27.0%) of the households are in the household size (2 - 4). In a descending order, as the size of households, increases, the total number of households in each group decreases with the lowest 5.3% households having either 17 or more people.

On the whole, over one-half (56.6%) of households have 5 or more persons and 43.3% households have 4 or less persons.

Occupancy Rates: About 7.4% of people live at less than one person per room, well over one-third (42.7%) live at one to two persons per room. About one-third (29.1%) live at more than two persons per room and over one-tenth live

at three (3) to four (4) persons per room. 8.6% of the population are living at more than 4 persons per room. In general terms, one-half (49.9%) of the people live at 2 or more persons per room.

Marital Status: In the area, 16.3% of people are single household either married or divorced. About one-half (49.8%) practice monogamy and one-third (33.8%) of the total practice polygamy.

Opinion on Rent: Majority of the respondents (66.9%) are of the view that the rent is generally too low. Only 13.7% and 19.4% respondents viewed the rents to be high and moderate respectively.

Occupation: Over one-third (37.3%) of the residents population engage in farming activities, 10.1% in public service, 3.2% in industry, 25.6% in trading, 7.1% in transport and 16.7% are engaged in other activities.

Mode of Transport to Work place: Of the total residents interviewed, more than one-half (54.8%) walk to work or school. This is followed by motor-cycle (26.1%) and then taxi and bicycle accounting for 3.7% and 2.0% respectively. Assisted transport (lift) accounts for 0.8% whereas private vehicles and work place vehicles accounted for 12.4% and 0.2% respectively.

6.1.7 Priorities for Improvement

Improvement Most Desired: Water supply was the possible improvement (62.4%) needed by the households. The improvement given second priority in the ward by household heads was better built house. Others desired are more rooms (11.5%) and electricity (8.3%).

To further assess the quality of the environment, the residents were asked to indicate their order of priority. Drainage/Better access ways scored the highest (53.7%) and Reguse collection and sanitation had 46.3%.

6.2 The Improvement Process: The following points about the improvement process in urban areas have been taken into account.

6.2.1 Improvement as a Continuous Process:

Individual owners repair and improve their properties as the need arises and resources permit. However, this process may be prevented from working because of the lack of a major public facility (such as a main drain or a solid waste collection service) which residents cannot provide for themselves. An important part of the purpose of an improvement of this nature is thus to provide the conditions to enable residents to make improvements for themselves.

6.2.2 Scope of Community Action:

Some improvements in public areas can likewise be carried out by the community itself. This is particularly appropriate in areas where few financial and technical resources are needed and where a small group of residents have a clear interest in improving their living conditions.

6.2.3 Confidence:

The improvment process depends on confidence in the area, and lack of confidence may be a reason why the process ceases to operate. This is largely a matter of local motivation, but it can be affected by official attitudes and actions. The Area Improvement Project should be seen as an opportunity to improve resident's confidence in their area.

6.3 Services Considered:

Improvement measures should create opportunities for further small-scale improvements by individuals or community action. In view of this and priorities for improvement, the following services has been identified as relevant to improvement design proposals:

6.3.1 Infrastructure:

- Water supply
- Environmental sanitation (sewage and refuse disposal)
- Sullage disposal
- Drainage
- Access
- Electricity
- Others

6.3.2 Social Facilities:

- Open spaces
- Social services
- Others

6.4 Proposed Design Project:

The proposed improvement measures are listed below and shown in Figure 6.12.

