URBAN RENEWAL PROGRAMME FOR IMPROVING BLIGHTED AREAS: A CASE STUDY OF SELECTED PARTS OF KADUNA METROPOLIS

M.Sc (U.R.P) Thesis

By

OYEKANMI, OYETUNDE SAMUEL
B.Sc (Hons) Arch., M.sc Arch., A.B.U
Zaria

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

DECLARATION

I hereby affirm that this Thesis has been composed by myself and that it is a record of my research work. It has not been accepted in my previous application for a high degree. All sources of information are acknowledge by means of references.

....

Signature Date

CERTIFICATION

This Thesis entitled

URBAN RENEWAL PROGRAMME FOR IMPROVING BLIGHTED AREAS: A CASE STUDY OF SELECTED PARTS OF KADUNA METROPOLIS BY OYEKANMI OYETUNDE SAMUEL meets the regulations governing the award of the Degree of M.Sc (Urban and Regional Planning) of Ahmadu Bello University and as approved for its Contribution to Knowledge and Literary presentation.

Arc. G. P. Khanna
Chairman, Supervisory Committee — 14th Dec/91 Date

Dr. J. B. Kaltho
Member, Supervisory Committee — 21st JAN '91 Date

Mallam I. D. Sulleiman
Head of Department U.R.P — 21.01.91 Date

Prof. D. I. Saror
Dean, Post Graduate School — 4-6-91 Date

DEDICATION

Dedicated to:

Almighty God, for His Grace which gives life that sustained me through out the work. I pray that I should be able to live up to His expectation to eternity.

Mum and Dad, for being bless with them.

And to my Brothers and Sisters, for their goodwill, Love and Understanding especially 'Iya'.

May Almighty Bless you all, Amen.

Lastly, to the soul of the resposed in the family, I pray that the LIGHT should perpectually continue to shine upon you as you strive toward LIFE, TRUTH and the Almighty father. Amen.

ACKNOWLEDGEMENT

Iam greatly indebted to my Supervisor, Arc. A.P. Khana, whose untiring pain-staking and constructive criticisms were valuable in moulding the study through almost fault-finding search to take care of every minute detail.

I am also equally grateful to my other Supervisior Dr. (Arc) J.O. Popoola who stimulated my thoughts on the subject through constructive criticisms and other contribution that provided essential guidance without necessarily imposing his own view on the main issues and conclussions arrived here.

I am highly appreciative of the assistance rendered by various individuals licing in the blighted areas of Kaduna and staff of government Ministries and parastatals especially Mrs. Galadimawa of Kaduna State Urban Planning and Development Authority, project Engineer Inuwa of Kaduna State Water Board who helped in the course of this study and final preparation of this dissertation.

I am also grateful to the head of Department of Urban and Regional Planning, Mallam I.D. suleiman, former Managing Director, Kaduna State Urban and Planning Development Authority (KASUPDA) who contributed greatly in the work. My thanks also go to all academic staff of the Department of Urban and Regional Planning in person of Dr. A.I. lawan, Mallam Maru'uf Sani, Mr. P.B. Simon and Mr. D.J. Abin for their useful, constructive and objective criticisms during the seminar presentation and the thesis review. I sincrerely thank the non-academic staff for providing a condusive atmostphere during the intensive and rigorious course.

I am highly apppreciative of untiring pain-staking effort offered by Dr. J.B. Kaltho for the use of words.

My heart felt gratitude goes to friends among colleagues for their interesting contributions, I quiet appreciate their friendship especially Mallam Ahmed Garba and Mr. Paul Ameh.

My compliments and gratitude also go to my former lecturers who gave me a great deal of help and encouragement academically. They include Professor (Arc) S.A. Adesina, Dr. (Arc) O. Solanke, Arc. A.O. Oloyede and Arc. H.B. singh.

Finally, I am most grateful to Mallam Rasheed O. Adewale and Mrs L.S. Moses who typed this report. I also offer my apologies and gratitude to all, especially those who directly or indirectly helped me in this research work.

Thank you all and God bless, Amen.

ABSTRACT

URBAN RENEWAL PROGRAMME FOR BLIGHTED AREAS: A CASE STUDY OF SELECTED PARTS OF KADUNA METROPOLIS:

urban renewal programme is an intervention package to solve problems confront-inf blighted parts of Urban Centres. The problems are physical, environmental, socio-cultural and adminsitrative in nature. The problems of blight include inadequate and low maintenance level of infra-structural facilities, inadequate planning and implementation of development projects and lack of well-defined approaches to renewal programmes toward blightedness. This adversely threatens the environment which undergoes the decay process. Blightedness is intensified at the. periphery where haphazard development and pressure in exacted on the utilities and services. Owing to population growth largely accounted for by the influx of migrants to the cities.

The study addresses itself to the types and nature of blight in Kaduna metro-polis, with a view to evolving the most appropriate Urban renewal programme. The study is able to achieve this through measuring blightedness using the method of rough screening, weight and expontial method and multiple Index Survey. The parameter measured also include physical and socio-economic conditions.

The study inferences shows that blights grow from both planned and unplanned areas as well as core and peripheral areas, where immigrants first settle and the problems grow rapidly. At the periphery, there are less activities of physical planning authorities. Rigasa, which is at the periphery of Kaduna is the most blighted as revealed by the results of the multiple Index Survey. This needs long term programme as the solution. Majority of the residents (49 Percent) are low income earners, that is NO-150 per month; They are mainly unskilled employees in trade business. About 40 percent of the residents live

in rented accommodation at N25.00 per month which is cheaper, as this type of accommodation will cost N40.00 or more at the core area. This ares lacks adequate infrastructure and services and maintenance. Many deficiences were identified in planning implementation which leads to environmental and housing problems. However, the close relationship between Rigasa and rest of Kaduna Metropolis is shown by the fact that 60 percent of its inhabitants work within the Metropolitan central area. It is therefore imperative to arrest blight in the interest of the whole metropolis. The Urban renewal programme adopted is preventive and curative upgrading measures currently in use in some Nigeria cities.

TABLE OF CONTENTS

TITLE PAGE		(i)
DECLARATION		(ii)
CERTIFICATION		(iii)
DEDICATION		(iv)
ACKNOWLEDGEMENT		(v)
ABSTRACT		(vii)
TABLE OF CONTENTS		(ix)
LIST OF FIGURES		(xii)
LIST OF TABLES		(xv)
LIST OF PLATES		(xvi)
PART ONE	SCOPE AND METHOD OF STUDY	
CHAPTER ONE:	THE RESEARCH DESIGN	
1.10	Introduction	1
1.20	Statement of problems and justification of research	2
1.30	Aim and Objectives	3
1.40	Scope and Limitation	4
1.50	Research Methodology	4
1.60	Thesis Structure	6
1.70	Introduction to Case Study area	8
CHAPTER TWO:	NATURE AND CHARACTERISTICS OF BLIGHTEDNESS IN URBAN AREAS AND PROGRAMMES FOR URBAN RENEWAL IN NIGERIA	
2.10	The concept of blightedness and its formation	10
2.20	The nature of blightedness	11
2.30	Blightedness in urban Centre of Nigeria	13
2.40	The existing Urban Renewal programme for blighted areas in Nigeria	18
2.50	The Summary	29

PART TWO:	STUDY AREA, DATA ANALYSIS AND PLANNING	
CHAPTER THREE:	BLIGHTEDNESS IN KADUNA METROPOLIS	
3.10	Identification of blighted Area in Kaduna	31
3.20	Selection of Areas for Detailed Study	32
3.30	Categories of Blighted Areas in Kaduna	32
3.40	Degree of Blightedness in selected Areas	38
3.50	Locational characteristics of Blighted Areas in Kaduna Metropolis	39
3.60	The Summary	41
CHAPTER FOUR:	PHYSICAL CONDITIONS OF SELECTED BLIGHTED AREAS IN KADUNA METROPOLIS AND THE SOCIO-ECONOMICAL CHARACTERISTICS OF THE INHABITANTS	
4.10	Physical conditions of the selected Areas	43
4.20	Socio-cultural and Economic characteristics of the Inhabitant	48
4.30	Availability and use of House-hold Utility Services and Facilities	53
4.40	Housing supply and general environmental problems	55
4.50	Acceptance of improvement scheme	61
4.60	Types of Urban Renewal programmes	64
4.70	The Summary	65
CHAPTER FIVE:	PROBLEMS IDENTIFIED AND RENEWEL PROPOSALS FOR DIFFERENT LEVEL OF BLIGHTEDNESS IN THE SELECTED AREAS OF KADUNA METROPOLIS	
5.10	Planning problems of the old Government Reservation Area (GRA) (1st Level Blight)	67
5.20	Urban Renewal programme proposed for old Government Reservation Area (GRA)	70
5.30	Planning problems for Tudun-Wada/Nupawa (2nd and 3rd level blight)	75
5.40	Urban Renewal programme proposed for Tudun-wada/Nupawa Area	79

5.50	Planning problems in Sabon-Tasha (4th level blightedness)	84
5.60	Urban Renewal programme proposed for Sabon-Tasha Area	86

PART THREE INFERENCE AND A DESIGN PROPOSAL

CHAPTER SIX: DETAILED STUDIES ON BLIGHTEDNESS IN RIGASA

6.10	Introduction	89
6.20	Existing Land Use	89
6.30	Condition of buildings	92
6.40	Condition of Facilities, Utilities and Services	92
6.50	Socio-economic characteristics of the inhabitants	95

CHAPTER SEVEN: PROPSOED URBAN RENEWAL PROGRAMME FOR RIGASA

7.10	Need for Renewal	100
7.20	General preventive measures and policies	101
7.30	Renewal proposed at Metropolitan level	106
7.40	Preventive programme for Rigasa district	110
7.50	Curative renewal programme for Rigasa	114
7.60	Detailed environmental upgrading proposal	138
7.70	Proposed implementation strategies	138
7.80	CONCLUSION	145
	APPENDICES	147
	BIBLIOGRAPHY	148

LIST OF FIGURES

Figure		Page
1.01	Conceptual framework of the Thesis	5a
1.02	Thesis Structure	6a
1.03	Location of Study Area - Metropolitan Kaduna	8a
1.04	Metropolitan Kaduna within its micro region	8b
1.05	Population growth and projection trends	8c
1.06	Existing administrative districts of Kaduna Metropolis	8d
1.07	Geographic and climatic setting (Data) of Kaduna Area	9a
1.08	Existing Land-Use in kaduna Metropolitan Area	9b
3.01	Extent (level) of Urban deterioration in Kaduna	31b
3.02	Degree of blight in selected Study Areas	32b
3.03	Locational characteristics of blighted areas	40a
4.01	Number of persons per household/Site Area in hectares percentage of habitable units and sharing of facilities	48a
4.02	Kaduna Metropolis, Sectors of economy and the age-Sex Structure	48b
4.03	Reasons of migration and previous occupation	49a
4.04	Religion/ethnic background distribution	49b
5.01	Existing land-use - Old G.R.A. Site	67a
5.02	Existing physical conditions	67b
5.03	Infilling programme by the Civilian Government (1980)	70a
5.04	Max Lock proposed programme of upgrading	71a
5.05	Details of physical planning problems - observations	72a
5.06	Details of physical planning solution - applied methods	72b
5.07	Illustration of example before upgrading & after upgrading	75a
5.11	Existing Land-Use - Tudun-Wada/Nupawa	76a
5.12	Existing physical conditions	76b
5.13	A Case Study of a section of Tudun/Wada - observations	80a

5.14	A Case Study of a section of Tudun/Wada - planning solution	80b
5.15	Renewal of Tudun-Wada compound	83a
5.16	Illustration of example before upgrading & after upgrading	83b
5.21	Existing land use Sabon-Tasha	84c
5.22	Existing physical conditions	84d
5.23	Proposed network layout for improvement of Sabon-Tasha	86a
5.24	A Case Study of a typical section of Sabon-Tasha Observation	86b
5.25	A Case Study of a section of Sabon-Tasha - proposed planning solutions	86c
5.26	A Case study of typical compound houses in Sabon-Tasha	87a
5.27	illustration of example before and after upgrading	87b
6.01	Existing land uses - Rigasa	89d
6.02	Types of Building and roofing materials	92a
6.03	Growth development trend/Age of structures	92b
6.04	Existing physical conditions	92c
6.05	Existing Utilities and Services	92d
6.06	Physical planning problems	94a
6.07	Peak hour traffic volume along western bye-pass	95a
7.01(A)	Minimum Setback requirement in metres and floor areas ratio	102a
7.01(B)	Types of zoning plot and Building height	102a
7.02	Proposed planning units centre and hierarchy for the implementation of Urban Renewal Programme	107a
7.03(A-C)	Proposed planning unit centre Alternative for Rigasa districts	109a-c
7.04(A-C)	Proposed concepts for Alternatives centres for Rigasa area	111a-c
7.04	Concept proposed for Rigasa	112a
7.05(A)	Existing land use in Rigasa	116a
7.05(B)	Land use proposed map for Rigasa	116c
7.06	A Case study and proposed improvements of a typical traditional compound in Rigasa	121a

7.07	Suggested improvement on pit latrines	123a
7.08	Proposed design of District/Community Centre	126a
7.09(A)	Typical cross section for proposed roads and detail of the construction	131a
7.09(B)	Proposed concept of Transportation Network	131b
7.09(C)	Proposed concept of Utilities lines	132a
7.10(A)	Details fo stand pipe, refuse collection and water drains system	132b
7.11	Propsoed phasing map for Rigasa	138b
7.12	Detailed of physical planning problem and proposed Renewal solutions for a section of Rigasa environment	138 c-e
7.13-14	Illustration of examples for existing uses and proposed renewal for the same	138 f-i

LIST OF TABLES

		Page
2.1	Conceptional framework of Urban blight nature and causes	10a
2.2	Model for blightedness	11a
3.1	Delimitation of blight in kaduna Metropolitan Area	31a
3.2	Extent of blightedness is selected areas in each district	32a
4.1	Existing land-use pattern in the study area	44
4.2	Physical condition of the study area	46
4.3	Socio-economic characteristics of the study area	51
4.4	Availability and use of household Utilities, Services and Facilities	54
4.5a	Housing supply problems and general impression toward environemntal perception	57
4.5b	Landlord conception and attitude towards housing supply and problems	60
4.6	Level of acceptability of improvement scheme	63
4.7	Degree of blightedness in people's housing condition in the selected Case Study areas	65a
5.1	Minimum Setback requirement for Septic tank	73
5.2	Proposed standard for road (in metres)	80
6.1	Existing land-use types and coverage	90
6.2	Age-Sex Structure of the existing population	96
7.1	Minimum set back of housing unit from plot line	103
7.2	Building height requirement for development	104
7.3a	Proposed planning Hierarchy for Kaduna Metropolis	107
7.3b	Evaluation of alternative concepts of proposed centres	113
7.4a	Proposed Upgrading Standard for Facilities and Services	115a
7.4b	Upgrading or Rigasa-Kaduna Metropolis: schedule of requirements for the year 2000	116 b1-b2
7.4	Land Uses	119
7.5	Proposed phasing of Facilities, Utilities, Sites and Services	138a

LIST OF PLATES

Plate		Page
5.01	Building components and surrounding environment lack effective maintenance, which make it obsolete and dilapidated	68a
5.02	Refuse dump within the compound and burnt at regular interval	68a
5.03	Lack of maintenance as major source of disrepair, the garage left to dilapidate and become obsolete property which have changed uses in most cases into Mechanic Workshop/Boy's quarters	68b
5.04	Un-tarred road and undefined drained along Yakubu Avenue undergo upgrading prior to the coming rainy season	68b
5.05	Commercial stalls activities encroaching on public Right of Way	68c
5.06	Animal keeping and raising, amount to defacate carelessly in the compound. They also eat up flowers and young shruts planted for landscaping	68c
5.11	Street trading on untarred Aminu road and the reluctant litter. It also shows pedestrian supremacy struggle over the vehicle facilities which lack parking and add to the problem of traffic congestion	77a
5.12	Refuse litter around the bad stagnated open drainage line during the rain. This overflows and flood the road with its materials	77a
5.13	Conforming and non-conforming mixed use, dirty open drains which is stagnant and constitute health hazards	77b
5.14	Street cooking especially for public consumption and in most cases it encourages encroachment on public property such as on Right of Ways	77b
5.15	Alley in between block on residences arranged back to back. Lack maintenance and it is rather used for dumping refuse	77c
5.16	Utilization of open space (Unorganised mini market) for buying and selling which is located close to convinence places on public property site	77c
5.21	Undefined drain open into the untarred road and building walls structure shows some element of sub-standardness	84a

5.22	Temporary thatch material is used as walls to cover some part of dilapidated structure	84a
5.23	Most mud block structures lack maintenance.	84b
5.24	Dilapidated unplastered traditional compound which still has its thatch roof and mud well rendering	84b
5.25	Shallow open drain allow waste water to flow along the street and may even form a pool on the road, also there are some unplastered dilapidated traditional mud structures	84c
5.26	An open space littered with refuse and temporary structures	84c
6.01	Open non-concrete storm drains showing the effects of erosion	89a
6.02	Refuse dumpalong the major road at the frontage of uncompleted buildings. This is hazandous to young ones who look for some valuables within the refuse.	89a
6.03	Major tarred road terminate abruptly at the mosque. Building close by are unconforming with petroleum products.	89b
6.04	Haphazard and ugly sight around clubs/hotels/houses location	89b
6.05	Haphazard organised building on site without demarcation for various activities	89c
6.06	Temporary material used in construction of illegal structures in any open space (unorganised) available	89c
6.07	Rigasa roads submerged after downpour	95b

part 1

chapter 1

- THE RESEARCH DESIGN

CHAPTER ONE: THE RESEARCH DESIGN

1.10 INTRODUCTION

Urban renewal is aimed at solving the problems of urban blightedness which is a complex and multi-dimensional process. Renewal generally encompasses all strategies adopted for replanning built-up areas where blight has set it. Urban blightedness involves physical deterioration of Environmental and housing conditions. Blighted areas are as a result of high rate or urbanization caused by government policy or emphasizing the location of facilities in few centre. This lead to the polarization of unplanned development with increased population which is not supported with infrastructural services provided. This eventually leads to over-utilization of facilities, utilities and services.

The early application of renewal programmes was restricted to eradication and redevelopment, which were short term programmes that produced negative results. Where a positive programme was applied, it lacked public participation. However, the most popular programme for residential problems in Nigeria presently is upgrading. This takes care of the misconception and misapplication of earlier Urban renewals strategies which is disruptive to investment and land ownership.

The failure of some previous renewal programme drew the attention of planners to alternative and more appropriate Urban renewal programme. This blight issues are now addressed by integrated preventive and curative measures within upgrading programmes so as to improve the living condition of the people. This process involves economic regeneration, employment, provision of infrastructural facilities and improvement of housing units.

In this chapter, the research design is discussed to provide understanding on the research forms, purpose and plan. The specific focus and justification of the study are first given. The Aim and Objectives of the Study are set out next to guide the research and provide the framework for understanding the work.

The conceptual framework, methods and data collection and analyses are also described in the chapter. It ends with the description of the organisation of the thesis report in which the various parts are identified and the contents of each chapter highlighted.

1.20 STATEMENT OF PROBLEMS AND JUSTIFICATION OF RESEARCH

Urban Centres in Nigeria are generally characterised by deteriorating environmental conditions due to rapid growth and polarization of activities which exceed the provision and development of urban infrastructural facilities to the required standard. This further causes haphazard growth of all sorts of land uses, poor physical structures poor sanitary condition and high occupancy ratio.

Kaduna was initially planned, but when blight developed in some sectors, the social and physical environment continued to decline. This blightedness deprives the residents of opportunities to develop and realise their full potential. It also subjects them to strain and stress which could have adverse effect on their health and well-being. This is through failures to fulfil their cultural and spiritual need, as this lowers their productivity and liveability. It also gives rise to crimes and other social vices. Blighted environments hinders the economic, social and political growth of the Nation. Blighted areas are considered as evil, filthy and not healthy for the over all Urban development; but this understanding of blight is insufficient.

Blight is related to time and space, which is self-perpetuating and threatening of engulf the whole metropolis. This process is a complex interaction system. Also the existing urban renewal programme has limited scope and adhoc in nature; that is, it lacks integrated approach: economic regeneration and citizen participation. Lastly renewal is based on wrong premises of affordability and not comprehensive enough to integrate the existing old and new developments.

There is therefore a need for curative and preventive urban renewal programme of upgrading to solve the problems of blight in Kaduna Urban Centre. A Programme with this objective can only be formulated on the basis of a study of the nature and process if formation of blight as well as the factors responsible for them. This is the focus of this study. The results are expected to provide an insight in solving similar urban blight in other urban centres.

1.30 AIM AND OBJECTIVES

1.31 AIM

The aim of this research is to examine the environmental blightedness in Kaduna metropolis and review various Urban renewal programmes that have an appropriate programme for all the various areas of different levels of blightedness in Kaduna.

1.32 OBJECTIVES

The study attempts to achieve the mentioned aim through the following objectives.

(a) To examine the general nature and characteristics of blightedness in Nigerian urban areas and to review various renewal programmes that have been applied.

(b) To Identify the types, location and extent of blightedness in Kaduna Metropolis.

(c) To study the physical condition and socio-economic characteristics of selected blighted areas and determine the extend of blightedness.

(d) To identify Urban renewal strategies for the improvement of the blighted areas.

(e) To examine the problems of the most blighted area: and prepare a Schedule of requirement for its development.

(f) To evolve design proposals for the most blighted area and suggest implementation strategies.

1.40 SCOPE AND LIMITATION

The study of Urban renewal programme and blightedness are broad and open-ended. These have a multi-disciplinary dimension and which are complex in nature. They include Social, Economic and Physical. Physical approaches to urban renewal will be emphasized, but other multi-disciplinary dimensions and appraoches will be considered to enhance the quality of the Physical Planning Proposals.

The research will be confined to the nature, types of blightedness and appropriate renewal programme on the various levels of blightedness; but it will evolve a specific Urban renewal programme with a design proposal for implementation in the msot blighted area of Kaduna Metropolis.

1.50 RESEARCH METHODOLOGY

This section discusses the conceptional framework evolved and the methods by which the data were collected, analysed and synthesized.

1.51 CONCEPTIONAL FRAMEWORK OF THE THESIS

The Study involves review of the theoritical base in Urban renewal schemes. The factors Identified are used as parameters to assess the blighted areas. This is then correlated with the reviewed strategies adopted in the previous Study areas.

Finally, Inferences on the problems identified are drawn out on each level of blightedness, to evolve a strategy for appropriate planning proposals and implementation (See Figure 1.01).

1.52 METHODS OF DATA COLLECTION

Collection of data was undertaken from primary and secondary sources. These are as follows:

(a) PRIMARY SOURCES

A reconnaissance survey using the Rough Screening method was first conducted in Kaduna metropolis to identify the nature of blightedness. Then areas of all types of blight Identified were categorised using the Weights and Exponential method. Quesionnaires were adminsitered on the residents to determine their socio-economic characteristics. The sampling technique used is described below. The questionnaires were adminsitered to assess the extent of blightedness with Multiple Index survey. Also, formal and ifnromal interviews were conducted to obtain people's opinions and preferences.

Existing Land Uses, infrastructural facilities, services and their level of maintenance were mapped. Also, the environmental problems related to road system, sanitation and building condition were recorded on maps. Photographs of some areas observed were taken. Thus maps were produced on information as the type of buildings, roofing materials and structural soundness of buildings.

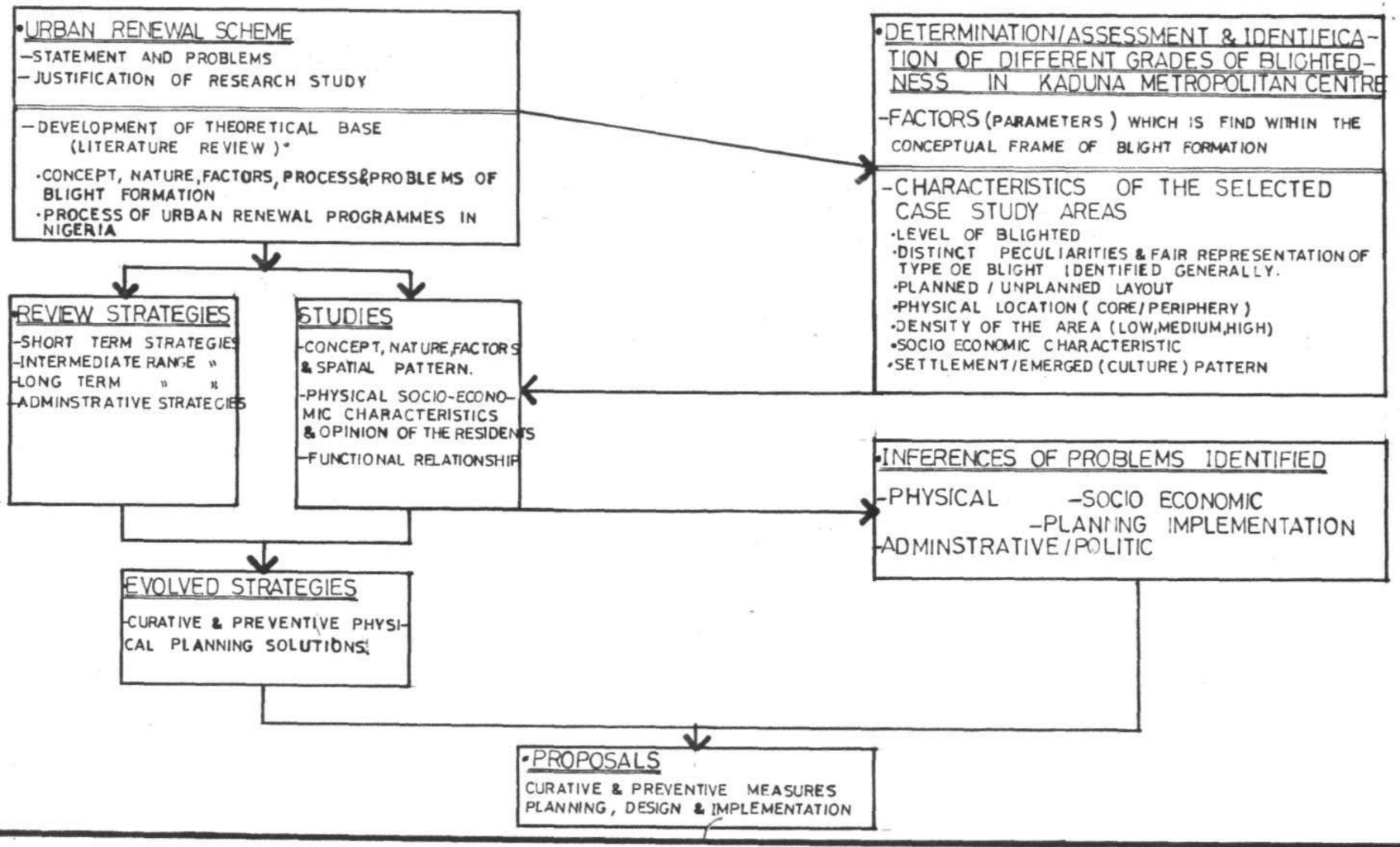


FIG 1·01

CONCEPTUAL FRAMEWORK OF THE THESIS

OYEKANMI O. S.
MSc THESIS 87/88
U.R.P. A B U ZARIA.

Source: Adopted from Literature review

Sampling was based on stratified random technique. The area was intially divided into 6 Units. A sample size of 10 percent was administered questionnaires. In each of the units in the Study Area, 30 questionnaires were adminsitered giving a total of 210 questionnaires which represent 10 percent of the households in the 6 Units. But this Unit is used as the basic sampling, which ranged from one respondent in a single household (individual resident) to above five respondents in clusters of dwelling/compound Units.

An equal number of questionnaires were intially adminsitered in each Unit for comparative analysis. Since the population in the different settlement area are not equal, more questionnaires were administered to cover the required sample population. However, in order to have a good spread, the area considered was divided into squares on paper. Then any building within each small square is administered a questionnaire.

(b) SECONDARY SOURCES

Some basic data and maps were obtained from Government establishments, Private Organisation and Libraries.

1.53 METHOD OF DATA ANALYSIS

The analysis of the basic types of data collected were based largely on mutual statistical computation. The frequencies of response were plotted on graph of various nature such as bar, pie chart etc., to give a quick visual impression.

1.60 THESIS STRUCTURE

This study is divided into three parts of seven Chapters (Figure 1.02) part one consists of Chapter One and Chapter Two. Chapter One gives the statement of problems and justification of research, including the

PART I

THE RESEARCH DESIGN

- INTRODUCTION
- PROBLEM AND JUSTIFICATION OF RESEARCH
- AIMS AND OBJECTIVES
- SCOPE AND LIMITATION
- RESEARCH METHODOLOGY
- THESIS STRUCTURE
- INTRODUCTION TO CASE STUDY AREA.
- EXPLANATION OF SOME TERMS USED

CHAPTER 1

THEORETICAL CONSIDERATIONS

- GENERAL NATURES AND CHARACTERISTICS OF BLIGHTEDNESS IN NIGERIA URBAN AREAS
- PROCESS, CAUSES AND FACTORS OF BLIGHTEDNESS.
- EVALUATION OF URBAN RENEWAL PROGRAMMES IN NIGERIA

CHAPTER 2

BACKGROUND STUDIES AND LITERATURE REVIEW

PART II

DETERMINAITON OF THE EXTENT OF DEGENERATION IN THE STUDY AREAS

- TECHNIQUES OF ANALYSIS OF URBAN DEGENERATION
- CATERGORISATION OF THE BLIGHTED FINDINGS

CHAPTER 3

STUDY AREAS

- PHYSICAL CHARACTERISTICS
- SOCIO CULTURAL AND ECONOMIC CHARACTERISTICS OF THE RESIDENTS.
- FINDING OF THE MULTIPLE INDEX SURVEY

CHAPTER 4

FINDINGS AND URBAN PROGRAMMES

- INFERENCES AND PLANNING PROGRAMMES FOR 1st TO 4th LEVEL BLIGHTEDNESS.

CHAPTER 5

DATA ANALYSIS, INFERENCES AND PLANNING

PART III

INFERENCES AND PROGRAMMES FOR MOST BLIGHTED AREA

- EXISTING CONDITIONS OF LANDUSES AND INFRASTRUCTURAL SERVICES, AND SOCIO-ECONOMIC CHARACTERISTICS OF THE INHABITANTS.
- CURATIVE PROGRAMME AS THE PLANNING SOLUTION

CHAPTER 6

PROPOSALS

- PLANNING AND DESIGN OF PREVENTIVE PROGRAMMES FOR BLIGHTEDNESS IN RIGAS
- DRAW OUT SCHEDULES OF REQUIREMENTS.
- RECOMMENDATIONS AND IMPLEMENTATIONS.
- CONCLUSIONS

CHAPTER 7

DETAILED STUDY AND DESIGNED PROPOSALS

FIG 1·02 THESIS STRUCTURE

OYEKANMI O. S.
M.Sc. Thesis 87/88
U.R.P. A. B.U. ZARIA

Source: Adopted dissertation presentation format.

aim and objectives, scope and limitation as well as the research methodology, thesis structure and introduction to Case Study area.

Chapter Two is essentially a theoritical review on the concept and formation of urban blight as well as the nature and characteristics of blightedness in Nigeria and existing Urban renewal programmes.

Part Two is the data analysis, inferences and curative planning proposals. It is made up of Chapter Three, Chapter Four and Chapter Five.

Chapter Three is the study of general conditions and extent of blightedness in Kaduna metropolis. Using some blight Identification Indices the measurements were done based on Rough Screening survey and Weight and Exponential methods determine the blight types and their nature. Chapter Four deals with the analysis, nature of physical conditions and socio-economic characteristics of the inhabitant of selected blighted areas in kaduna Metropolis. Chapter Five deals with renewal programmes towards dealing with problem of different level of blighted ness in the selected areas of Kaduna Metropolis.

Part Three covers the proposal on physical planning problems and it constitutes Chapter Six and Chaper Seven.

Chapter Six covers a detailed examination of Rigasa blightedness - being the most blighted area. Chapter Seven is the Schedule of requirement for renewal programme of Rigasa and a design proposal with strategies for its implementation.

1.70 INTRODUCTION TO CASE STUDY AREA

1.71 LOCATION AND DEMOGRAPHIC CHARACTERISTICS

Kaduna Metropolis is the Capital of Kaduna State (Figure 1.03 Figure 1.04). It is located between latitude 10.4°N to 10.7°N and longitude 7.2°E to 7.6°E. This area is carved out of the former Zaria and Kachia Local Governments. Its metropolitan planning area is delineated by an arbituary radius of 40KM. This town is a strong nodal point in the network of communication and is adequately linked with other towns by road, rail and air. As the former regional capital of Northern Nigeria, it grew up as a regional centre.

In 1952, the population of Kaduna was estimated as 40,000 which increased to 149,000 in 1963. This is a four-fold increase in 11 years, with a projection to 350,000 in 2015 by the Kaduna Masterplan (Figure 1.05). The projected population for the year 2000 is 2,000,000. For the development of the metropolis the Kaduna State Urban Planning and Development Authority (KASUPDA) has divided the metropolis into 7 planning districts (Figure 1.06). The population of the whole metropolis area is estimated at 450,000 in 1984 that is, 30% increase in less than 20 years. Presently the population is estimated at 1,369,144.

1.72 PHYSICAL CHARACTERISTICS

Kaduna experiences two main climatic seasons in the year that is, the dry and wet seasons. The dry period from November to March is characterized by dust-laden Harmattan wind. It is a dry, cold and often strong wind blowing from North-Eash Shahara region. The wet period starts in April, with the prevailing wind blowing from the South-West to the hinter land. This brings rainfall up to October. The rain storms are usually violent with thunder and lighting preceeded by a driving wind. The average annual rainfall figure for Kaduna is 164mm (Figure 1.07).

WITHIN THE CONTEXT OF THE CONTINENT, NATION AND STATE

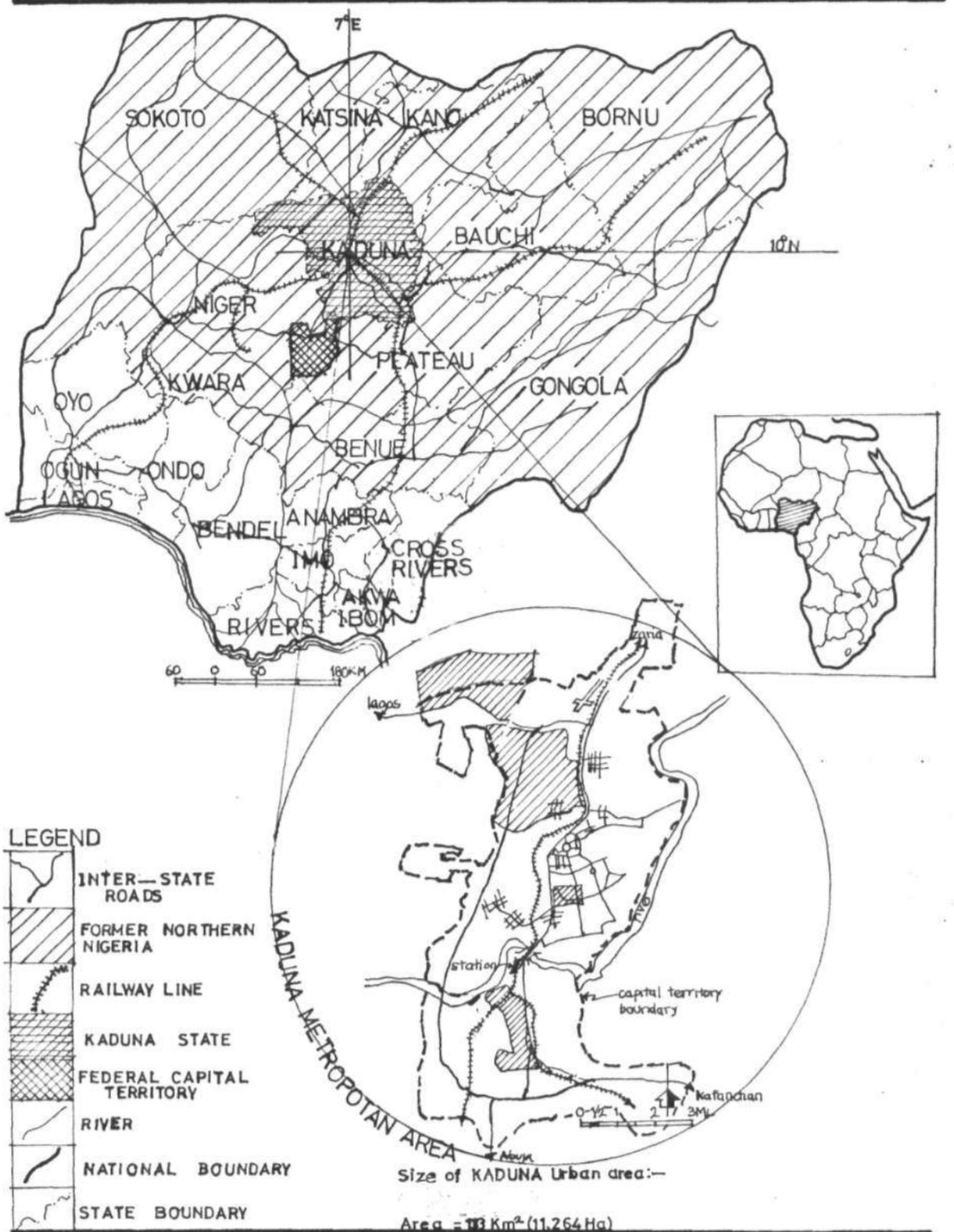


FIG. 1·03 LOCATION OF STUDY AREA - METROPOLITAN KADUNA

OYEKANMIOS MSc THESIS 87/88
URP—A.B.U ZARIA

Source: URP Dept Library

DELINEATION OF KADUNA METROPOLIS PLANNING AREA.

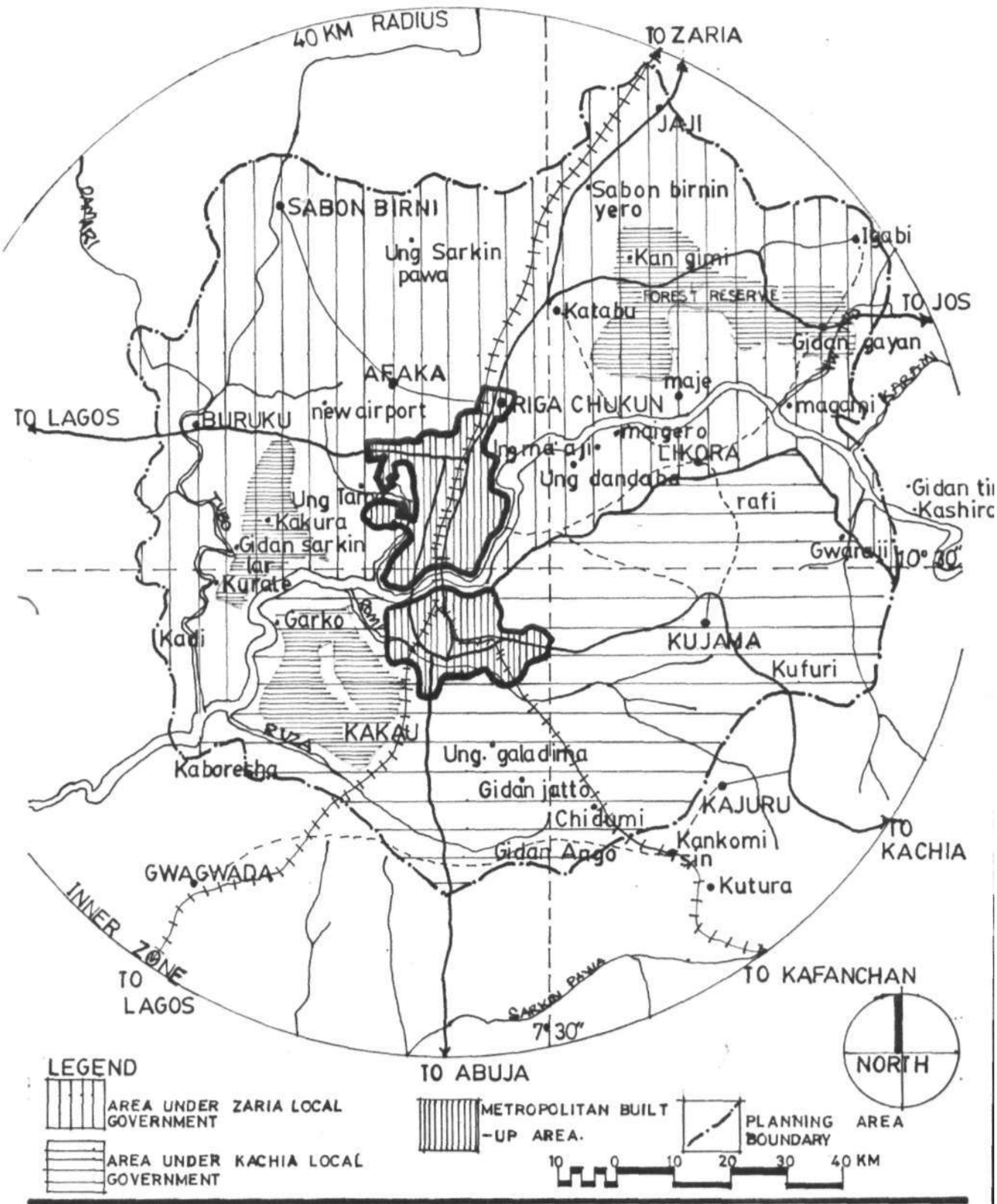


FIG. 1.04 METROPOLITAN KADUNA WITHIN ITS MICRO REGION

OYEKANMI O S
MSc THESIS 87/88
URP- ABU ZARIA

Source: Max lock & Ka surda kaduna.

FIG 1·05 — POPULATION GROWTH AND PROJECTIONS TRENDS

OYEKANMI O.S.
M Sc THESIS 78/79
U.R.P–A. B.U. ZAR

Source: Kaduna Master plan: REVIEW AND PROPOSALS FOR 2015

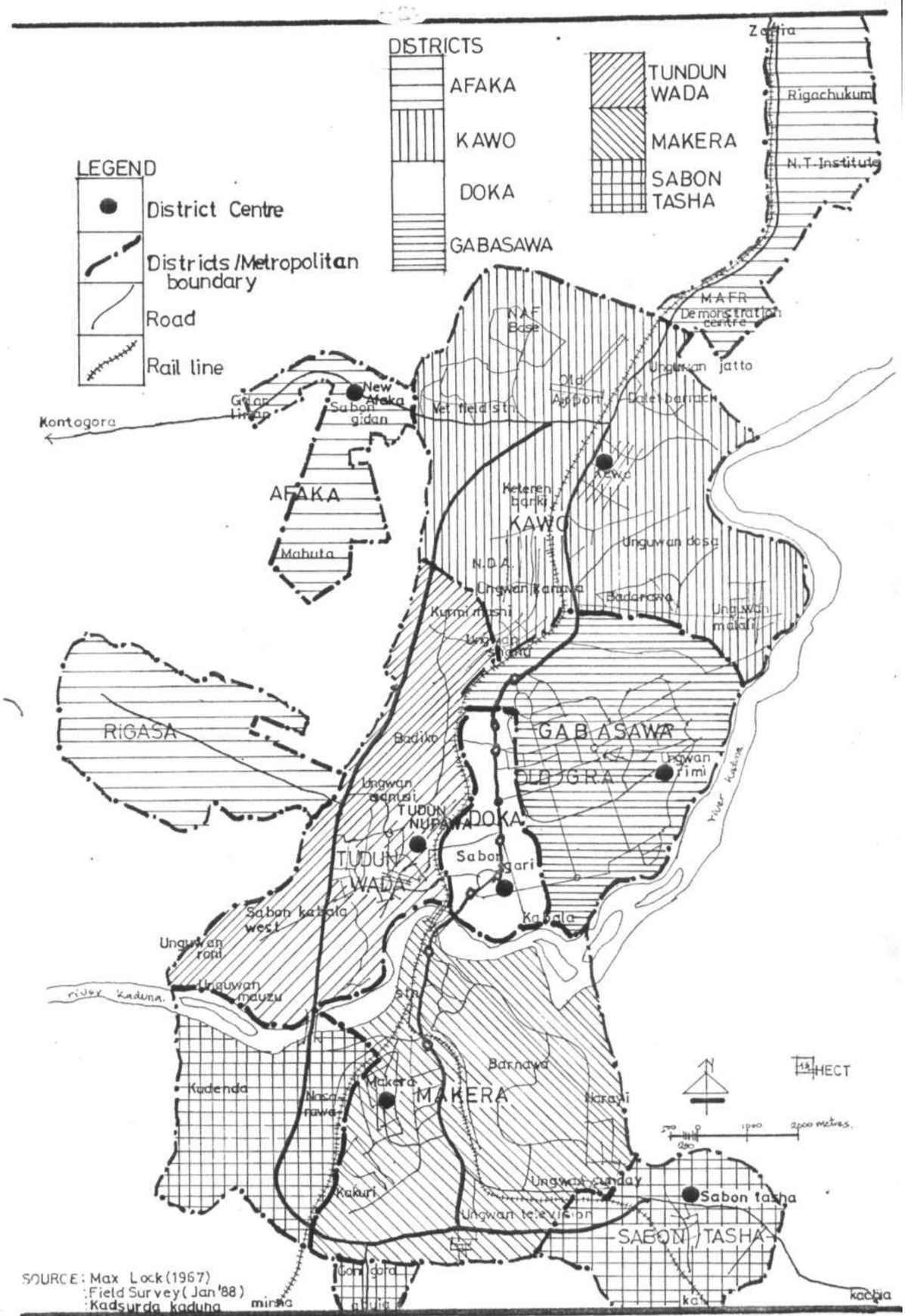


FIG. 1·06 EXISTING ADMINSTRATIVE DISTRICTS OF KADUNA METROPOLIS

OYEKANMI O.S
MSc THESIS 87/88
URP – ABU. ZARIA

Kaduna records its highest temperature in april with range between 90° - 105° Farenhert, and lowest in January between 45° - 60° Farenhert with 30° percent at dawn during dry season.