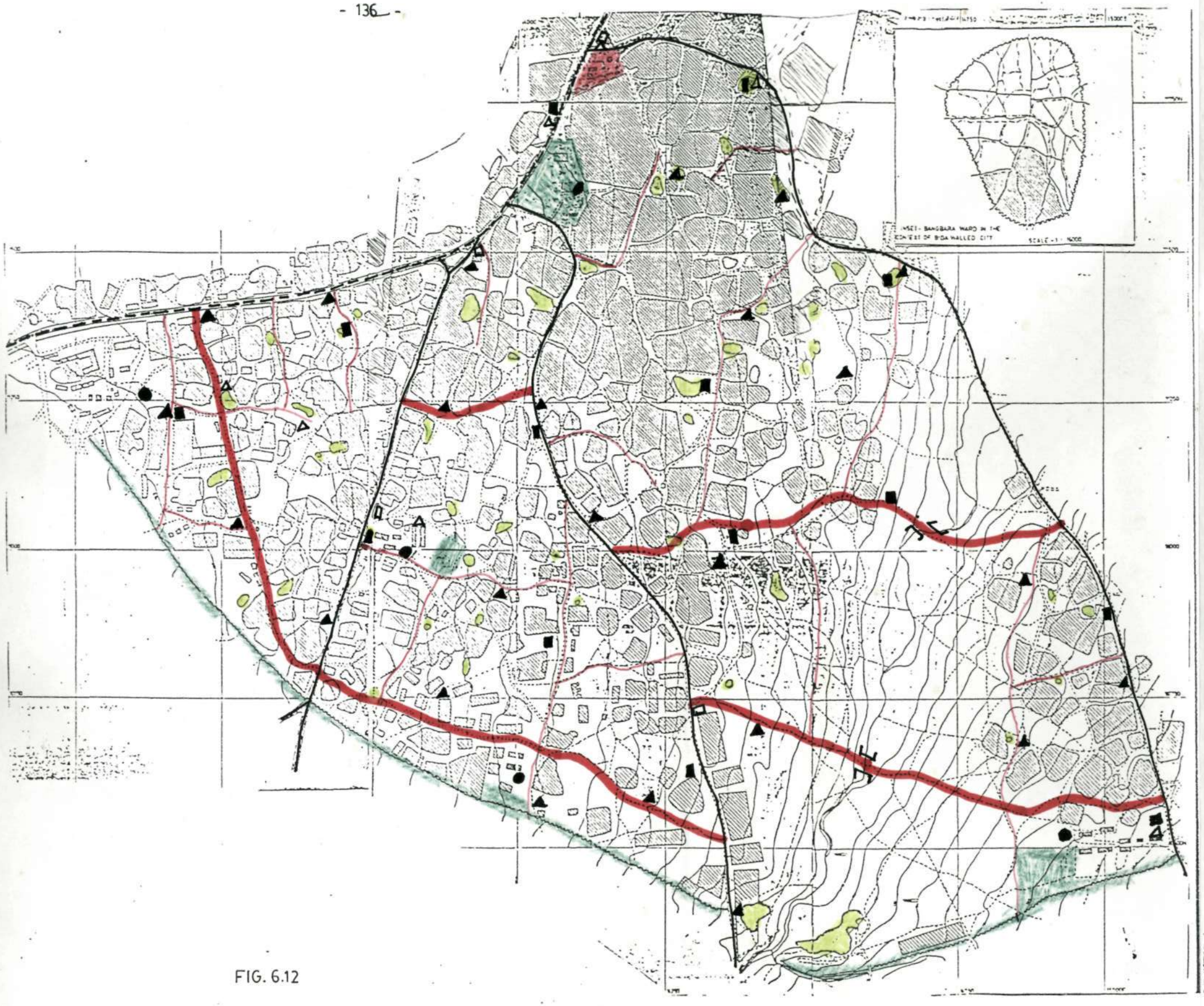
6.4.1 Area Improvements:

Burrow Pits - Filling of burrow pits.

Roads - Spray and chip of pot holes along Yisa Road and Umaru Majigi Road.

- Spray and chip carriageway of Hajiya Lolo street and Eyagi Street.

DESIGN PROPOSAL

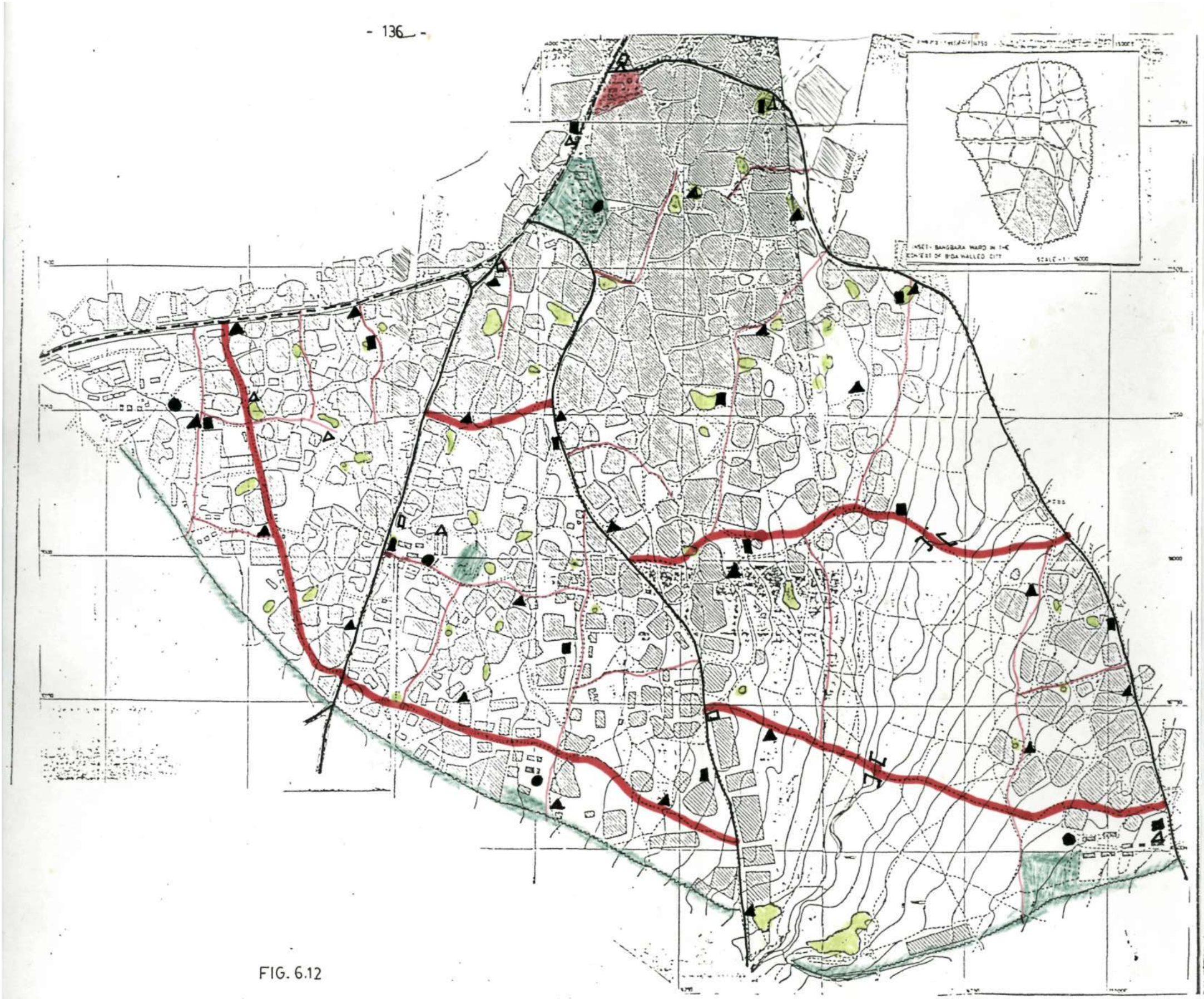


LEGEND
ACCESS
TOWN ROAD
AREA RD INPROVED
LOCAL RD PROPOSED
LOCAL LANES
CULVERTS
SOLID WAST
CONCRETE DUMPS
WATER SUPPLY
STANDPOSTS EXISTING
PROPOSED
SANITATION
PUBLIC LATRINES
FILLING BURROWPITS
ORG OPEN SPACE
INPROVED COMM AR
BUS STOP SHADES
CITY WALL GREEN
BELT

FIG. 6.12

BIDA WALLED CITY: BAGBARA WERD

DESIGN PROPOSAL



LEGEND
ACCESS
TOWN ROAD
AREA RD INPROVED
LOCAL RD PROPOSED
LOCAL LANES
CULVERTS
SOLID WAST
CONCRETE DUMPS
WATER SUPPLY
STANDPOSTS EXISTING
PROPOSED
SANITATION
PUBLIC LATRINES
FILLING BURROWPITS
ORG OPEN SPACE
INPROVED COMM AR
BUS STOP SHADES
CITY WALL GREEN
BELT

FIG. 6.12

BIDA WALLED CITY: BAGBARA WERD

- Local Street, linking Umaru Majigi Road and Hajiya Lolo Street. Compacted laterite carriageway.