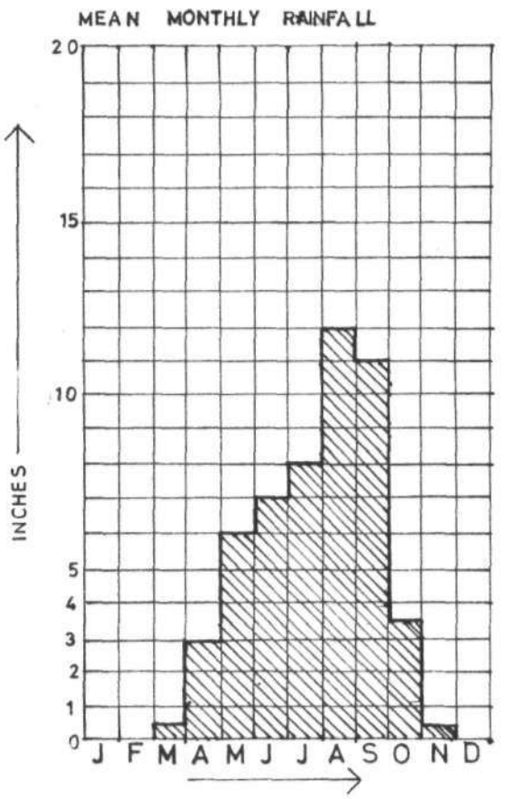
The physical features is characterized by rolling terrain of North Central plan topography of 450 - 590 metres above sea level. This is covered with sedimentary rock comprising of both igneous and metamorphic rocks. It also has Zaria aeolian soils group covering up to 14 feet depth in some places. The entire region is drained by the Kaduna river and its tributaries which flow from the Jos plateau dividing the town into two.

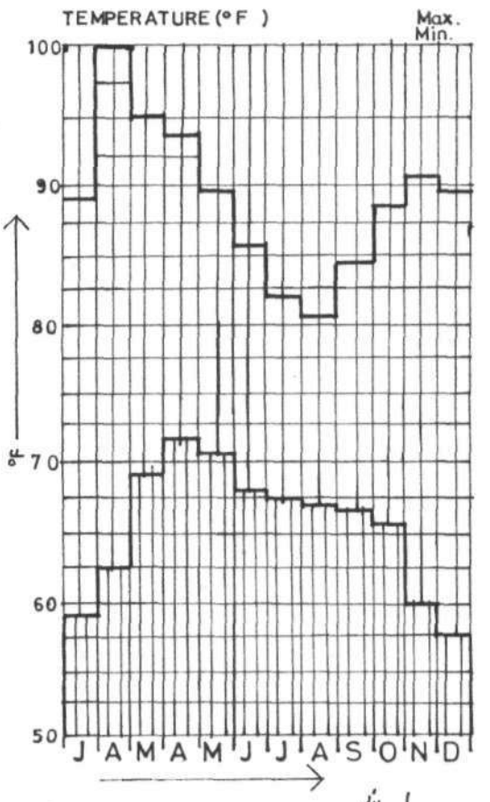
Kaduna lies north-of the Guinea Savannah vegetational Zone, which takes in most of Zaria province and consists mainly of orcharch bush and developed trees between 36 - 45 feet high.

1.73 LAND USE

The land-use pattern of Kaduna Metropolis is dominated by residential, commerical public/semi public recreation uses (Figure 1.08). The percentage of hectarage of different uses is difficult to determine due to mixed Land Uses and lack of effective Zoning policies.

The residential neighbour-hoods are of different types of density, that is, high, medium and low. High density residential ares are mixed up with Commercial and Service Industrial activities.





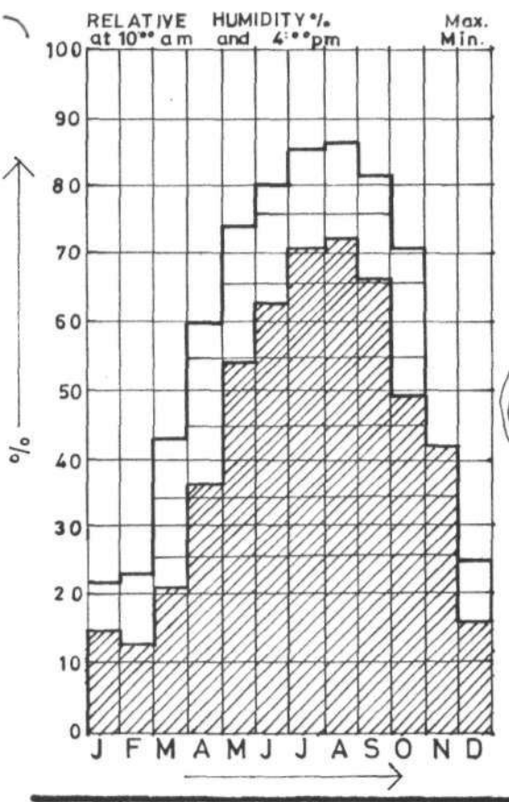




FIG. 1·07 GEOGRAPHIC & CLIMATIC SETTING (DATA) OF KADUNA AREA

OYEKANMI O S
MSc THESIS 87/88
URP A.B.U. ZARIA

Source: Max Lock & URP Library, "KADUNA"

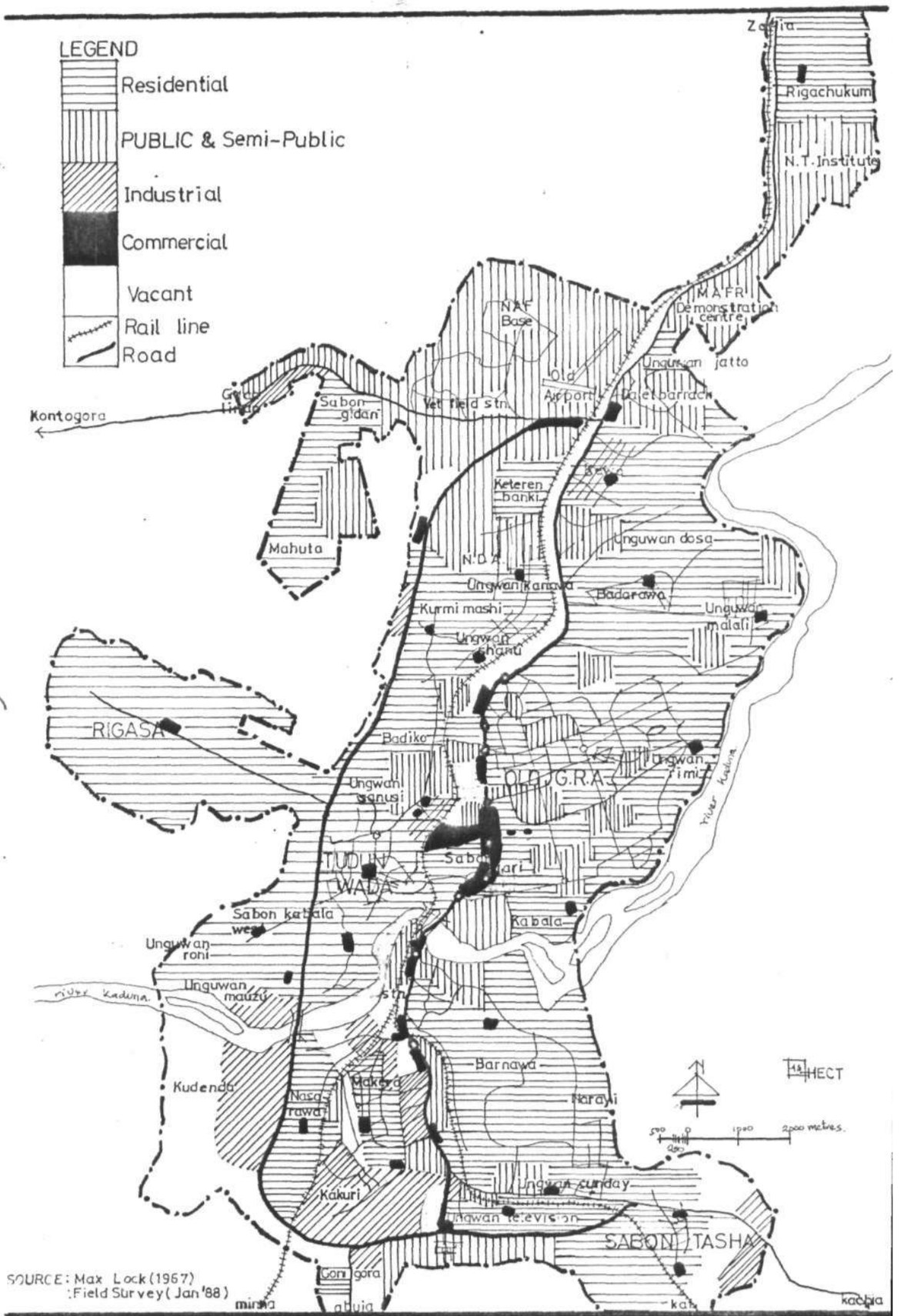


FIG. 1·08 EXISTING LANDUSE IN KADUNA METROPOLITAN AREA

OYEKANMI O S
MSc THESIS 87/88
URP – ABU ZARIA

chapter 2

NATURE AND CHARACTERISTICS OF BLIGHTEDNESS IN URBAN AREAS AND PROGRAMMES FOR URBAN RENEWAL IN NIGERIA

2.10 THE CONCEPT OF BLIGHTEDNESS

The nature and quality of the physical environment results from the interaction of social, economic and cultural factors. These forces contribute to the environmental decay which affects both the physical and social quality of the environment within and outside the metropolis in which people live. H.J. Gans (1962) defines blights as "... an area which is physically, socially and emotionally harmful to residents at large". This presupposes that blight is a physical and social condition which relates to issues of time and place. He further argues that it is "... an area where the social and environmental factors are proven to cause problems and pathologies for the residents". This issues of "social image" presupposes that blight relates to people's socio-economic class.

These issues of physical condition and social image from the basis for the two categories of areas that become blighted (See Table 2.1). These are as follows:

(a) Areas which have blights, right from their inception

(b) Squalid housing resulting from misuse of planned residential area.

That is, blightedness refers to the decline in quality of environmental quantity and image, both physically and socially which could affect or endanger health, safety and morale of the residents. This also includes deteriorating economic condition within the city.

Stokes, C.J (1962, P.188) on the other hand, defined blight based on two variables, that is:

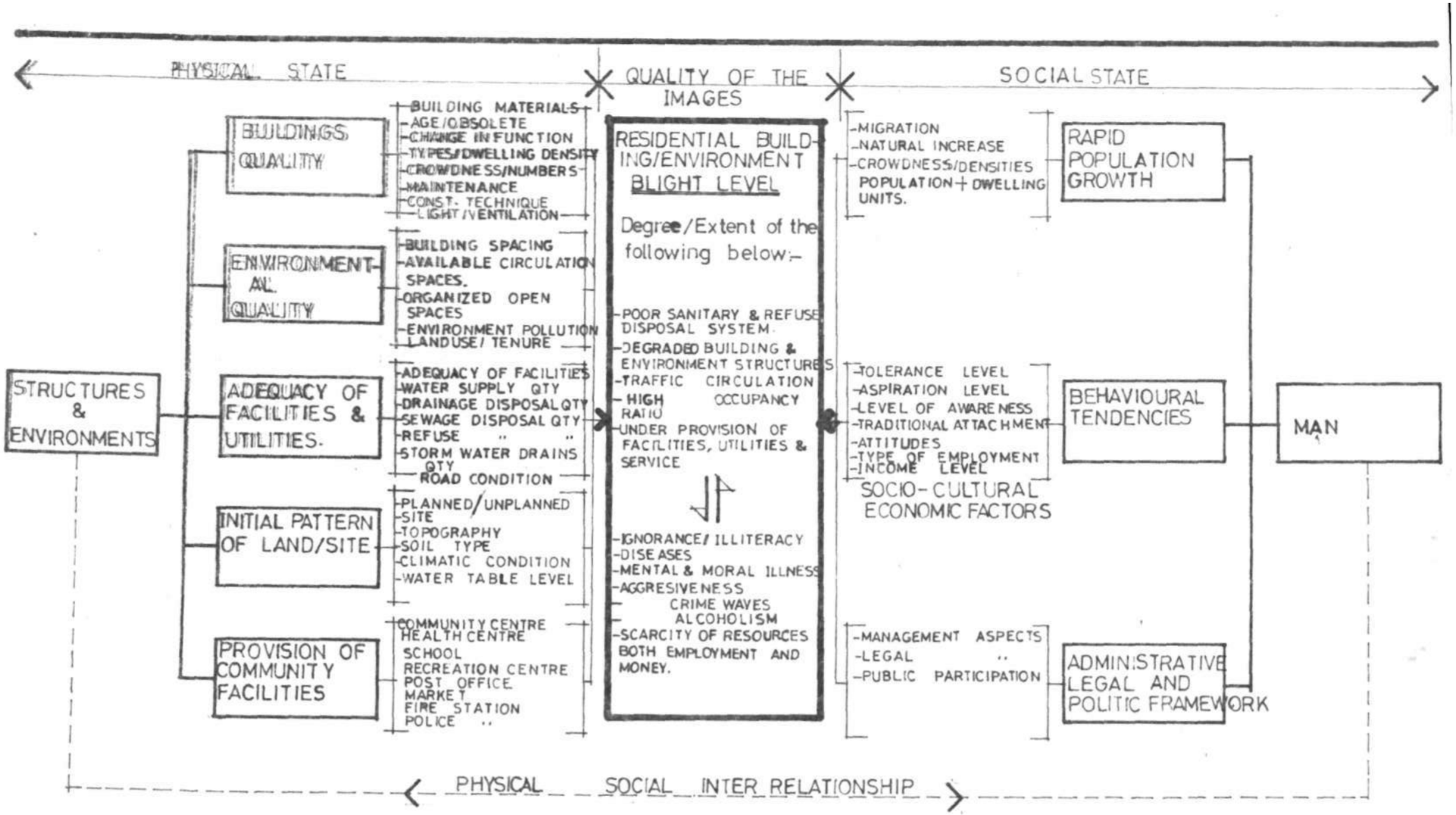


TABLE 2.1 CONCEPTUAL FRAMEWORK OF URBAN BLIGHT NATURE AND CAUSES

OYEKANMI O S
MSc THESIS 87/88
URP ABU ZARIA

Source: Adapted from Literature review.

(a) Residents' psycological attitudes toward moving up the social scale.

(b) Socio-economic barrier they are likely to encounter.

2.20 THE NATURE OF BLIGHTEDNESS

Two main groups of residents of blighted areas may be identified - those with 'hope' or 'escalate' who intend to better themselves and believe self betterment is possible, and those with 'despair ' or "non-escalator" who either have no desire to move up the social scale or believe that any attempt to change status will be Unsuccessful or may be denied the possibility of Upward social mobility. It is argued 'Hope' is the house of Stranger immigrants, which are either attracted by social and economic opportunities or driven from houses by economic, political or social up-heaval. Usually they come to Urban Centres seeking 'improvement' in their conditions and a majority are asborbed into the general employable population and are able to move up the social scale. However, not all strangers are successful; some lack the ability and others are debarred. These, together with those having no desire for upward mobility, are in habitants of the blight of "despair".

From this the deduction is that blight of "hope" will disappear with decrease in migration, because there will be increase in the number of job opportunity. This may also be through a filtering down process as the dweller moves outward where that of "despair"will persist because it housed the poor. Thus, the assumption made about blight type 'B' and 'D' reflect reality (Table 2.2), because of its socio-cultural barrier byt type 'A' and 'C' is unrealistic to believe that it will be self-eliminating as opposed to filtering down process. This shows that houses vacated by people, because of improved economic position, are normally occupied by other people of lower economic status. So far, it has been assumed that migration, ability and income growth are the determinants of the rate of blight formation.

TYPES / CLASSES	HOPE	DESPAIR
ESCALATOR	A	B
NON ESCALATOR	C	D

ECONOMIC / CASTE BARRIER

ABILITY BARRIER

BLIGHT FORMATION (MODEL) DETERMINANTS / PROCESS

Source: C J STOKES (1962)

(A)

TYPES / CLASSES	HOPE	DESPAIR
ESCALATOR	PLANNED CORE " " PERIPHERY (TEMPORARY OPPORTUNIST) ATTITUDES (BEHAVIOUR) TO MAINTENANCE OF BETTER ENVIRONMENTAL FACILITIES PROVIDED.	UNPLANNED CORE (TEMPORARY NECESSITARIANS) ASPIRATION & INCOME LEVEL IS UNABLE TO MEET THE NEEDS OF PROVISION & MAINTENANCE OF FACILITIES, IF PROVIDED
NON-ESCALATOR	UNPLANNED PERIPHERY (PERMANENT OPPORTUNIST) TOLERANCE LEVEL OF BLIGHT & PREFERENCE FOR OTHER NEED.	UNPLANNED FRINGE (PERMANENT NECESSITARIANS) HIGEST CAUSES OF BLIGHTEDNESS AWARENESS LEVEL IS LOW & CANNOT ALLOW FOR AFFORD & ASPRANG

BLIGHT NATURES IN METROPOLITAN KADUNA

Source: ADOPTED after stokes & seeley

(B)

TABLE 2.02 MODEL OF BLIGHTEDNESS

OYEKANMI OS
MSc THESIS 87/88
U.R.P—A.B.U.ZARIA

2.21 CATEGORISATION OF RESIDENTS OF BLIGHTED AREAS

From the attempt to diagnose the cause of housing and environmental blightedness, it seems that the study are reflects Seeley's model of degrated article (Table 2. 2). These are:

(i) Temporary Opportunists

(ii) Permanent Opportunists

(iii) Temporary Necessitairns

(iv) Permanent Necessitairns

(i) Temporary Opportunists

The 'temporary opportunists' are groups who believe that blight is a way of self improvement and independence of its members. This consists of three sub-groups.

First, the beginners who are mostly the young migrants with slim finance, education and resources, who are newly settled in the towns.

Second are the climbers who have stayed longer than the beginner. They accumulate enough goods, money and know-how to move to better areas but who refuse to move based on self sacrifice and self-denial.

Thirdly, the enterpreneurs who stay because of their business-like attitude also belong here, but partition their residence to use part of it for their business. They eventually move out to better neighbourhood when they acquire enough money.

(ii) Permanent Opportunists

The 'permanent opportuntists' stay here because the blights afford a protection from the hand of law to avoid business competition of the better area.

These are people with range of characters who appreciate the 'good time'. They stay here, because living in blighted areas leaves them surplus money to spend on other things. The blighted areas provide other things they desire and meet people of similar interest.

(iii) Temporary Necessitarians

The 'temporary necessitarians' are those conscious of the degraded condition of their environment, but can do nothing about it, and have not adjusted to the life in that area. There include the respectable poor and the trapped. Their values and associations are usually outside the area of residence and are those of higher social class. Normally, they are law abiding groups, who anticipate that life will change for better.

(iv) Permanent Necessitairans

The 'permanent necessitarians' consist of people who feel they cannot leave their blighted housing areas for alternative areas. These are the adjusted poor; who adopted a deep sealed habit to its ways. They are the indolent who display immobility to alternative accommodation and the social outcasts such as alcoholics, drug addicts, prostitudes, etc, whose illegal activities or shady character exclude them from better organised neighbourhoods.

2.30 BLIGHTEDNESS IN URBAN CENTRES OF NIGERIA

There is spatial variation in blight dimension and its popualtion with time, place and people. The degree of decline in quality of the environment both physically and socially vary from the Urban Core to Periphery. However, there are more physical blightedness in the Core than social degrated Images, but these two are more intense at the peripheral areas. Thus, this makes the situation more complex especially the social problems through expansion of unplanned settlements.

Blight developed through rapid Urbanization and polarization of development which is experienced during the transition from agarian to market/Industrial economy. Thus, there is a shift of people from rural areas into urban Centres owing to the attractions of real and perceived economic and social benefits. However, rapid population growth causes stresses on existing infrastructural facilities resulting in degradation in environmental quality and housing shortages.

2.31 PHYSICAL FACTORS

(i) Environmental Problems

Many blighted areas have locational and physical constraints such as marshy, hilly, rock, etc, These may be barrier beyond technological and financial committment on the physical development. These make the land not to be adequately planned from inception or not planned at all, as the terrian is seen as constraint to spatial development of the town. This will generally result into chaos because it will lack access roads to some housing units and the condition could be worsned seasonally.

Environmental quality are degraded by lack of maintenance and inadequate facilities, utilities and services and poor structures. Open drains are indisciminately littered with refuse dumps, resulting into poor sanitary conditions. Land use is often characterized with mixed use which are incompatible and lack development control. Generally, the circulation routes are crowded with traffic and the street pattern is often unplanned due to poor plot layout pattern.

(ii) Housing Problems

Poor housing is the major problem confronting many blight areas. Blighted environments result in an attempt to solve this problem in the first place, through self-help. These unplanned

growths have little regard to bye-law and zonning regulations. Also public right to services such as infrascture, ventilation, light,etc, are not observed. These areas are generally high density growths with traditional pattern, characterised by narrow streets. High population causes shortages in supply of affordable housing units, and high level of over-crowding.

This is further stretched by poverty which supresses affordability although they cannot afford government low cost housing units, because their aspiration is general toward cheaper affordable rental houses mostly in the peripheral area. Poor building designs and workmanship are used in housing construction for themselves, due to lack of financial resources and know-how. These houses are clustered together in traditional village pattern in haphazard manner. These streets are usually dirty tracks, which are difficult to pass through during the rains.

The housing units in the blighted areas lack basic infrastructure such as pipe-borne water, electricity, drainage and sewage disposal. This makes people to resort to use of shallow wells pit latrines, but bathroom and kitchen are usually shared.

Usually the local materials used require regular maintenance as its useful life span is estimated to be between 15 - 20 years at economic cost beyond which it becomes costly to maintain than to replace. This ageing is the transition state from full utility to complete uselessness. There could also be change in function of building structure to meet the demand of its occupants this led to mixed users causing environmental pollution, which might result in high mortality and disease rates.

2.32 SOCIO-ECONOMIC FACTORS

Poverty could aggreviate blightedness; and facilities, utilities and services are inadequate and poorly maintained, where provided. This is reflected when blight area acts as acculturation centre for new immigrants with little savings and skills. These immigrants, due to poor savings tend to put-up with their relations or people from the same ethnic group. This reflects the social values observed by H.J. Gans (1962). These give rise to other behavioural patterns which accelerate environmental degeneration such as weak and unstable economic, educational achievement and type of employment associated with young immigrants. This shows the environmental and social quality of the residents through their acquired community identity where all types of buildings are found. The buildings are usually close to each other forming the inhabitant's ethnic grouping, social and economic status. As blight acts as "accultration centre" for rural migrants, through assisting them to slowly adapt to Urban life and acquainting them with social and economic support in the environmental stage where the unskilled people find employment as labourers, petty traders, hawkers etc. This under-developed human resources give to low income which reflect the paucity of social amenities on these environment and the close relationship of the concept of "place of living" near 'place of work'. The crowdedness of houses within the compound and that of the people within their dwelling unit cause lack of privacy, exposure to contagious diseases, social abnormality, juvenile deliquency and crime.

2.33 PLANNING AND DVELOPMENT CONTROL IMPLEMENTATION FACTORS

Most residents of blighted areas in Nigeria are characterized socially by little educational attainment, unskilled labour and little savings. They are usually in low-paid employment as hawkers, petty traders, street vendors. These activities of low income earners determine their residential location to be close to work place mainly due to failling land values and low rents.

Also land problems exist associated with absence if metropolitan government. This shows lack of formal, effective planning and development control. No incentive is made for large Investment as title to land are non-existence, their area is not recognised by planning authorities so they lack facilities.

However, the standards used by the planning authorities reflect middle class values. They constitute a constraint in land acquisition procedures and do not reflect the socio-cultural values of the people for whom the plans are made. Since the people cannot buy a building within a planned area with real market ocassionally, they acquire non-urbanized land illegally. There is also the issue of ineffective development control measures. As most planning agencies lack necessary machinery to effectively monitor development trends and how to be linked. These are further aggreviated by conflict between departments such as local government on one hand and the planning agencies on the other over issues of land allocation, ground rents, issuances of certificate of occupancy and provision of necessary services.

This is coupled with frequent activities of land speculators through the sale of unserviced plot to the people. Sometimes governments themselves perpetuate blight formation by refusing such settlement recognition and incorporating them into official Urban Centre. There is also weakness in legal and land tenureship where land sub-divisions are possible through break-up in ties of family or communal ownership of properties in case of death of the family head or changes in economy within various family set-ups.

2.34 POLITICAL/ADMINISTRATIVE FACTORS

Administratively there is right to occupy but not to own land permanently, even when people placed a request for permission for a specific type of development within a scheme. This is according to the land use decree 1978. This decree also charged the State Governor with the authority on the implementation of Urban Land Planning and Development Control over all areas designated as being under planning juriduction. With this decree, it means that the Governor can revoke plot Certificates of Occupancy where conditions of grant are neglected, such as failure to develop a plot within a stipulated time, change of use, etc.

However, the recognition of local authority statutory right of occupancy, allow the Local Government Sole administrators authority on the sub-division and allocation of land within their areas of jurisdiction. Because local authorities lack technical manpower, this gives rise to blight within some urban areas.

Also, government acquiring of land, but failing over a long period to pay compensation, results into illegal disposition and consequently uncontrolled physical growth.

2.40 THE EXISTING URBAN RENEWAL PROGRAMMES FOR BLIGHTED AREAS IN NIGERIA

The renewal programme evolved so far were divided into three categories for practical purpose. The United Nations defines the term "Urban Renewal" as a system for preventing the pre-mature obsolescence or urban neighbourhoods and facilities for the restoration of declining areas as well as recreation of worn-out areas. In this section, the various shemes, within this definational scope, implemented in Nigeria are discussed.

2.41 THE SHORT TERM PROGRAMMES

These are divided into negative and positive programmes based on their effectiveness.

(A) The Negative Aspects

Basically four alternatives have been applied here. These include eradication and redevelopment, relocation and repatriation. All these are earlier attempted for blight improvement, which take the form of negative policies, regulations and control. Blight repatriation often involves the removal of rural immigrants back to their villages of origin where blight rehabilitation in Nigeria is a piece-meal improvement of structures by individual land-lords, which is currently favoured over slum clearance. Clearance involves depriving the residents of their traditional job opportunities by clearing away productive small scale industrial establishments and enterprises. These strategies have been applied in several instances in the eradication and relocation programmes. The main programmes are as follows:

(a) Lagos Slum Clearance/Re-development Scheme

The "bull dozer approach" was applied in Lagos first (1928) due to bubonic plaque and later Kaduna in 1977. This scheme is mostly applied in areas where 90 percent of the physical structures were blighted and basic services condition were grossly inadequate.

The 1928 clearance scheme involves Lagos Executive Development Board (LEDB) demolising 28 hectares of poor housing (80,000) and relocating the displaced

persons in a temporary housing project at Surulere. The initial area was set aside for replanning for commercial and residential uses. No sooner than the first batch of the affected people moved to the re-settlement site at Surulere, the scheme ran into problems and was later abandoned in 1960 for the following reasons as observed by D.G. Yahaya (1979):

i. It was expensive and lacked sufficient consideration for financial resources;

ii. Break-up of family ties made purchase of land after redevelopment impossible as familities could not come together collectively to buy the land again;

iii. The standard housing design adopted for the people did not reflect their values and ideas;

iv. The resettlement scheme at Surulere was highly inadequate and led to overcrowding;

v. Lack of regard and disruption of the economic activities;

vi. Compensation paid to the inhabitants was inadequate;

vii. The administrative framework was ineffective as was embodied in the programme implementation.

(b) Kaduna Metropolitan Re-development Scheme

In 1977, a more drastic approach of eradication without re-location was jointly organised by the Kaduna Capital Development Board and Local Government. It involved indiscriminate clearance of peripheral slums and squatter settlements along Western bye-pass. This project earmarked Ketaren-Banki, Kurmin-Mashi, Kabala West and Nassarawa area for action. Only the third of Kateren-Banki and one-fifth of Nassarawa were demolished before it was net with stiff opposition from the

inhabitants and general public. The Scheme's failure is enumerated by D.G. Yahaya (1979) in the following terms:

i. No provision was made for alternative shelter for the residents;

ii. The issues of compensation, either in terms of alternative land or finance, was not part of the package;

iii. No prior study was conducted to determine the socio-economic characteristics of the residents and their attitudes toward renewal before demolition exercise.

(c) Programme for Ahmadu Bello Way

Rehabilitation 'Piece Meal' development

The sub-standard structures constructed of, thatch, mud, etc., were to be replaced as they exist next to modern commercial storey buidings along the arterial highway. Thus, the realization of these facts called for improving building standards drawns up by Kaduna Capital Development Board (K.C.D.B) through the study of structures along the thorough-fare. Recommendations were also made for demolition and provision of parking facilities along Ahmadu Bello Way in 1970. The property owners were then given guidelines for redevelopment of their premises. The programme failed because of the following reasons:

i. Plots of 30 metre by 15 metre bordering the highway could not provide a desirable parking space because of limited space.

ii. The standards set were high; and the development required bank loans which many people could not secure;

iii. The scheme was not comprehensive enough as vehicular access and parking were not thoroughly considered.

2.42 PROGRAMMES WITH POSITIVE RESULTS:

These include rehabilitation with civic surgery,conservation/preservation and prevention. They are discussed below, with examples.

(a) Rehabilitation (Civic Surgery)

This strategy used where urban government cannot afford redevelopment as the scale of demolition in rehabilitation is less and it is cheaper. This strategy means any "piecemeal improvement" of individual; buildings and infrastructural facilities toward maximazation of the use of public funds. It involves selective demolition of dilapidated structures, improvement of bad layouts especially junctions and conflicting land use. It also offers opportunity to retain areas of particular economic and architectural importance by face-lifting blighted structures.

(b) Kaduna Programme of Restrictive Expansion Through Engulfment of Blighted Areas with New Residential Layout Designs

Areas affected are light idnustrial lay-outs prepared for Ketaren-Banki, Ungwan Rimi, Tsanni Kura and others were affected by this strategies in different ways. This seems to conform with Max Lock's recommendation for blight solution, where a form of circumvention is proposed by integrating the new developments and the old. The overall image of the area is enhanced in this way, and by a process of gradual trickedown the old is expected to be renewed.

(c) Kaduna programme for Provision of Utilities and Services

The Kaduna State Programme for provision of utilities and services was carried out with the establishment of Kaduna Capital Development Board. It led to improvement of roads and

sewage disposal in the central commericla areas, Tudun-Wada and Sabon-Gari. In addition, the Board commissioned a United National Team to draw-up a comprehensive master-plan for sanitation system for the whole metropolis.

(d) Conservation/Preservation Scheme

This is a master-plan approach in which structures or urban elements that are considered to be of historical, architectural and cultural values were involved in protection/or retention by making minor repairs. They include the City Gate and Wall, Emir's Palace, Mosques, Churches, etc. This strategy has been employed to safe-guard the environment from further deterioration that is, to prevent reoccurence of blight situation after it was initially wiped-out. Such factors were enforced like Building regulation, bye-laws etc.

These positive strategies provide physical planning solutions to the problems without necessarily destablising the hunman element of the slum.

2.43 INTERMEDIATE RANGE PROGRAMMES

These include infilling, up-grading, community participation and blight integration strategies. These positive strategies provide physical planning solutions to benefit low income earners who need social support and orientation.

The programme was developed with the need to determine the low income group's ability in the real estate development based on a loan scheme. Abrams (1964) suggested the recognition of the needs of residents of blight areas through up-grading of services; and infilling of unoccupied land in the built-up area through provision of serviced plots to low income earners, who may then proceed to

erect their homes using either an aided or a self-help methods.

Sites and Services Schemes

Examples of these programmes are the Bauchi and Imo State World Bank assisted projects described, as well as other small projects. These are described as follows:

(a) Bauchi Up-grading /Infilling

This programme was motivated during 3rd National Housing Programme (N.H.P). This project is financed under World Bank Programme of Nigerian States Urban Development Project (NSUDP), with the aim of improving the over-all living standard of a targeted 50,000 population as from 1980 through up-grading, provision of serviced sites, provision of new and improving the existing infrastructural facilities, utilities and services.

The project is undertaken within National housing objectives as follows:

i. Increase in low cost housing supply for low-income group within financial affordability;

ii. Financial recovery of investment cost to allow replicability elsewhere;

iii. Define the affordable standard of construction of housing infrastructure;

iv. Control of effects of Urban sector investment on National and States economics;

v. Should ensure that all provisions grow sufficiently to accommodate the growth with its population at minimum cost.

The framework for the implementation are provision of:

i. Physical and social infrastructure for 2100 service plots in 120 hectares of vacant land;

ii. Up-grading of 140 hectares of adjascent built-up area;

iii. Finally, infilling of 73 hectares of land

The achievment of this scheme is substantial, compared to its disadvantages because of citizen participation and revitalization of investments involved.

However, Jamoh (1983) outlined the failure as follows:

i. The problem of reconnection the objectives of housing design with affordability of this low income group;

ii. Choice of up-grading area solely based on affordability not on scientific analysis of degree of degeneration;

iii. Lack of consideration to the up-grading of housing units themselves;

iv. Method of financing the project by State Government, World Bank and Mortgage Bank is full of loop-holes for big failure if one of the three is unable to meet it financial obligations.

The project experienced some Implementation Problems as follows:

i. Land acquisition for development from the indigene;

ii. Inadequate and irregular funding by the state Government;

iii. Sub-standard civic structures developed by incompetent and inexperienced contractors including delays which led to high running cost;

iv. Recovery of investment cost was disrupted by low finance

v. Procedure of acquiring Certificates of Occupancy slowed down the plot development rate;

vi. The scheme suffered for lack of adequate staff both managerial and technical

(b) Imo State Up-grading/Site and Services

This scheme is expected to provide serviced plots, social and physical infrastructure to Owerri, Aba, Umuahi. It was intended to up-grade the older core of Owerri town and the area liable to flood in Aba.

The areas of failure were as follows:

i. The Federal Government and World Bank failure to fulfil their financial obligation in loan and document ratification between the parties concerned;

ii. The payment of Eight Billion debursed by State Government for the present assessed compensation claims have not been effected.

(c) Community Participation Strategy

This is based on non-monetary investment by using various incentives for self help effort based on community resources and participation. This is due to the fact that financial investment on blighted development is inadequate and also on ability and desire of the blight residents to help themselves.

Since the basic problems are poverty and education and not directly housing and infrastructure, there is need to provide serviced plots. Government is to specify the building design and standard. This is enhanced through public education.

(d) Blighted Integration Strategy

This strategy maintained that blight residents contribute to the economic potential of human development and cannot be isolated from the urban process in which is is participating.

It also sees the establishment and growth of blight areas as consequence of aggregated series of individual family decision. Therefore, the basis for blight integration should be farily centred with provision of viable options to immigrants as available elsewhere in the metropolis such as low income housing, employment opportunities, services and utilities, etc. A realistic blight integration programme should include the components of more viable housing market for low income groups, since both its expectation and its economic capacity are limited. Also, integration of the labour force as part of human resources will encourage the community's participation in this provision of minimum services such as health centres, schools, vocational training centres, police and fire protection and basic utilities. This could help to break the circle of poverty. This suggests that the scope of blight integration goes beyond physical reconstructions.

2.44 LONG - RANGE PROGRAMMES

The long range programmes which include both integrated regional planning strategies and administrative machinery strategies operate as preventice measures.

(a) Integrated Rural Planning Strategy

This is a long-term guided growth to accommodate rural migrants. This approach also deals with blight problems in the regional planning context, that is, involving not only urban centres but also rural areas and immigrants. These are integrated in terms of social, economic, physical and environmental planning. The expansion of the city growth will proceed in order to achieve the desired goal at minimum cost, even where no comprehensive land use scheme

is provided. This planned growth calls for co-ordination of national, regional and local level actions to avoid bottle-necks in the development and re-development processes.

This approach is suitable for Development Countires particularly from the economic point of view, because it care of lay-outs in advance, provide sufficient sites and services in terms of land area, road network system. These ease the provision fo water supply and basic infrastructural facilities under the basic available resources.

(b) Administrative Strategies

These Strategies is geared toward establishing an administrative machinery: legally sound and well co-ordinated within the set-up. This ensures effective implementation and control which is considered economically viable in terms of financed development.

The formation fo centralized development board, whose function will be based on concept of hierarchy for central co-ordination and monitoring of all planning activities and other administrative bodies, will be formed. This is opposed to different usurped planning functions which lies above technical capacities of other planning and implementation authorities such as local government which independently cannot achieve a desirable cultural standard to relate to people's in-come and needs. They complicate and confuse issues which eventually result in haphazard development.

In many State Capitals there exist several planning and administrative bodies such as Metropolitan Development Boards, State Ministry of Lands, and Surveys/Land and Housing and Local Authorities. With all these, there is need for clear definition of the respective roles to be played by the administrative bodies. This should be clearly defined to avoid over-lapping of functions and also central co-ordinating bodies to monitor all the planning activities or other planning and administrative bodies at various levels down to the district level.

2.50 SUMMARY :

The concept of blightedness depends on the nature and causes of physical conditions and social image of the environment. This naturally affects the quality of the images, through the following causes:

(a) Physical factors

(b) Socio-economic factors

(c) Planning and development control implementation factors

(d) Political/administrative factors

Many Urban renewal programmes applied before are the short term programmes, intermediate range and long term programmes. The negative aspects of short term programmes are discarded as it has been proved to be unpopular, where it was used before. But the collection of 'piece meal approaches' from short-term to long-term programmes is used as upgrading scheme.

Thus, the integrated upgrading programme has been found to be very suitable for migrant settlers, as this approach is aimed at alleviating the suffering of the urban poor who form the bulk of the residents of blighted areas. The programme us user-oriented as it takes care of basic needs through provision of employment and education as well as the provision of housing units. This strategy is a preventive measure. But its curative measure take care of minimum level of dislocation through provision of adequate facilities, utilities and services.

part II chapter

3

BLIGHTEDNESS IN KADUNA METROPOLIS

The objectives of analysing the physical condition of housing and environmental blightedness in residential areas is to find a basis for a choice of appropriate renewal action. This is to determine the extent of deterioration in the metropolis. The results of the survey are given below:-

3.10 IDENTIFICATION OF BLIGHTED AREAS IN KADUNA:

ROUGH SCREENING

The method is used first because it is quickest and the cheapest method. It proceeds from the whole town (Primary Screening) to various parts in details (Secondary Screening). It gives a good basis for understanding of the degree of degeneration in the blighted areas. It was conducted in the following way:

i. Quick surveillance (walkabout) survey was conducted round the metropolis.

ii. Identification of extent of each boundary area within the metropolis.

iii. The physical strcutures were assessed using some factors, such as conditions of roof, wall, floor, etc. Also considered is lack of maintenance of facilities together with assessment; then pollution regarding industrial Sewage and noise, etc.

iv. The extent of blightedness was studies and recorded (See table 3.1 and Figure 3.01).

v. Finally, determination of the level of blightedness based on logical sequence and qualitative appraisal.

vi. Computing of the scores for final grading on the scale of value Six being the blighted area and value one as good that is, not blighted.

BLIGHT ANALYSIS - VISUAL PHYSICAL ROUGH SCREENING SURVEY (WALKABOUT METHOD)

DISTRICTS/ ZONES/ BLOCKS	AREA	HOUSING CONDITIONS: CONDITION OF ROOFS, WALLS, FLOOR ETC	AVAILABILITY OF FACILITIES & SERVICES	CONDITION OF MAINTENANCE	GRADE	ENVIRONMENTAL CONDITIONS: OVER-CROWDING	WASTE NUISANCE	NOXIOUS POLLUTION	TRAFFIC CONFLICTS	DRAINAGE PROBLEMS	GRADE	FINAL GRADE
A1	AFAKA / MAHUTA / RIGACHUKUN	2	3	2	3X	3	3	2	3	4	3/	4
A2	RIGASA	3	4	3	4X	3	4	2	4	4	4/	6
B1	ABARKPA KETARA BANKI/UNGUWAN SHANU	2	3	3	3X	4	4	3	4	4	4/	5
B2	UNGUWAN KANAWA / KAWO	2	2	3	3X	3	3	3	3	3	3/	4
B3	UNGUWAN MALALI LOW COST HOUG N. D. A.	1	2	3	2 X	1	2	2	2	2	2/	2
B4	MALALI VILLAGE UNGUWAN DOSA / BADARAWA	3	3	3	3X	COMPONENTS OF HOUSING CONDITIONS					COMPONENTS OF ENVIRONMENTAL CONDITIONS	5
B5	NEW GRA MALALI	1	1	1	1	BAD / VERY INADEQUATE = 3					4/	1
C1	SABON GARI	2	1	1	1X	FAIR / INADEQUATE = 2					CRITICAL = 4	3
D1	UNGUWAN RIMI LOW COST HOUSING OLD GRA CENTRAL AREA	2	1	2	1X	GOOD / ADEQUATE = 1					EXIST BUT NOT CRITICAL = 3	2
D2	KABALA DORI ESTATE HOUSING KABALA DORI TUNG KUDU UNGUWAN RIMI AREA UNG. MUNCHI	2	2	3	3X	VALUES ASSIGNED					MARGINAL = 2	5
E1	TUDUN WADA / NUPAWA	2	1	2	1X	GRADE VALUES					NONE = 1	4
E2	UNGUWAN SANUSI / EXPRESS BY PASS	2	3	2	3X	4X = ALMOST ALL THE CONDITIONS IS BAD					VALUES ASSIGNED	1
E3	KABALA WEST / UNGUWAN MUAZU	2	3	3	3X	3X = MORE THAN 2/3 OF STRUCTURES IS BAD.					GRADE VALUES	6
E4	KURMIN MASHI / BADIKO	3	3	3	3X	2X = BETWEEN 1/3 - 2/3 OF STRUCTURES IS BAD					4/ = ALMOST THE WHOLE AREA HAVE ENVIRONMENTAL PROBLEMS	5
F1	BARNAWA / NARAYI LOW COST / G R A.	1	2	3	2X	1X = UP TO 1/3 OF STRUCTURES IS BAD					3/ = SLIGHTLY MORE THAN 2/3 OF AREA IS BAD	2
F2	BARNAWA / NARAYI VILLAGE UNGUWAN BOKO	3	3	2	3X	1 = NO STRUCTURES IS BAD					2/ = BETWEEN 1/3 - 2/3 HAVE ENVIRON PROBLEMS	4
F3	MAKERA	2	2	2	2X						1/ = UP TO 1/3 ENVIRONMENT HAVE PROBLEMS	3
F4	KAKURI / UNGUWAN GWARI	3	3	3	3X						1 = NO ENVIRONMENTAL PROBLEMS	5
G1	NASARAWA	3	2	3	3X	4	3	4	3	4	4/	5
G2	GONI KOFA	2	4	3	3X	3	2	1	2	3	3/	4
G3	UNGUWAN TELEVISION/ SABON TELWA	2	3	3	3X	4	4	3	3	4	4/	5
G4	TSAUNI KURA / SABON TASHA	2	3	2	3X	3	4	3	3	4	4/	5

TABLE 3-1

DELIMITATION OF BLIGHT IN KADUNA METROPOLITAN AREA

SOURCE: Field survey (jan'88)

OYEKANMI OS
MSc THESIS 87/88
A. B. U. ZARI

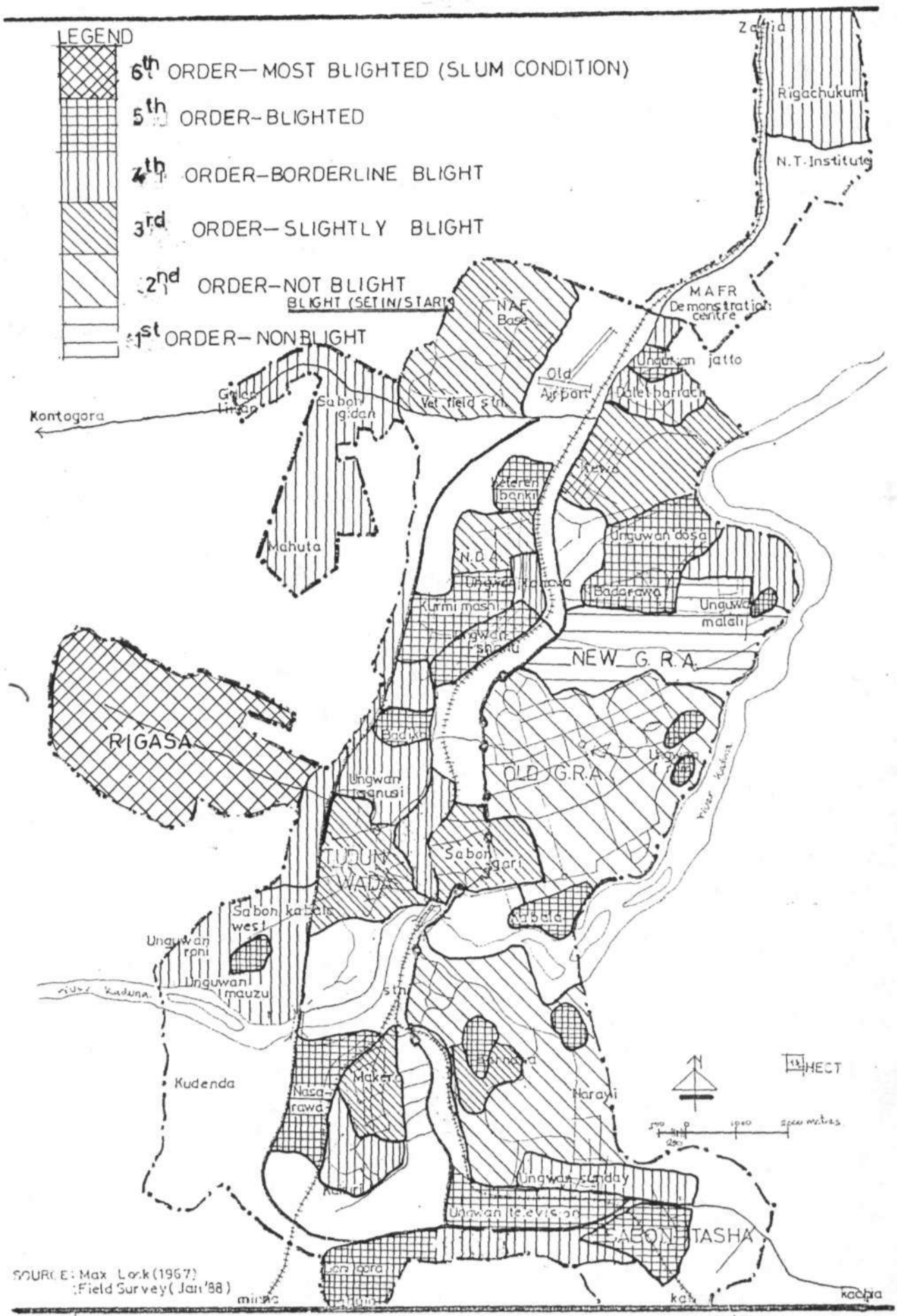


FIG. 3·01 EXTENT (LEVEL) OF URBAN DETERIORATION IN KADUNA

OYEKANMI O S
MSc THESIS 87/88
URP – ABU ZARIA

The results of the survey are given on Table 3.1 and figure 3.01. They show that large parts of Kaduna are blighted. Those that are not blighted have been categorised into two: the good areas described as 1st Order "not-blighted" and the fairly good described as 2nd Order "not-blighted".