- Provide a Street, linking Hajiya Lolo Street and Eyagi together with a culvert across the Chicen River. Compacted laterite.

- Laterite surfacing of street linking Yisa Road and Umaru Majigi Road.

Drainage - Improve drainage lines along Yisa Road.

- Construct/provide concrete drains along Umaru Majigi Road, Hajiya Lolo Street and Eyagi Street.

- Provide drainage lines along the Streets.

Water Course: - Encourage the development of market gardening along the Chicen River for agricultural use.

Street Lighting: - Install street lighting along Yisa Road, Umaru Majigi Road, Hajiya Lolo Street, Eyagi street and proposed new Local Street.

All these Area - Level improvements sould be carried out directly by the State Government (or its parastatals) as part of the inital Improvement Project.

6.4.2 Local Improvements

Water Supply:

- Provide 29 new standposts in addition to existing 7 standposts (State Action)

Environmental Sanitation:-

a. Sewage - Provide 5 VIP latrines for public use (State Action)

- Provide grant aid for improvement and construction of proposed VIP latrines in compounds (community Action).

b. Solid Waste - Provide 900 empty oil drums in locations, and 15 concrete dumps, for use as refuse collection point (State Action)

Access/Sullage - Improve few local lanes by surfacing with compacted laterite and providing concrete sullage drains, and demonstration (State Action)

- Further provision of materials by the State for local lane improvements to be carried out by groups of local residents (Community Action).

Drainage - Improve local drains (Community Action)

Open Spaces - Provide funds for acquisition of vacant land by community (Community Action).

- Provide trees for planting by Community (Community Action)

Bus Stops - Provide 6 Bus Stop shades to be located at strategic points.

Education - The three primary schools serving the area are reasonably well located in relation to it. No action is therefore proposed.

Health - Considering the location of the area to the General Hospital, the existing Clinic/ Dispensary within the area should be expanded and services improved. This will improve primary Health care in the locality.

6.5 PHASING

The scheme has been phased over 5 years. It is recommended that all measures requiring state action be implemented in the first year. Financial and technical assistance for community measures should be vailable for its remaining four years.

However, the general improvement of the houses should be gradual by the individual house owners. The major area of house improvement will be the improvement of ventilation in rooms and toilet conditions. Encouragement should be given to residents to widen the windows in their rooms, to plaster the floor and to raise the squatting slab for their pit latrines. Houses without electricity, water, etc will be encouraged to do so by laying more service lines nearer to the houses.

6.6 IMPLEMENTATION

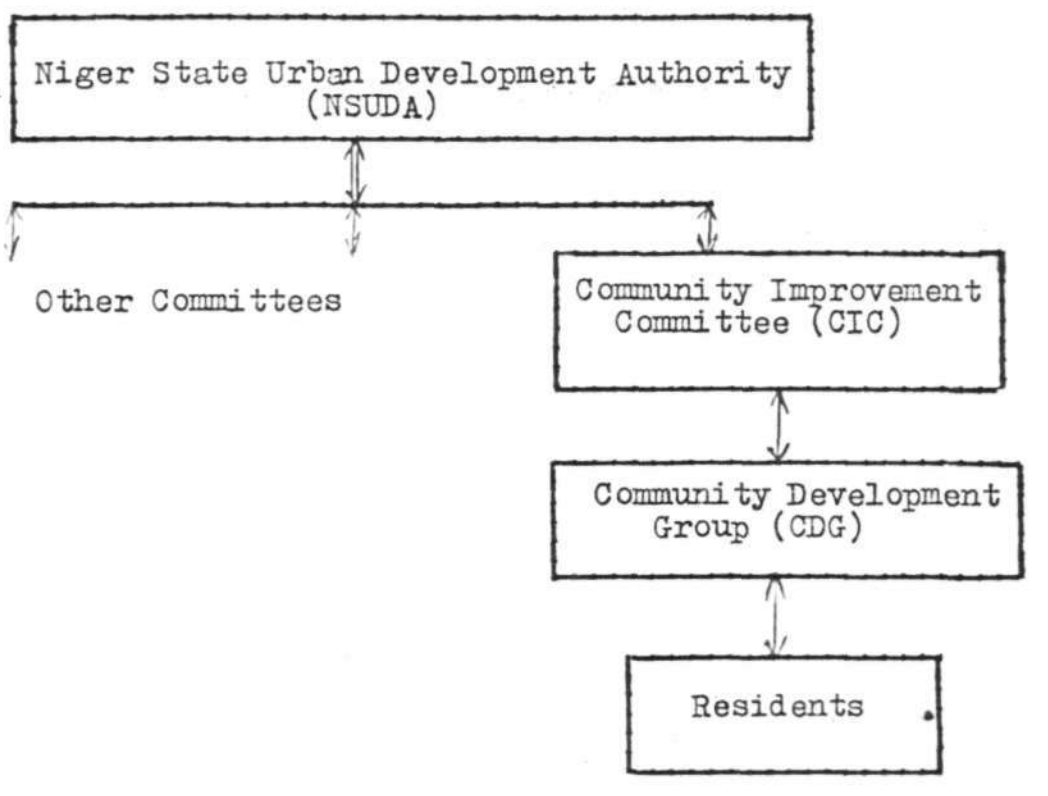
Any meaningful proposals for the improvement of these environments should be accompanied with the interest of the community it is to be effected. It is the value of the society that can decide the use of environment. For instance, whether social ties can be disturbed in order to take up the urban renewal programme depends on the value of the society. Residents need to be made aware of linkages that exist in the environmental system - the relationship between one aspect of environment with another. Residents should be able to identify the problems and they are to take active participation in programmes according to their need and available resources at hand. Residents will take interest and will participate in developing programmes if environmental problems are viewed through their perception. It is the value adjudgement of residents that count most. It is through their efforts that any programme can be fruitfully implemented.

The most important factor that can determine the successful implementation of the improvement project in this study is the careful co-ordination of the role of various bodies involved and the residents of the Efu ward at large. 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 planning, coordination and implementation. The coordination of the views of other Ministries and Boards concerned in the urban management process should be its responsibility.

2. Community involvement in decision-making and project execution.

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



The management structure for the implementation of the proposals is to consist of a Community Improvement Committee (CIC) - as a unit of the Niger State Urban Development Authority. 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 various ministries and Boards are undertaken and coordinated.

Responsible to this committee is the community Development Group (CDG) which will be headed by a Local Government representative, preferably community development expert and to consist of the ward head and other representatives from the community appointed by the residents. The group is to be transistory between the people and the Community Improvement Committee.

6.7 CONCLUSION

Nigerian urban centres particularly our traditional cities have within the past few decades witnessed an unprecedented rate of growth that cannot be divorced from the overall chaning socio-economic structure of the country, and which have led to the creating of a number of problems such as serviceability, liverability and manageability among others. Therefore, the need to improve them is highly desirable in view of the fact that not only will this make for a more pleasant environment but can actually help attract new developments.

The genesis of urban environmental degeneration cut across the physical, social and economic spheres of human endeavour relating to accelerated population growth, increased urbanization and expanded and efficient new technology. None of these need be damaging to the environment. However, the efforts to accommodate population, to plan and control industrialization and urbanization, and to properly manage land and resources have fallen short of the required. In addition, the forces work at varying degree to change the image of the cities.

In tackling these problems particularly in the traditional cities, the valuable attributes should be maintained as changes are being introduced. This will make the cities retain their age long identity. Variable standards have to be introduced in order to accommodate certain unique characteristics of the traditional environment. The success of project of this nature will to a large extent depend on the coordination of the actions of various bodies and organizations on the one hand and individuals and residents on the other. Beauty can't be forced but can, and should be encouraged by government action.