Through the use of the Rough Screening method it was established that the degree of blightedness vary from one part of Kaduna to another. These needed to be delineated for further detailed study to determine the various degrees of blightedness. How this was done and the results are discussed in sections 3.20 and 3.30 below.

3.20 SELECTION OF AREAS FOR DETAILED STUDY:

Some areas in the metropolis were selected for detailed study based on the following criteria:

i. The methodology should avoid piece-meal appraoch;

ii. Fair representation of all levels of blighted identified

iii. District pecularies which are based on the following parameters below

(a) planned/unplanned settlement

(b) location based on core periphery and fringe

(c) density of the settlement-low medium and high

(d) socio-economic character and cultural pattern (See Figure 3.02 Table 3.2).

3.30 CATEGORIES OF BLIGHTED AREAS IN KADUNA

The study areas were selected based on major parameters of core-periphery/fringe settlement mainly, also in relationshiop to the issue of blighted level of degraded article, but other variables are at the background as they seem in exhustible.

CHOICES : CRITERIA

- METHODOLOGY SHOULD AVOID PIECEMEAL APPROACH.
- IDENTIFIED LEVEL OF BLIGHT OF URBAN DEGENERATION, USING THE TECHNIQUES OF ANALYSIS IN ORDER OF EFFECTIVENESS.
- FAIR REPRESENTATION OF OTHER TYPES OF BLIGHT IDENTIFIED & THEIR DISTINCT PECULIARITIES.

TABLE 3.2

EXTENT OF BLIGHTEDNESS IN SELECTED AREAS IN EACH DISTRICT

SOURCE: Field survey (jan '88)

32a

AFAKA

AREA	MAKERA	RIGASA	RIGACHUKUN
LEVEL			
FACTORS/CRITERIA	5 4 3 3 3 3 2 2 2 1 1	5 4 3 0 0 0 2 2 0 1 0	5 4 3 3 3 3 2 2 2 1 1
TOTAL	2 22	– – 15	3 8 15
WEIGHTED SCORE	6 22	– – 15	9 16 15
TOTAL WEIGHT SCORE	32	15	40
FINAL GRADE	5	6	4
DESCRIPTION	VERY POOR	BAD	POOR

KAWO

KAWO	UNGUWAN DOSA	MALALI LOW COST	UNGUWAN KANAWA	MALALI NEW G.R.A
5 4 3 3 2 2 2 1 1	5 4 3 3 3 2 2 1 1	5 4 3 3 3 2 2 1 1	5 4 3 3 3 2 2 1 1	5 4 3 3 2 2 1 1
5 17 4	1 2 22	23 2 1	1 19 6	26 – –
15 34 4	3 6 22	69 4 1	3 38 6	78 – –
54	31	74	47	78
3	5	2	4	1
FAIR	VERY POOR	GOOD	POOR	VERY GOOD

DOKA

SABON GARI
5 4 3 3 2 2 1
9 17 –
27 34 –
61
3
FAIR

GABASAWA

OLD G.R.A	KABALA DOKI	UNGUWAN FILIN JIDA
5 4 3 3 3 2 2 1 1	5 4 3 3 3 2 2 1 1	5 4 3 3 3 2 2 1 1
20 6 –	– 6 20	– 3 23
60 12 –	– 12 20	– 3 23
72	32	29
2	5	5
GOOD	VERY POOR	VERY POOR

TUDUN WADA

TUDUN WADA	TUDUN NUPAWA	UNGUWAN KANUU	KURMI MASHI	UNGUWAN MUAZU
5 4 3 3 3 2 2 2 1 1	5 4 3 3 3 2 2 2 1 1	5 4 3 3 3 2 2 2 1 1	5 4 3 3 2 2 1 1	5 4 3 3 3 2 2 2 1 1
9 14 3	– 9 17	4 12 10	– 4 22	2 2 22
27 28 3	– 18 17	12 24 10	– 8 22	6 4 22
58	35	46	30	32
3	4	4	5	5
FAIR	POOR	POOR	VERY POOR	VERY POOR

MAKERA

AREA	MAKERA	NAKURI	LOW COST BARNAWA	VILLAGE NARAYI
SCORE				
FACTORS/CRITERIA	5 4 3 3 2 2 2 1 1	5 4 3 3 3 2 2 2 1 1	5 4 3 3 2 2 2 1 1	5 4 3 3 2 2 2 1 1
TOTAL	5 [illegible]	– 13 13	22 4 –	3 23
WEIGHTED SCORE	53 [illegible]	– 26 13	56 8 –	6 23
TOTAL WEIGHT SCORE	53	29	74	29
FINAL GRADE	3	5	2	5
DESCRIPTION	FAIR	VERY POOR	GOOD	VERY POOR

SABON TASHA

NASARAWA	GONIGORA	UNGUWAN YELWSON	TSAUNIA KURAYAS-H
5 4 3 3 3 2 2 2 0 1 1	5 4 3 3 3 2 2 2 2 1 1	5 4 3 3 3 2 2 2 2 1 1	5 4 3 3 3 2 2 2 2 1 1
– – 24	– – 26	– 8 18	– 1 25
– – 24	– – 26	– 16 18	– 2 25
24	26	34	27
5	5	4	5
VERY POOR	VERY POOR	POOR	VERY POOR

FACTORS CONSIDERED

CRITERIA USED FOR WEIGHTING IS BASED ON RESIDENTS PRIORITY OF PREFERENCES & FIELD OBSERVATION. WEIGHTS ARE THEN ASSIGNED TO THESE VARIABLE RANGING FROM 5 FOR THE MOST IMPORTANT VARIABLE TO 1 FOR THE LEAST IMPORTANT.

- BUILDING CONDITION (WALLS, ROOFS, FLOORS & FOUNDATION) ---- F_0
- SANITATION CONDITION (SOLID & REFUSE) ---------- F_1
- CONDITION OF ROADS (POT HOLE, WATER LOGGED) ---------- F_2
- FACILITIES (HEALTH, SCHOOL) & UTILITIES PIPE (BORNE TAP WATER) F_3
- CONDITION OF DRAINAGE (LIQUID WATER) ---------- F_4
- ENVIRONMENTAL HAPHAZARD DEVELOPMENT ---- F_5
- ENVIRONMENTAL POLLUTION/ VENTILATION ---- F_6
- CONDITION OF MAINTENANCE ---------- F_7
- STRUCTURES OVERCROWDNESS ---------- F_8
- ELECTRICITY LAID OUT CONDITION ---------- F_9

MARKED RANGE VALUE FOR BLIGHT EXISTENCE CONDITION

UPPER QUARTILE $Q_3 = 62$

MEAN " " $Q = \bar{X} = 42.5$ 47

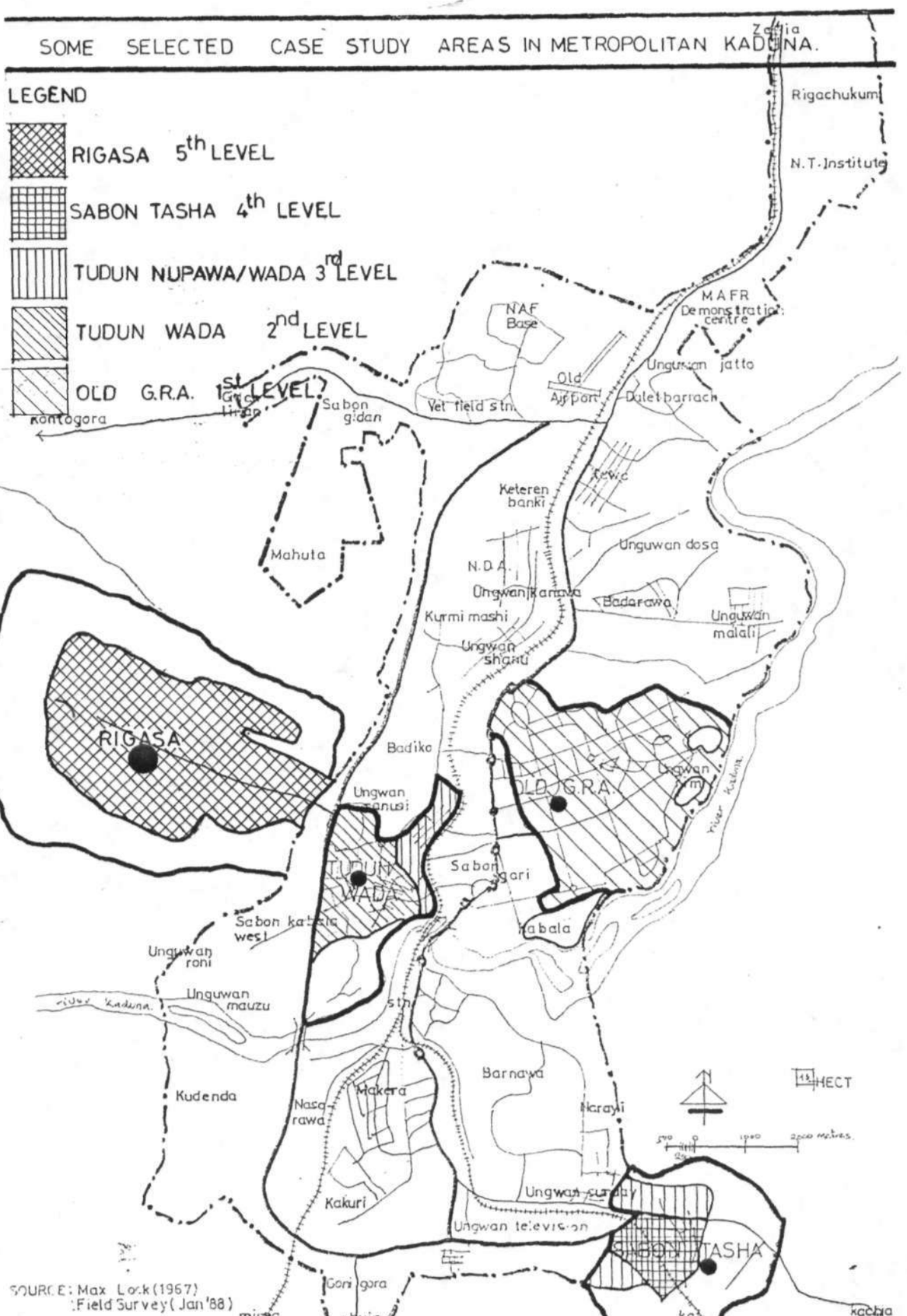
LOWER " " $Q = 33$

CLASSIFICATION OF BLIGHT EXTENT

	TOTAL WEIGHT SCORE	
6th ORDER	0 – 20	BAD
5th " "	20 – 33	VER POOR
4th " "	33 – 47	POOR
3rd " "	47 – 62	FAIR
2nd " "	62 – 77	GOOD
1st " "	OVER 77	EXCELLENT

AREA QUALITY REPRESENTED

- Planned core/periphery
- Partially planned/uncontrolled devt
- Unplanned core/periphery
- Ageing level
- Encroached official/commercial/industrial act[illegible]


SOME SELECTED CASE STUDY AREAS IN METROPOLITAN KADUNA.
LEGEND
RIGASA 5th LEVEL
SABON TASHA 4th LEVEL
TUDUN NUPAWA/WADA 3rd LEVEL
TUDUN WADA 2nd LEVEL
OLD G.R.A. 1st LEVEL
Zaria
Rigachukum
N.T. Institute
MAFR Demonstration centre
NAF Base
Old Airport
Unguwan jatto
Dulet barrack
Vet field stn.
Sabon gidan
Kontagora
Keteren banki
Mahuta
Unguwan dosa
N.D.A.
Ungwan Kanawa
Badarawa
Unguwan malali
Kurmi mashi
Ungwan shanu
RIGASA
Badiko
Ungwan sanusi
OLD G.R.A.
TUDUN WADA
Sabon gari
Sabon kabala west
Kabala
Unguwan roni
Unguwan mauzu
river Kaduna
stn.
Barnawa
Kudenda
Nasarawa
Makera
Kakuri
Ungwan television
SABON TASHA
Gonigora
Kachia
SOURCE: Max Lock (1967)
Field Survey (Jan '88)
FIG. 3·02
DEGREE OF BLIGHT IN SELECTED STUDY AREAS
OYEKANMI O S
MSc THESIS 87/88
URP – ABU. ZARIA

(A) 1ST LEVEL BLIGHTEDNESS

The Old Government Reservation Area (G.R.A.) came under the 1st level blightedness level based on the criteria llated above (Figure 3.02 Table 3.2). This is the oldest layout in grid iron plan. This residential area was mapped out by the colonial administration for the urban elites. The residents were mostly white Senior Civil Servants and Junior workers from the Southern part of Nigeria. This was to accommodate low density settlement based on garden city concept. This area has had large ample space which cannot be maintained by the authorities concerned.

The socio-ethnic grouping here is more indegenous as it reflect the kinship ties, political adminsitrative elites which are generally strong in all respects including the socio-economic, that is, they are the best people who have access to this background.

Problems Identified in 1st Level Blightedness

The nature of the problems observed were extremely low density development with large ample space, untidy open space/ bushy surrounding. Untarred streets and pot holes on some roads. Animals and poulty keeping within the compound dilapidated buildings and obsolete facilities. Refuse is burnt within compound, some buildings are partly mixed Land uses e.g. residential/commercial use mainly. Such as Salon, Shop, etc. The landscaope garden within the compound is mixed with seasonal farming. Along the streets usually we have non-concrete and undefined drains. But maintenance and management problem is periodically experienced, for this level, old Government Reservation Area (G.R.A.) is chosen for 1st renewal programmes.

(B) 2ND AND 3RD LEVEL BLIGHTEDNESS

Tudun-Wada/Nupawa (See Figure 3.02 & Table 3.2) reflect partially planned area by the colonial list for social racial segregation of whites from migrant civil servants from the south of the country. However, with increase in population, people of different ethnic grouping invaded this area making the area laid out in grid-iron to expand and encompass unplanned settlements. This was possible due to the nature of the phsical landscape. The settlement was initially planned as Labour Camp for Old Government Reservation Area and as residential area for indigenous commercial workers. This settlement was formerly part of the peripheral areas, but now growth and expansion have engulfed the area. The residents are largely self-employed based on commercial activities as this area is close to the market. The physcial pecularity of the architectural designs reflect the people's cultural background and house type, which are mostly supplied by the private popular and private commercial sectors for rentage and purchase.

All housing units are used for some form of commercial activity, from retail shops to stores, attached to residential units forming mixed land uses. The market serves the whole. Houses in the area are generally developed with building permit, based on medium density layout. Later , the unplanned area evolved with high density.

Problems Identified in 2nd and 3rd Level Blightedness

The nature of the problems observed were street parkingsand poor access to residential units. In some places some streets were converted into commercial activity areas, which give rise to traffic problems especially along major roads juncton as for example, the market area. Also, there is pedestrian circulation which conflict with vehicular traffic tracks.

As for the sanitary condtions, it is upsurp. Refuse are dumped at the backyard alley of plots. And where refuse is dumped at collections points, it sometimes extends into open drains and the roads. usually this undefined drains allow sullage water to flow along the roads surface or from a pool, often open spaces are littered with refuse and illegal structures usually built in zinc /thatch roofing sheets. There is generally unco-ordinated mixed land-use, which have conflicting uses producing noise, industrial pollution, etc. Also present are obsolete and dilapidated buildings. The variation in level and nature of problems give rise to 2nd and 3rd level blightedness. And for this level Tudun-Wada and Tudun Nupawa were chosen for this case study.

(C) 4TH LEVEL BLIGHTEDNESS

Sabon Tasha (See Figure 3.02 & Table 3.2) is a new settlement in the industrial zone. This unplanned location is presently at the periphery. It has fragmented unco-ordinated layout, which lack unified common snese of place and it gives rise to lack of effective functional and physical integration, among the different units. This are is largely inhabited by the indigenous population. It is associated with a high

accident rate at market area. The traditional housing type/characteristic of the area were built haphazardly without a well-planned road hierachy. Self-aid mode of construction was used producing poor qualify buildings of high density and haphazard development which lack facilities.

Problems Identified in 4th Level Blightedness

The problems observed are lack of effective, functional and physical integration amongst the different residential units (land-use developed haphazardly) which gives lack of unified common sense of place, with inadequate facilities and basic services. There were poor accessibility and also difficulty in differenciating road hierarchy. These uncoordinated and fragmental development will in future pose problem to expansion, more so as there are conflicting land uses and mixed unconforming uses such as industrial/residential which might be obnoxious.

There us generally, poor sanitary surrounding, where open spaces are littered with refuse and disposal system is usually absent. This is coupled with poor building conditions, over-crowding and poor maintenance of facilities provided.

Usually, the main market is the busiest area which causes traffic congestion along major roads and generally the activities encroach on roads causing high accident risk, this is compounded by lack of parking spaces.

(D) 5TH LEVEL BLIGHTEDNESS

Rigasa (See Figure 3.02 & Table 3.2) is chosen as a 5th level blightedness. It was initially rural settlements in unplanned fringe area, outside the control of Urban Government, which is unable to control or guide development nor acquire the land. Rental housing developers have tended to opt for cheaper land from local government at the periphery thereby avoiding land controlled and regulated by the urban governments. The socio-economic level of the residents is determined by the agarian market economy, that is, mainly farming and petty traders. All these political and socio-economic problems together with physical problems make it not to be accessible to facilities, utilities and services, which intensify environmental blight through delapidating and conflicting land use.

Problems Identified in 5th Blighted Level

The problems observed were fragmental and unco-ordinated development with poor structures with lack of effective functional and physical integration with the metropolis. Generally, there is inadequate and lack of basic infrastructural facilities, poor maintenance of road which are not differenciated hierachically. Refuse are disposed on open spaces. If open spaces are provided for public/semi public, they are usually un-organised. There is encroachment of commerical activities or Right of ways. Some land uses are non-conforming mixed uses, giving rise to blightedness. The drainage channels are usually undefined which allows sullage to drizzle along the roads, but heavy erosion is caused by storm water along the major drain lines by storm water.

There is basic problem with pit latrine location within the compound which are usually located very close to well water. Majority of residents, share their limited facilities such as, toilet, bath-room etc., also use of frontage, corridor and court-yard for cooking. The poor buildings condition is as a result of less understanding of local materials used, with cements and poor workmanship. The compound type design gives rise to poor ventilation and lighting to individual compound because of over-crowdiness - Rigasa represent the 5th level which is most blighted areas identified in the metropolis.

3.40 DEGREE OF BLIGHTEDNESS IN SELECTED AREA

To determine the extent of blightedness with less subjectivity, the Weight and Expontial method was used. This is a more detailed analysis of blightedness in some districts representing all blight types identified above (See Figure 3.01). For this detailed study, the factors given in section 3.10 plus some additional ones were re-examined, but this time weighting index is applied as a rate to the individual factors for final determination of the scores. A weighting index range from 5-1 has been assigned to different factors in order of importance, based on residents' preferences and the researcher's observation, are combined to formulate considered factors.

Each factor is split into three dimensions. To indicate the level of deterioration which is recorded during the survey, the total scores for each factor for various area were obtained.

Lastly the weighting index and score were assgined to all factors (criteria) by multiplying the total scores in each factor category by the weight thus assigned and then summing up all the scores for each area (Table 3.2). Class Values were assigned to delineate the various orders of deterioation. The class values were obtained by finding the mean, upper and lower quartiles of all the total weighted score and applying these values directly on the total weighted scores for each area. Thus, a total weighted score falling between the upper quartile and above will give the highest order (lowest degree of deterioration) and the 1st order will be formed by scores below the lower quartile. That is, it is the area in good condition which obtains the highest score above the upper quartile.

3.50 LOCATONAL CHARACTERISTICS OF BLIGHTED AREAS IN KADUNA METROPOLIS

Five broad types of blight can be identified, these are generally based on circumstances which led to their formation. They are either based on the spatial dimension of core-periphery-fringe location and/or planned-unplanned zone.

3.51 PLANNED CORE

Planned core is central/core blight, which emerged due to ageing of buildings and poor management of utilities. This is because of lack of maintenance and neglect, obsolescence of structures, functional changes, etc. Examples of this include old Government Reservation Area (G.R.A.), Sabon-gari in Doka district where land uses have been changed.

3.52 UNPLANNED CORE

This is the second type of central/core blight found in an area where no formal planning has occured. These could be in walled cities like Kano, Zaria etc. These cities are usually organic in nature. In Kaduna metropolis, this is in the sections which had grown prior to intial planning, like Abakpa, Anguwan Shanu, etc (See Fig. 3.03).

They are close to or within the core area and with Urban growth the settlements are then engulfed. The changes in function, technology, etc., help the blighted residents with money/economy aid.

3.53 PLANNED PERIPHERY (Labour Camp)

Some areas of Blight emerged in formally planned areas which are segrated into low, medium and high density and also based on segregation of white areas from blocks in Kaduna, or the segregation of natives from non-natives. Thus, the present day Sabon-gari and Tudun-Wada, are the direct outcome of this policy. Usually they have buffer zones of vegetation, or any other physical barrier. This area strictly houses the young family immigrants with little education and skill, since they exhibit utilizable potential for whites and service activities in the Metropolitan centre. Their housing are usually close to their work places. However, because of complex mix factors like human behaviour, lack of maintenance and neglect of this planned area, structural and environmental deterioration sets us. In Kaduna, this is mainly in Tudun-Nupawa.

3.54 UNPLANNED PERIPHERY (Rural-Urban Mugration to Satelite/Dormintory Town)

This is an area, at the metropolitan edge where many city services do not reach due to lack of provision or the poverty level of the inhabitants. These usually fall outside the control of Urban governments in terms of land acquisition. These settlements grow

SOME METROPOLITAN CENTRE WITHIN THEIR MICRO - REGION

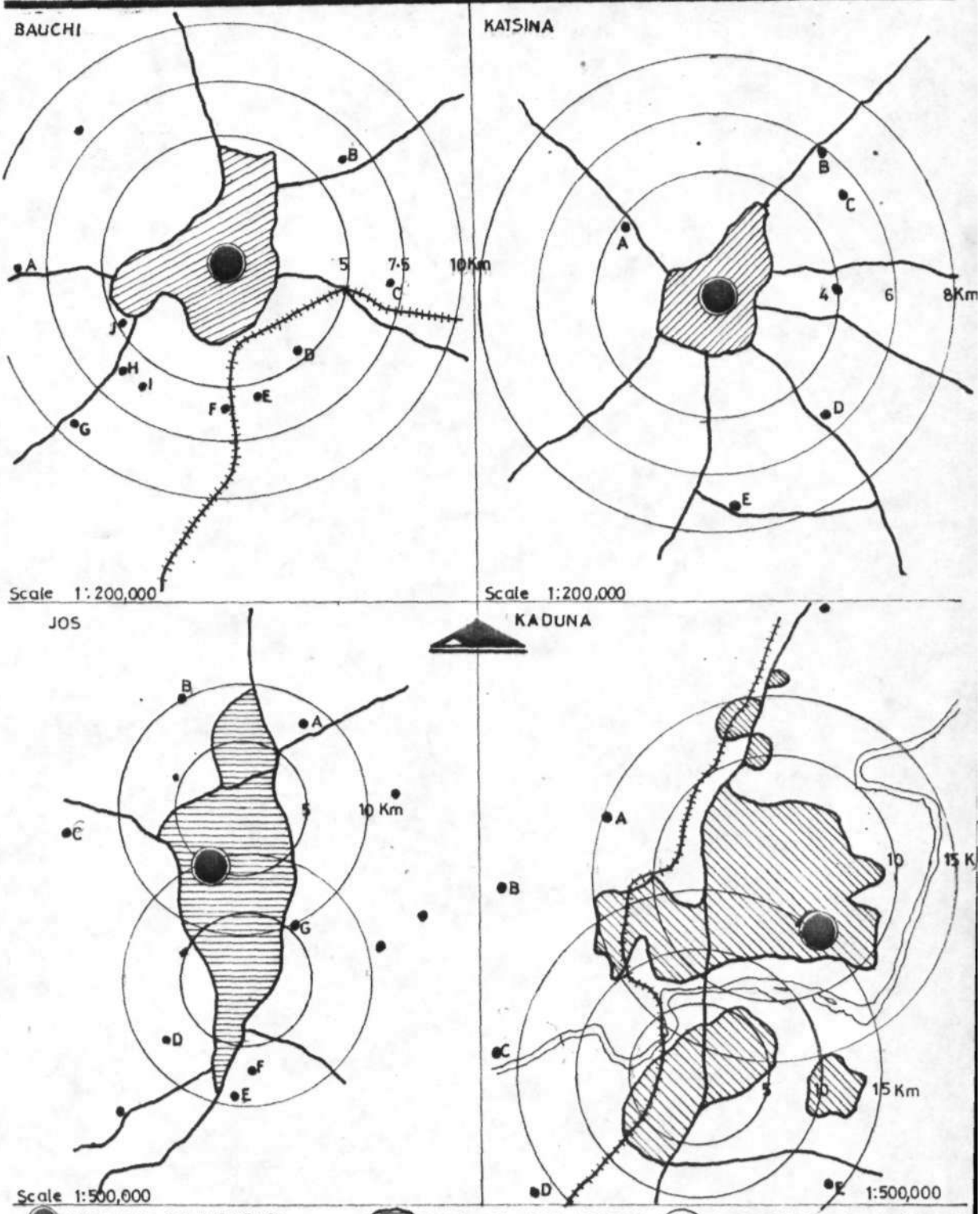


FIG 3·03 LOCATIONAL CHARACTERISTICS OF BLIGHTED AREAS

OYEKANMI O.S
M Sc THESIS
U.R.P. – A.B.U. ZARIA

Source U.R.P. Library

organically, being characteristic of their former rural status. In some cases it was the land economy at the core that forced them to move to the periphery. Thus, with urban expansion some of these settlements have now been engulfed, but they still ahve pockets of their initial built-up areas such as Narayi, Anguwan Malali, Sanusi, Rimi, etc. Their basic problem is neglect and lack of amenities.

3.55 UNPLANNED URBAN FRINGE

This area is outside the metropolitan boundary, usually at the fringe where there is a concentration of non-village rural/non farmer population and where land belongs to a different local government, that is different from that of the metropolis. These are the worst blighted area called 'slum' as they strickly to house most recent migrants usually developed in haphazard manner, squatter like Rigasa.

3.60 THE SUMMARY:

The objectives of determining the extent of blightedness is to find appropriate renewal programme for each area considered because some of degenerated factors are more intensified in some areas than others. Thus, to determine this, the rough screening was first used, because it is a quick and cheap method which proceed from whole town to various parts in details mainly for the environmental conditions. For housing conditions, each district delineated from the rough screening is then tested with Weight and Exponential Survey, which is a less subjective and more detailed analysis. This method is deficient in measuring the household characteristics. This calls for Multiple Index Survey which takes care of this deficiency and it is also a more detailed method.

The study are selected was chosen based on some criteria such as:

(i) Planned/unplanned settlement

(ii) Core/periphery location

These are interwoven with others like density, socio-economic character and socio-cultural pattern. Fom that five broad types of blight identified were further identified for more detailed study. The results are given the next Chapter.

chapter

4

PHYSICAL CONDITION AND THE SOCIO ECONOMIC CHARACTERISTICS OF THE INHABITANTS OF SELECTED BLIGHTED AREAS IN KADUNA METROPOLIS.

CHAPTER FOUR: PHYSICAL CONDITIONS OF SELECTED BLIGHTED AREAS IN KADUNA METROPOLIS AND SOCIO-ECONOMIC CHARACTERISTICS OF THE INHABITANTS

4.10 PHYSICAL CONDITIONS OF THE SELECTED AREA

The physical conditions fo the selected area are described in terms of environmental and housing that gives a broad description of environmental conditions, which is reflected in the land-uses.

4.11 EXISTING LAND-USES PATTERN IN THE SELECTED AREAS

The existing land use is mainly residential (Figure 5.01, 5.11, 5.21 and 6.05 and Table 4.1). The residential land use, is out of proportion with complimentary uses. This calls for a balance in order to make the area more functional and livable for the residents.

The blight is associated with the mixing of land uses such as residential/commerical, residential/industrial, residential/recreation, etc. This is particularly applicable to areas from 2nd level blight to the msot blighted because some uses are not conducive to living, and in fact constitute health hazard or sanitary pollution of grinding mills, mechanic works, etc. In the Government Reservation Area (GRA) there is large ample space for development which is poorly maintained. Tudun-Wada/Nupawa which is planned for medium density is deficient in recreational and other facilities whereas Sabon-Tasha and Rigasa give unplesant visual view of unplanned haphazard settlement.

TABLE - 4.1 EXISTING PERCENTAGE OF LAND USES - IN THE SELECTED AREA

Land-Use Types	Governemnt Reservation Area Percentage	Percentage Tundun-Wada Percentage	Coverage Sabon-Tasha Percentage	Rigasa Percentage
Residential	50.0%	67.2%	69.2%	62.0%
Commercial	2.1%	4.2%	6.3%	6.7%
Public and Semi Public	20.5%	8.0%	7.2%	11.5%
Recreation	15.0%	--	--	1.3%
Services Industries	0.4%	0.6%	1.5%	0.5%
Transport Network	9.5%	16.0%	12.3%	1.5%
Services	2.5%	4.0%	2.0%	3.0%
Hectares Cover (Total)	1,047 (ha.)	1,660 (ha.)	887 (ha.)	1,760 (ha.)

SOURCE FIELD SURVEY 1988

From Table 4.2, it is clear that out of the total area of 726 hectares presently in Rigasa the bulk (494 hectares) 62% is under residential land use where as only 40 percent is required. This is at the expense of other land uses.

4.12 PHYSICAL CONDITIONS

Housing condition is the product of economic, technological and social factors. This issue is reflected in three various qualities of standard discussed, as follows:

(i) Housing type and roofing materials

(ii) Ages and conditions of building and

(iii) Level fo maintenance and type of repairs

This trend depicted in the table 4.2 below. From the graph (Appendix A (I-IV). Table 4.2) has been prepared to show the correlation between the housing type, construction materials and level of maintenance. The Government Reservation Area (GRA) made used of 76 percent sandcrete block which relate to high skill technology usually executed by specialist builders.

On the other hand, Rigasa, less than 30 percent sandcrete block are used compared to various local materials. This does not need specialist builders, instead the community unites in self-help effort to build houses for themselves.

TABLE - 4.2: PHYSICAL CONDITION OF THE STUDY AREA

Characteristics	I t e m s	Old Government Reservation Area	Tudun-Wada/ Nupawa	Sabon-Tasha	Rigasa
Housing Type	Compound type	0%	8%	50%	58%
	Roomy Type	0%	30%	28%	40%
Wall Material	Mud-Block	0%	2.5%	12%	8%
	Sand Crete Block	76%	59%	18%	30%
Roof Material	Mud-Thatch	0%	6%	19%	16%
	Iron Sheet	96%	88%	70%	64%
Age of Building	0 - 10	18%	22%	25%	49%
	40 Plus	36%	8%	5%	20%
Condition of Building	Need Repair	53%	24%	36%	60%
	Need Demolition	17%	29%	36%	12%
Level of Maintenance	Less 12 Months	60%	35%	19%	14%
	2 Years Plus	12%	59%	31%	44%
Type of Maintenance	Door	42%	34%	30%	24%
	Window	26%	29%	10%	26%

SOURCE: Field Survey, 1988

NOTE PLEASE Figures do not add up to 100% each area, because specified responds were picked out for special detailed analysed, but the figure in this chart are from the comprehensive information.

Design is traditional in nature, no division of labour and it evolved through trial and error.

Use of local materials requires requires regular maintenance. This is because the useful life at economic cost for maintenance is estiamted to be 10 years for mud and wall/thatch roof housing, 15 to 20 years for brick zinc roof housing. Beyond that it becomes more costly to maintain than to replace the structures. This guides the inferences drawn in this study on buildings that have out-lived their useful life span. The findings indicate that in the older section of each settlement, majority of houses are constructed with mud and rendered, mud with thatch or zinc sheet roofing. This shows the need to improve traditional materials to reduce heavy demands placed on the level of maintenance (Table 4.2). The survey also revealed that in the old Government Reservation Area (G.R.A.) 60 percent is related to obsolete structures and in Rigasa 14 percent is based on local material. Among these, 52 percent need repair in the Government Reservation Area (GRA) while it is 60 percent in Rigasa.

In terms of durability and condition of the structures,about 12 percent of housing in the Government Reservation Area(GRA) are maintained (major) about 2 years above, whereas it is 44 percent in Rigasa. Most of the houses at the periphery lack proper ventilation and natural lighting. Overall residential density varies from one area to another. In Rigasa, it is at moderate rate of 158 Persons per hectare while occupancy ratio (persons per livable room) is approximately , whereas house-hold size is 15 on the average.

4.20 SOCIO-CULTURAL AND ECONOMIC CHARACTERISTICS OF THE INHABITANTS

4.21 POPULATION CHARACTERISTICS

There is limitation on reliability of the data on the growth assumed by statistical data and Max Lock projection. From the records, the population was 39,000 in 1952 and 149,000 in 1963, that is an increase of about 300 percent in 11 years. In 1984 the Department of Urban and Regional Planning A.B.U. revised the Max Lock Master Plan of Kaduna and estimated the population to be 500,000 which indicates an increase of 38 percent in less than 20 years. This is about 125 percent of the projected figures for the year 2017 by Max Lock. As the last trend continue for about 5 years, the rate will be 17 percent with population estimate in 1988 as 1,369,144. This is an increase at the rate of 3.5 percent yearly. For economic planning the assumed rate, based on economic situation, is 2.5 percent annual increase. Therefore, the projection indicates figures of 1,400,208 in 1995 and 2,000,000 in the year 2000.

The survey revealed that the average house-hold size varies from 10 to 15 in the study areas (Figure 4.01). This depends on many factors especially Kinships ties, socio-economic, religion, ehtnic background, etc. The Age-Sex structure of the population in each zone is a reflection of that of the metropolis. This is shown on Age-Sex pyramid structure (Figure 4.02). Children between the ages of 1 to 10 are Nursery and Primary School going age. Similarly those of Secondary School and Post-Secondary School at 11 to 16 and 17 to 20, respectively can be distinguished from working populations between the ages of 21 to 64. This is crucial for provision of employment places and facilities as recreation, market, etc., and those aged 65 years and above for specialized health clinics. The female population in the study area has light edge over the male by accounting for 51.8 percent of total population

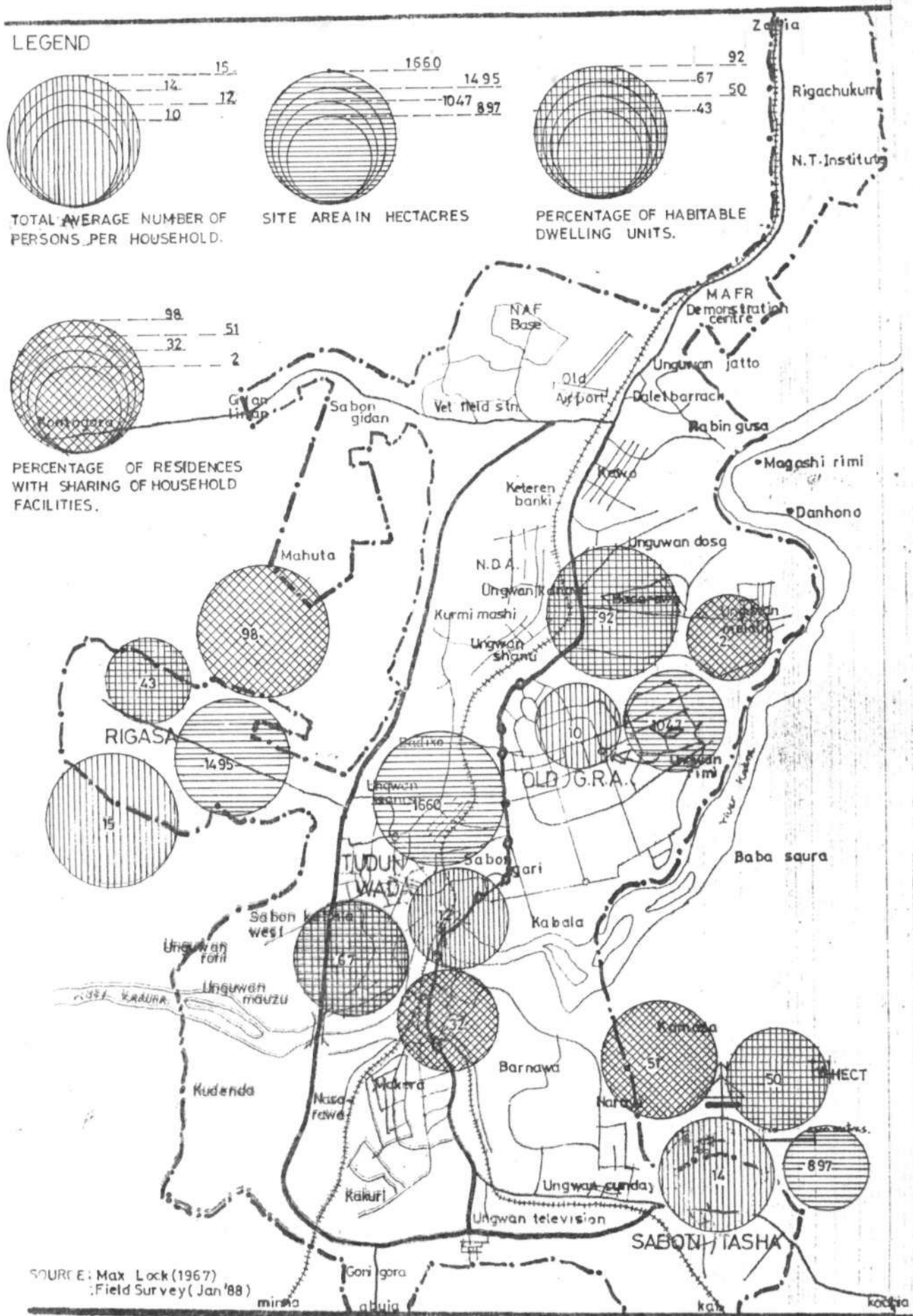


FIG. 4·01 NUMBER OF PERSONS PER HOUSEHOLD/SITE AREA IN HECTACRES/% OF HABITABLE UNITS & SHARING OF FACILITIES

OYEKANMI O $
MSc THESIS 87/88
URP – ABU ZARIA

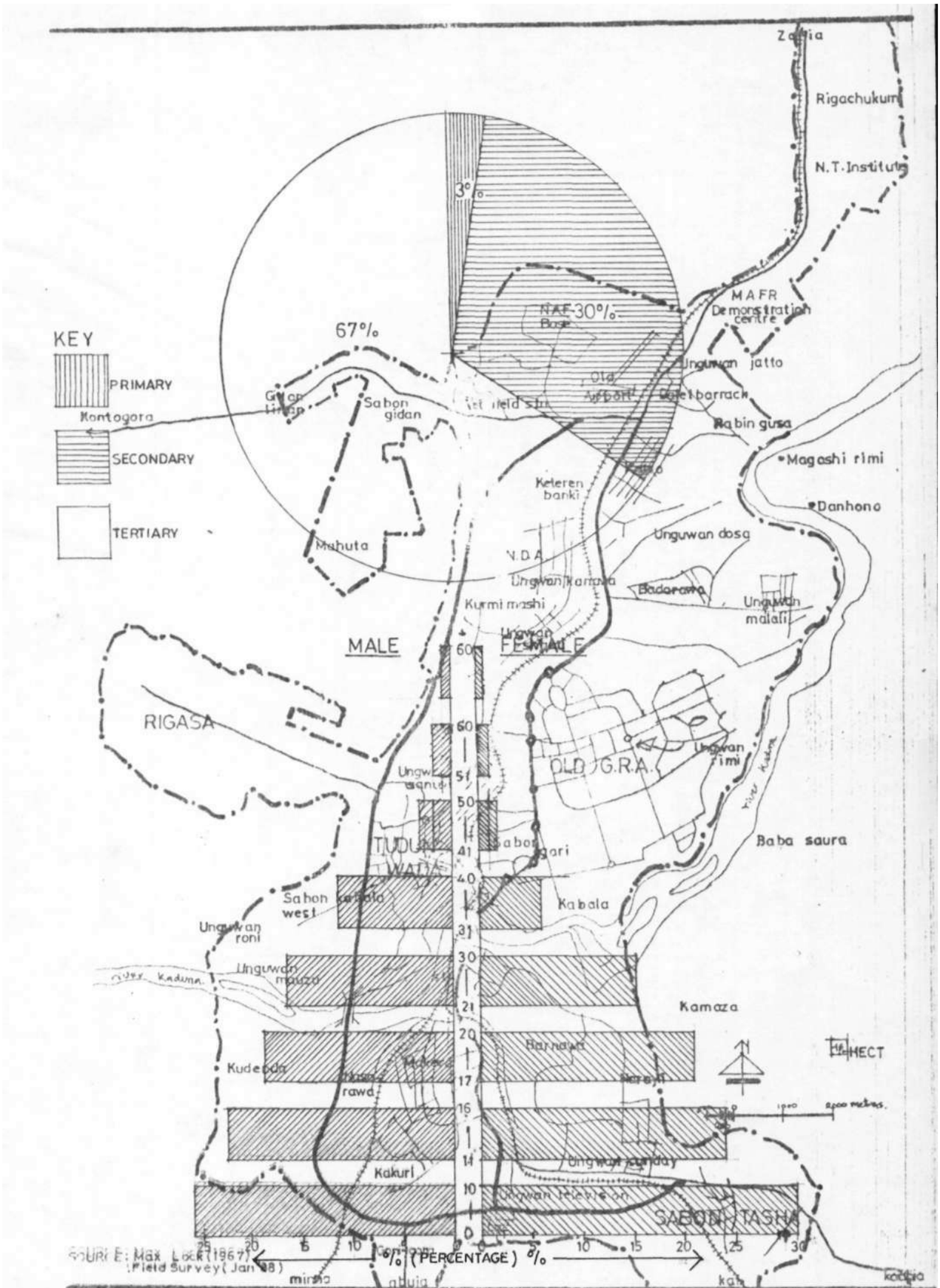


FIG. 4:02 KADUNA METROPOLIS: SECTORS OF ECONOMY AND THE AGE SEX STRUCTURE

OYEKANMI O S
MSc THESIS 87/88
URP – ABU ZARIA

The active age group is considered to be between 21 to 65 years. This group has the proportion of about 38 percent for male and 30 percent for female.