Thus, it is hoped that the study will go along way to checking physical planning problems in similar communities especially where such area have been subjected to immense pressures by immigrants as a result of economics of agglomeration and siting of educational institutions in such areas.

A great many so-called urban problems are really conditions that we either cannot eliminate or do not want to incur the disadvantages of eliminating.

REFERENCES

1. Abranis, C. (1967). Man's Struggle for Shelter in an Urbanized World. The MIT Press, Massachusetts.

2. Adepoju, O. (1972). Nigeria: Strategies for Urban Redevelopment; Town and Country Planning Summer School February, pp.52.

3. Breger, S.T. (1967). Urban Blight and Slum, M.I.T. Press, Massachusetts, pp. 203.

4. Burns, W. (1963). New Towns for Old. Leonard Hill Books Ltd., London, pp. 14 - 27.

5. Burrows, G.S. (1968). Chichester: A Study in Conservation, London HMS Office, pp. 57.

6. Chapin, F.S. (1972). Urban Landuse Planning, University of Illinois Press pp. 412.

7. Chapin, F.S. (1979). Urban Landuse Planning. Urbana: Illinois University Press, pp. 142-143.

8. Dar AL-Handasah Consultatants. (1979). Feasibility Study: Upgrading in Sokoto. Vol. 1, Final Report.

9. Gibson, M.S. and Langstaff, M.J. (1982). An Introduction to Urban Renewal Hutschison, London.

10. Grebler, L. (1964). Urban Renewal in European Countries: Its Emergence and Potentials. University of Pennyslvania Press, Philadelphia, pp. 13.

11. IFH, (1958). Housing Policy in Regions of Rapid Population Growth, Hague pp. 127.

12. Kaltho, J.B. (1982). Accommodation of Change in an Indigenous Hausa-Fulani Settlement: Case Study of Bauchi, Unpublished M.Sc. (U.R.P) Thesis. Ahmadu Bello University, Zaria, Nigeria. pp.13.

13. Lynch, K. (1960). The Image of Cities. The M.I.T. Press, Harvard University Press, London.

14. Manzoni, S.H. (1955). Redevelopment of Blighted Areas in Birmingham, Journal of the Town Planning Institute, Vol. 41, No.3, pp.92.

15. Maraus and Detwyler, et al, (1972). Urbanization and Environment. The Physical Geography of the city. Belmot: Duabury Press, London. pp 14 - 21.

16. Max Lock Group Nigeria Limited (1980). Bida Master Plan.

17. Parry, J.G. (1980). Environment and Sanitation Journal of R.J.T.P. Britain. pp.62.

18. United Nations, (1967). Planning of Metropolitan Areas and New Towns: United Nations Publication, pp.80.

19. United Nation, (1970). The Impact of Urbanization on Man's Environment. UN Publication, pp.23.

20. Urquhart, A.W. (1977). Planned Urban Landscapes of Northern Nigeria, Ahmadu Bello University Press, Zaria, Nigeria.

21. World Bank Publication, (1979). Improving Effectiveness of Urban Aid. New York. Vol.3, No.4.

22. Zubair, M.Y.I. (1980). Rehabilitation of Old Minna Township, Unpublished M.Sc.(U.R.P.). Thesis Ahmadu Bello University, Zaria, Nigeria.

APPENDIX

DEPARTMENT OF URBAN AND REGIONAL PLANNING
AHMADU BELLO UNIVERSITY, ZARIA

THE HOUSEHOLD INTERVIEW SURVEY:

1. Land acquisition: Inherited ☐ Purchased ☐ Gift ☐
2. What reason(s) Influenced your your choice of the locality?
   Family land ☐ Proximity to relatives/ethnic groups ☐
   close to religious groups ☐ close to place of work ☐
   Others ☐
3. Building permission: Ward Head ☐ Local Government ☐
   No permission ☐
4. Type of tenure: Owner occupied ☐ Free ☐ Rent ☐
5. a. Type of household: Single person ☐ Husband & wife/
   wives ☐ Nuclear family ☐ Nuclear family with
   other relatives ☐

b. (i) Total number of persons:
   (ii) How many wives? _____
   (iii) How many children? _____
   (iv) Others _____
   (v)

Male	Age group	Female
_____	0 - 9	_____
_____	10 - 19	_____
_____	20 - 29	_____
_____	30 - 39	_____
_____	40 - 49	_____
_____	50 - 59	_____
_____	60 - 69	_____
_____	70 - 79	_____
_____	80	_____

6. a. Source of finance for house maintenance_____

b. Estimate monthly expenditure on house maintenance ₦_____

c. Is it enough? Yes ☐ No ☐

d. If no, suggest other possible sources:

7. Age of the house?

8. Is the house: traditional ☐ Modern ☐

9. House type: Compound ☐ Flat ☐ Duplex ☐
Other ☐

10. Is there any enclosed Courtyard: Yes ☐ No ☐

11. Type of wall construction: Mud ☐
Concrete ☐ Mud with cement plaster ☐
Other (specify) ☐

12. Type of roof construction: Thatch ☐ Metal sheet/zinc ☐
Concrete ☐ Other ☐

13. Is there any maintenance or repair work required on the building? Yes ☐ No ☐
If yes, How much? Name ☐ A lot ☐ A moderate amount ☐ very very little ☐

14. a. Total number of rooms:
b. Number of rooms occupied:
c. Number of rooms vaccant:

15. a. Do you have kitchen: Yes ☐ No ☐

b. Type of kitchen: Open space ☐ Room ☐

16. Is there a bath room? Yes ☐ No ☐ (Specify number)

17. a. Is there a toilet? Yes ☐ No ☐

b. If yes, what kind of toilet do you have
Pit latrine ☐ water closet ☐
☐ Bucket latrine ☐

c. Is it shared with others? Yes ☐ No ☐

d. If pit latrine, how long does a pit last? Years

18. How is sewage disposed of? None ▱ Top of pit sealed ▱ collected ▱ Septic tank ▱ Other ▱

19. Refuse disposal: Open ground dumping ▱ Dustbin ▱ Burning ▱

20. a. Source of water supply: Well ▱ Tap ▱
Water seller ▱ Tank ▱ river ▱ other ▱

b. Is water always available? Yes ▱
No ▱

c. Is there another supply? Yes ▱ No ▱ if yes where? Specify

d. Where is the usual water supply? Inside house ▱
Outside house ▱

c. Is the water good? Yes ▱ No ▱

f. How much does your water cost per month? ₦_____

21. Source of light: Electricity ▱ Bush lamp ▱
if electricity cost per month ₦_____

22. What do you like most to be improved in this house:
Electricity ▱ more rooms ▱ Better built house ▱ water supply ▱

DEPARTMENT OF URBAN AND REGIONAL PLANNING
AHMADU BELLO UNIVERSITY, ZARIA

RESIDENT'S QUESTIONNAIRE

1. Occupation: Farming ☐ Civil servant ☐
   Industry ☐ Trading ☐ Transport ☐ other ☐

2. Distance of home to work _____

3. Mode of transport to work place: Foot ☐
   Motor cycle ☐ Taxi ☐ Bicycle ☐ Lift ☐
   Private car ☐ work place vehicle ☐ other ☐

4. Rent: High ☐ Medium ☐ Low ☐

5. a. Housing condition: Good ☐ Fair ☐ Poor ☐

   b. If not good why is it not improved?
   Lack of money ☐ Attitude of landlord ☐
   Temporary structure ☐

6. a. Ward condition: Good ☐ Fair ☐ Poor ☐

   b. If not good, what do you think should be done to improve it? _____

7. a. Demolition if necessary: Yes ☐ No ☐

   b. If yes, then relocation

Permanent		Temporary	
Within ☐	Outsie ☐	Within ☐	Outside ☐

8. Would you prefer to live in any other ward (efu) or part of the town:
   Yest ☐ No ☐

9. Which ward (efu) .....

10. What do you like most to be improved on in this ward (efu) .....

    Drainage ☐ Better Assess ways ☐
    Refuse collection ☐ Clinic/Dispensary ☐
    Disease control ☐