All the sectors of the economy are represented fully reflecting the stage of development of the town itself. The town started as an Adminsitrative Centre providing services (Tertiary sector), then Industrial (Secondary sector) later developed supported by the good link of Kaduna to all parts of the country. Farming (Primary sector) has been in existence since inception of Kaduna. The Secondary sector consists of services like commercial, retailing, etc. Slightly more than half of the industries are public financed suggesting a very weak economic base for Kaduna. The percentage of peple from various parts of the country is shown on Figure 4.03 for the different districts. The figure a.so reflects the reasons for migration which is mainly economic and socio-political. Figure 4.04 reveals the findings on ethnic composition, religious background of the residents which have correlation with places they settled in Kaduna.

4.22 SOCIO-ECONOMIC CHARACTERISTICS

The socio-economic conditions of any community are depicted by cultural background, educational level, occupational pursuit and in-come level. The last two are most important measures of economic status which dictate house ownership, choice of housing location and mode of transport to work places (See Apendix B (I-IV, Table 4.3 and Appendix C (I-IV). Table 4.3 is the summary of the salient aspects of the findings in the study area. The data indicate that there has been a shift in occupational structure when the present occupational pursuit is compared to that prior to migration. This is because the basic reason for movement is to seek for better economic status elsewhere. Regarding occupational structure, the survey revealed that those employed in private/

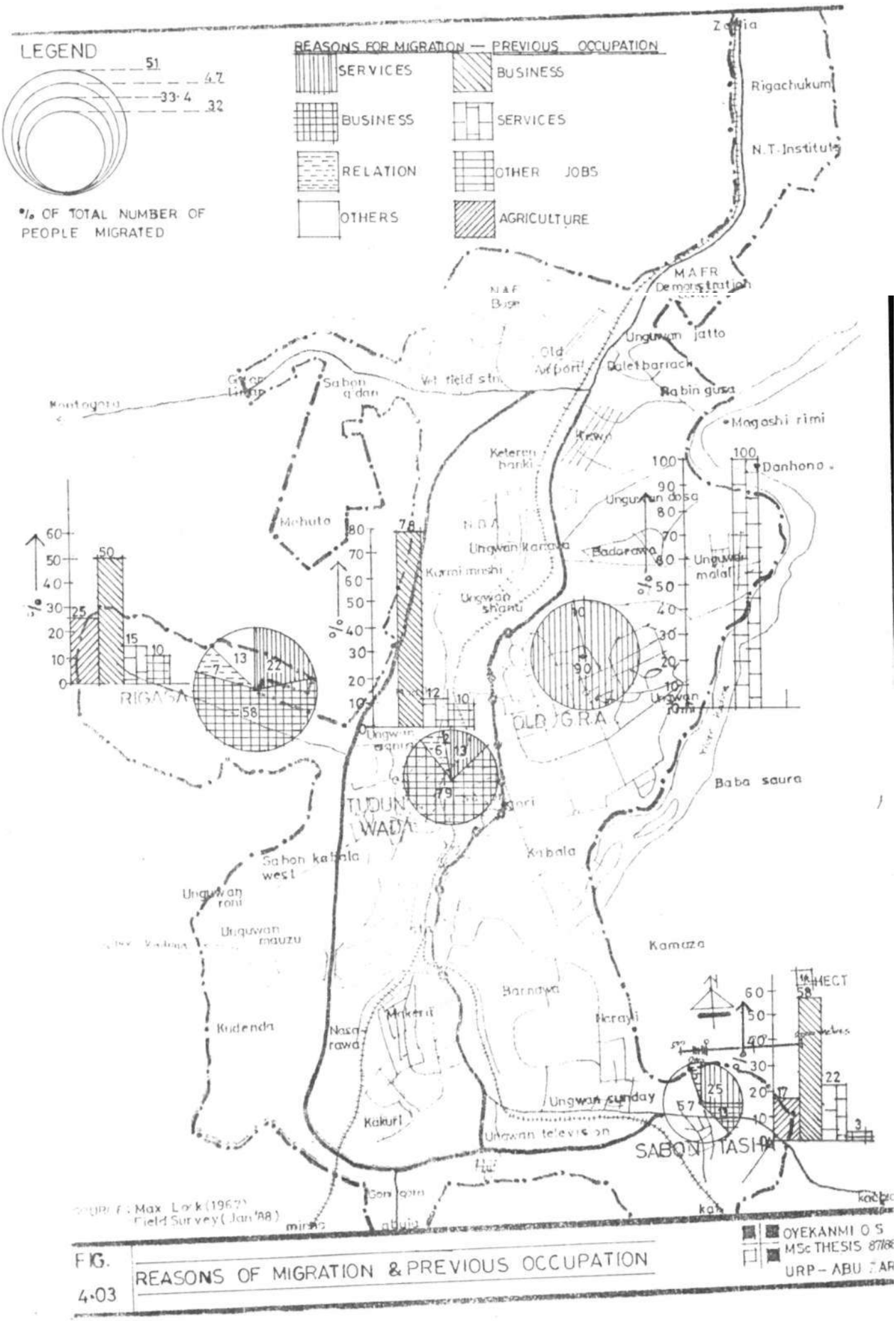
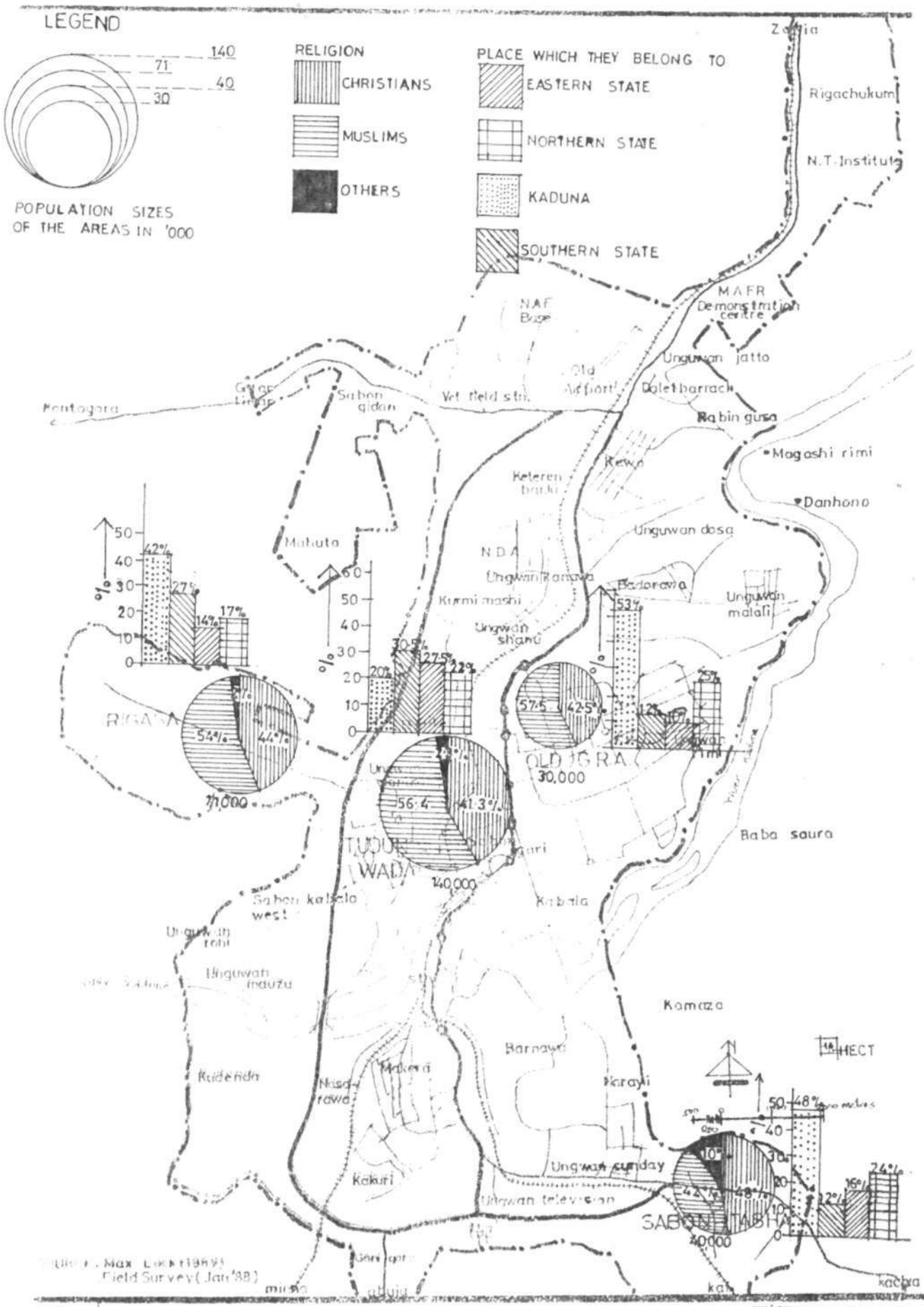


FIG. 4·03 REASONS OF MIGRATION & PREVIOUS OCCUPATION


LEGEND
140
71
40
30
POPULATION SIZES OF THE AREAS IN '000
RELIGION
CHRISTIANS
MUSLIMS
OTHERS
PLACE WHICH THEY BELONG TO
EASTERN STATE
NORTHERN STATE
KADUNA
SOUTHERN STATE
Zaria
Rigachukum
N.T. Institute
MAFR Demonstration centre
Unguwan jatto
Old Airport
Dole barrack
Rabin gusa
Magashi rimi
Danhono
Unguwan dosa
Unguwan malafi
Rewa
Keteren banki
N.D.A.
Ungwan Ramza
Kurmi mashi
Ungwan shanu
Mahuta
Sabon gidan
Vet field stn.
Kantogora
Badarawa
RIGASA
OLD GRA
TUDUN WADA
SABON GARI
30,000
40,000
Baba saura
Sabon kasela west
Kabala
Unguwan tofa
Unguwan mauzu
Kamaza
Barnawa
Ruderida
Nasarawa
Karayi
Ungwan sunday
Kakuri
Unguwan television
kachia
HECT
Max Likert 1967
Field Survey (Jan '88)
FIG. 4·04
RELIGION / ETHNIC BACKGROUND DISTRIBUTION
OYEKANMI O.S.
MSc THESIS 87/88
URP – ABU ZARIA

public services make up 80 percent in Government Reservation Area (GRA), 30 percent in Tudun-Wada/Nupawa, 28 percent in Sabon-Tasha and 6 percent in Rigasa. This distribution reflects the educational characteristics where Post-Secondary School qualifications are 45 percent Tudun-Wada dn 17 percent in Sabon-Tasha, zero percent in Rigasa. The lower percentage in Tudun-Wada and none in Rigasa reflect that there are more people with Primary School level in Rigasa who are employed in Government Services consisting of Messengers, Typists and Cleaners.

TABLE - 4.3: SOCIO - ECONOMIC CHARACTERISTICS

Characteristic	I t e m s	Old Government Reservation	Tudun-Wada/ Nupawa	Sabon-Tasha	Rigasa
House Ownership	Owner's Occupied	26%	44%	55%	52%
	Rented	74%	49%	34%	40%
Choice of Location	Closeness to Work	43%	36%	23%	29%
	Low Cost of Rent	5%	12%	36%	42%
Mode of Transport	Car	86%	20%	10%	6%
	Public Transport	10%	26%	30%	34.5%
Monthly Income	₦0 - ₦150	0%	2%	36%	49%
	₦300 and above	81%	55%	6%	0%
Educational Qualification	Primary	12%	31%	27%	30%
	Post-Secondary	45%	5%	17%	0%
Occupational Structure	Business	6%	55%	26%	46%
	Services	80%	30%	28%	6%

SOURCE: Field Survey 1988

The low placement, on the hierarchy of Government Service posts, of people in Rigasa explains why 49 percent earn below ₦150.00 per month. But 5 percent Post-Secondary qualification in Tudun-wada show that low rent and closeness to work is the possible explanation while people stay here because they are most inhabited by people in commerical activity. Also, 17 percent having Post-Secondary qualifications in Sabon-Tasha are unskilled labourers in the industries. The poor quality of environment noted in the fore-gone analysis correlates with low income status and educational level of the residents of Sabon-Tasha and Rigasa.

The mode of transport used to work places by residents of each residential sector is a reflection of income level, as illustrated in the graph (See Appendix C (I-IV). The majority of car owners (85 percent) live in old Government Reservation Area where 43 percent reside here because of closeness to their places of work. The high percentage of cars is a reflection of their socio-economic status as only 26 percent of the houses were owner occupied on large ample plot size. A high percentage (30 percent) public transport in Sabon-Tasha and (34.5 percent) Rigasa, despite their being close to the work centre. This reveal a correlation of income level, which is also a positive relationship to choice of location of residence where there is low cost rent on easy access to landed property as majority are indigenes are owner occupied in places like Sabon-Tasha (55 percent) and Rigasa (52 percent).

4.30 AVAILABILITY AND USE OF HOUSE-HOLD UTILITIES, SERVICES AND FACILITIES

These are crucial factors in the measurement of household sanitary standards, as reduction in amenity value and lack of maintenance, reduces the liveability. Also, their productivity which will eventually reduce their zeal toward improvement of their environment as house quality is a reflection of the neighbourhood at large. Absence of facilities like electricity and telephone, reflect the socio-economic class/level. It is not an indication of deterioration. However, the littering of solid waste and stagnant liquid waste constitute a health risk and eye-sore. The field survey results, recorded and presented on graph (See Appendix D I-IV), reveal some salient aspects. A characteristic feature of the use of utilities and services in the neighbourhoods shows that they are calculated for exclusive use. All households (100 percent) in the Government Reservation Area (GRA) that were surveyed have pipe borne water while there was none at Rigasa. From the Table 4.4, it is clear that the older part are well connected with services while new areas are still being planned for. The residents at the periphery in Rigasa 78% satisfy their need mainly through well-water.

TABLE 4.4: AVAILABILITY AND USE OF HOUSEHOLD UTILITIES, SERVICES AND FACILITIES

Characteristic	I t e m s	Old Government Reservation Area	Tudun-Wada/ Nupawa	Sabon-Tasha	Rigasa
Sources of Water	Pipe Borne	100%	90%	6.8%	0%
	Well	0%	10%	39.0%	98%
Type of Utilities and Services	Electricity	100%	90%	55.0%	0%
	Kichen	100%	45%	33.0%	20%
Type of Toilet	Water Closet Flush	100%	55%	50.0%	2%
	Pit Latrine	0%	45%	37.0%	85%
Liquid Waste Disposal	Drainage Gutter	12%	50%	32.0%	10%
	Compound	0%	18%	42.0%	25%
Number of Habitable Rooms	2-Bedroom	13%	40%	14.0%	25%
	4-Bedroom	36%	17%	36.0%	28%
Solid Refuse Disposal	On Street	7%	35%	40.0%	57%
	Compound Burnt	78%	4%	4.0%	5%

SOURCE* Filed Survey 1988

All (100 percent) of the houses in the Government Reservation Area (GRA) have private utilities and services which declines toward the periphery. Similarly (100 percent) Government Reservation Areas residents use flush water closet, while 85 percent Rigasa resident use pit latrines due to non-availability of water. The high incidence of pit latrines and wells within compounds suggest pollution of water. This is an indication of poverty levels and low quality of this neighbour as opposed to the old Government Reservation Area and Tudun-wada where tap water and water closets are available.

Generally, drainage channels are open, even when built of concrete. They are also usually shallow. A majority (50 percent) of Tudun wada residents drain liquid waste from their compounds into the drainage gutter, which are usually narrow alleys at the back of their compounds and along streets. They constitute an eye sore, but majority (42 percent) of Sabon-Tasha have drains within the compounds which escape into the street and from a pool. Although there is a system of refuse collection and disposal in the metro-polis, the survey revealed that it is not organised as 78 percent burnt refuse in Government Reservation Area (GRA) compound and majority (57 percent) at Rigasa dump their refuse along street drainage channels and in any open space.

4.40 HOUSING SUPPLY AND GENERAL ENVIRONMENTAL PROBLEMS

This information is important to give the general 'mental' map pre-ception that the residents have about their environment. This is crucial in the formation of programmes and policies, as these are factors of inertia that result in restructing the human landscape and also hold them to particular area. This information will be useful also during the relocation exercise, and determine the level

of affordable rents for housing units needed (See Appendix E (I-IV) which is summarised on Table 4.5A. This reveals the salient aspects of the field survey. From the data, the residents indicate the amounts they spend per month on housing. Some 90 percent paid above ₦76.00 in Old Government Rerservation Area (GRA) which is highly subsidised expressed by 70 percent of residents. This is because they are public housing for government employees, and the rent is a small percentage of their monthly income. On the other hand, 32 percent of 50 percent residents that paid below ₦25.00 in Rigasa, feel that the amount is high, considering their lack of facilities.

Observation of the condition of building reveals that it is related to level of maintenance, type of construction materials and with ageing as discussed early.

TABLE - 4.5(a): HOUSING SUPPLY PROBLEMS AND GENERAL IMPRESSION TOWARD ENVIRONEMNTAL PERCEPTION

Characteristic	I t e m s	Old Government Reservation Area	Tudun-Wada/ Nupawa	Sabon-Tasha	Rigasa
Rent Paid per month	₦0 - ₦25	0%	6%	38%	50%
	₦76 Plus	90%	13%	6%	0%
Comment on Rent Paid	High	5%	20%	29%	32%
	Low	70%	38%	26%	7%
Condition of Building	Good	16%	22%	20%	18%
	Poor	24%	31%	30%	32%
Percentage of Plot Owner's	Plot	67%	81%	96%	86%
	Not Plot	33%	19%	6%	14%
Plot Development	Developed Plot	31%	58%	78%	82%
	Undeveloped Plot	69%	42%	22%	18%
Percentage of Persons Satisfied with:	Road	36%	28%	35%	70%
	Recreation	75%	24%	67%	4%
Desired Improvement	Refuse Disposal	60%	74%	60%	22%
	Closeness to Facilities	72%	69%	58%	28%

SOURCE: Filed Survey 1988

the result is that 24 percent in Government Reservation Area (GRA) feel that housing is poor, while only 16 percent consider it as good. The reasons given by those who consider it as poor are that the area is quite bushy; lacks proper access to plots and also lacks maintenance. In Rigasa, 32 percent of the residents also noted that the condition is poor. Only 18 percent of residents accept the environment as good. In the Government Reservation Area (GRA) 67 percent of residents own plots of which 36 percent are located within Kaduna Metropolis and 64 percent are located elsewhere. Some 31 percent of the plot owners have developed their plots with 28 percent developed through loan, mostly in Kaduna. However, 72 percent developed their plots through self-aid which suggest the concept of self-aid traditional approach possibly in their home towns. Those with developed plots in Kaduna have no intention of moving there, since the locations do not suit their status and they are used mainly for commercial purpose. A majority of people (88 percent) in Rigasa are plot owners with 78 percent located in kaduna (mainly Rigasa itself)while 22 percent are located in their various home towns. Some 83 percent of the developed plots were built through self-help efforts, which shows the use of local materials giving a traditional environmental out-look to the area.

Residents were asked about their level of satisfaction, and in the Government Reservation Area (GRA), 36 percent feel satisfied with road and 75 percent with recreation. Some 70 percent of respondents in Rigasa feel satisfied with the condition of roads and 4 percent with recreation. Their environmental blightedness. The response to the question of which major problem need improvement, 60 percent of residents indicated refuse disposal, and 72 percent in the Government Reservation Area (GRA) indicated distance to facilities while in Rigasa it is 72 percent and 28 percent for refuse disposal and distance

to facilities, respectively. This shows the influence of low income status and the low educational level on Rigasa people's perception and attitudes toward their environments.

Appendix F (I-IV) and Table 4.5B give the summary of the salient aspects of residents' tenure-ship in the metropolis area. From the data, the main reason (45%) for house location in Tudun-wada is investment. Since land close to the C.B.D. is costlier and acquired through the State governments. In the peripheral areas such as Sabon-Tasha 58 percent indicated low cost land normally obtained through the local government or occupied freely as the main reason. Poor income is the mian issue which restrict their choice.

TBALE - 4.5(b): LANDLORDS CONCEPTION AND ATTITUDE TOWARDS HOUSING SUPPLY AND PROBLEMS

Characteristics	I t e m s	Percentage of Total Respondents		
		Tudun-wada	Sabon-Tasha	Rigasa
Reason for House Location	Investment	45%	2%	7%
	Cheap Land Value	30%	68%	61%
Land Acquisition	Local Government	38%	15%	7%
	Inherited	5%	18%	8%
Construction Method	Self Help	8%	27%	52%
	Contract Builders	82%	49%	26%
Average Rent Cost Per House-hold	₦0 - ₦20	0%	41%	61%
	₦26 - ₦30	30%	12%	10%
Period or Rent Collection	Monthly	13%	74%	80%
	Six Monthly	44%	16%	8%
Reason for Lack of Repair	No Co-operation	60%	13%	6%
	No Money	40%	50%	80%

SOURCE: Field Survey 1988

of alternative neighbourhood which correspond to high index (61 while a household would pay an average of below ₦20.00 as rent at Rigasa, the same type of accommodation on same rentage is not easy to find at Tudun-Wada. The least rent for the same house standard is between ₦26.00 and ₦30.00 at Tudun-Wada and these are only 30 percent of the housing stock there. About 44 percent indicated that they pay six months installment of rent before commencing with monthly rent payments while 80 percent pay on monthly basis at Rigasa. Some 60 percent in Tudun-Wada lack the co-operation of house owners and only 6 percent in Rigasa. About 40 percent also lack money in Tudun-Wada, while 80 percent in Rigasa lack mone as reason for not co-operating.

4.50 ACCEPTANCE OF IMPROVEMENT SCHEMES

The residents' perception, opinion and attitudes toward their various neighbourhoolds is important toward formulating appropriate renewal programmes. It has been asserted that blight exists only in the mind of the outsiders while the residents are rarely conscious of this condition. This is partly true, as it was confirmed through the field investigation in particular the aspect on people's condition of living and environmental perception. The factors which have considerable weight on people are tenureship, income status, housing condition, availability of services and social values like kinships ties, educational awareness and tolerance level. These are summarised in Table 4.6 with the details given in Appendix G (I-IV) and Appendix H (I-IV). To establish the main cause of blightedness, the residents were asked to indicate their order of preferences for a given number of utilities, services and facilities, which they think will improve the living condition in their neighbourhood. The results are shown in See Appendix G (I-IV). The results show that the most important for the residents are drainage and portable water. The result seems to correspond with

the survey of house-hold facilities and services in which water is identified ad inadequate. The area lacks good drainages which affect the streets as dirty sewage water spills on roads and narrow paths.

Questions were asked regarding appropriate elements of policy for renewal programmes to the residents of areas which have high owner occupier tenancy. They give less objective value by saying that the area required facilities and services. Also, the same idea is shared by low-income earners who have no alternative place in mind. But the tenants mostly suggest some improvements of housing units in addition to need for facilities.

TABLE - 4.6 LEVEL OF ACCEPTANCE OF IMPROVEMENT SCHEME

Characteristic	I t e m s	Old Government Reservation Area	Tudun-Wada/ Nupawa	Sabon-Tasha	Rigasa
Response to Relocation	Temporary	32.5%	38%	55%	45%
	Permanent	32.5%	18%	25%	25%
Type of Relocation	Temporary Within	75.0%	63%	80%	77%
	Permanent Within	60.0%	69%	75%	85%
Factors Consider Outside	Close to Work	42.0%	55%	35%	13%
	Moderate Rent	10.0%	9%	30%	15%
Preference Changes in Houses	Alteration	67.0%	40%	40%	46%
	Renovation	33.0%	41%	50%	34%
Prefences for Utilities	Drainage	16.0%	11%	9%	10%
	Water	14.0%	14%	19%	25%
Opinion on Neighbour	Need Re-Building	45.0%	20%	10%	38%
	Need Facilities	30.0%	10%	46%	30%
Contribution	Communal Work	12.0%	30%	12%	25%
	Any Two	17.0%	15%	25%	20%
Type of Organisation	Government	88.0%	25%	22%	13%
	Community Development Effort	10.0%	20%	16%	22%
A i d s	Financial	57.0%	42%	47%	22%
	Saving Loan	40.0%	30%	43%	35%

SOURCE: Filed Survey 1988

When their opinion was sought on the type of contribution they could give for renewing their areas, their social values based on communal living is reflected in their answers. Regarding the residents' response to relocation, the survey revealed that the owner occupiers and land-lordshave social and economic motives at stake, in the loss of their properties, which they outrightly rejected.

For the tenants who want permanent change, the motivation is securing better housing with adequate utilities, services and facilities which are considered below standard. The results of their response are shown in Table 4.6. The group who want permanent change outside are tenants with higher income than majority of the residents who want to stay in these area temporarily. When asked about their preferences about alternative residents, the two main factors considered outside their area mostly were closeness to work place and moderate rent for similar residences as they already have (See Appendix H (I-IV). Preferences for changes in houses followed the same pattern of responses where the owner occupies prefer renovation while the tenants may consider the housing to be obsolete and needing major alterations.

4.60 TYPES OF URBAN RENEWAL PROGRAMMES

The choice of a particular programme depends to a large extent on the result expected and the level of degeration. In this programme, the social and economic costs arising as a from its application are not given consideration. However, in this evaluation, the crucial considerations taken are the residents' critical needs, willingness, involvement and participation. If focusses on both the physical structures and household characteristics, which also includes an element of public participation. This is aimed at improving the living standard of people as well as the quality, liveability and productivity of these areas. All these can only be effectively achieved with the

good will and support of the people concerned. It also helps the planner in the selection of a base in a place where no study was done before.

The Multiple Index Survey is a very detailed analysis and is a more objective survey. It uses weighted factors such as percentage income of residence, percentage of buildings without electricity, pipe-borne water and toilet.

This is then compared with a base which is supposed to be one for an area considered to have a minimum standard of living. The Index is calculated for each district/zone using the relationship expressed as follows:

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

The total indices for each zone forms the basis on which zones are categorised into degrees of blightedness and also for selecting appropriate renewal programmes to be adopted at various levels (See Table 4.7 for details).

4.70 THE SUMMARY

The nature of blightedness in the metropolis was determined by Multiple Index Survey which is comprehensive. This shows that housing problems lead to further environmental problems. However, the Residents' indicate that they want to stay in their various housing units with some maintenance or alterations. The main point of rejection of relocation is due to financial committment which is at stake and location in relation to place of work. The extent of blightedness calls for various possible planning action. These results suggest a long range programme for Rigasa, because the area has a score of 131 considered to be high blight intensity. A short term programme will be applied in both old

DEGREE/LEVEL & EXTENT OF BLIGHT (TYPES) — MULTIPLE INDEX SURVEY

Parameters/Variables	MOST ACUTE CONDS.		Zones: OLD G. R. A.		TUDUN WADA		SABON TASHA		RIGASA	
	WEIGHTAGE	BASE	OBS. VALVE	INDEX	OBS. VALVE	INDEX	OBS. VALVE	INDEX	OBSERVE VALVE	INDEX
1 PERCENTAGE OF HOUSEHOLDS WITH INCOME OF ₦150 (REGARD MINIMUM WAGE OF 125₦)	1	49	0	0	2	4·06	36	73·47	49	100
2 PERCENTAGE OF EXTENT OF STRUCTURE DEGENERATION (AGES /MAINTENANCE)	2	80	52	130	24	60·00	36	90·00	80	200
3 PERCENTAGE OF HOUSES WITHOUT PIPEBORNE WATER AND SHARED PIPE WATER	1·5	85	0	0	30	52·94	80	144	85	150
4 PERCENTAGE OF HOUSES WITHOUT ELECTRICITY.	1	100	0	0	10	10·00	45	45	100	100
5 PERCENTAGE OF HOUSES WITHOUT WATER CLOSET OR TOILET FACILITIES e.g. bucket, pit latrine.	1	98	0	0	85	86·73	83	84·69	98	100
6 CENTAGE OF HOUSES WITHOUT KITCHEN WITH SHARED KITCHEN	1	80	0	0	55	68·75	67	111·67	80	100
7 PERCENTAGE OF NUMBER OF PERSONS PER HABITABLE ROOM (OCCUPANCY RATIO)	1·5	7	2	42·86	4	57·14	5	71·43	7	150
8 PERCENTAGE OF HOUSES WITH ACCESS TO ADQUATE FACILITIES eg schools, clinic	1·5	32	100	468·75	78	365·63	53	248·44	32	150
INDEX TOTAL			641·61		704·24		868·72		1050	
AVERAGE			80·20		88·03		108·59		131·25	
RESULTS (POSSIBLE PLANNING ACTION)			SHORT TERM STRATEGY		SHORT TERM RANGE		INTERMEDIATE RANGE		LONG TERM RANGE STRATEGY	

2,3,7 & 8 VARIABLES, HAVE MORE LIVABILITY TO A HOUSE, SO HAVE HIGHER WEIGHTAGE SCORE ASSIGNED TO IT. BUT VARIABLES 1,4,5 & 6 RECEIVED LOWER SCORE.

$$\text{INDEX} = \frac{\text{OBSERVED VALUE}}{\text{BASE VALUE}} \times \text{WEIGHTAGE} \times 100$$

BASE VALUE = THE WORSE VARIABLES NOTED /PREVIOUS YEAR VALUE FOR THE SAME AREA.

ZONES CATEGORISING THE GRADES OF BLIGHTEDNESS

BLIGHT JUST SETTING IN	LESS 85
BOARDLINE BLIGHT	85 — 100
HIGH BLIGHT INTENSITY	OVER 100

SOURCE: Field survey(jan

TABLE 4·7 DEGREE OF BLIGHTEDNESS IN THE SELECTED CASE STUDY AREAS

OYEKANMI O.S.
MSc THESIS 87/88
URP — A.B.U. ZARIA

65a

GRA and Tudun-Wada/Nupawa areas, while intermediate range programme is considered appropriate for Sabon-Tasha considering their scores.

The study of environmental and housing condition in Kaduna Metropolis in general confirmed the proposition that conditions in some areas within the Metropolis constitute poor environments. This means that the most appropriate renewal programme will embrace the provision of infrastructure, improvement of housing conditions, provision for proper liquid wastes disposal, refuse collection and disposal system, as considered desirable for each area. Therefore, there is need to implement a realistic programme to provide for curative and preventive measures to the blight problem depending on the level of environmental blightedness in each area.

chapter 5

• PROBLEMS IDENTIFIED AND RENEWAL PROPOSALS FOR DIFFERENT LEVELS OF BLIGHTEDNESS IN THE SELECTED AREAS OF KADUNA METROPOLIS.

CHAPTER FIVE: PROBLEMS IDENTIFIED AND URBAN RENEWAL PROGRAMMES PROPOSED FOR DIFFERENT LEVELS OF BLIGHTEDNESS IN THE SELECTED AREAS OF KADUNA METROPOLIS

The renewal approaches adopted here have minimum level of dislocation, in aiming at improving their social physical environment based on the participation of the residents. That is, it is aimed at alleviating the suffering of the Urban poor through a strategy of User Oriented programme.

5.10 PLANNING PROBLEMS OF THE OLD GOVERNMENT RESERVATION AREA (GRA - First Level Blight)

5.11 Land Use

The residential land uses takes up 50 percent of the area. Other complimentary uses are present in lower proportions. The residential area is planned, but not well defined plots. It has plot areas ranging between 1-1.2 hectares. These old layouts were prepared based on the guidelines given by Lord Lugard. These plot sizes are undersirable considering the cultural standard and social life of the Nigerian elites. There is indiscriminate intermingling of uncompatible uses such as auto-mechanic workshop, carpentary, etc., (Figure - 5.01).

5.12 Housing Problems

The housing problems comprise of dilapidated/obsolete structures and shortage in housing unit for civil servants in an extremely low density area (Figure 5.02). The dilapidation is related to untidy or bushy environment of many plots due to lack of maintenance of gardens and burning of refuse within the housing units (Plate II). The gardens are maintained seasonally for farming purpose only and for animale keeping. The quality of individual housing units also makes a collective impact on the overall

EXISTING CONDITION OLD G.R.A LAND USE METROPOLIS LEVEL BLIGHTEDNESS

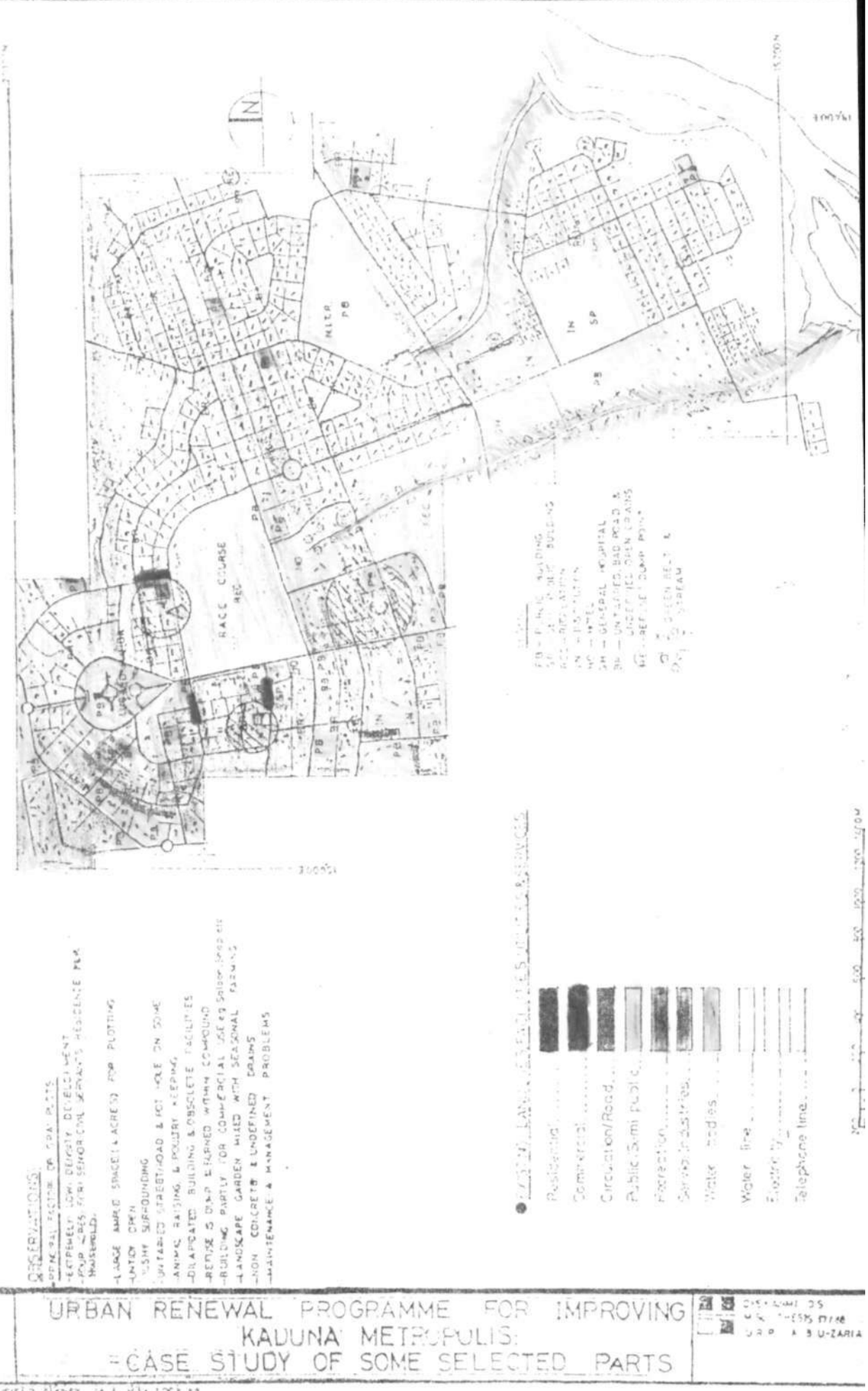
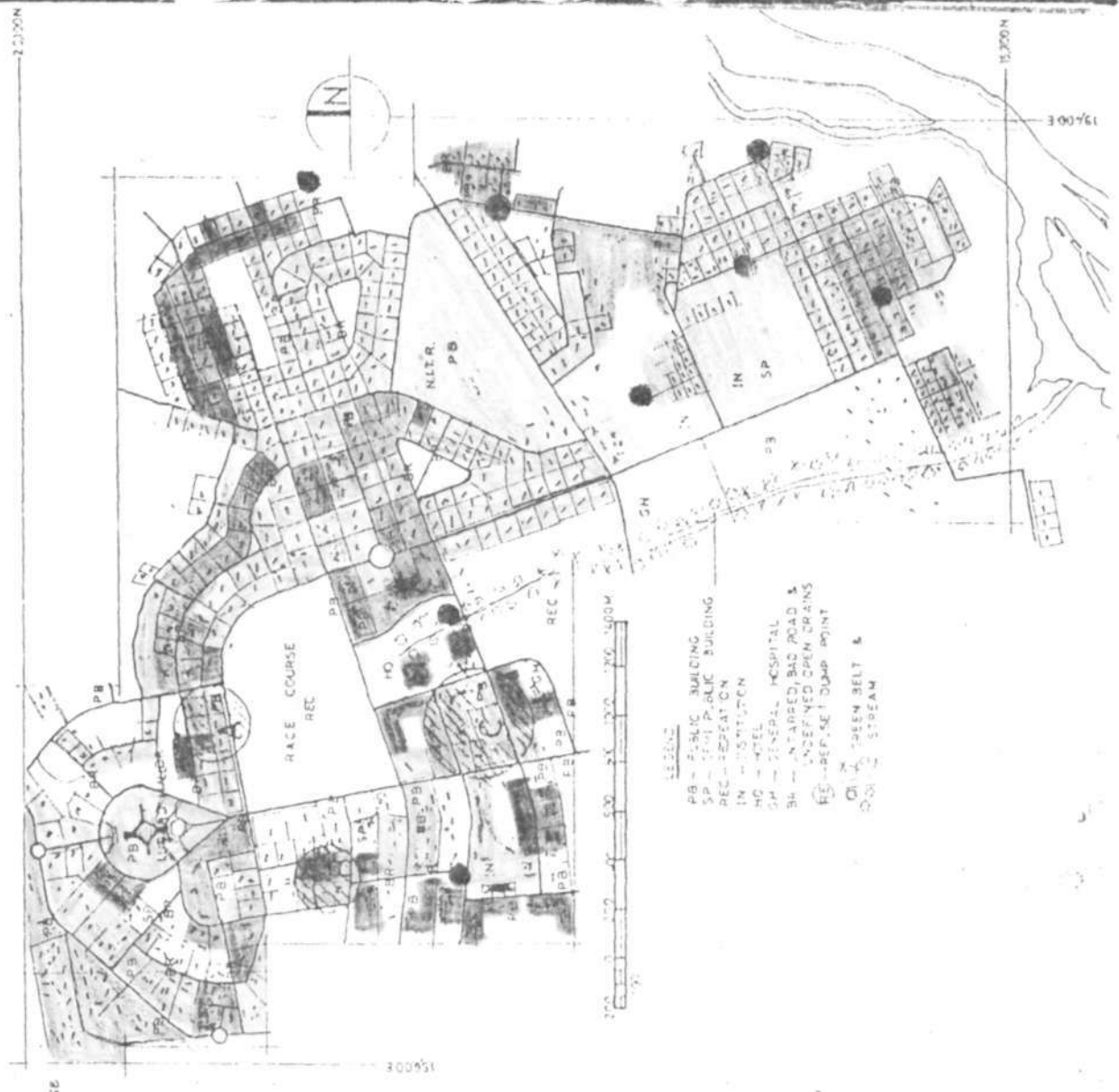


FIG 5·01 URBAN RENEWAL PROGRAMME FOR IMPROVING KADUNA METROPOLIS: A CASE STUDY OF SOME SELECTED PARTS



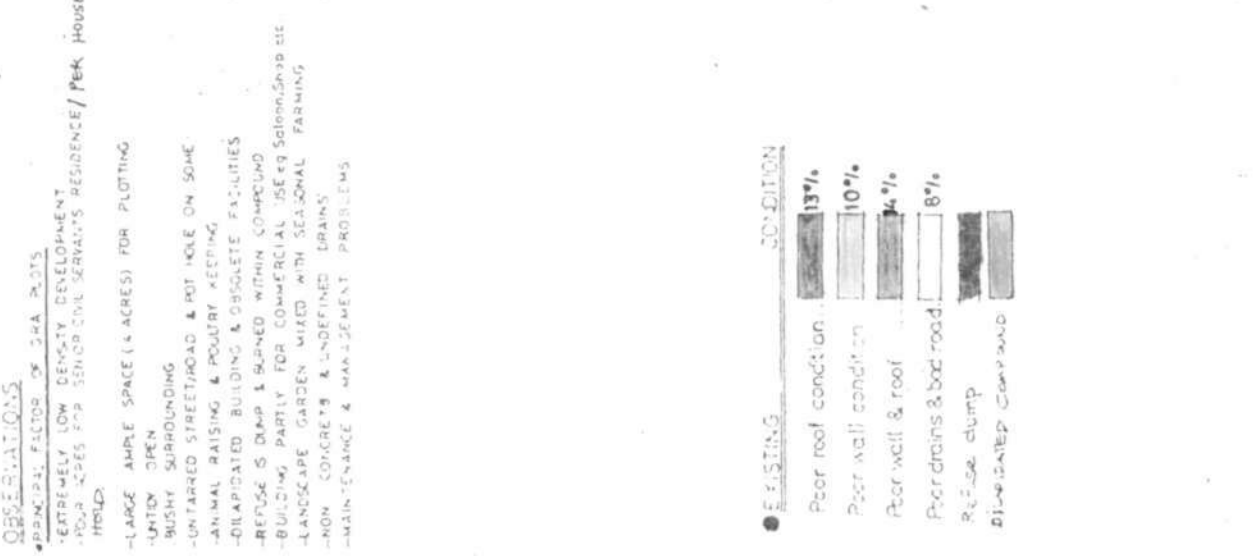


FIG 5·02 PHYSICAL CONDITIONS OF HOUSING AND ENVIRONMENT IN OLD GRA

Source: FIELD SURVEY '87 & MAX LOCK '87

OYEKANMI OS
MSC THESIS 87/88
U.I.P. A.B.U-ZARIA

image of a given neighbourhood, based on materials used, type of buildings and their ages, the density, as well as housing quality. In the GRA, there are change in use, where garages are (Plate III) used for housing, small sacle industrial enterprises like grinding mill, mechanic workshop, etc. Here vibrations from mechanics may cause major cracks in building structure. Also obnoxious gas, oil drains emitted from machines and cars cause both air and land pollution, thus resulting in blightedness. Although where commercial activities take place hawkers enchroach on roads (Plate V).

5.13 . Environmental Decay

This problem is mainly due to lack of maintenance and laxity of public authorities concerned with management of the utilities and services they provide. This range from the quantity and quality of housing units to infrastructural facilities such as drainage channels, unmaintained or up-graded roads (Plate IV). Most buildings that are dilapidated belong to government. There is general lack of maintenance of available facilities, utilities and services and refuse are burnt within compounds or dumped on to the streets. The urban landscape is also polluted by wastes like blackened oil which endanger underground water and noise from the activities of welders and vulcanizers. Usually the sewage disposal system used is the septic tank. Many of the open drains for storm water are not built of concrete, and therefore become shallow and undefined as they are blocked by sand and refuse. This renders such drains in-efficient during the rainy season and some streets are blocked and become unmotorable with a lot of dust during the dry season. This dust settles on the landscape elements and buildings thereby reducing their aesthetic value.

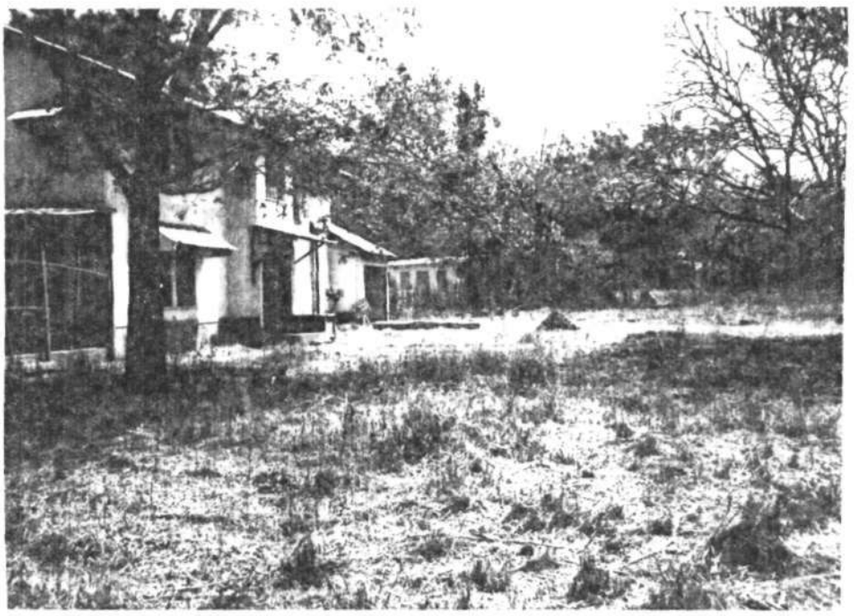


PLATE I Building component and surrounding environment lack effect maintenance, which generally make its obsolete and dilapidated.



PLATE II Refuse dump within the compound and burnt at regular interval

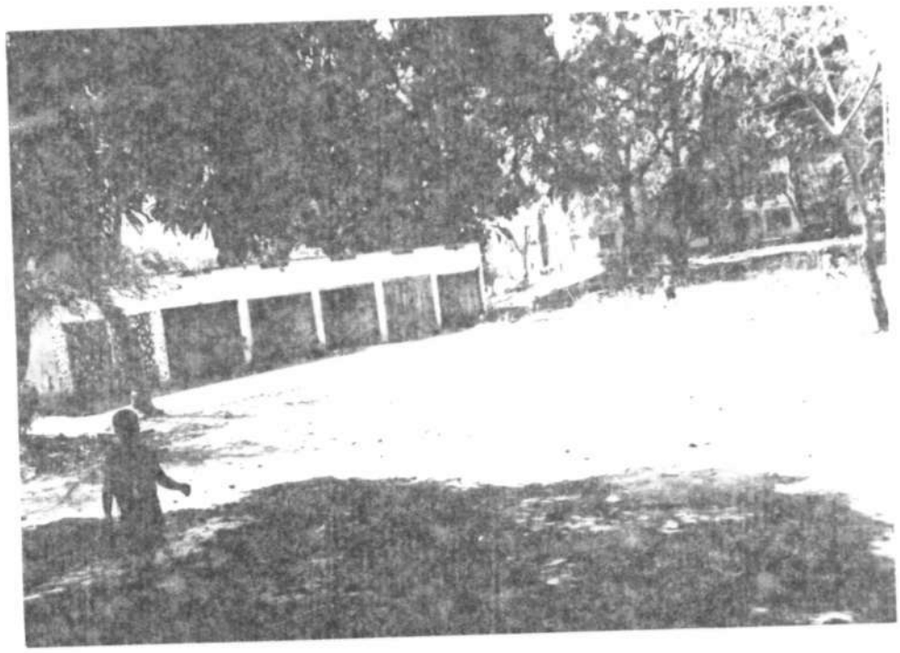


PLATE III Lack of maintenance as major source of disrepair, the garages are left to dilapidate and become obsolete property which have changed uses in most cases into mechanic workshop/boy's quarters



PLATE IV Untarred road and undefined drain along Yakubu Avenue undergo upgrading prior the coming rainy season



PLATE V Commercial stalls encroaching on public Right of Way

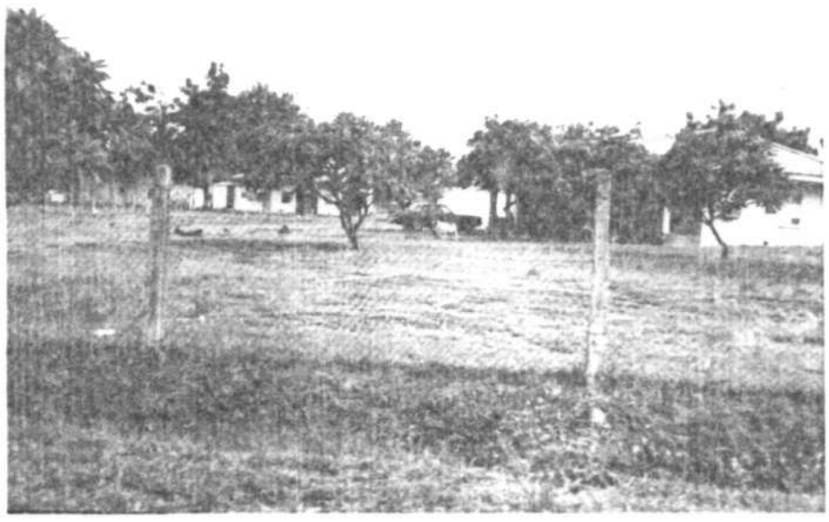


PLATE VI Animal keeping and raising amount to defaecate carelessly in the compound. They also eat up flowers and young shrubs planted for landscaping.

5.14 Problem of Limited Amenities

The amenities provided to serve the whole metropolis include fields for racing and golfing, as well as recreation. But the public/semi public facilities are also few and inadequate, except for Federal Government establishments like General Hospital, Police headquarter, NITEL Office etc. But Schools are located wlsewhere within the metropolis which means that all pupils and students have to travel long distances for schooling, and for some residents have converted some part of the Units into Nursery/Primary Schools.

5.15 Problem of Utilities and Services

Based on the data collected, utilities and services such as Water, Electricity and Telephones that have been provided are highly inadequate, Only 60 percent of the respondents have Telephone services due to their economic level, but 100 percent of the residents have Water and Electricity. There is problem of irregular supply caused increase in consumption and obsolete pipes which tend to burst. For electricity, that is due to low capacity of the existing transformers to cater for the present demand. Laying of overhead cables close to tree branches cause disruption during heavy storms. Drainages are simply dug up gutters become refuse dumps. This is because refuse disposal and collection systems are not organised.

5.16 Socio-Economic Problems

The survey findings reveals males to 49.4 percent and about 30 percent are of working age group. Nursery to University education are about 50 percent and about 20 percent adults need social welfare services. Their socio-cultural background revealed the Hause-Fulani as the dorminant ethnic group and are mostly Moslems.

The earning and spending capacity of the residents is averagely ₦500.00 per month. They are officers on Grade Level 10 and above generally.

5.17 Satisfaction of the Residents

This was assessed using living condition, housing condition, availability of facilities, services and utilities. Hence, their response and opinion about their housing and environmental condition revealed that few wanted temporary relocation and majority will not want relocation at all. Adequate provision of all facilities that are required is recommended for improving the housing standard and the environmental blightedness.

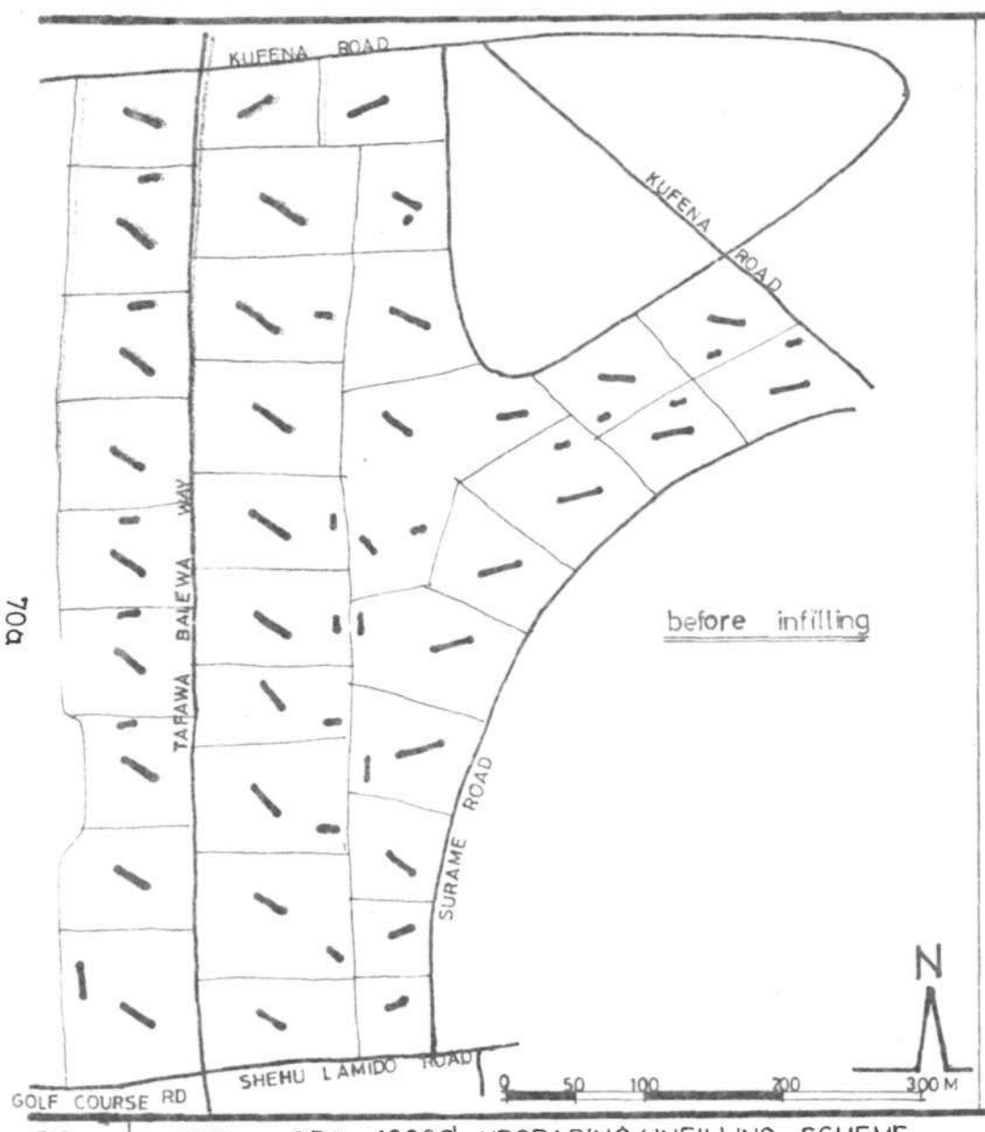
5.20 URBAN RENEWAL PROGRAMME PROPOSAL FOR OLD GOVERNMENT RESERVATION AREA (G.R.A.)

The proposals for renewing the old GRA are discussed in relation to the principles considered appropriate. These are as follows:

5.21 Principles of Infilling and Up-grading as Curative Measure

i. The land use zoning allocation should not be deficient in provision of other facilities, that is, the balance should be rectified through reducing the residential land-use proportion and increase that of commercial and semi public/public uses.

ii. Redensification through sub-dividing the large building plots which have been shown as not easily manageable. Redesnsification would allow for optimum utilities and maintenance of space through reduction in plot sizes which between 30 x 35 square metres and 35 by 45 square metres (Figure 5.03).



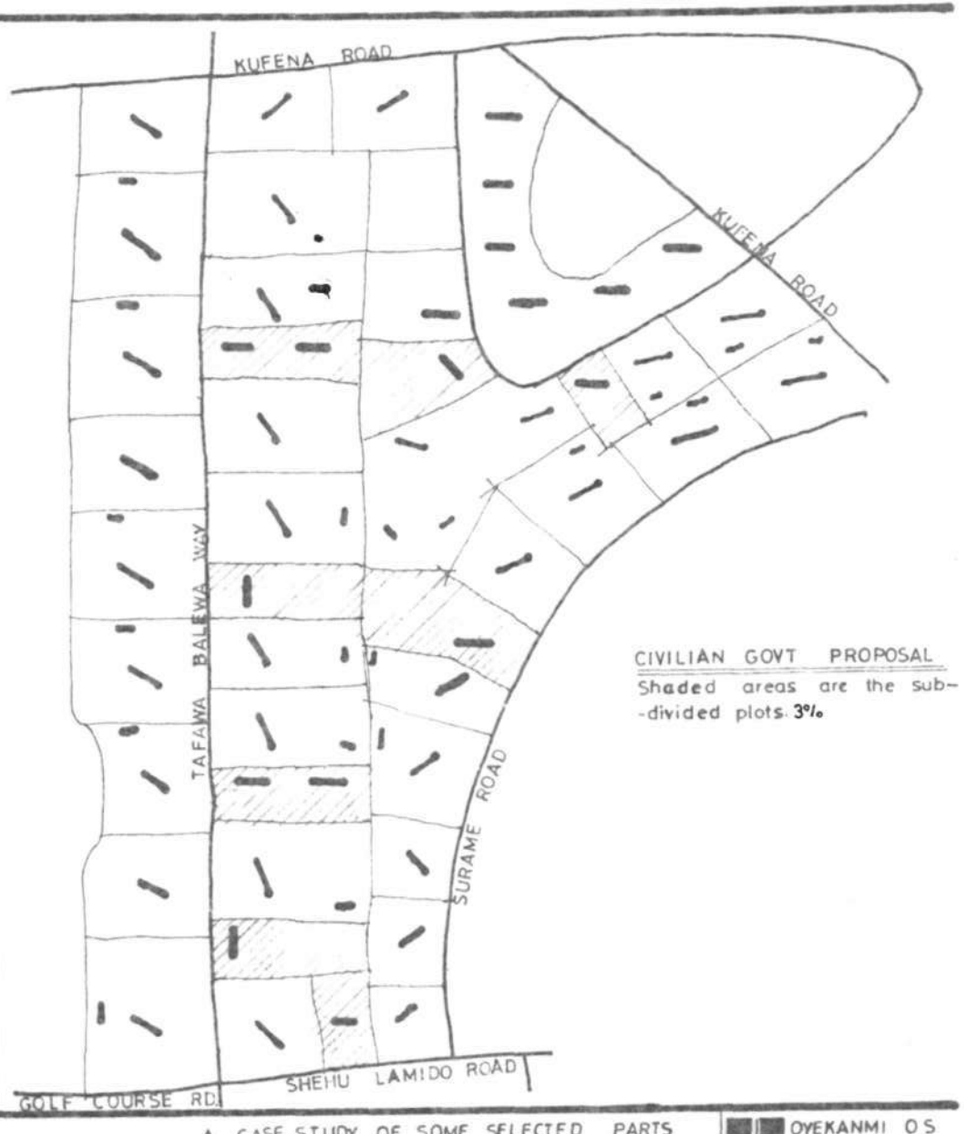


FIG. 5·03 OLD GRA 1980S' UPGRADING/ INFILLING SCHEME
1980'S CIVILIAN GOVERNMENT MANAGEABLE SIZES.

A CASE STUDY OF SOME SELECTED PARTS

OYEKANMI O S
M Sc THESIS 87/88
U.R.P-A.B.U ZARIA

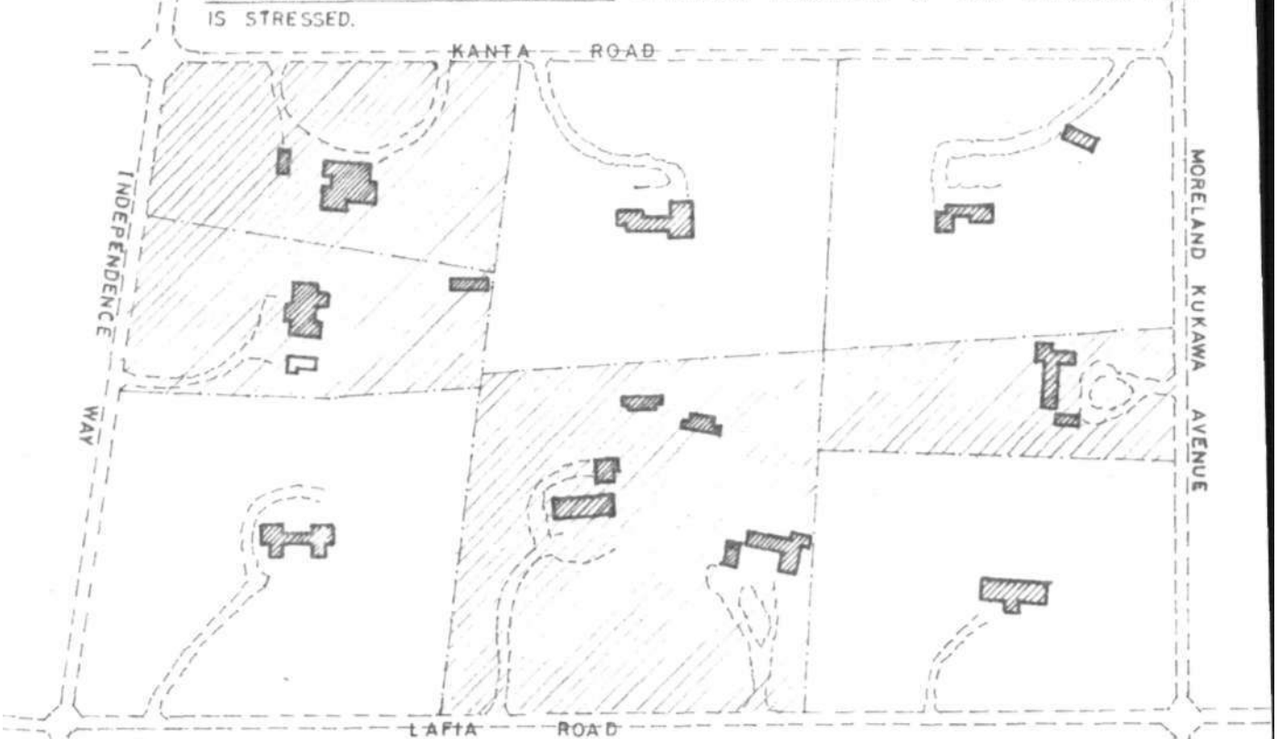
Source: Field survey '88

iii. The infilling should be designed in conforming with the existing layout concept of Government Reservation Area (GRA) as well as its architectural standard and aesthetics. It is to be based on fair distribution of urban space with little inbalance permitted due to civil service income structure. The low/medium density nature should still be maintained.

These infilling and up-grading strategies are not new as it was proposed by Max Lock plan earlier (Figure 5.04). For the successful implementation of these strategies, buildings at the core of the plots should remain unaltered, because most houses are centrally located on Site. This makes sub-divisions difficult as only those plots where residences are sited to one side can another building be fitted-in. Therefore, this strategy needs to be appraised as individual access to the units is more desirable (Figure 5.04B). Also there should be well defined boundary - fence. For this programme the number of housing units depends on availability of large vacant space for re-plotting with reference to their socio-economic level. About 20 percent medium density units and 80 percent low density,that is 150 persons per hectare and 50 persons per hectare, respectively, should be evolved on site. This gives approximately 6 and 4 plots, respectively, on the present large plots. The recent development of these strategies involved provision of an average of 3 habitable rooms per house plus 2 bed-room unit boy's quarters. These are popularly known as "pink houses" provided under the infilling scheme in the old Government Reservation Area (GRA) (See Figure 5.03). The programme was initiated by the Civilian Government in 1972.

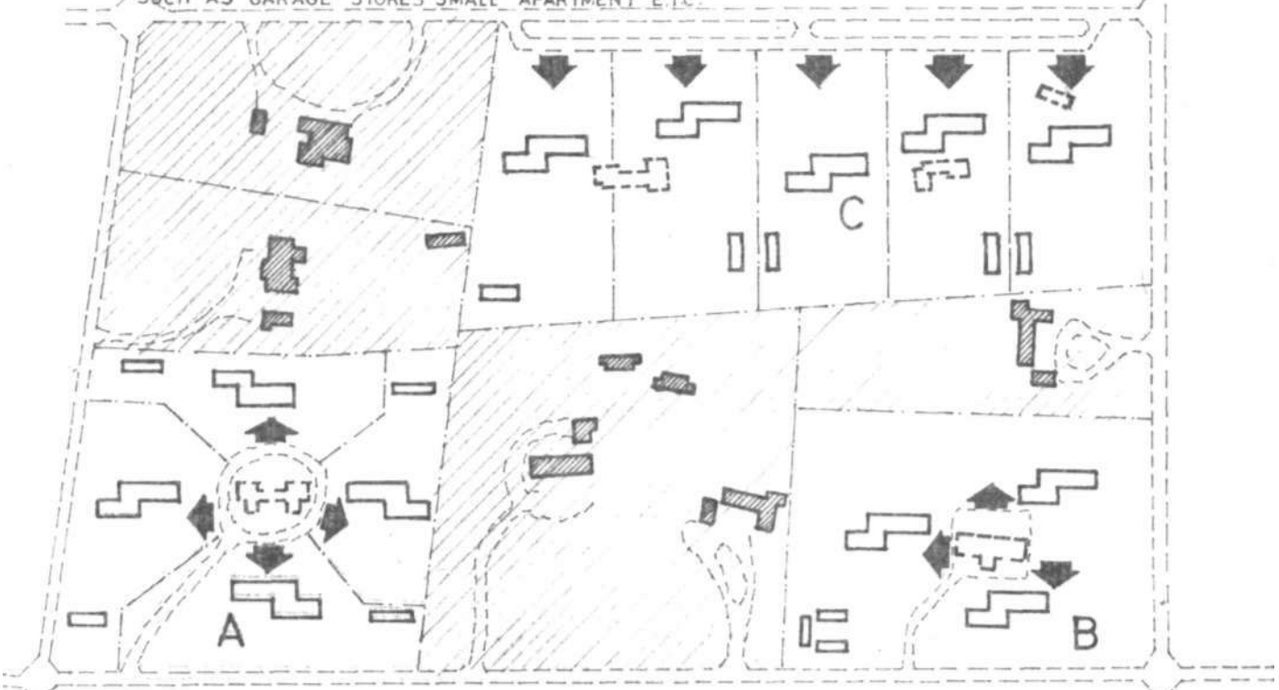
— DETAILED "C" —

Government Reservation Area INDIVIDUAL TREATMENT OF SUB DIVIDABLE PLOT IS STRESSED.



RESIDENCIES CENTRALLY LOCATED ON SITES REMAIN UNALTERED SIMPLY BECAUSE MOST OF THESE HOUSES ARE PLACED PLUM IN THE CENTRE OF THIER FOUR ACRES MAKING SUB DIVISION A DIFFICULT MATTER.

A— CENTRALLY LOCATED BUILDING SHOULD BE PULLED DOWN OR CONVERTED INTO OTHERS USES SUCH AS GARAGE STORES SMALL APARTMENT E.T.C.



C— TWO ADJACENT PLOTS COULD BE TAKEN OVER FOR COMPLETE REDEVELOPMENT. THE WHOLE DOUBLE SITE SUBDIVIDED INTO FIVE (1¼ - 1½) ACRE PLOTS. WITH PRIVATE ACESS FROM A COMMON SERVICE ROAD.

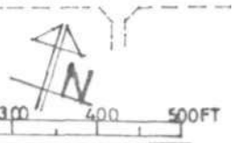


FIG. 5·04

THE PROPOSED MAX LOCK'S IMPROVEMENT SCHEME FOR OLD GRA
CASE STUDY OF SOME SELECTED PARTS OF KADUNA METROPOLIS

OYEKANMI O S
MSc THESIS 87/88
URP A BUZARIA

SOURCE: MAX LOCK '67

iv. The plot ratio, (with and depth), where appropriate, should be a minimum of 1:1½ and maximum of, 1:3 size; while 40 percent to 50 percent plot coverage may be allowed for adequate space between buildings and other activities within the area. The latter includes poultry sheds as they increase the coverage of the individual plots and inhibit adequate cleaning of the area. That is, permissible coverage takes care of temporary structures and prevent uncontrolled utilization of plots.

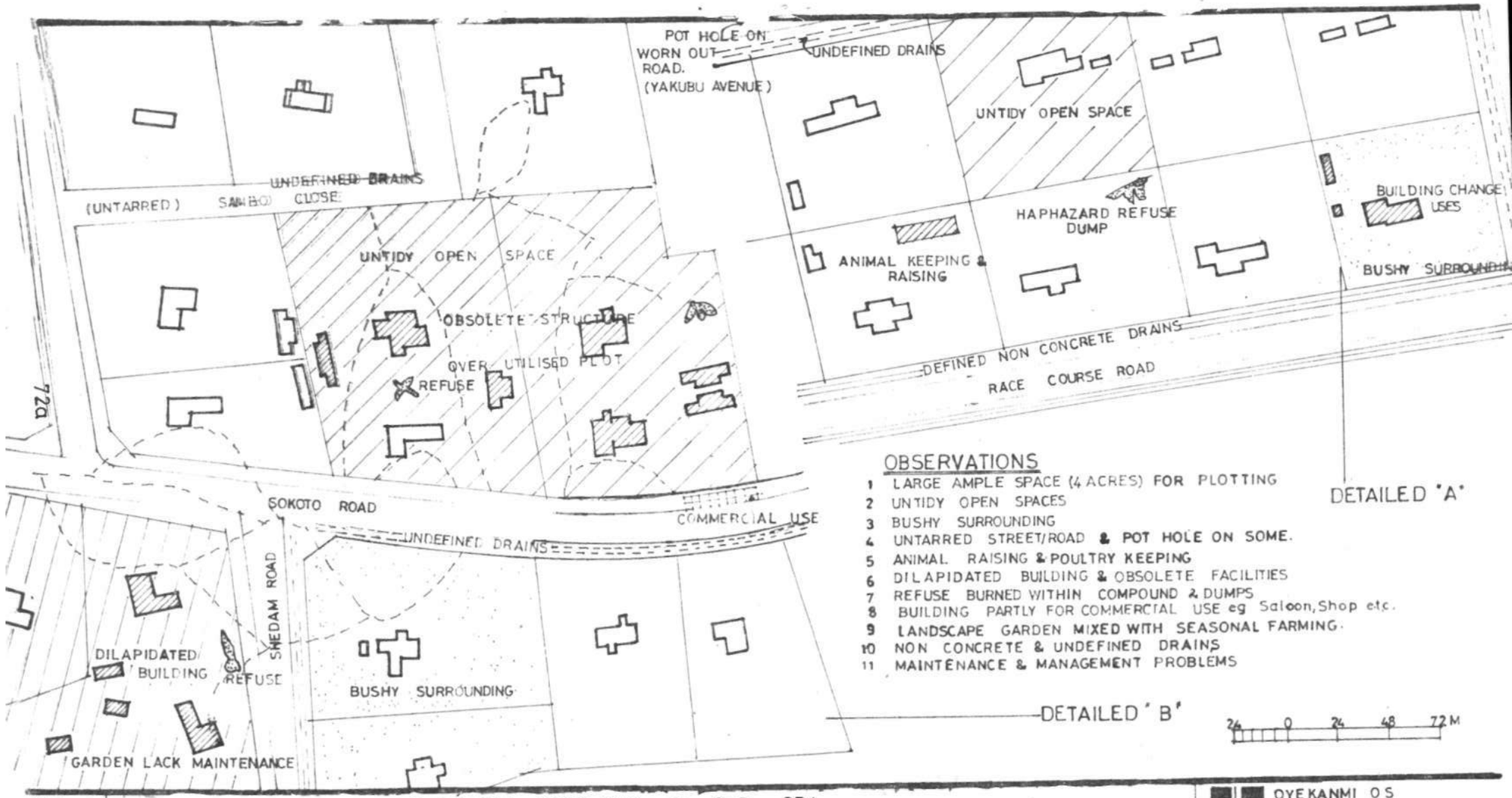
v. The aesthetic quality of the environment should be enchanced by planting of conventional, ornamental trees, etc., to improve the surrounding and reduce untidyness (Figure 5.05 and 5.06).

Considering the envisaged increase in accessibility certain set-back standards are to be observed so as to guarantee adequate spaces away from traffic (See Table 7.1).

vi. Facilities

The inadequancy of water supply is checked by Water and Power Development Company Limited (WAPDECO), so that the water tanks capacity to serve the entire population is used as a base for average design standard of water requirement = 100 - 120 litre per day. There should be possibility of provision of storage tanks for individual houses and groups of houses.

There is need to reduce the problems caused by electricity supply failures and water retention time to meet people's demand For Electricity, more transformers are to be installed and the obstructing trees along the electricity lines are reduced



OBSERVATIONS

1. LARGE AMPLE SPACE (4 ACRES) FOR PLOTTING
2. UNTIDY OPEN SPACES
3. BUSHY SURROUNDING
4. UNTARRED STREET/ROAD & POT HOLE ON SOME.
5. ANIMAL RAISING & POULTRY KEEPING
6. DILAPIDATED BUILDING & OBSOLETE FACILITIES
7. REFUSE BURNED WITHIN COMPOUND & DUMPS
8. BUILDING PARTLY FOR COMMERCIAL USE eg Saloon, Shop etc.
9. LANDSCAPE GARDEN MIXED WITH SEASONAL FARMING.
10. NON CONCRETE & UNDEFINED DRAINS
11. MAINTENANCE & MANAGEMENT PROBLEMS

FIG. 5·05

HOUSING AND ENVIRONMENTAL PROBLEMS IN OLD GRA
-CASE STUDY OF SOME SELECTED PARTS

OYEKANMI O S
MSc THESIS 87/88
U.R.P – A.B.U ZARIA

SOURCE: Field Survey '88

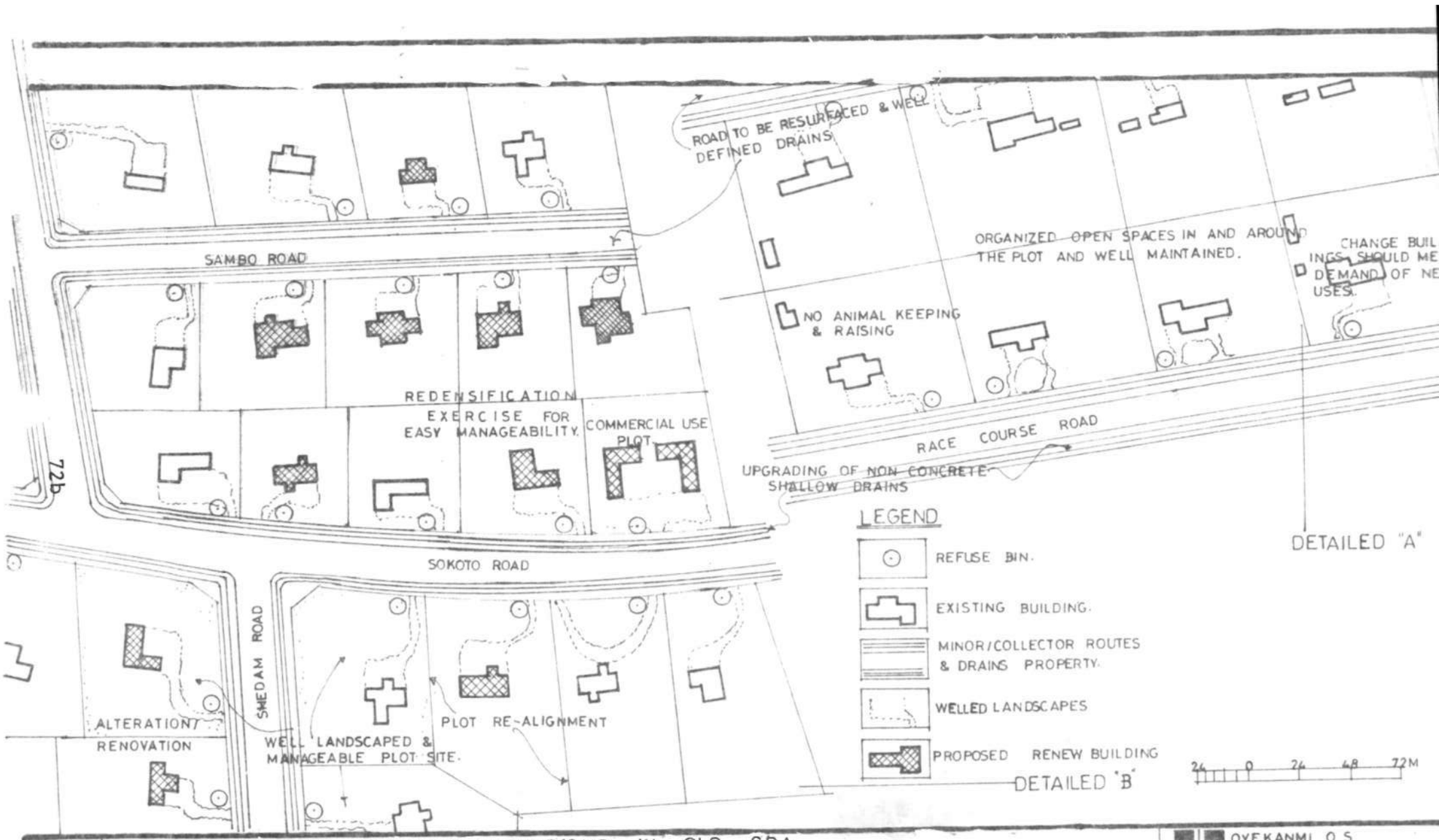


FIG 5·06 PROPOSED PHYSICAL PLANNING SOLUTIONS IN OLD GRA -CASE STUDY OF SOME SELECTED PARTS.

OYEKANMI O S
M Sc THESIS 87/88
URP — A. B.U. ZARIA

to the barest minimum through prunning oftheir branches. Septic tanks should be reconstructed where there are damages. The following new specifications are recommended for use in the reconstructions.

Table 5.1 Minimum Set-back requirement		
Building distance to Septic Tank	=	1.5 metres
Property line distance to Septic Tank	=	1.5 metres
Walls distance to Septic Tank	=	30 metres
Stream/water supply to Septic Tank	=	30-60 metres
Water Shed	=	3.0 metres
Water Pipe	=	3.0 metres
Path	=	1.5 metres
Large Tree	=	3 metres

Source, Duncan Mara (1976)

The set back standards ensure that enough clearance is given so that the septic tanks do not cause damage and pollution. The septic tanks should be located away from other facilities within the compound and should have direct installation standard. Soil permeability should be high. It requires skills for both its construction and maintenance.

The actual performance level of the septic tank depends on the number of residents in the compound, amount of water for disposal etc. However, an average tank for 10 persons is usually:

1.80m x 0.90m x 1.50m for Septic Tank

and

1.50m x 1.50m x 3.00m for Soakaway Pit

A large number of residents in a house require more than one toilet facility. Also, the Soakaway pit depth to be dug depends on the number of people in the compound. Assuming a compound of 10 people in

Government Reservation Area (GRA):

As liquid waste production per person per day = 200 litrres.

Total waste generated by 10 persons = 200 x 10 = 2,000 litres.

90 litre waste water requires a pit = 1 m^2

2,000 litres requires = $\frac{2,000}{90}$ = 22.2m^2

. . Depth = $\frac{22.2}{2 \times 11}$ = $\frac{22.2}{2 \times 3.14}$ = $\frac{22.2}{6.28}$

= 3.27 metres

Thus, the depths of the Soakaway Pit to be dug in this compound is 3.30 metres.

5.22 Principle of Restrictive Up-Grading

i. There is need to establish organised Kiosk/corner Shops or other related facilities based on the demand within the neigbourhood. The relocation of services should be related to average distance to be travelled by residents who would use them.

Corner Shops/Kiosk should replace all unplanned commercial activities and clearance of all Kiosks that encroach on roads. A Material such as clay bricks is specified for Kiosks as use of numerous types of materials is appauling visually.

ii. There should be prohibition of animal-raising and grinding mills within the housing units, where planning conditions are not met. These activities are to be monitored and regulated where permissions are granted. Also stoppage of refuse burning on open spaces and proper (Figure 5.06). Rubbish bins are proposed to be provided at each housing unit entrance.

iii. Provision of other necessary community facilities like Schools, etc, which are valued by the people.

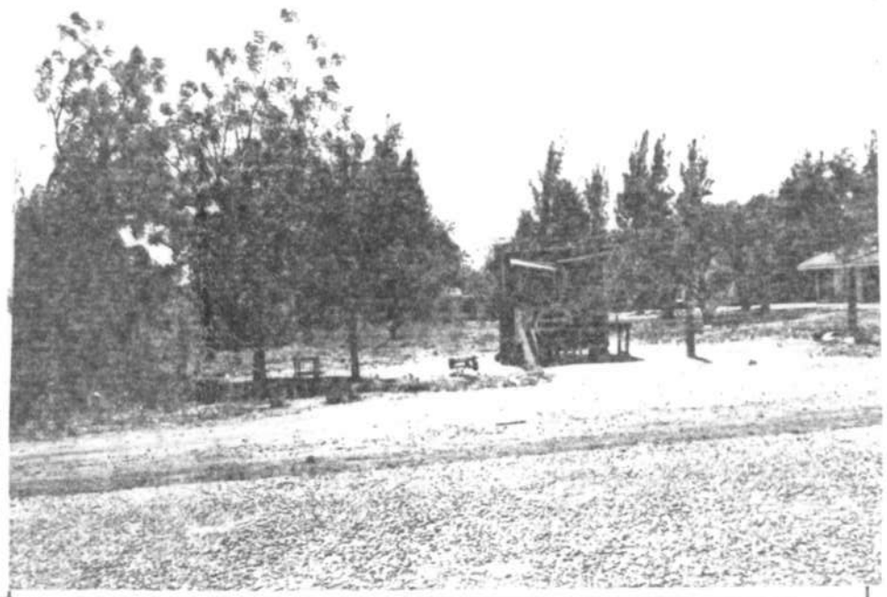
iv. There is need to upgrade the obsolete structures by renovations and alterations where necessary. The bushy surroundings should be maintained into a garden where a plot is under utilized, or sub-divisions and street re-alignment have produced incidental open spaces. Also, trees should not be cut down within the compound. Access is provided to each house from the streets (See Figure 5.07 which also shows the location of rubbish bins.

v. There is need for the removal of pollution producing activities like Mechanic Workshops, Grinding Machines, etc. This Development should be monitored and regulated within residential units, by restricting their location to a specific site.

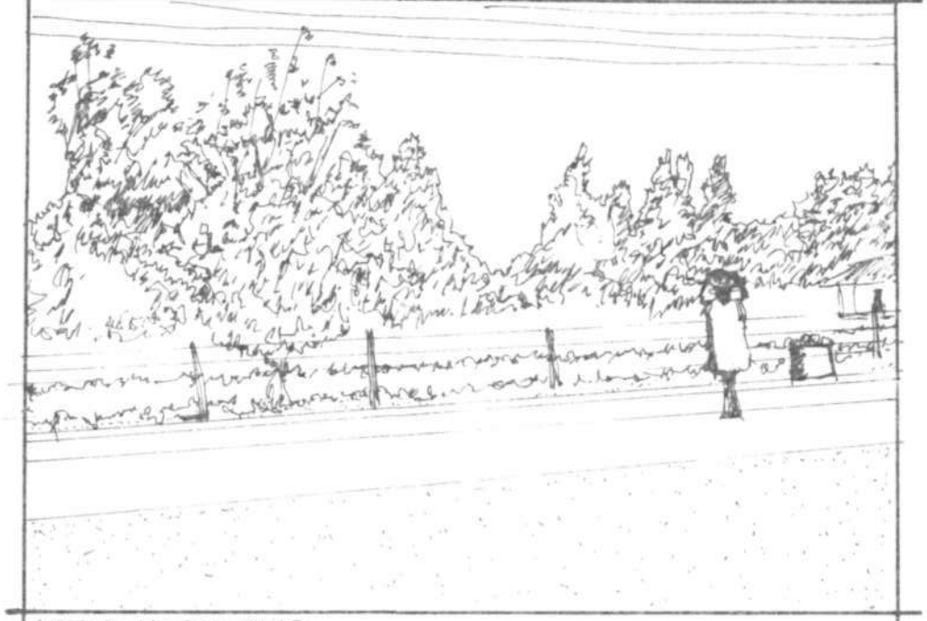
5.30 PLANNING PROBLEMS IN TUDUN-WADA NUPAWA
(Second and Third Level Blight)

5.31 Land Use

These area is the former labour camp for the Immigrants who come to work in Kaduna. There is haphazard mixing of land uses, (See Figure 5.11) which are not particularly conducive to living and constitutes health hazard or sanitary nuisance. They include commercial, grinding machines, mechanic and vulcanising workshops etc. There make the environment filthy, noisy and pollute the air creating health hazards.



BEFORE UPGRADING



AFTER UPGRADING

THIS EXAMPLE ILLUSTRATES HOW A COMPOUND AND DRAINAGE DITCH CAN READILY BE IMPROVED TO PREVENT THE HEALTH HAZARD AND EYESORE OF DISCARDED RUBBISH. DUST BINS ARE PROVIDED TO IMPROVES THE VISUAL APPEARANCE, ALSO INCLUDED IN THE PROGRAM ARE REMOVAL OF ILLEGAL KIOSK. PLUS ADDITIONAL LANDSCAPE TO CREATE A SMALL AREA OF SOCIAL SIGNIFICANCE AMENITY.
SMALL AREAS ALONG THE ROADSIDE CAN BE DEVELOPED TO PROVIDE AMENITY NETWORK AND THE PEDESTRIAN SPINE AS DEVELOPED WALKWAYS.

FIG 5·07

SPECIFIC HOUSING AND ENVIRONMENT PLANNING SOLUTIONS . A CASE STUDY OF SOME SELECTED PARTS —OLD GRA CAMP ROAD—

OYEKANMI O S
M Sc THESIS 87/88
U.R.P. A.B.U-ZARIA

5.32 Housing Problem

The quality of individual residential units has a collective impact on the over-all image of any neighbourhood (See Figure 5.12). The estimated total population of Tudun-Wada/Nupawa in 1988 is 140,000. The average population of residential units equals 12 persons. The estiamted total number of residential units equals 13,333 and the estimated number of dipalidating units equals 555,54 units which is 14 percent of the total housing stock.

The total estimated population in dilapidated units is 6,660. The existing average plot size is 450 metre square, and the total land area in this district is 146.7 hectares.

The total required area to re-accommodate affected "shortfall" persons at present plot size of 450 (30 x 15) square metres equals 24.998 hectares. The remainder, that is, the existing minus the required hectares of land is 121.702 in the South-Western portion of Tudun-Wada. Despite high rate of population growth and shortage in housing supply, people are generally unwilling to move from this zone to other areas within the metropolis, due to strong kinship ties. The result is that people tend to over utilize the residential spaces by creating additionals rooms within the compound. This is due to the general desire amongst kins. The other reason is their high tolerance and low awareness levels.

These low income group has no choice than to crowd up to 20 rooms per plots into less done and unhealthy residential space of 12 plots per hectare. Thus, coupled with their non-aspiring group character they show their lack of committment to the environment, such as in lack of maintenance of various units and the tenants do not feel obliged to make repairs. The low income tenant cannot and would not wish to maintain individual housing units belonging to reluctant lords.

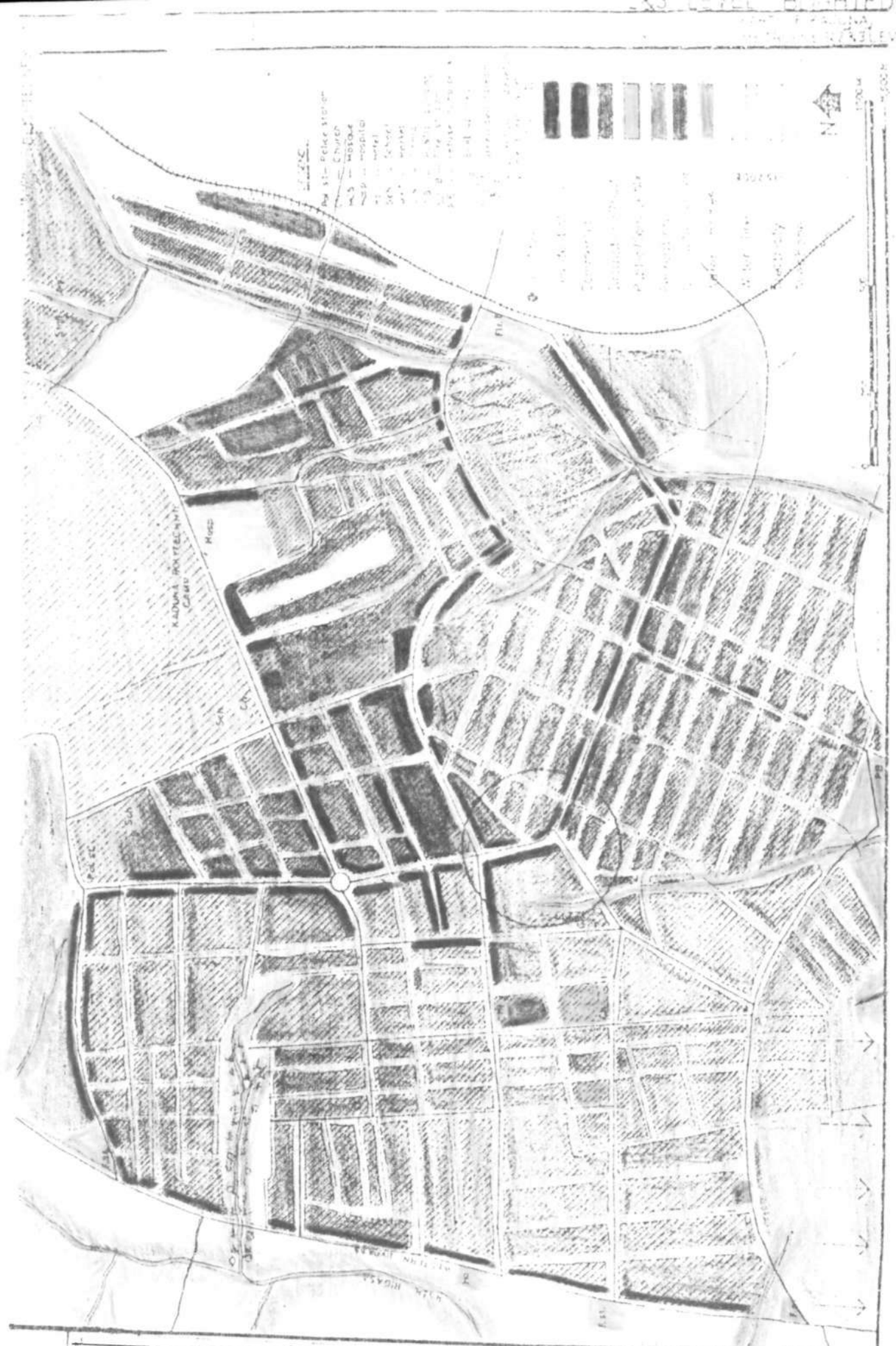


FIG 5.11 EXISTING LANDUSE PATTERN IN TUDUN/NUPAWA AREA

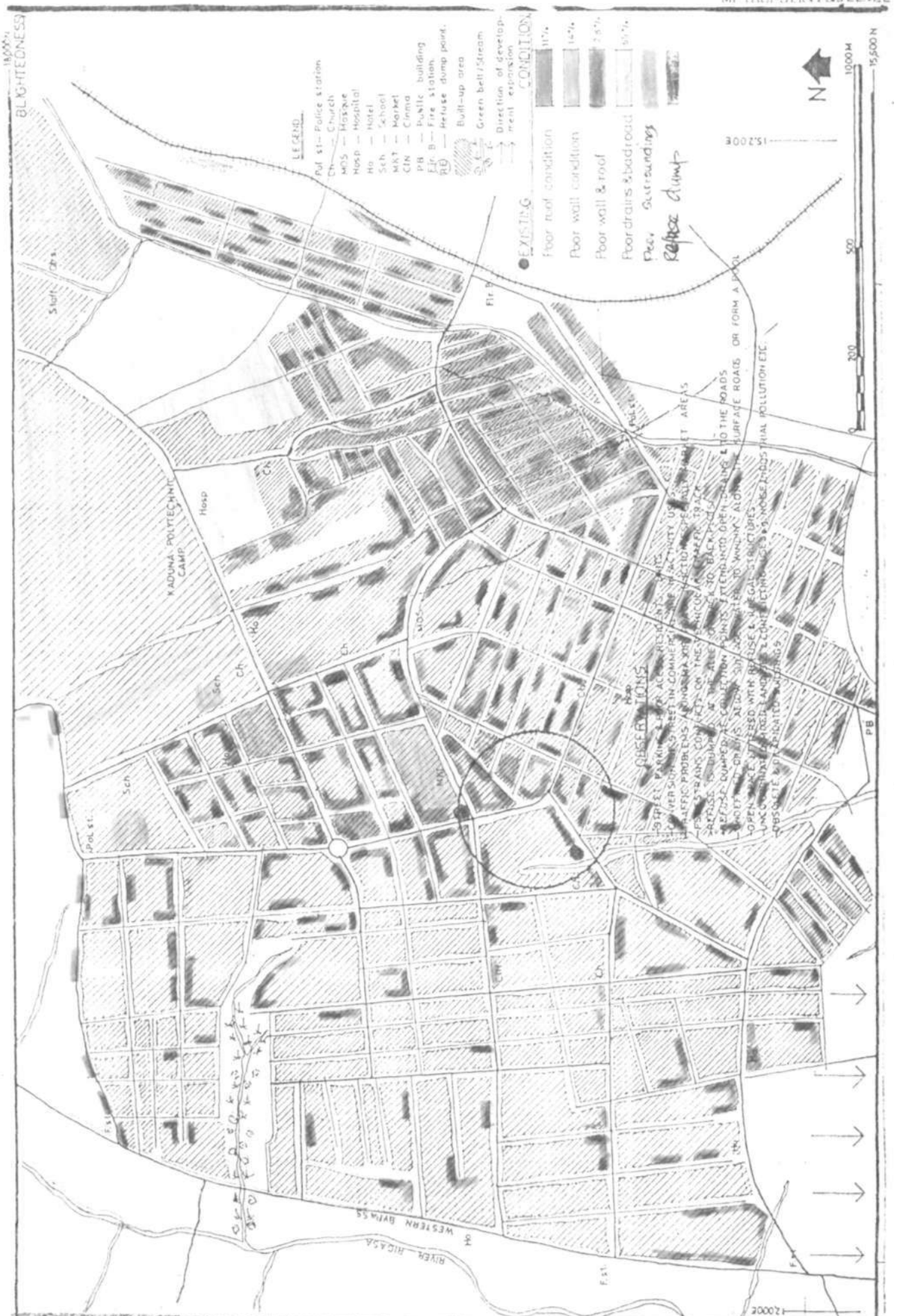


FIG 5.12 HOUSING AND ENVIRONMENTAL CONDITIONS IN TUDUN WADA/NUPAWA AREA

DYEKANMI OS
M.Sc THESIS 87/88
U.R.P. — A.B.U. ZARIA

Profit-making is their (the landlords) major consideration and when they do not have to carry out maintenance given the high housing shortage, the houses remain unmaintained that forces people to maintain them. This is reflected on private commercial houses. The situation is often worsened by the mode of collection of rent, which require up to six months deposit payment on securing a house.

5.33 Environmental Decay

Environmental degeneration causes deterioration in drainage, roads and aesthetics. In this district, these problems can be summarised thus: chaotic traffic situation particularly around market areas due to non-availability of parking spaces (Plate I) hence parking occupying part of Right of Way. Also, there is enroachment, by commercial activities, along the streets where petty traders squat.

There is the absence of organised open spaces within the area. Thus, disposal of waste is on stagnant sanitary lanes or at the back of compounds and sometimes along road sides (Plate II). Non conforming uses such as Mechanic Workshops, Vulcanizing, outdoor/road side cooking, kiosks, open air trading, etc , take place along most major roads within this residential area (Plate III).

Although majority of buildings are in good condition, some need repairs and renovations.

5.34 Problems of Amenities; Utilities and Services

Major sources of water supply are pipe borne and well water. A large percentage of house-holds depend on pipe borne water. But 10 percent use wells which reflect the fact that most of the households also possess pit latrines. Occassionally these pit latrines are given poor



PLATE I Street trading on untarred aminu road and the resultant litter. It also shows pedestrain supremacy struggle over the vechicle facilities which lack parking and add to the problems of traffic congestion.



PLATE II Refuse litter around the bad stagna ted open drainage line. during the rains, this overflows and flood the road with its materials.



PLATE III Conforming and non-conforming mixed use, dirty open drains which is staggnant and constitute health hazards



PLATE IV Street cooking especially for public consumption and in most cases its encourages encroachment on public property such as on right of ways.



PLATE V Alley in between block of residences arranged back to back. Lack maintenance and it is rather used for dumping refuse.

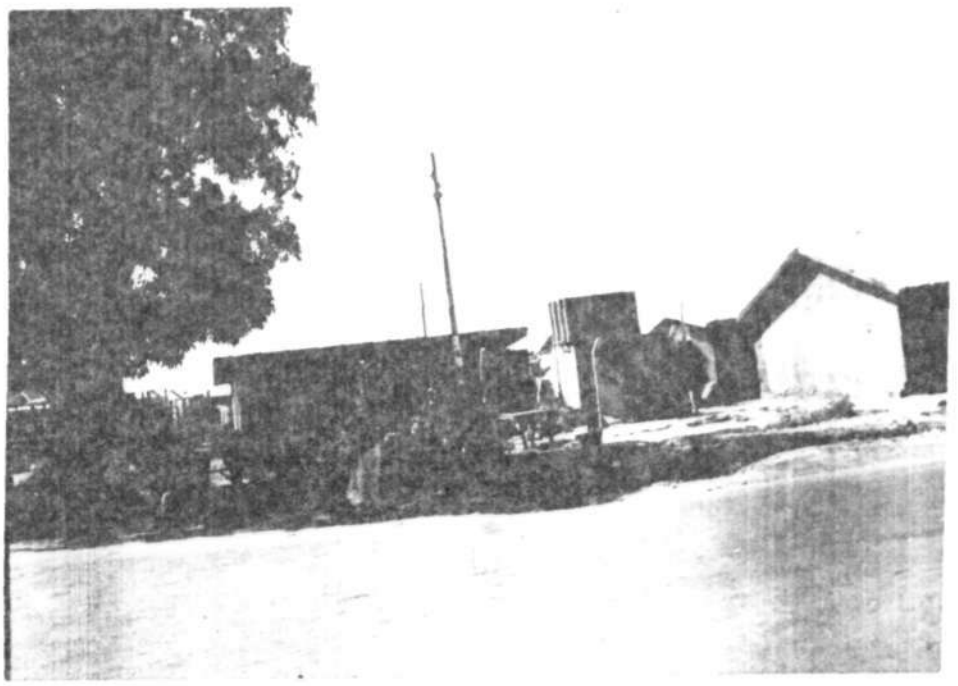


PLATE VI Utilization of open space (Unorganised mini market) for buying and selling, which is located close to convienence place at public property site.

locational consideration in relation to the position of the well within the compound. This causes health hazard through contamination.

There is inadequancy of water supply sources which often contribute to blocked drains, wash hand basin, and water closet. Since slightly more effluent waste is not easily washed away, these causes the stagnation of water in gutters which stinks resulting in discomfort to people. These also are breeding ground for mosquitoes. Generally, there is sharing of facilities as regards bathroom, toilets and kitchens, which lead the people to adopting various alternatives, such as cooking within the main house (Corridor/Varandah) or even in the bedroom. It also leads to defeacating in open places which constitutes health hazards. The inadequancy of facilities contributes a drag on the effective functioning of the entire urban system which includes semi public recreational land use etc.

As for the housing uinit, tenants make arrangements in form of roster for the up-keeping of toilets and bathrooms. Where the Land-lords do not live within the house, this does not work effectively. The hap-hazard laying of pipes, sometimes cause pipes to brake and gush out water for days. This causes muddy surroundings. For the fear of early filling up of Soak-aways, water from bathrooms and kitchen are allowed to drain through open drainage lines. These dirty water breed insects, pects and vermin around resident units.

5.35 Socio-Economic Problems

The poverty level of the average residents' make people to occupy house with inadequate facilities where the rent is moderately cheap. Also, because of economic handicap to government, essential facilities such as water supply and other existing infrastructure are not provided when necessary and these often lead to disruption of other facilities such as road, which involves the laying of pipes and cables.

This affects the visual quality directly and indirectly holding up traffic. Inadequate finance and man-power, allow all sorts of refuse dump along road sides in this district. Also, dug-out mud could easily drift back into the drain and block it up. This leads to over-flow of water and other lighter effluent into the streets thereby leading to fast deterioration of the road. There is limited use of Soakaway pipes which allows water to drift either within the compound or on the streets. The refuse cleared from gutters are usually left at the sides of the drainage lines, only to drift back into the drains later.

5.36 Satisfaction of the Residents

This is related to house owners' relationship with the occupier and tenant opinion about the residence. Their opinions are more subjective about the housing condition as owners occupiers or land-lords consider their investment and property to be at stake, where tenants' economic situation is the main reason. But fair objective reasons are obtained from the tenants.

5.40 URBAN RENEWAL PROGRAMME PROPOSAL FOR TUDUN-WADA/NUPAWA AREA

5.41 This programme is based on the principle of up-grading of housing units which is used as curative measure for the present problems. The considerations are to reduce the gross density;

(i) to improve the use;

(ii) to increase the visual quality of many streets, where degenerated groups of buildings are renovated but the broad framework of street blocks, sanitary leanes and standard plots are retained. Obsolete blocks are either

removed, for better planned buildings or initial open space or plots created for small off-street parking, to be harmonised by modifying the existing pattern. The 15 x 15 metre plots proposed by Max Lock Master Plan helps to provide alternative site and reduce loss of plots. The obsolete structure spaces are planned for playing and sitting as open recreation spaces. Existing sanitary lanes are improved, that is, clearing of drainage and sewage disposal with provision of pipe borne water system. But back alley Sanitary lane re-design as part of present compound is proposed as well as spaces behind groups of houses for semi private working area (Figure 5.13 and 5.14).

(iii) It is proposed to carry out restrictive relocation of mechanic workshops especially those pollution producing ones. there is also to be the relocation of Kiosks encroaching on roads.

(iv) There is to be up-grading of distribution route to control, reduce and redirect traffic from amjor traffic congested Ibrahim Taiwo Road (See Figure 5.16). The standard used is based on that form dervied to the whole metropolis (Table 5.2).

Table 5.2 - proposed Standard for Road (In Metres)

Type of Street	Right of Way	Carriage Way
Major Residential	24	12
Collection	18	9
Local	15	7.5
Cul-de-sec	12	7.5
Foot-paths		2.5 - 3



FIG 5-13 NATURE OF PROBLEMS OF HOUSING AND ENVIRONMENT —CASE STUDY OF SOME SELECTED PARTS (A SECTION OF TUDUN WADA)

OYEKANMI O S
M Sc THESIS 87/88
U.R.P.-A B U ZARIA

SOURCE: Field Survey (Jan'88)



FIG 5·14

PROPOSED PHYSICAL PLANNING SOLUTION
-CASE STUDY OF SOME SELECTED PARTS (A SECTION OF TUDUN WADA)

OYEKANMI OS
M Sc THESIS 87/88
U. R. P.–A. B. U. ZARIA

SOURCE: Kaduna State Urban Planning and Development Authority.

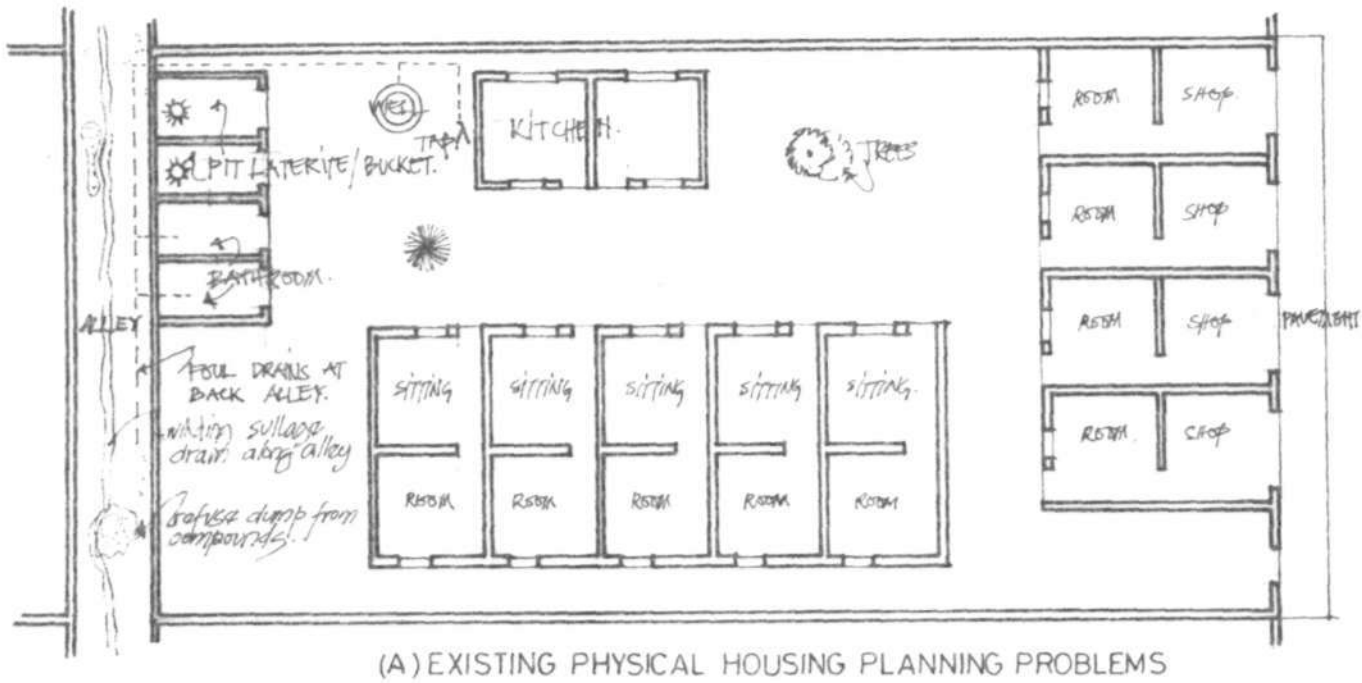
Open air trading and display of wares on public or Right of Ways is to be discouraged. Also, these are to be monitored including regulation of commercial activities such as record stores and animal-raising within the residential neighbourhood.

(v) All sorts of refuse dumps on sanitary lanes are to be removed and every house owner shall provide disposal bins to be emptied regularly at fixed collection points. Also, there is need for every room to have external windows, which is equal to at least (one-tenth) of the floor area of such rooms, (See Figure 5.15). Alternatives renewal strategies are considered for sewage and sanitary disposal system.

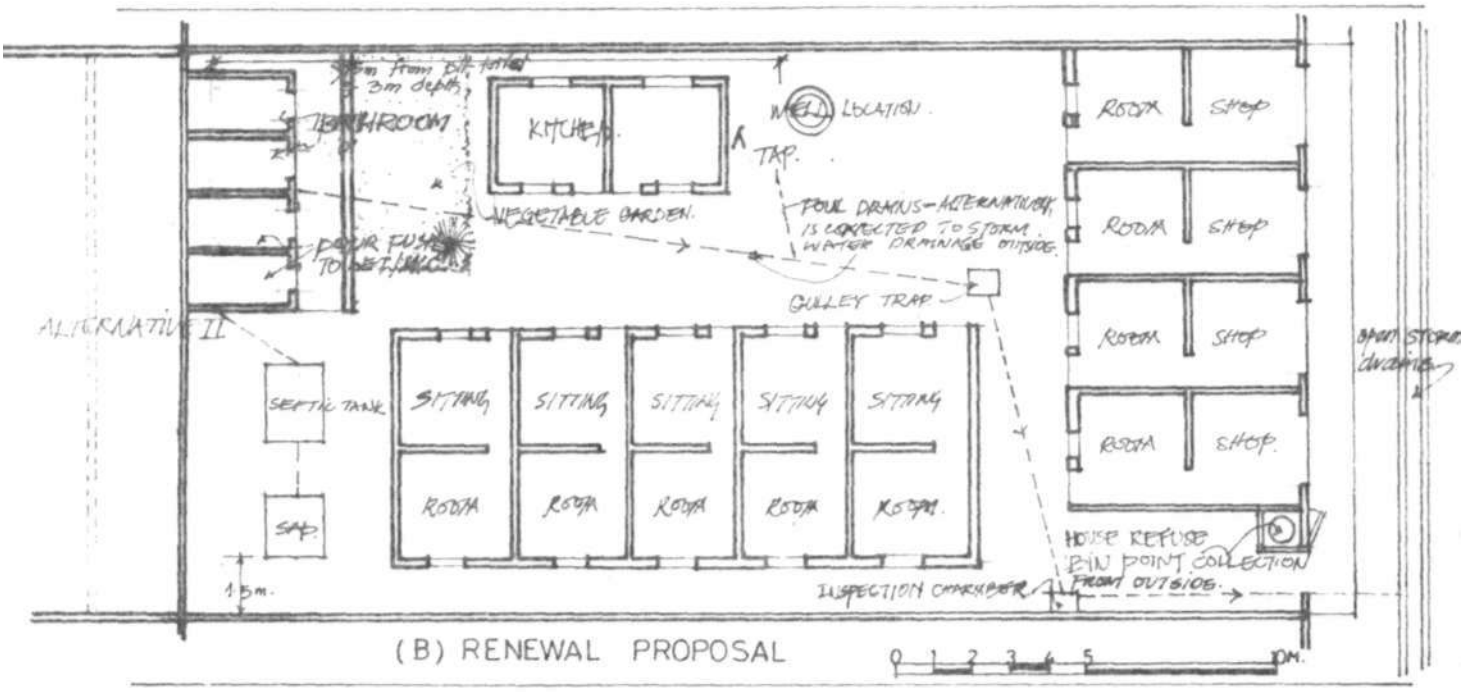
(vi) The floor of bathrooms should be cement screed and one bathroom per six persons is recommended. No latrine opening shall be nearer than 2 metres to openings of other facilities, such as kitchens, food stores, etc. Since the use of soakaways is limited to the plot with adequate space where plots may not have adequate space it is recommended to have a central sewage system for this medium density area.

5.42 Central Sewage System

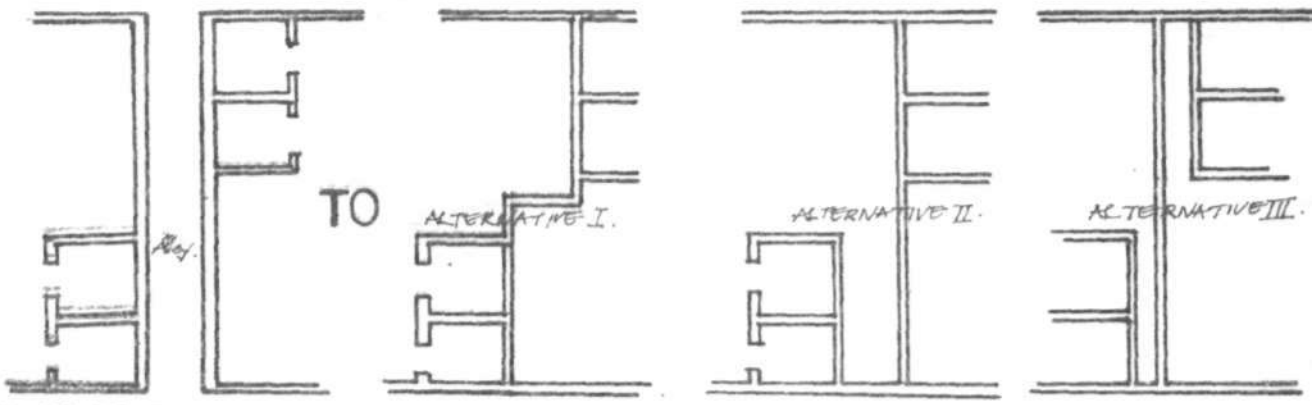
A central sewage system is recommended which makes use of waste stabilization ponds that are particularly suitable, being largely unaided by man and requiring only the choice of a suitable site down stream. These ponds could achieve very high degree of purification at lowest cost and maintenance by unskilled operators. The maintenance simply involves cuttings of embarkment grass and



(A) EXISTING PHYSICAL HOUSING PLANNING PROBLEMS



(B) RENEWAL PROPOSAL



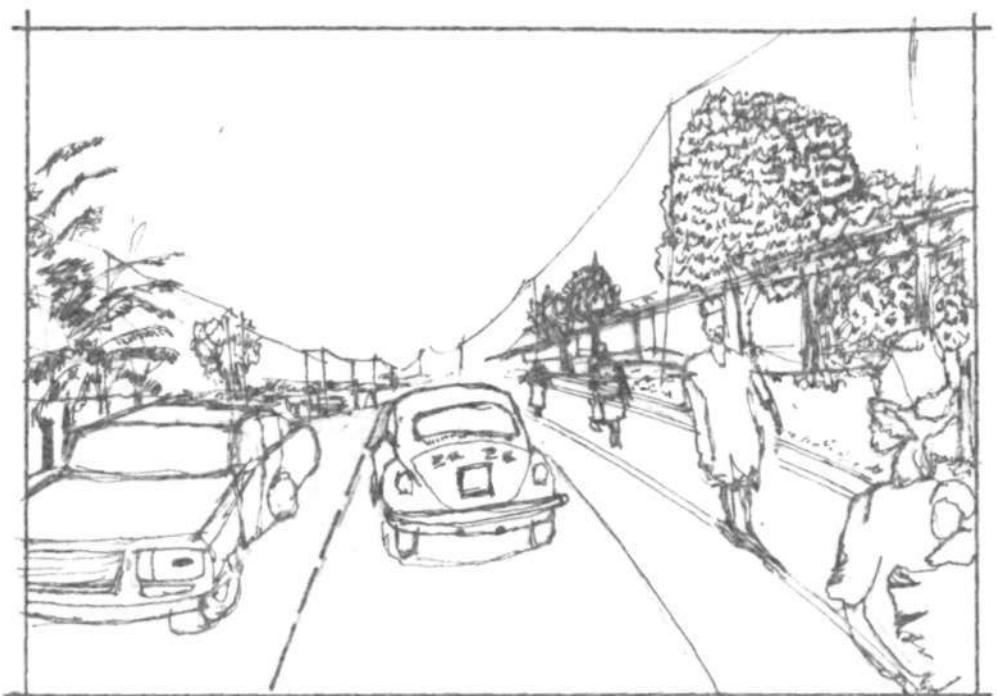
(C) ADJUSTMENT OF BACK TO BACK COMPOUND ARRANGEMENT OF ALLEYS.

FIG 5:15 — PROPOSED RENEWAL PROGRAMME FOR HOUSING UNITS
CASE STUDY OF SOME SELECTED PARTS. (RENEWAL OF TUDUN WADA COMPOUND)

OYEKANMI OS
M Sc THESIS 87/88
U.R.P.-A.B.U.ZARIA



EXISTING



PROPOSED

THIS EXAMPLE ILLUSTRATES HOW LAND USE E.G. COMM. TRADERS ENCROACHED ON ADJOINING PEDESTRIAN / VEHICULAR CIRCULATION, PREVENTING EASY FLOW OF TRAFFIC DUE TO SUPREMACY OF ONE USE OVER THE OTHER. THIS CAN READILY BE IMPROVED BY CREATING A SHADED WALKWAYS, A DRAINAGE CHANNELS AND PARKI PEDESTRIAN FREE ZONES FOR CAR OWNERS AND THE DISPLAY ITEMS SHOULD PASS THE FRONTAGE LEVEL. THERE IS ADDITIONAL TREE PLANTING ALONG THE FRONTAGE OF THE SHOPPING AREAS.

FIG 5.16	PROPOSED ENVIRONMENTAL RENEWAL PROGRAMME — TUDUN WADA DUTSEN-MA STREET —— : A CASE STUDY OF SOME SELECTED PARTS	OYEKANMI O.S. M.Sc. THESIS 87/88 U.R.P.-A.B.U. ZARIA

Source: Field survey '88

removal of floating scums from pond surfaces.

The following standards for waste stabilization ponds depth with its various compents are recommended to ensure preventive of any form of blockage of the sewer. The minimum gradient of a sewer pipe is related to the width of such sewer. For instance, a sewer 600mm diameter is to have a gradient of 3m/km and 200mm for 1.25m/km.

The recommended locational considerations for central treatment works are as follows:

(a) Pumping will be avoided as much as possible

(b) The site should be at least 500 metres away from any house to avert visual and odour nuisance.

(c) The shape of site, depth and gradient should be suitable so as to permit gravitational flow from one pond to the order.

(d) Soil permeability should be low.

(e) The site should be free of flood.

(f) Adequate land for future extension.

(g) The pond site should be down stream of rivers supplying water to the town.

The pond layout is to accommodate a multi-ponds system, one anaerobic, one focultative and three maturation ponds.

Re-cyling

This is a purposeful method fo recovering some of the list of the scheme, which is vigorously pursued in the following two ways below:

(a) Irrigation on Large Scale

The waste water is to be used for crop production. Five days retention, time required for pond contamination is to be ensured in order for the water to be free for irrigation. For safety, only industrial crops should be produced.

(b) Aqua-culture

Sewage-grown algae can be fed to domestic animals like fish and ducks. It is therefore recommended for aqua-culture to be developed using the sewage treatment ponds.

5.50 PROBLEMS IN SABON-TASHA (Fourth level Blightedness)

5.51 Land-Use

Sabon-Tasha is essentially a residential area with displays chaos in physical outlook and also deficiency in other complimentary uses (See Figure 5.21). This arises partly from the conflicting mixed land uses, since there is no clear demarcation between residential and commercial activities. Trading is carried out everywhere, including service industrial activities some of which are obnoxious. Their activities generally encorach on the major roads, while pedestrians struggle for space with vehicles along major roads. Open spaces are lacking, except for incidental spaces which are used as refuse dumps.

5.52. Housing Problems

Houses are built haphazardly on site and there is no clear demarcation of plots. This leads to under-utilization of plots, resulting to incidental spaces as refuse dump. Where plots are closer to the commercial activities they are over-crowded with built-up structures. This causes over utilization of plots associated with high residential densities of up to 14 persons in a housing unit. This reflects lack of enforcement of building regulations and bye-laws. Most of the houses are in degenerated condition due to poor workmanship on the construction, materials used and method applied (See Gigure 5.22).

5.53 Environmental Decay

The deterioration in Sabon-Tasha is due to haphazard location of compounds due to bad layout and also lack of maintenance of the structures (Plate III). These haphazard development results from squatting public spaces. This causes all sorts of pollution since the land is put into non-conforming mixed uses by the residents. These are major causes of health hazard, as the inhabitants generally lack in-

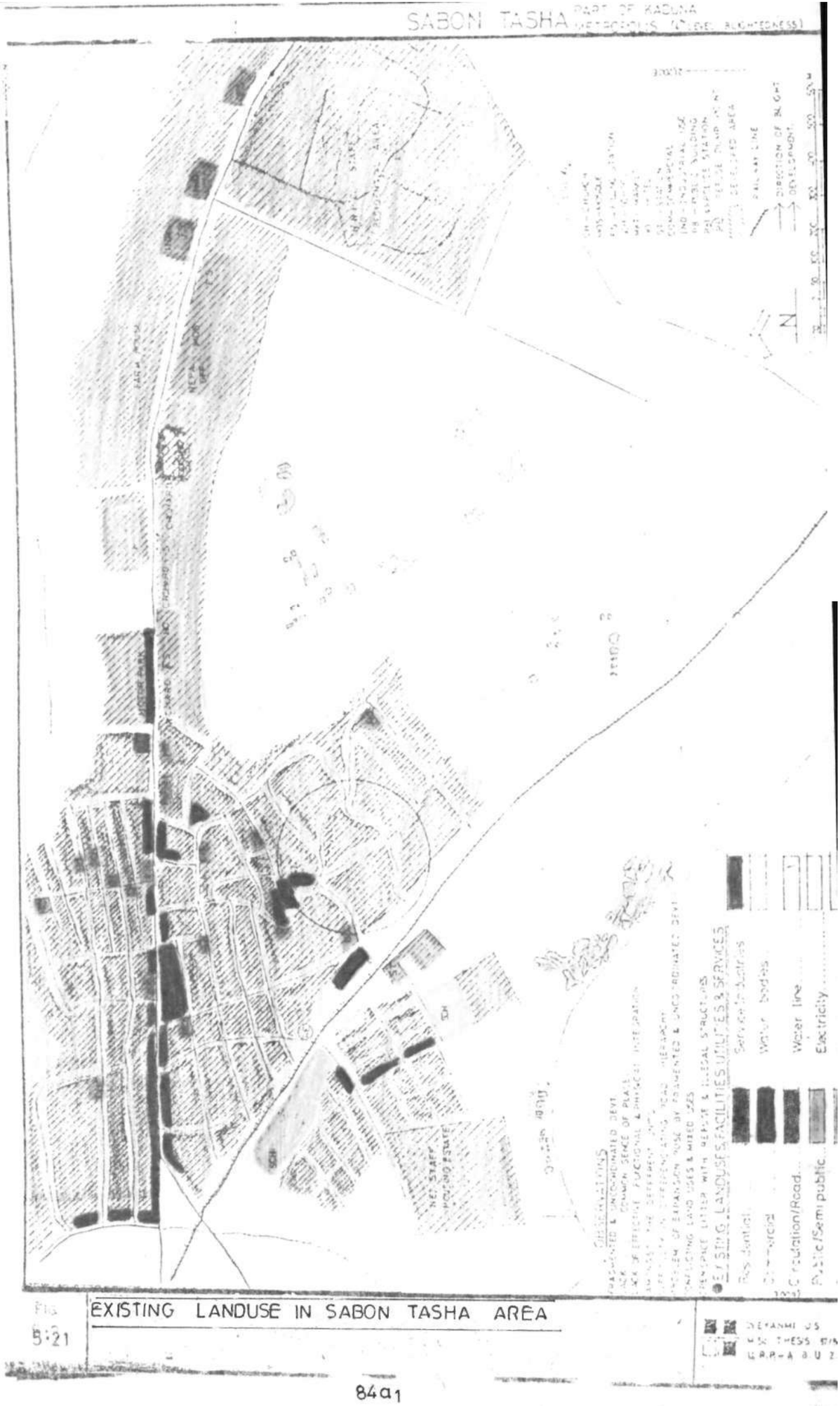


Fig 5:21 EXISTING LANDUSE IN SABON TASHA AREA

SABON TASHA

FIG 5.22

HOUSING AND ENVIRONMENTAL CONDITIONS IN SABON TASHA AREA

Source: FIELD SURVEY '88

OYEKANMI O.S
M.Sc THESIS 87/88
U.R.P - A.B.U ZARIA



PLATE I Undefined drains open into the untarred road and building walls structure shows some element of sub-standardness.



PLATE II Temporary thatch material is used as walls to cover some parts of dilapidated structures



PLATE III Most renders mud block structures lack maintenance, instead unnecessary inscriptions are written on the wall surface.



PLATE IV Dilapidated unplastered traditional compound, which still has its thatch roof and mud wall rendering.



PLATE V Shallow open drain allow waste water to flow along the street and may even form a pool on the road, Also there are some unplastered dilapidated traditional mud structures



PLATE VI An open space littered with refuse and temporary structures

frastructure such as roads and drainage (Plate V). Also, these includes dirty living habits indicated by littering of refuse (Plate VI).

5.54 Problem of Amenities, Utilities and Services

There is lack of adequate water supply shown by high percentage of well water usage and sharing of these amenities. This problem is compounded by location of pit latrines close to wells which contaminates the well water.

The road which serve as linkages are undefined and unpaved. Some roads do not have drainage, but where provided, this open drains are simply dug out and heaped up at the edge of the drains. With time these are washed back to block the drains. These may later become refuse dumps. The roads are not hierarchically layed and motor traffic along them are not controlled.

There is the problem of electicity lines layout, as electricity poles cannot be laid properly due to the absence of development control measures.

There is general laxity on the part of both the authorities and the general public to maintain their individual property and essential facilities that have been provided. Drainages are not maintained, neither are roads up-graded. Also landlords do not feel obliged to commit part of their rental income into maintenance of their buildings. Even the open drains, when blocked by residents, are not cleaned up because they rely on government agencies to do so.

The proportion of the population to the amenities, indicates over-utilization. This calls for proper surgical view toward the population in relation to standardisation of the amenities.

5.55 Socio-Economic Problems

The inadequancy of the facilities provided make the rent to be cheap and affordable to low income who form a large proportion of the residents. Also, there is the lack of effective development control and activities by the authorities to provide essential facilities and their inability to maintain the existing ones.

5.56 Satisfaction of the Resident

The owner-occupier and low income tenants express opinions which are subjective, and reflective of their economic situation. This makes them consider the residential area as adequate but consider the environment as degenerated and needing good roads, drainage, etc.

5.60 RENEWAL PROGRAMME PROPOSALS FOR SABON-TASHA

The proposals for the renewal of this area include:

i. Integration of these area physically, by providing access roads to unserviced plots, that is a sites and services scheme (Figure 5.23 and Figure 5.25).

ii. Introduction of new facilities, that is, reactivating existing infrastructure. That is to be done through upgrading the housing condition by demolition and redevelopment of unfit structures and regular maintenance of deteriorating neighbourhood facilities to a desirable standard (Fig. 5.24).

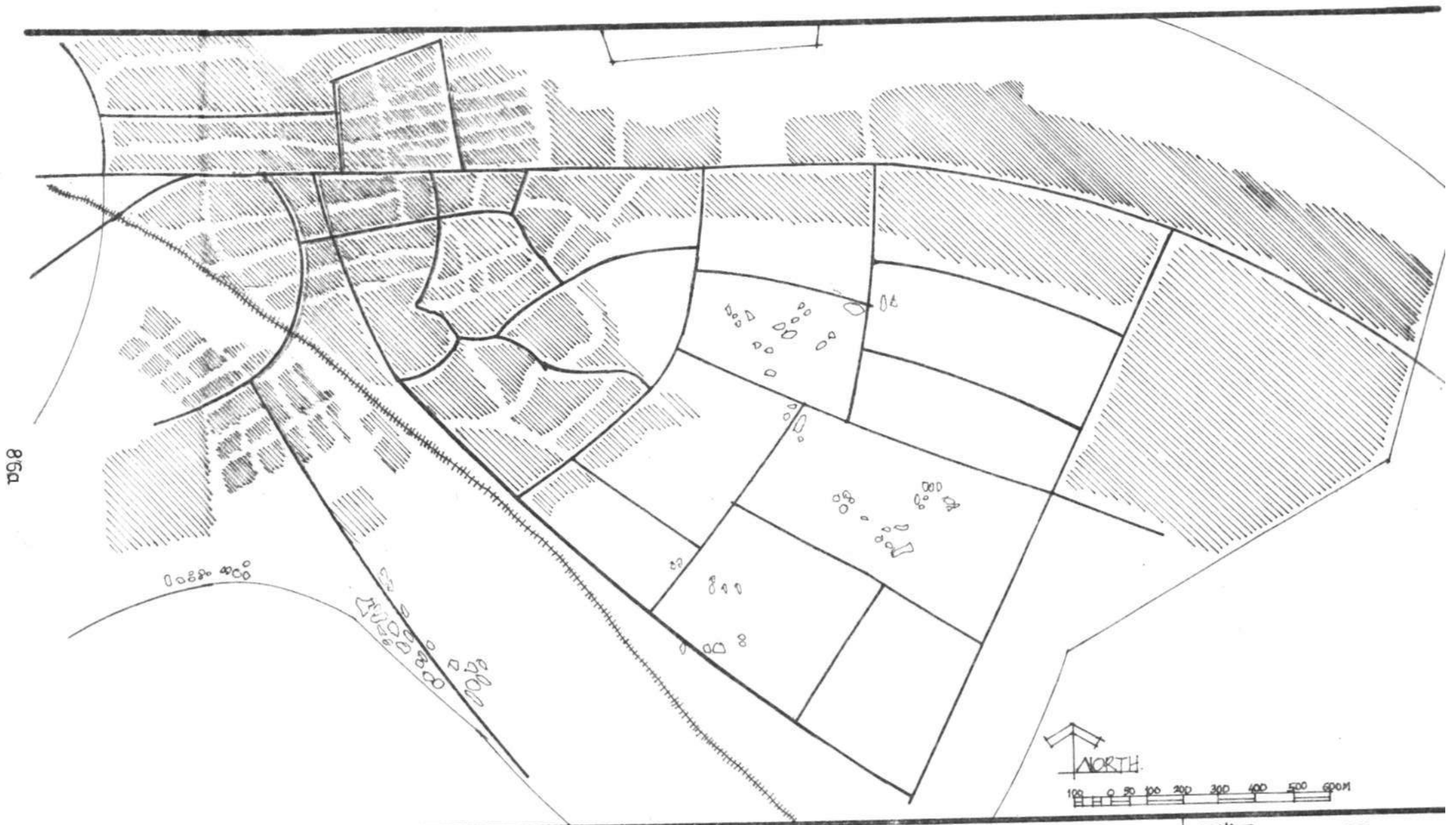


FIG. 5·23

PROPOSED PHYSICAL PLANNING SOLUTIONS
(NETWORK LAYOUT MAIN PROPOSED IMPROVEMENT PLAN FOR SABON TASHA)

OYEKANMI OS
MSc THESIS 87/88
URP ABU ZARIA

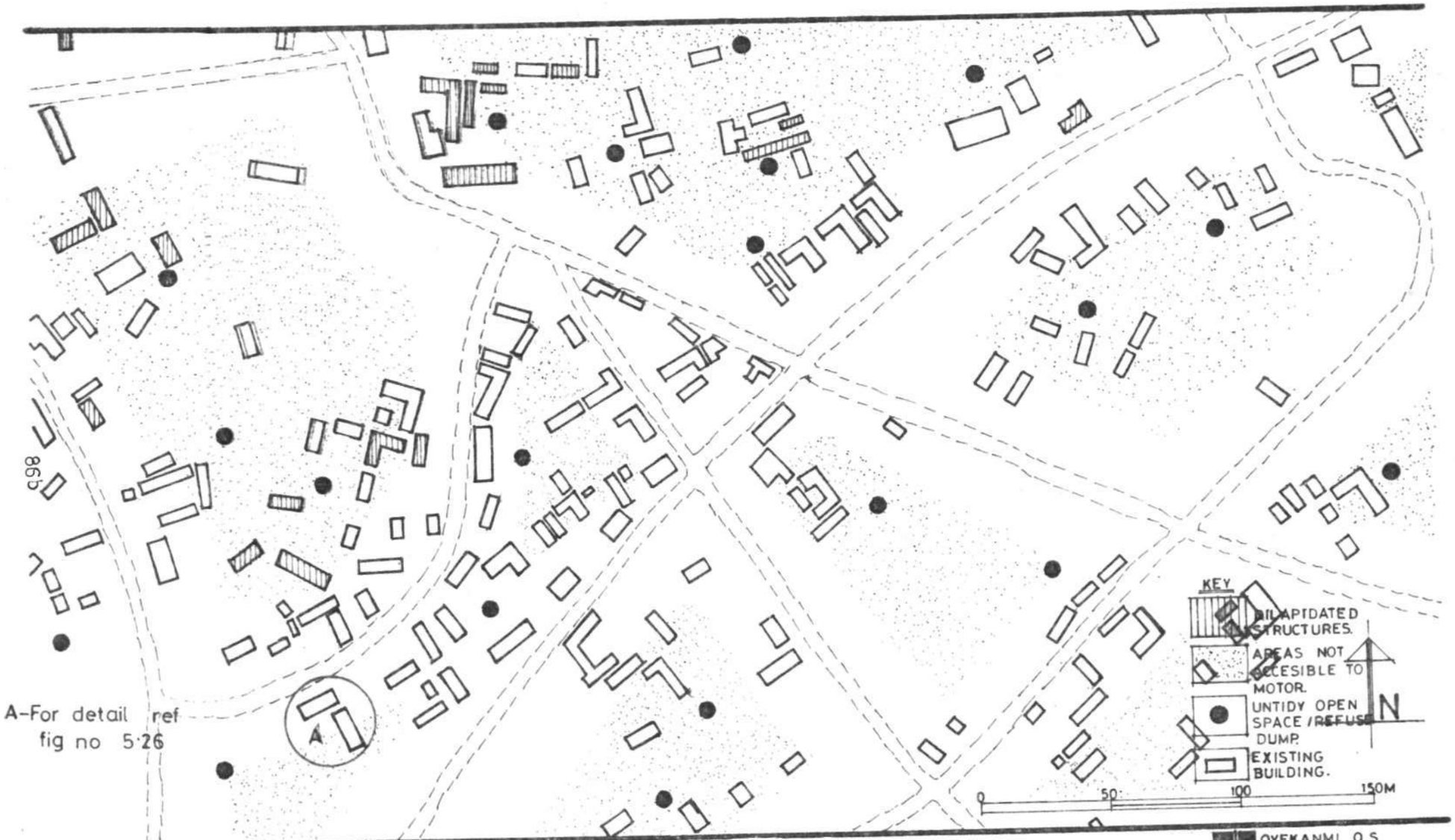


FIG. 5·24

EXISTING PHYSICAL PLANNING PROBLEMS

(A TYPICAL SECTION OF SABON TASHA)

OYEKANMI O S
M Sc THESIS 87/88
U.R.P.–A B U ZARIA.

SOURCE: Field Survey (Jan'88)

iii. Infilling of vacant areas within the neighbourhood. Opens spaces is provided through detailed landscaping of some defined spaces. The planning authority (Kaduna State Urban Planning and Development Board Authority) should enforce development control and building regulations. Also, the local government should extend their refuse disposal system to all neighbourhoods by clearing all refuse dumps and ensuring that each compound is served with collection vehicles (figure 5.25).

iv. Integrate this area with other parts of the metropolis by providing adequate infrastructural facilities, utilities and services such as good roads and drainages where they are lacking.

v. Upgrading incentives will be introduced in form of subsidised loans scheme and refusal by property owner to accept the loans, without carrying out the instructions within specified period, should be penalised.

vi. For the purpose of up-grading, co-operate organisations should be encouraged to take care of much of the financial component, while technical assistance are to be given as well so as to ensure that the standards specified are complied with. These include the provision of bath-rooms and toilets; and kitchen space per one house-hold (fig. 5.26).

vii. Emphasis is placed on individual maintenance of properties. This should be monitored by the local government.

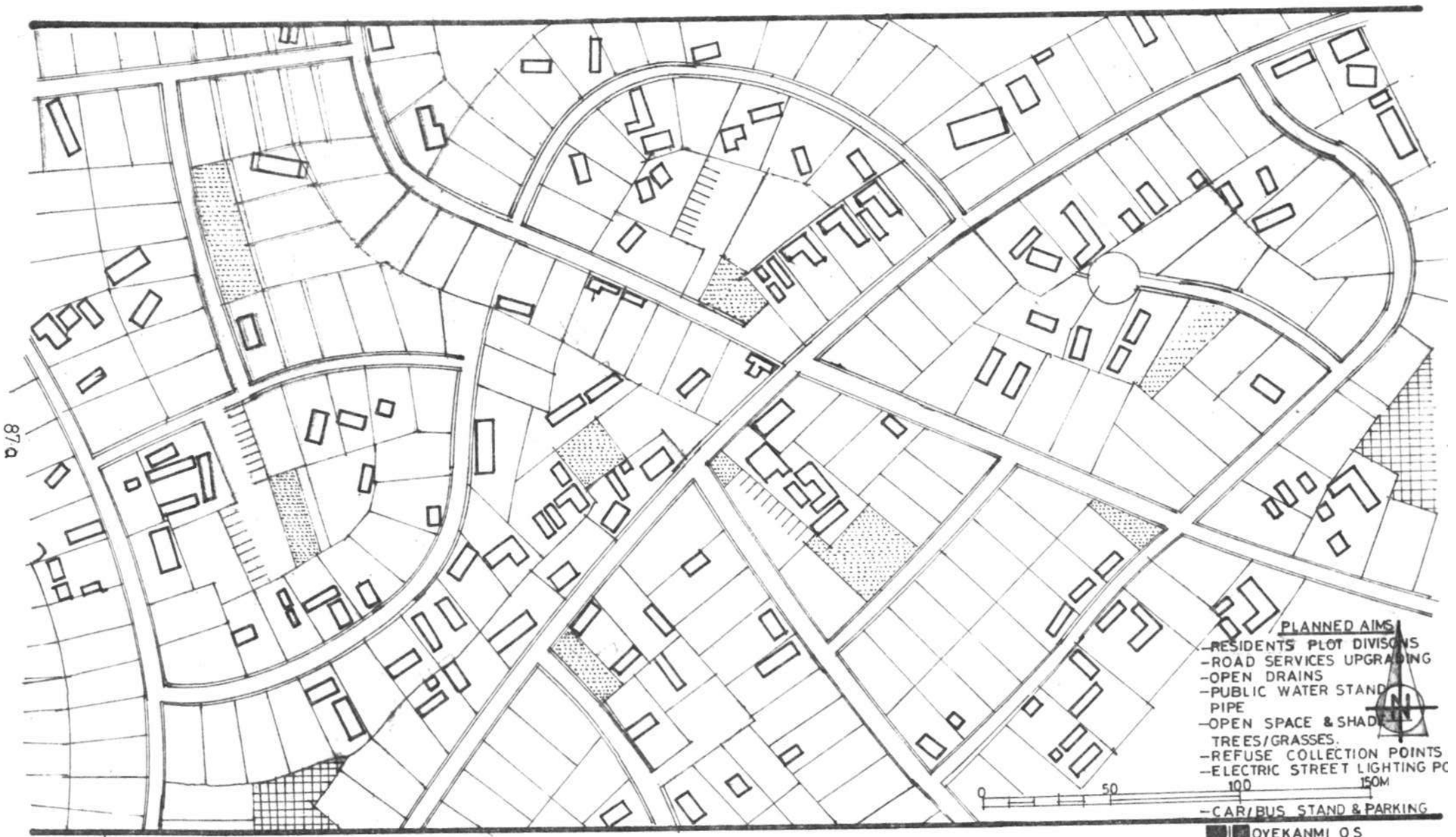


FIG 5·25

PROPOSED PHYSICAL PLANNING SOLUTIONS
(A SECTION OF SABON TASHA)

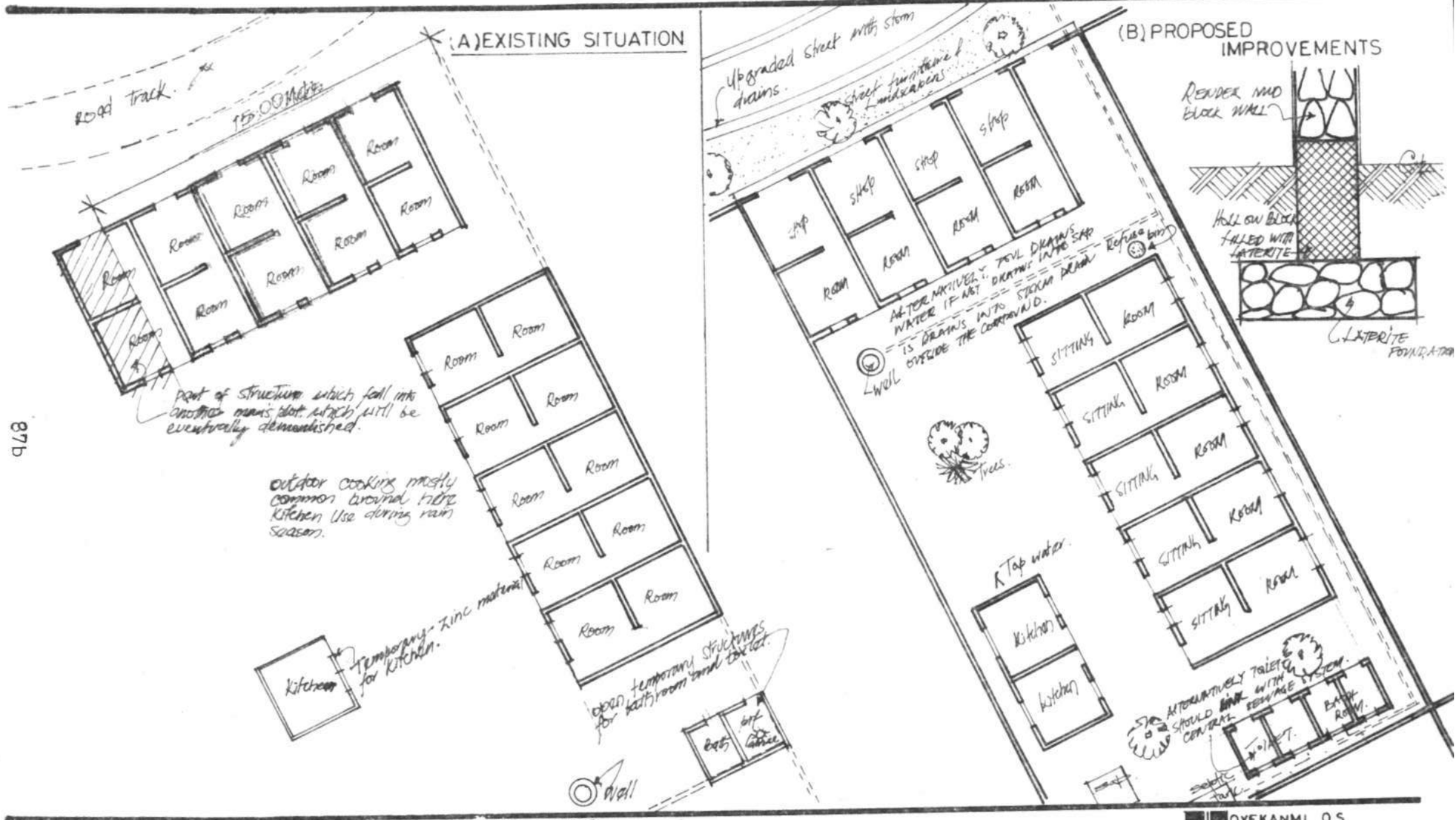


FIG. 5·26 PROPOSAL FOR RENEWAL OF HOUSING UNITS

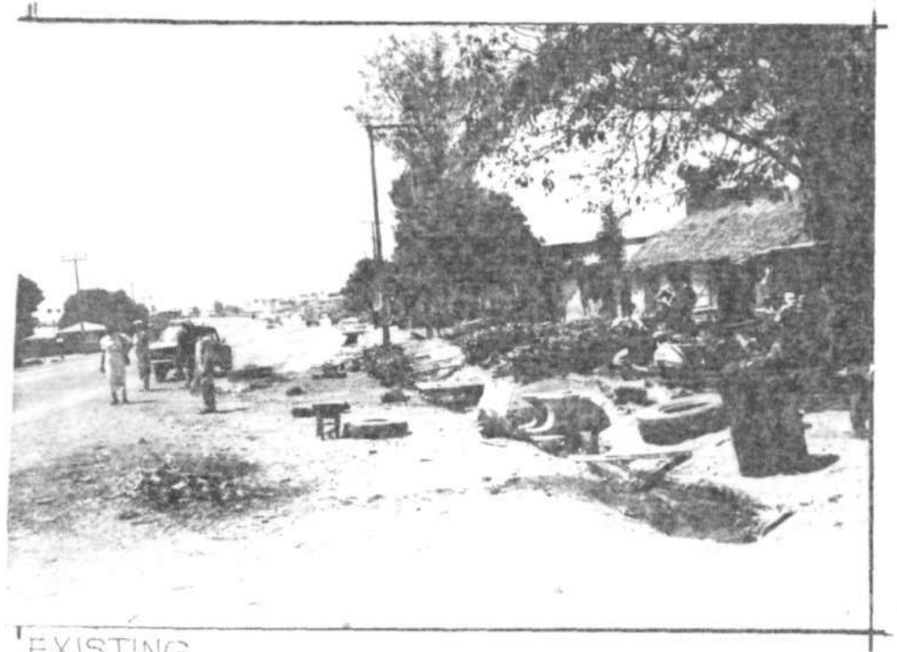
(RENEWAL OF SABON TASHA HOUSES)

OYEKANMI O S
M Sc THESIS 87/88
U. R. P. ABU ZARIA.

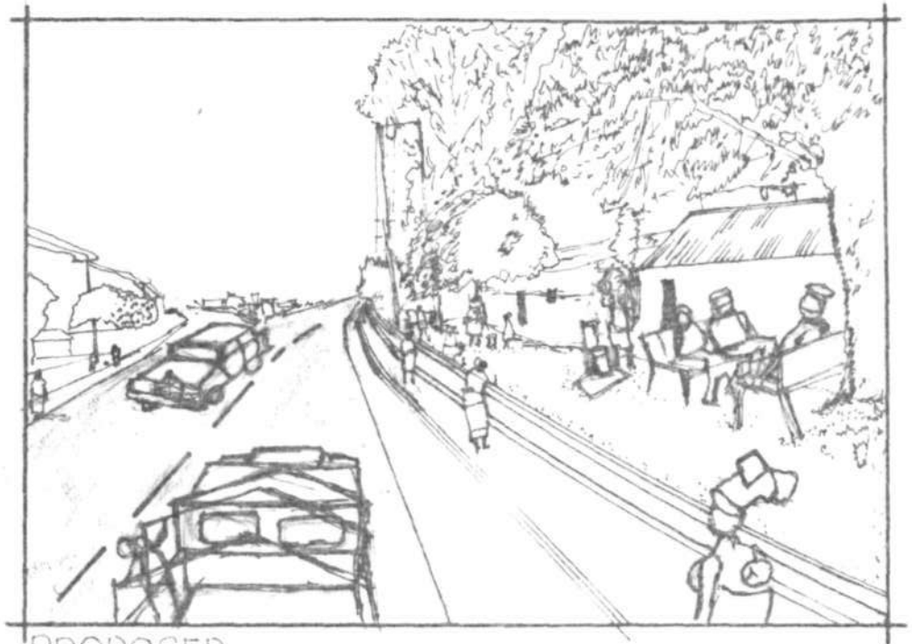
viii. Relocation of certain uses from an area where they are found to be unconducive due to non-conformity. These means that activities with characteristics (air, land pollution, like smoke, dust and noise) should be away from the living areas (Figure 5.27).

xi. Also, residential inter-relationship with other uses, such as grinding machines are proposed for the market area only where conforming use as located.

x. It is proposed to have public toilets as some residential units do not have toilets. Also, provision of toilets at commercial areas and motor park is recommended in the neighbourhood.



EXISTING



PROPOSED

IMPROVEMENTS TO EXISTING SITUATIONS ARE SHOWN IN THIS SKETCH. THE CARRIAGEWAY IS FURTHER WIDEN TO PROVIDE PARKING SPACE ALONG THE PEDESTRIAN PATH. DRAINS CHANNELS IS DEVELOPED WITH CONCRETE. RECREATION AREAS OR SMALL PARKS IS DEVELOPED TO PROVIDE A SOCIAL FOCAL POINT FOR THE USE OF LOCAL RESIDENTS AND VISITORS AS PLAY-GROUNDS. ALSO THE INCLUDE PROVISION OF AMENITY SUCH AS STANDPIPES, LANDSCAPE TREE PER COMPOUND EG. AZADARACH INDICA [NEEM], ACACIA SPP. AND EUCALYPTUS. ALSO SHRUBS LIKE Jacaranda, Hibiscus and Fruit trees: especially mango, guava and pistachio nut are planted in small clusters to create sizeable shade areas to provide a focal point, fruit etc

FIG	AN IMPROVEMENT PLAN FOR THE ENVIRONMENT	OYEKANMI O.S.
5·27	SABON TASHA KACHIA ROAD	M.Sc. THESIS 87/88
		U.R.P-A.B.U. ZARIA

Source: Field survey '88

part III

chapter 6

• DETAILED STUDIES ON BLIGHTEDNESS IN RIGASA

CHAPTER SIX: DETAILED STUDIES ON BLIGHTEDNESS IN RIGASA

6.10 INTRODUCTION:

The multiple index survey conducted, (Table 4.7) revealed that Rigasa is the most blighted area in Kaduna metropolis. These facts show that it requires urgent attention which is to be coupled with long term programme. Blightedness is associated with poor living environment that affect the residents' opportunity, financial, physical and mental resources. Blightedness is self-perpetuating resulting in crime, disease and juvenile delinquency which will affect the peaceful co-existence of the whole metropolis, if action is not taken to provide conducive environment for Rigasa.

6.20 EXISTING LAND-USE

Rigasa is essentially a residential area, which displays chaos in physical outlook. This arises partly from conflicting land-use (Figure 6.01 and Table 6.1). The total area is 1760 hectares.

This area is laid out in grid iron pattern, with unpaved and undefined roads except the major road which is paved. Nonetheless, the paved road has undefined drains, which has been eroded out by storm water (Plate I).Some access roads terminating abruptly as a result of absence of culverts.

FIG 6·01 EXISTING LANDUSE CONDITIONS IN RIGASA

TABLE - 6.1 Existing Land Use Proportions

Land-Uses Type	Percentage Coverage
Residential	62.0%
Commercial + Agriculture	6.7%
Public and Semi Public	11.5%
Recreation	1.3%
Transport Network	15.0%
Services Industries	0.5%
Utilities and Services	3.0%

The mixed land uses add another dimension to the quality of the residential neighbourhood. The mixing patterns include residential/commercial, residential/industrial, industrial/commercial, etc. The residential/commercial uses are found in almost all residential compound in every street. These are mixed vertically and horizontally or some units are used alternatively during day and night for petty trading and for sleeping especially around the commercial centre.

These activities cause competition for spaces between the commercial activity and motorists on street. Despite the Kaduna State Environmental Sanitation edict (1984) some illegal structures such as Kiosk and sheds are still constructed out of roofing sheets and sitted in the commercial areas.

The public/semi-public uses like Churches, Mosques, Schools etc exist in the area. Rigasa has(10) ten Churches, a Central Mosque close to the market which is fairly big and a number of small mosques/ Koranic Schools mixed with housing units. The Churches are located

towards the metropolis at the older aprts of the settlement and there are about 9 Nursery Schools established by individuals and Christian Organisations. There is only one Clinic (Rasraj Clinic) which is privately owned. There is only one Primary School behind the market which operates 2 shift daily. The Police Station and Alkali Court are located within residential buildings.

The recreational area present here is unorganised, but it fairly big. There are many incidental open spaces used for small recreational purposes, whereas some are used as refuse dumps.

The transport networks is largely unpaved and the recently developed ones are without drains. There is no provision for pedestrian paths, causing a struggle for supremacy, especially commercial area. The unpaved nature of the streets makes them seasonal as they are usually flooded with muddy water and suspension are discharged during the rainy season. The suspension also blocks the defined drains. The unpaved raods are usually dirty during the dry season as harmathan wind blows dust and litter.

There is also one major tarred road which abruptly ends at the Mosque (Plate III). Many of the unpaved roads are bad due to rain and heavy duty trailer movement, and some roads lack culvert links.

The service industries are indiscrimately located, irrespective of the obnoxious nature of their activities like auto repair workshops and grinding mills sited within the residential area. Sometimes, sections of residential buildings are converted into bakeries, or for brewing of local alcohol (Plate IV) or Petrol Filling Stalls. The nature of buildings and roofing materials contribute to the degenerated conditions and images (Figure 6.02).



PLATE I Open non-concrete storm drains channel showing the effects of erosion



PLATE II Refuse dump along the major road at the background of an uncompleted buildings. This is hazardous to young ones who look for some valuables within the refuse.



PLATE III Major tarred road terminate abruptly at the mosque, Buildings closeby are unconforming land [illegible] of petroleum products.

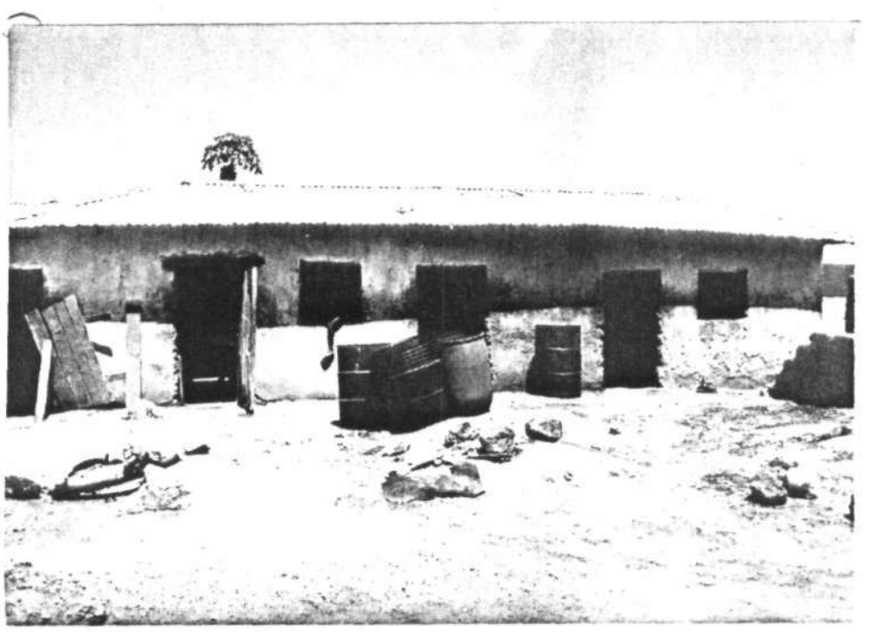


PLATE IV [illegible] Haphazard and ugly sight around clubs/hotel houses location



PLATE V Haphazardly organised buildings on site without demarcation for various activities.



PLATE VI Temporary material used in construction of illegal structures in available any open space.

6.30 CONDITION OF BUILDINGS

From the survey, it was noted that the historical development of Rigasa dated back to 1965, making the oldest buildings to be about 25 years. They are mostly constructed with mud, due to social value, low income and lack of linkage with the metropolitan centre through Rigasa River (Figure 6.02). With improvement in the linkage and some up-liftment in the economic ladder, some residents began giving a face-lift of cement mortar rendering on their mud walls and roofs changed into zinc sheets (See Figure 6.03).

However, to the South-East which is the first area of settlement many of the buildings are delapidated and largely dominated by mud buildings (See Figure 6.04).

To the North-West, most of the buildings are modern with materials such as cement-blocks, though some are also in bad condition due to illegal land and housing development activities. The number of dilapidated buildings is slightly high, which is mainly as a result of the lack of maintenance.

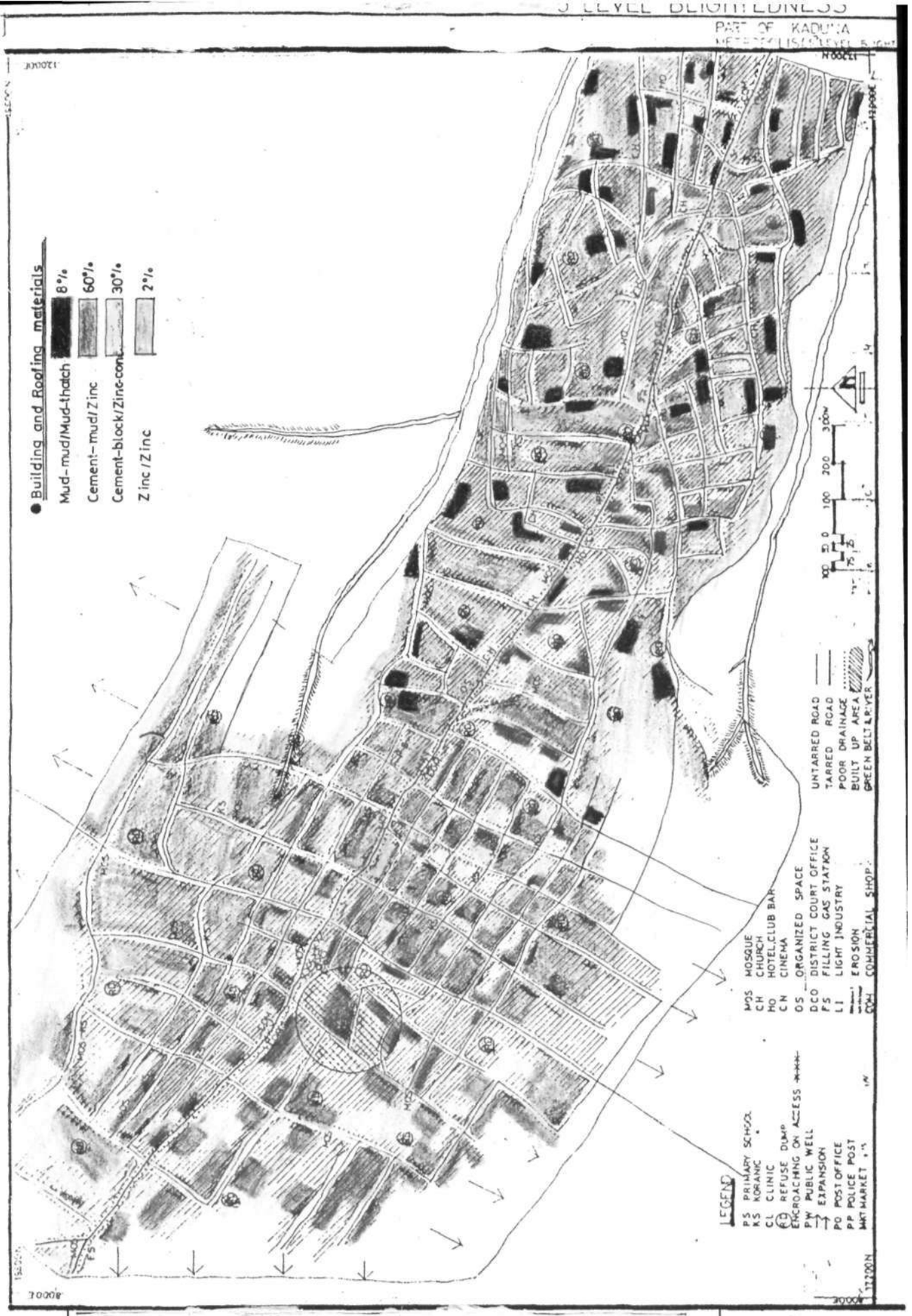


FIG 6·02 EXISTING BUILDING MATERIALS IN RIGASA

OYEKANMI O.S
M.Sc. THESIS 1988
URP – A.B.U. ZARIA

Source: FIELD SURVEY '88.

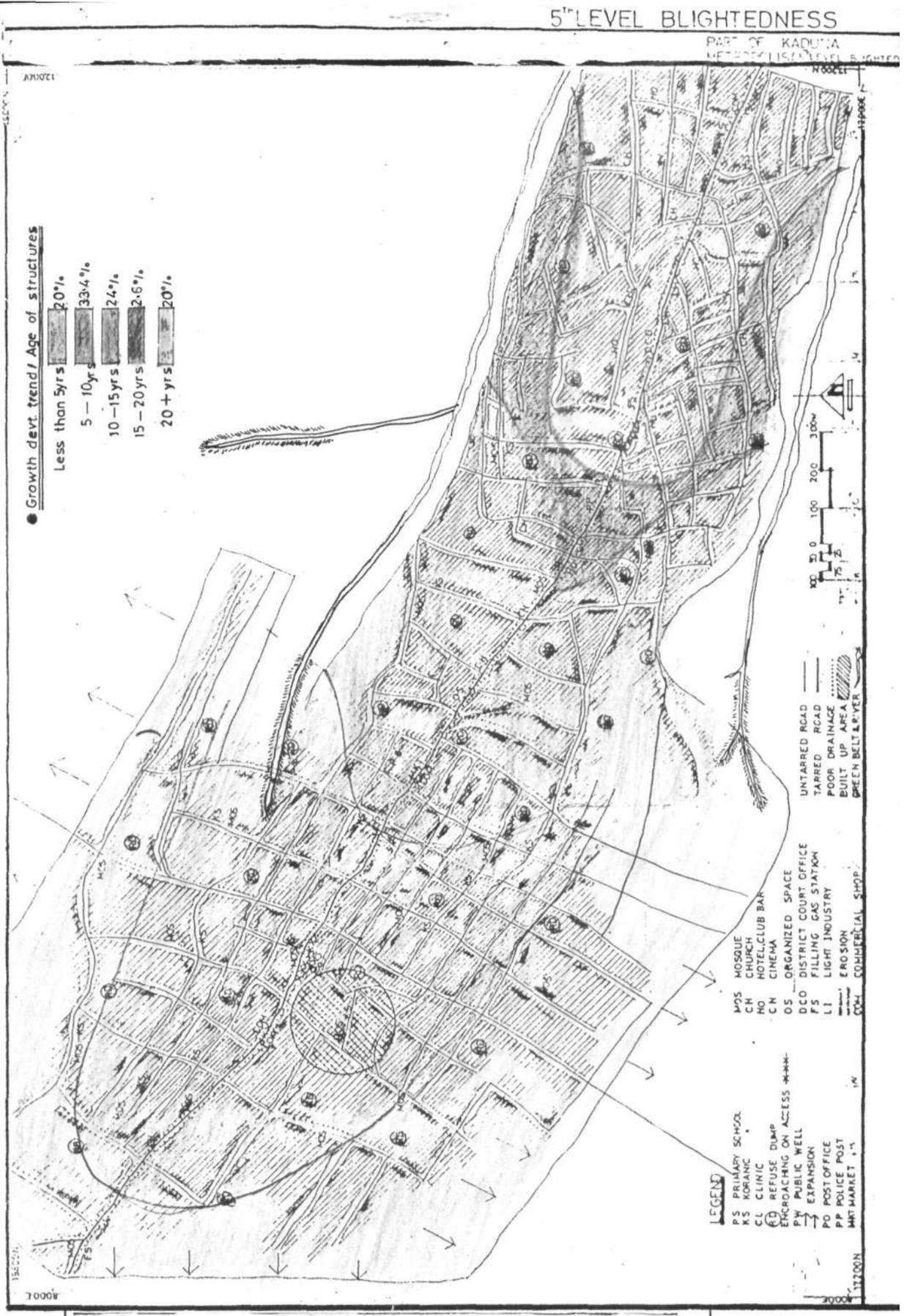


FIG 6·03 AGE OF STRUCTURES IN RIGASA

OYEKANMI O.S
M.Sc. THESIS
U.R.P — A.B.U. ZARIA

Source: FIELD SURVEY '88.

5TH LEVEL BLIGHTEDNESS

PART OF KADUNA METROPOLIS (5TH LEVEL BLIGHTE

FIG 6·04 EXISTING BUILDING CONDITIONS IN RIGASA

Source: FIELD SURVEY '88.

OYERANMI O.S
M.Sc. THESIS
U.R.P. – A.B.U. ZARIA

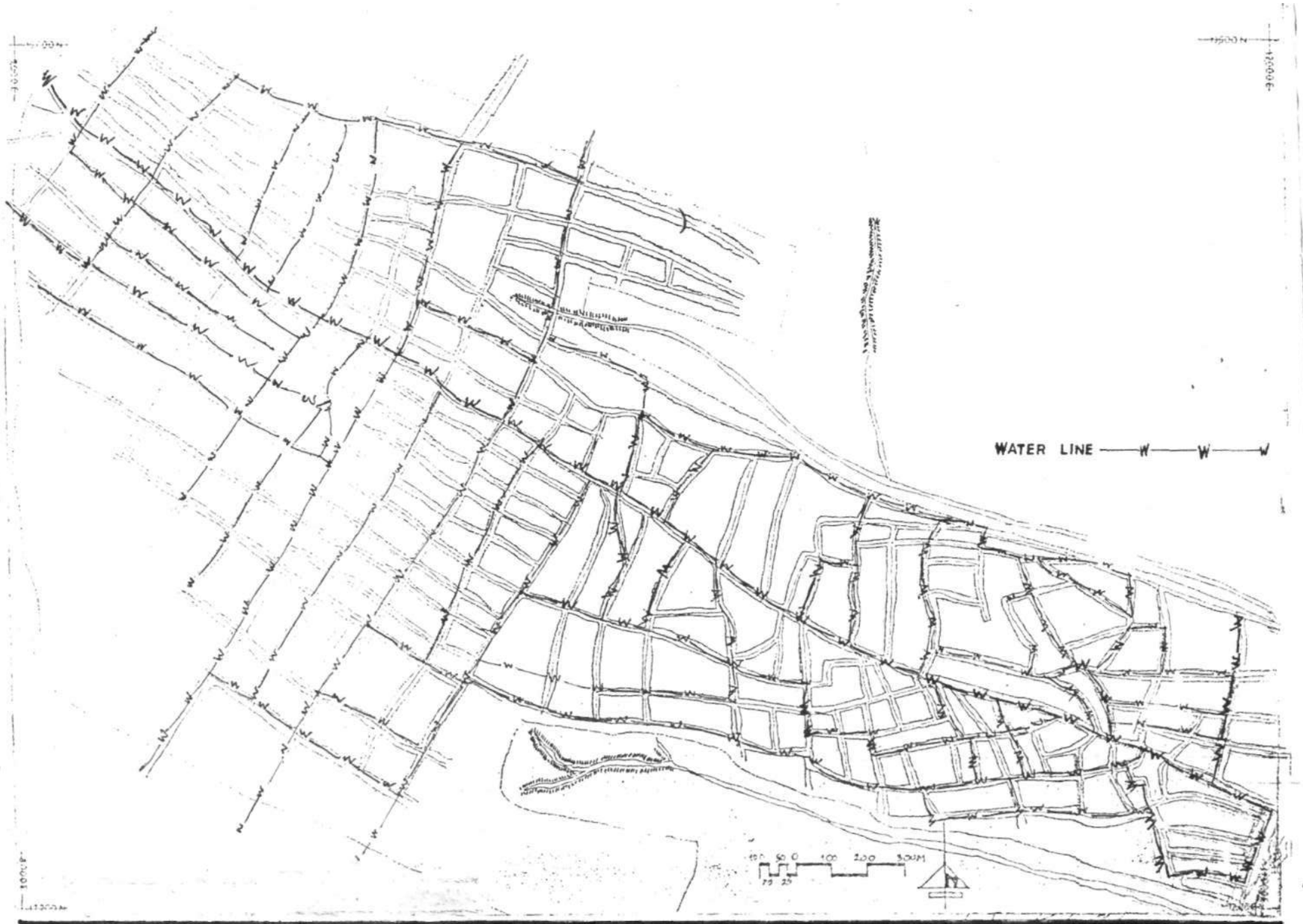


FIG 6·05 EXISTING CONDITIONS IN RIGASA: WATER SUPPLY NETWORK

OVERLAY: 05
M.Sc. THESIS 87/88
U.R.P. - A. B-U-ZARIA

6.40 CONDITION OF FACILITIES, UTILITIES AND SERVICES

(a) Water Supply

There is no provision of peipe borne water to each individual housing units in Rigasa. The main pipe system of Kaduna Water Board have just been laid through out the whole area by (WAPDECO) Water and Power Development company Limited. Under the World Bank. Third World Financing Project Schemes, Presently, most of the residents depend on well water which are privately owned within compounds (See Figure 6.05).

(b) Sewage

The lack of water supply and the low income status of most of the residents calls for pit latrines which form the major way of disposing solid waste.

These are indiscrimately located in the compounds without any though given to see-page of the waste water into the wells within the compounds. Sometimes they are closely located to cooking area, making them generally unkept and a health hazard.

(c) Sanitation

There is no organised form of refuse disposal within this area. These refuse are usually dumped in open spaces and open drains as to become health hazard especially during the rainy season. Also, bad odour are emitted from kichen wasts which are channeled into the gutter or pathways (See Figure 6.06).

(d) Kichen and Bathrooms

These facilities are generally shared within the compound. The survey finding is recorded on Table 4.4. Amongst its salient features is the fact that the housing condition is a reflection of low socio-economic status.

(e) Electricity Supply

There is no National Electric Power Authority (NEPA) connection linking Rigasa with the metropolis despite its closeness to Kaduna State National Electric Power Authority step down station. This is because the area belongs to different local government whose administrative centre is far away. This has kept the pace of development slower.

(f) Transportation network

Most residents walk or take public transport to their respective places of work as shown in Appendix A(I-IV). The Rigasa bridge is the only link to the metropolis. This causes road congestion. However, there are adequate unpaved roads within this area which are under-utilized. Pedestrians also use the same routes used by for vehicular access which have no hierarchical form. The inhabitants of Rigasa have only one road link closest to its neighbouring

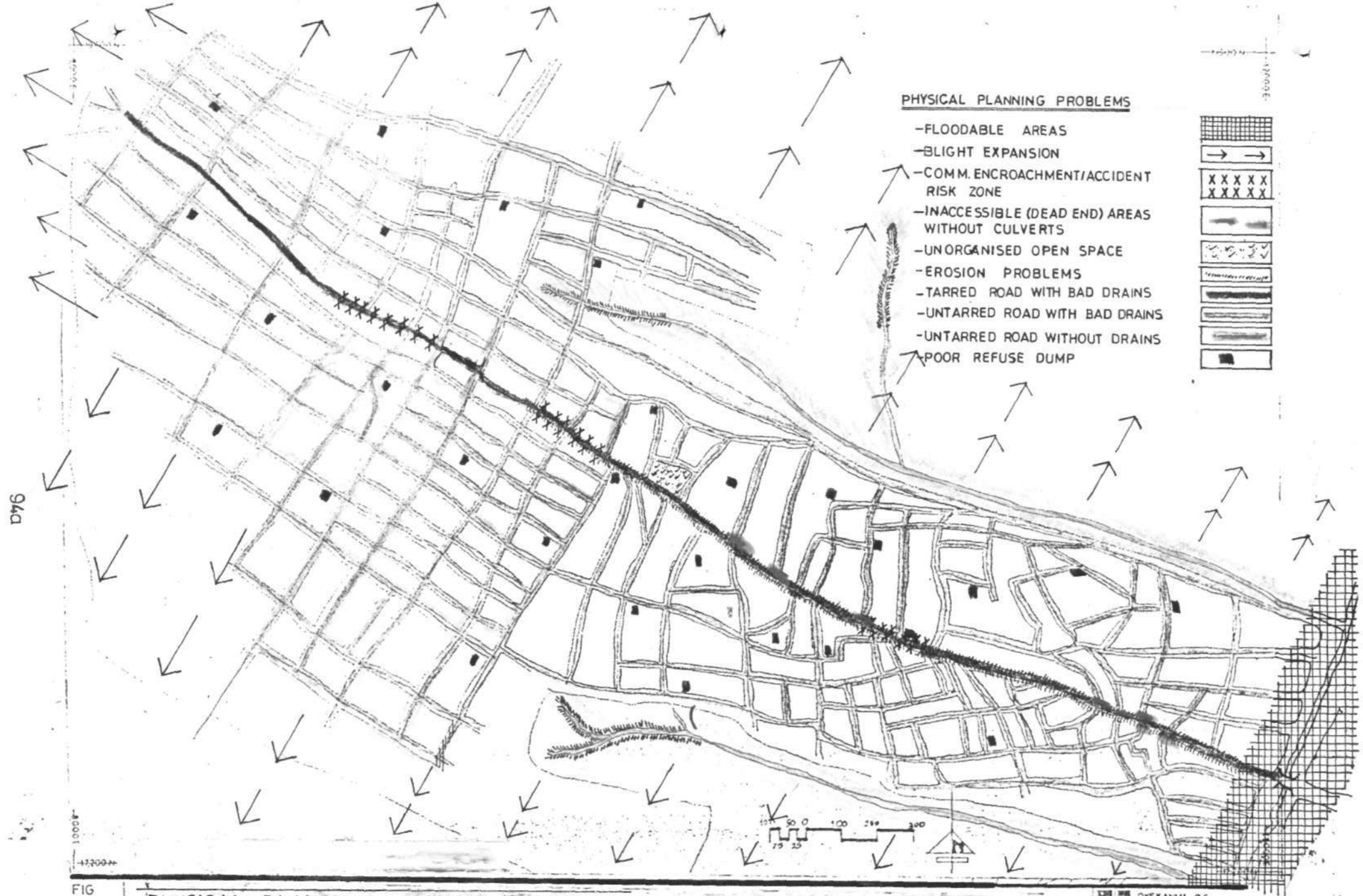


FIG 6.06 PHYSICAL PLANNING PROBLEMS IN RIGASA

Source: FIELD SURVEY '88

areas, which is through floodable river Rigasa bridge, that is usually cut off, occassionally during rainfalls (See Plate VII). This becomes clear that alternatives should be worked out for housing units in the floodable areas to reduce the traffic congestion on the bridge and improve the bridge condition (See Figure 6.07).

(g) Recreational Activities

There is a School-field and one open space. Out-door recreational activities is lacking in Rigasa as it can be seen from the survey findings, even when formal recreational activities are mostly desired by residents as shown by their responses. The in-door ones consist of a number of small private bars which are unorganised, a cinema and other forms of recreation activities like traditional ones. These are the least developed facilities in this area. Their haphazard location causes nuisance and environmental problems which need to be controlled.

6.50 SOCIO-ECONOMIC CHARACTERISTICS OF THE INHABITANTS

The age-sex structure of existing population was drawn up to enable one determine in what extent some of the facilities provided will meet the demands of the different age groups, such as Nursery Schools for 2-4 years category, Primary Schools for 5-10 year olds, Junior and Senior Secondary Schools for the 11-16 year category and University for the 17-20 years (Table 6.2).

Population distribution by places of work was plotted out to show the transportation needs of the residents in respect of their various places of work and also nature of their work (Appendix A (IV).

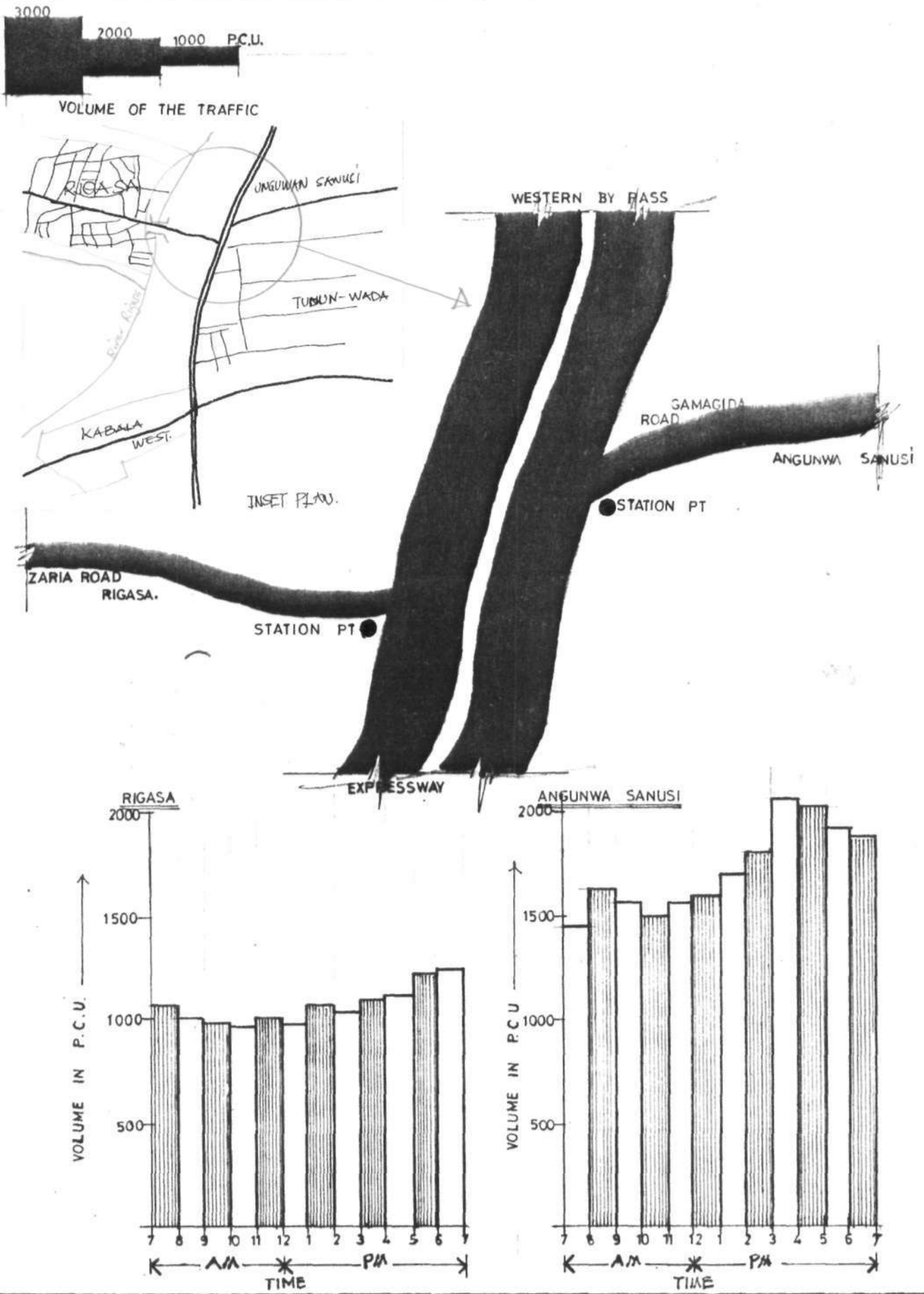


FIG. 6·07 VOLUME OF THE TRAFFIC ALONG WESTERN BYE PASS

OYEKANMI O.S.
M.Sc. THESIS 87
U.R.P.–A.B.U. ZA



Rigasa roads submerged after downpour

Parts of Rigasa village in Kaduna were over-flooded yesterday after a downpour which rendered many roads in the area almost impassable. Photo by ZUBAIRU RAHAMA shows some motorists and pedestrians trying to pass through one of the submerged roads.

PLATE VII

TABLE - 6.2 AGE-SEX STRUCTURE OF THE EXISTING POPULATION IN RIGASA

Age in Years	Male Population	Male Percentage (48.60)	Female Population	Female Percentage (51.40)	Total Population
1 - 4	7,580.0	23.4	8,503.0	24.8	16,088
5 - 10	5,586.0	17.2	7,028.0	20.5	12,604
11 - 16	5,511.0	17.0	5,623.0	16.4	11,134
17 - 20	5,350.0	16.5	4,903.0	14.3	10,253
21 - 40	6,517.0	20.1	4,355.0	12.7	10,872
41 - 45	4,422.0	1.3	617.0	1.8	5,039
66	1,783.0	4.5	3,207.0	9.5	4,990
	36,745 100%	(48.60)	34,236 100%	(51.40)	70,980

SOURCE: Field Survey 1988

From the graph, most (47 percent) residents work within Rigasa closely followed by those working in (35 percent) Tudun-Wada/ C.B.D. which have related commercial work like Rigasa itself. Then it is followed by this (15 percent) in industrial areas, in the South before those who work in other place like Kaduna North Secretariat etc.

(a) Occupational Structure

Appendix (IV) shows that the self-employed are greater in number, which probably explains why most (46 percent) residents work within Rigasa and the neighbouring Tudun-Wada Centre as farmers mainly. Others are traders, tailors, repairers, motor mechanics/vulcanizers etc. Some (10 percent) like to work in Kaduna Industrial Lay-out which is close to their residence to reduce transport costs and low rents costs. A sizeable proportion (12 percent) are farmers, who farm along the green belt or Fadama Land of River Rigasa.

(b) Income Structure

Appendix C (IV) shows that the majority (49 percent) of the residents earn less than ₦150.00 per month, with a very few of the resident who can afford cars of their own. Thus, these majority rely on the public transportation system to distance work places.

Inferences deducted have show that relocation should reflect the income level so as to meet the effective housing demand. in order not to reduce housing standards, the careful choice of construction materials are necessary and to be supplemented with adequa e essential utilities such as pipe-borne water, electricity supply, good drainage system, etc. The rent paid is a function of facilities provided as

reflected by the results of the survey that most facilities provided are shared. This is useful in the relocation exercise in regards to determining the affordable rents. The survey findings show that there is higher preference for rent to be determined on room basis rather than a whole house. Although both exist side by side the majority (50 percent) of people pay (maximum of ₦25.00 per month).

(c) Tenancy Distribution

This reveals that house tenancy pattern is a reflection of socio-economic status, where 78 percent are plot owners located in Rigasa, due to cheap available land. Some 52 percent of those who own plots are owner occupiers. The remaining 26 percent are land-lords. Some 40 percent of the residences rent houses, whereas others live with their relatives and 45 percent of the land was purchased since there was not form of government acquisition.

(d) Religious/Ethnic Structure

From the field survey, it became clear that indigenes settled at the North-West portion of Rigasa, a little far from the river bank. But as other ethnic groups came from other parts of Nigeria, the South-East portion close to the metropolis was occupied due to cheap available land. The South-East portion has more Clubs and are also dominated by Churches and Schools, while North-West is mostly Mosques and Koranic Schools.

(e) Opinion Toward Relocation

Residents' opinion toward relocation shows that owner/occupiers and Landlords opinion are different from those of the tenants. The owners have both social and economic interest at stake so they strongly object to relocation. The tenants are guided by economic consideration. From Figure 4.094D it is necessary that they will need persuation to up-grade their structures rather than sending them away from their land. Those who accented to relocation should be adequately compensated. This shows that some support is expected from the government especially financial aid and legal aid.

chapter 7

PROPOSED URBAN RENEWAL PROGRAMME FOR RIGASA AND ITS IMPLEMENTATION STRATEGIES

7.10 NEED FOR RENEWAL

It has been found out that the inhabitants of blighted residential areas contribute to the economic development of towns. But the blight is associated with lack of opportunities which affect physical and social images.

Generally, the study of blight which reveals that the poor living environment affect the residents' opportunity financially, physically and mentally which is associated with self-perpetuating crime, disease, fire hazard and juvenile diliquency.

To provide a conducive environment for dignified human beings and peaceful co-existence in blighted areas, approriate renewal programmes are necessary. The benefits include the appreciation of land values, and incentive to some residents by increasing availability of better quality houses with ultimate aim for the residents to purchase the house.

There will be redistribution of income if better quality houses are offered to former blight area dwellers, at lower rents plus plots at government subsidised prices which will reduce present rate of filtering down process. This allocation of resources results in the increase of property values, and aesthetic and cultural values. Other benefits are improvement in housing welfare and saving in cost of planning services which result in improving local finance. Hence, the upgrading strategy for provision of housing, facilities etc., is seen as means of government control toward economic and social development of Urban Centres.

7.20 GENERAL PREVENTIVE AND POLICIES

7.21 Preventive Measures

(a) Integrated Sub-regional Approach

It is recommended that the regional context should be integrated socially, economically and physically. This will lead to the provision of adequate site and service plots for immigrants who came into the metropolis in search of jobs.

Agriculture is encouraged and diversified into small scale agro-based industries. This is to be established to provide employment for the people and ready market for their farm produce. These are developed along side the provision of adequate water supply, electricity and other necessary infrastructure such as road network.

(b) Land acquisition and Building Permit

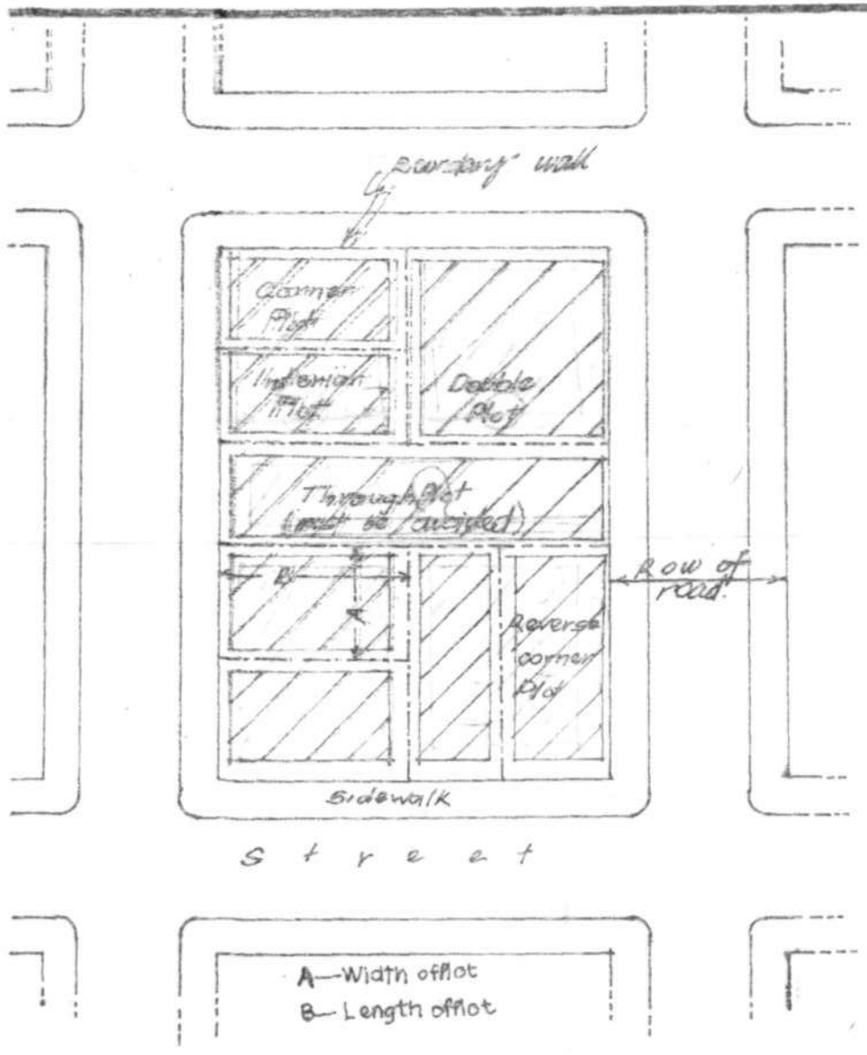
The existing land acquisition procedure should be made simple so as to increase the chances of the less privilledged people to acquire and develop plots at reasonable costs. It is recommended that the Kaduna State Urban Planning and Development Authority (KASUPDA) should be empowered legally over other Government agencies co-ordination. This will be achieved through defining their roles, which will include issuance of Certificates of Occupancy and permits to individuals to develop their housing units.

(c) Land requirement for future housing provisions

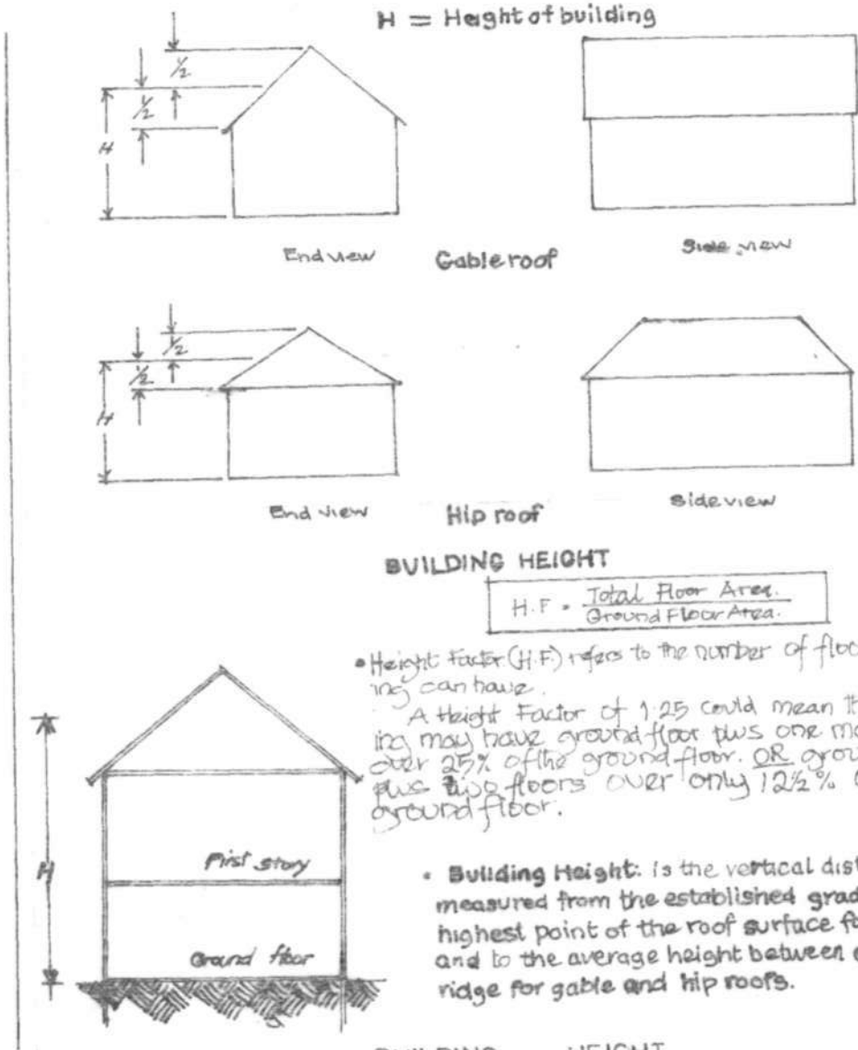
In order to plan for expected population growth, a projection is based upon the existing 71,000 population and expected growth rate of 3 per 2.6 occupant rate and 150pph density. This additional 2,750 population yearly will require about 1,065 habitable rooms which is 335 housing units. These would consist of 106 medium units and 249 low income units on plot areas of 7.16 hectare and 11.21 hectares respectively. This gives a total requirement of 19.37 hectares, for sites and services in Kigasa.

(d) Planning Standards

The standards used are in cognisance with the planning standards of a residential sector (Table 7.4b) The plot sizes and residential density, are to be a reflection of the people's socio-cultural background, their economic status and their level of building technology. These are flexible enough to accommodate any type of building design that will satisfy the technical standard such as set backs, building height, floor area ratio, etc., (Figure 7.01A). This effort is toward aiding and promoting locally produced materials and their building techniques.



TYPES OF ZONING PLOTS.



BUILDING HEIGHT

$$H.F. = \frac{\text{Total Floor Area.}}{\text{Ground Floor Area.}}$$

- Height Factor (H.F) refers to the number of floors a building can have.
  A Height Factor of 1.25 could mean that a building may have ground floor plus one more floor over 25% of the ground floor. OR ground floor plus two floors over only 12½% of the ground floor.

- **Building Height:** is the vertical distance measured from the established grade to the highest point of the roof surface for flat roofs; and to the average height between eaves and ridge for gable and hip roofs.

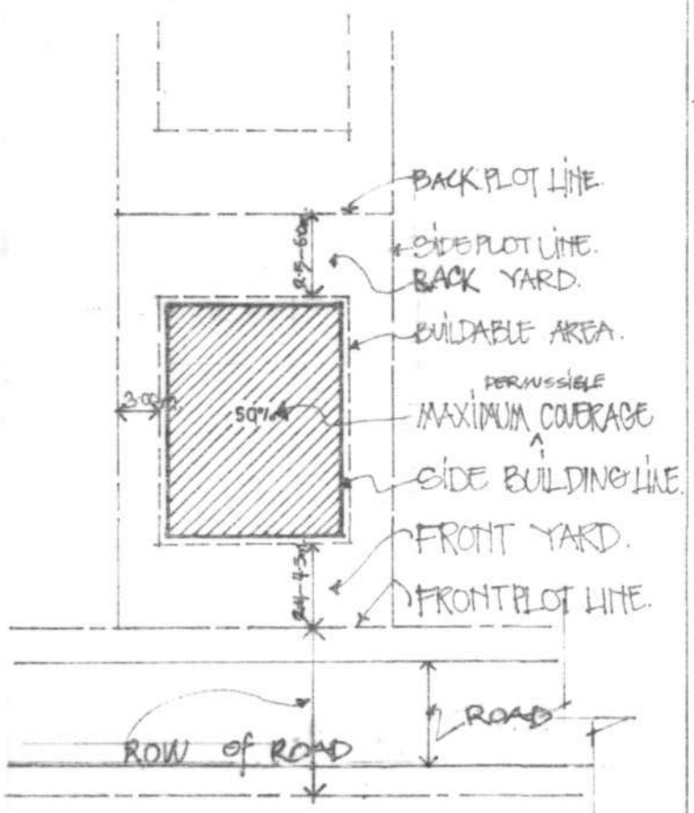
BUILDING HEIGHT

FIG 7-01 B

TYPES OF ZONING PLOTS AND BUILDING HEIGHT

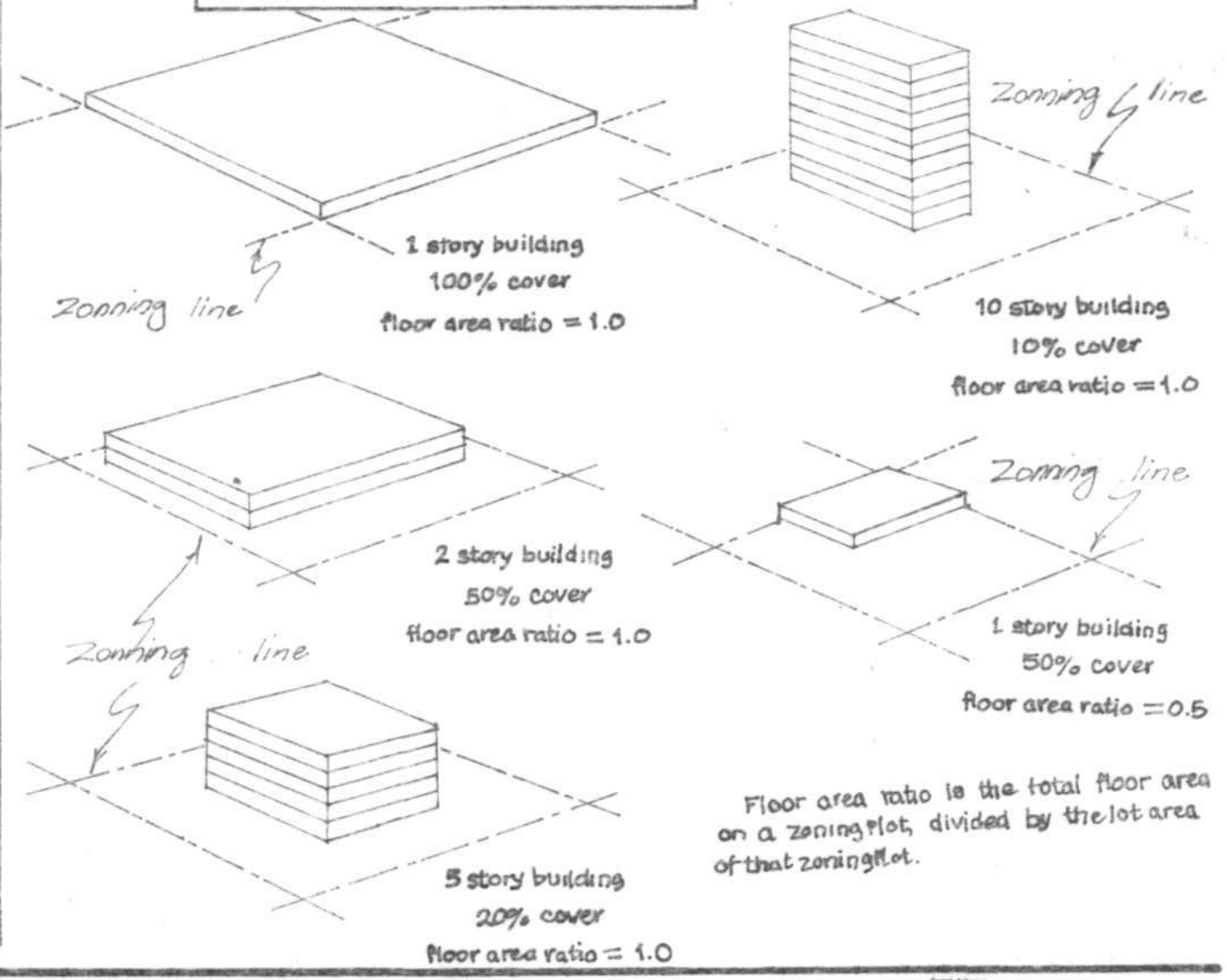
OYEKANMI O.S.
M Sc THESIS 87/88
U.R.P.–A.B.U. ZARIA

Source: JOSEPH DE CHIARA 1982 Planning Design Criteria.
LEE KOPPELMAN Pg. 329.



MINIMUM SETBACK REQUIREMENTS IN METRES

$$F.A.R. = \frac{\text{TOTAL FLOOR AREAS}}{\text{TOTAL PLOT AREA}} \times 100$$



Floor area ratio is the total floor area on a zoning plot, divided by the lot area of that zoning plot.

FIG. 7.01A — MINIMUM SETBACK REQUIREMENTS IN METRES AND FLOOR AREA RATIO

SOURCE: JOSEPH DE CHIARA 1959, PLANNING DESIGN CRITERIA. LEE KOPPELMAN

OYEKANMI O. S.
M Sc THESIS 87/88
U.R.P-A.B.U ZARIA

(e) Development Control

The edict establishing Kaduna State Urban Planning and Development Authority (KASUPDA) ensures that any piece of the metropolitan land, that is, land within a radius of 40 kilometres from the centre of Kaduna, should be the responsibility of KASUPDA. It is to prepare design schemes for development.

For effective implementation and co-ordination, Zonal Offices are to be established in each District/Community Centre. These would be under the Central co-ordinating the metropolitan headquarters. This will take care of the Districts down to the neighbourhood level and co-ordinate physical development activities of the various government establishments at the district level.

The Table 7.1 below shows the minimum set-back standards adopted in the proposals as derived from review of various types of residential developments by Vagale (1971).

TABLE - 7.1: Minimum set back of housing units (See Fig. 7.01)

Types of Residential Development	Accepted Minimum Set-back for a normal plot size (in metres)		
	Front	Side	Back
Improvment of Sub-Standard Area	2.4	1.8	3.0
Normal Housing Development	4.6	3.0	6.0
Standards Adopted	3.4	2.5	4.0

SOURCE: Vagale (1971) Manual of Space Standars for Urban Development in Western State of Nigeria, Technical College, Ibadan, Oyo State, Nigeria, P.13

The above minimum requirements are applicable for a maximum building height of 9 metres in Normal Housing Development (Table - 7.2). The side and the backyard width shall increase by 0.6 metres for every 3 metre additional building height proposed, as recommended for Kaduna Metropolis.

Table 7.2: Building Height requirements

Maximum Permitted Number of Storey	Maximum Building Height Corresponding to Number of Storery (in metres)
1	3
2	6
3	9
4	12

SOURCE: Kaduna State Urban Planning and Development Authority (KASUPDA).

Figure 7.01 shows that all types of buildings and location within one plot area is given in maximum number of permissible ratio. The maximum permitted number of storeys include all the upper floors. Any structure above ground recess from the building line is also considered as a storey and it is included in the number of storeys to determine the maximum building height. Basements are excluded from the estimates for the defintiion of maximum permitted number of storeys. The maximum number of storeys and the corresponding height of buildings in metres shall be fixed in accordance with above Table 7.1.

7. 22 Building Regulations

Building bye-laws at different stages of development will be administered to meet minimum planning standard (culturally) through proper design so as to achieve some degree of aesthetic values and to fulfil zoning goals, etc.

Others measures enforced:

- Density Control and height zoning discussed earlier (figure 7.01 A/B)
- Setting of building in accordance with stipulated floor area ratio
- Minimum plot size for various types of construction
- Design standard that ensure good sanitation and sewage
- Types and quality of building materials
- Alignment of access roads
- Special regulation governing the construction of temporary structure and sub-division
- Open space shall be provided on every side of any building in accordance to minimum set back requirement
- Every room should have external windows which is equal to at least one tenth (1/10 of the floor area of such room)
- The floor of bath-room should be cement screed, one per 6 persons is recommended and the toilet and openings should not be nearer than 2 metre to other such opening as Kitchen food-store, etc.
- Higher hierarchy of road should be tarred and other will be tarred when the economy improved
- Pedestrians movement is emphasised with less clash with vehicular routes

7. 30 RENEWAL PROPOSAL AT METROPOLITAN LEVEL

7. 31 Proposed Renewal Programme

The proposed renewal programme is based on the results of the study if environmental blightedness in Rigasa, which called for comprehensive up-grading renewal scheme.

The proposed programme has been treated at two levels, that is, from district/community level and housing unit levels, which are considered macro and micro levels respectively. At these levels, preventive and curative measures of the proposed programmes are evolved, respectively. At macro level, preventice measures deal with problems of land-uses zonning for different activities and its inter-regional linkages. But at the micro level, curative measures are directed at the most blighted Rigasa areas. Specific detailed renewal proposals and implementation strategies have been suggested.

These proposals makes use of four main design criteria as follows:

i) Population Size

ii) Existing land-uses in relation to residential

iii) Present Housing Units and Public facilities, Utilities and Services

iv) Physical planing boundary for the district

7.32 Design Principle

For the proposed Renewal Programme, Kaduna Metropolis is divided into seven districts (See Figure 7.02). Each district which has an approximate population of 250,000 persons is regarded as district/community Unit (See Table 7.3). But within each Unit, there are to consist of at least two residential sectors.

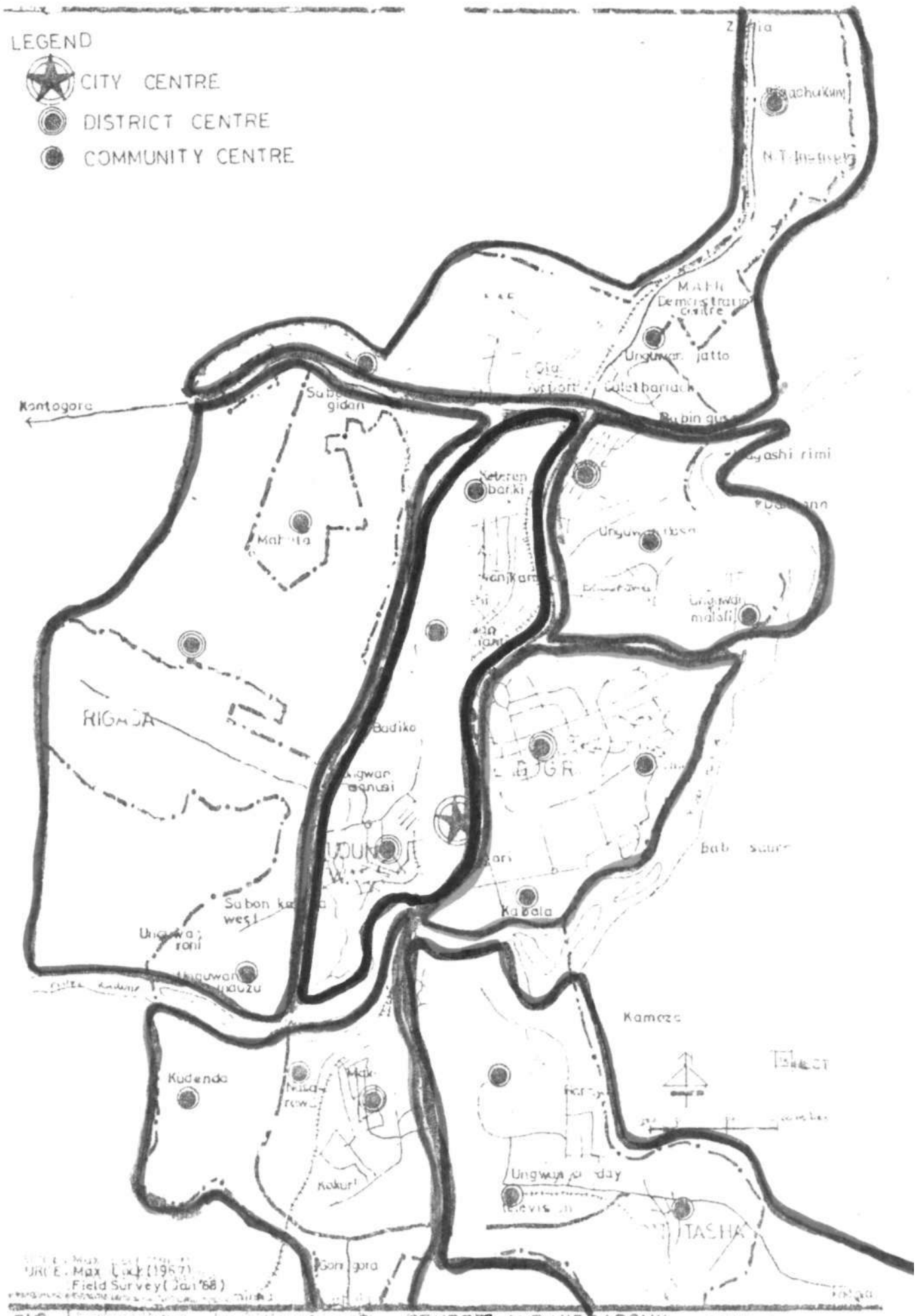


FIG 7·02 PROPOSED PLANNING UNIT CENTRES AND HIERARCHY FOR THE IMPLEMENTATION OF URBAN RENEWAL PROGRAMME

Table 7.3: Proposed Planning Hierarchy for Kaduna Metropolis

	District Planning Unit	Area
i.	Rigachukwu - Mando	2125 Hectare
ii.	Rigasa - Afaka	5475 "
iii.	Kawo	3250 "
iv.	Tudun-Wada - Kurmi Mashi	4125 "
v.	Central Area	4250 "
vi.	Sabon Tasha - Kudenda	4525 "
vii.	Makera - Kakuri	4775 "

In Rigasa - Afaka district, there is a proposal for four (4) Residential sectors.

7.33 Design Concept - Plan Proposal

The proposal (See Figure 7.03 A-C) calls for the status of Rigasa at the Regional level and it is to involve limited relocation. The main objectives is to inject linkages, housing units, public facilities, utilities and services while simultaneously providing income and employment for the inhabitants within their neighbourhood.

The basic resources which serve as vital ingredients of this redevelopment are:

(a) Integration of unsuitable land, which served as green belts especially the Fadamaarea of the river bank for agricultural purpose. This will be the basis for Agro Allied industrial project. The non-Fadama area will be used for landfill waste disposal system and some parts could be preserved as organised open spaces.

(b) For effective change and functional roles due to closeness and influence of the metropolis, the increase in population will be reflected in the reduction of the

proportion of workers engaged in agriculture as oppossed to increase in Industrial/Commercial, transportation etc. There is a need for adequate provision of these services within the Land-Use (See Tables 7.4A and 7.4B).

(c) The future development is dictated by the existing growth trend and the present population. The land-use planning should take care of wind direction to minimize health hazards by segregation of industrial land uses from others by having a system of green to further purify the atmosphere.

(d) The concept of mixed uses in applied for effective functional relationship within each district/community unit down to residential sectors as defined by main residential streets. The proposed general road hierarchy is as follows:

		Right of Way
i)	Regional highway/Expressway	40m
ii)	District route/Urban Arterial	30m
iii)	Main residential collectos and	20m
iv)	Minor Streets	15m

7.34 Site Analysis

(a) Topography of the Area

The topography of the area within the existing Site is relatively flat with rolling terrain, but it is suitable for meaningful development. There are few natural drains directly toward the streat which are incorporated into the system of green belt which is preserved in the design.

(b) Built-Up Area

The existing built-up area is properly integrated through provision of adequate and necessary infrastructure. This is ensured in the proposed design.

(c) Physical Constraint

The physical barrier should be integrated except such barrier as regional road, which will act as the boundary or present development designated as Rigasa district. Other factors are drainage pattern water bodies/water table, soil type/geology, type of structures. Also included are natural, manmade, cultural and aesthetic factors.

(d) Land-Use Zonning

Three alternatives are proposed for centres:

i) Firstly, the provision for one district centre with a mixed land-use within the existing residential use so as to integrate other complementary uses plus the proposed residential units within the Rigasa district (See Figure 7.03A).

ii) Secondly, the provision of two residential area centres within the new proposed residential units, so as to reduce relocation of existing housing units (See Fig. 7.03B).

iii) Thirdly, the combination and synthesis of the two preceeding alternatives, (See Figure 7.03C). This alternative is adopted based on population and land evaluation. This is because this concept combines the best features of the other two concepts.

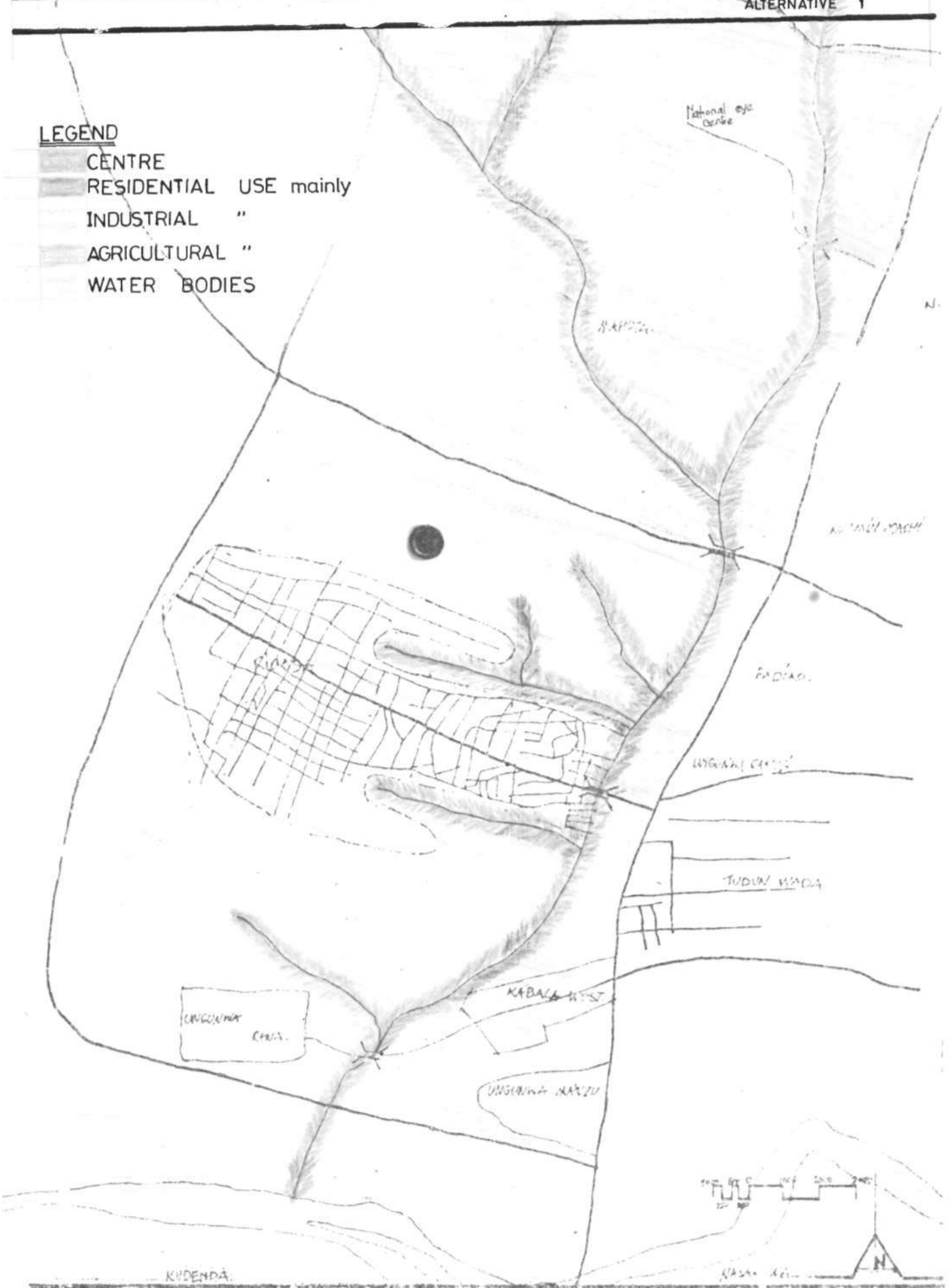


FIG 7·03A PROPOSED LOCATION OF CENTRES AND LANDUSE PATTERN IN RIGASA

DEKANMI O.S.
MSC THESIS 87/88
RP-A B. ZARIA.



FIG 3.03b PROPOSED CENTRES FOR RIGASA

MOYEKANA O.S.
MSc THESIS EVE
RP-A B U ZAR

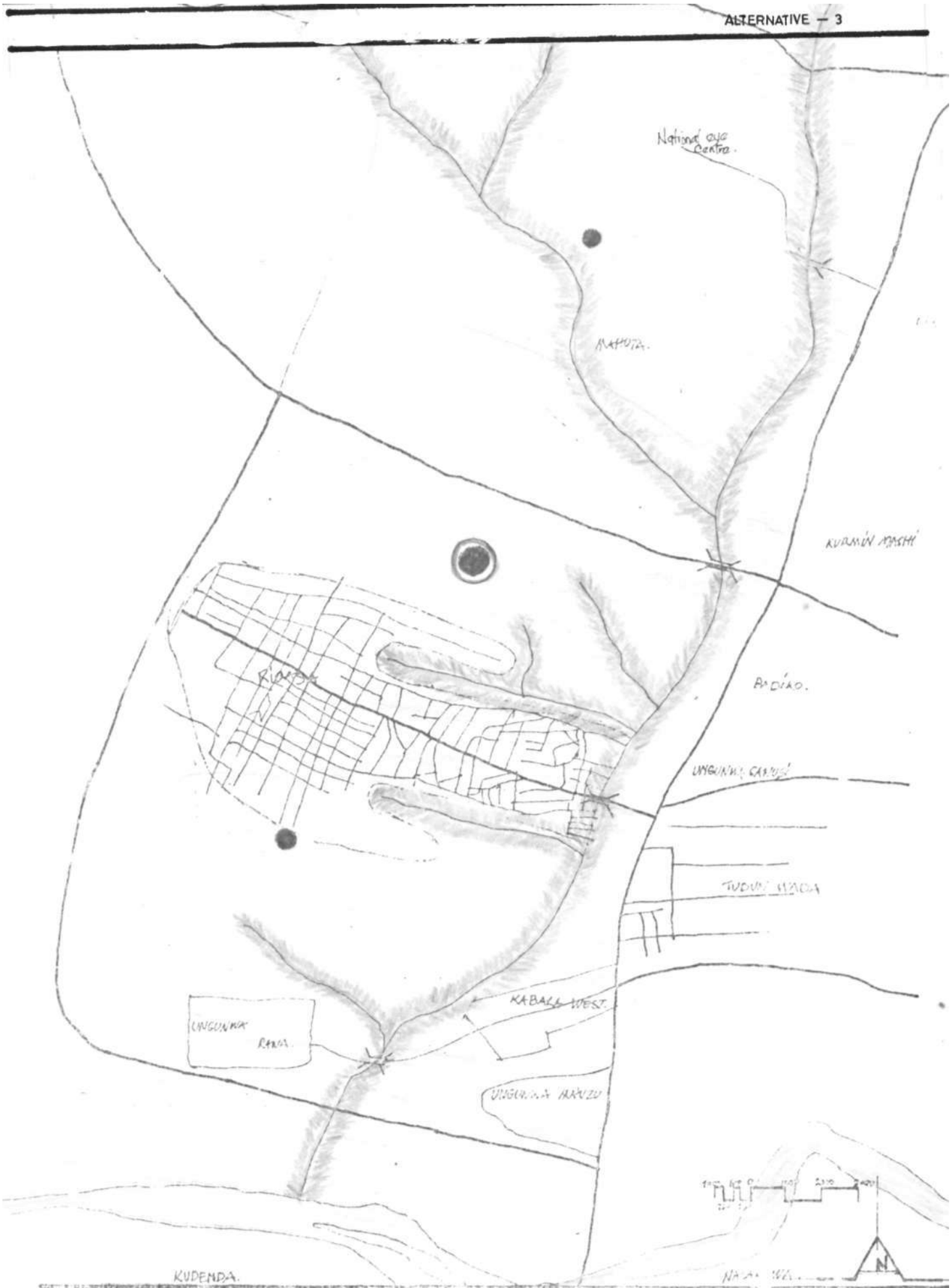


FIG 7·03 C PROPOSED CENTRES FOR RIGASA

OYEKANMI O.S.
MSc THESIS 87/68
U.R.P.-A.B.U. ZARIA.

7.40 PREVENTIVE PROGRAMME FOR RIGASA DISTRICT

7.41 Design Concept

This is physical planning and policies oriented. Factors affecting the general plan concept of the design are as follows:

i) Creations of central planning authority for development control within the centres, which is based on convenience, efficient operations of centralized amenities and even distribution. These will stop piece-meal development and preservation of some structures and unco-orinated pattern of settlements are integrated with the hierarchy of roads.

ii) Fragmented and unco-ordinated pattern of settlements are integrated with the proposed roads hierarchy.

iii) Improvement of individual housing units, facilities, utilities and services such as shops.

iv) The surrounding area should be accessible to central activities within a basic harmonous functional relationship.

v) Provision of adequate public facilities, utilities and services.

vi) Adequate provision of waste collection and disposal system.

vii) Phasing programme and policies for implementation.

The proposed concept is based on flexibility, attractiveness, proper functioning, convenience, safety and economy. The proposed concept involves efficient road network with plot layout on one hand and location of district/community centre on the other hand. This road system integrates predestrian walkways or precint and adequate parking provi-

vision to ensure segregation of traffic. Also incorporated within the design is the traditional design concept based on the natural features of the site.

7.42 Alternative Design Concepts

A Dispersed Linear Concept

The dispered Residnetial Centres are on a linear axis, this is to provide flexibility, while a pedestrian spine relates to these major routes and large open spaces (See Figure 7.04A).

B Compacted Square Form Concept

This is based on a grod-iron pattern where all the existing buildings are paralled and at right angle to the roads.

This system facilitates easy laying out of individual buildings and infrastructure for simpler and quicker operation (See Figure 7.04B). The consideration is based on central location of one district for proper functioning.

C Curvilinear (Sweeping Curve) Concept

In this concept, the circulation pattern provides a constantly changing viw of Urban Scope as a good constrast to the straight vertical and horizontal plans (See Figure 7.04C).

ALTERNATIVE CONCEPT – A



FIG 2.04A

PROPOSED LINKAGES

SOURCE

OYEKANMI OS
M.Sc. THESIS 87/88
U.R.P.-A.B.U. ZARIA



FIG 7·04B PROPOSED LINKAGES

ALTERNATIVE CONCEPT – C



FIG 4.04C

PROPOSED LINKAGES

SCALE

OYEKANMI OS
M.Sc. THESIS 87/88
URP-ABU ZARIA

7.43 EVALUATION AND APPLICATION OF THE ADOPTED CONCEPT

For the evaluation and selection of the most suitable of these concepts, some criteria are used. These include visual characteristics and economy. The result (See Table 7.32) suggests that concept 'B' is the most acceptable in terms of long-term advantages and integration (See Figure 7.04).

The Goals Acheivement Matrix technique is used in the evaluation of these proposals. This is based on some evaluation criteria which are assigned weights (Table 7.32). A rating scale is prepared with scores. Using the evaluation criteria, scores are assigned to each proposal. The scores are multiplied by the weights of each criteria. These are added up to give the total scores for each proposal. Result of the evaluation shows that Concept B has the highest Score. It is therefore adopted for the detail proposals.



FIG. 7·04 ADOPTED PROPOSAL FOR CENTRES AND LINKAGES

OYEKANMI-OS
M.Sc. THESIS 81188
U.R.P-A B U ZARIA

SOURCE:

TABLE 7:32 EVALUATION OF ALTERNATIVE CONCEPTS

EVALUATION CRITERIA	WEIGHTS	ALTERNATIVE CONCEPTS A		B		C	
		SCORE	TOTAL	SCORE	TOTAL	SCORE	TOTAL
1. Flexibility of land toward population need	5	4	20	4	30	3	15
2. Attrativeness/ Accessibility/Visual character	4	3	12	5	20	2	8
3. Proper functioning	3	2	6	4	12	3	9
4. Convenience	2	5	10	5	10	4	8
5. Safety	2	3	6	4	8	4	8
6. Economy	1	2	2	5	5	1	5
TOTAL			56		75		53

Rating Scale

5	4	3	2	1
Very High	High	Fair	Low	Very Low

7.50 CURATIVE RENEWAL PROGRAMME FOR RIGASA

7.51 The Basic Framework:

Rigasa has been shown to be the most blighted area. This has been selected for a detailed application of the most appropriate renewal progamme. This also shows how the same degree of blightedness elsewhere could be technically solved. The programme applied is geared towards up-grading of housing units and the general environments, infrastructure and community facilities. This is a solution which ensures gradual improvement on reasonable scale, through mobilization of local resources and community participation with minimum level of dislocation.

The up-grading programme tends towards a design approach to the blight problems. This is formulated based on specific goals and objectives of the design solution.

7.52 GOALS AND OBJECTIVES OF THE DESIGN

(a) Goals

To improve the environmental quality of the area, through provision of adequate infrastructural and community facilities. The other is to revitalize housing condition.

(b) Objectives

i To identify the growth trends (development) and integrate these trends into convenient living pattern

ii To propose a pattern of growth within the economic and social status of this planning unit.

iii To provide an integrated system of facilities, utilities and services within the area so as to promote health, safety, and general welfare

of the residents.

iv To structure the physical development pattern in such a way as to make it a complete entity at each phase of development.

v To promote local participation for implementing the programme.

7.53 PROPOSED SCHEDULE OF REQUIREMENTS FOR THE DESIGN RIGASA:

The field survey findings reveals that there is need for space for new developments considering the number of people that will be displaced and to take care of growth. This calls for projection of various land-uses to meet both the demand of the existing shortages in the area and the future demands. The future land requirement has been computed according to various land-uses existing in the area as well as newly proposed ones to reflect the proposed overall density for the area.

Three standards are used for determining the adopted standards. These adopted standards may be used in development in Nigeria such as Rigasa (Table 7.4A). Neither of the two up-grading standards considered alone reflected the area required by each facility. This is because there is limited space between the developed area.

The standardsproposed in the Zaria Master Plan, is considered in terms of the facility per unit of population and the amount of land required by each facility. In some cases the standard proposed are adjusted to suit the study area based on other factors like available land taking the year 2000 as the target year of the scheme being proposed. And, the population projected for the same year is about 150,000. This is used to determine the requirements on the basis of the adopted standards.

TABLE 7.4a PROPOSED UPGRADING STANDARDS FOR FACILITIES AND SERVICES.

ITEM.	STANDARD Zaria Master Plan.		UPGRADING STANDARD Sokoto Residential Development Project.		UPGRADING STANDARD Bauchi State World Bank Project.		PROPOSED DERIVED STANDARD.	
	Per Pop.	Area (Ha)	Per Pop.	Area (Ha)	Per Pop.	Area (Ha)	Per Pop.	Area (Ha)
COMMERCIAL.								
1. District Market.	-	-	1/100-150,000	-	-	-	1/100-150,00	3.8
2. Mini-Market.	-	-	1/2,100	-	-	-	1/30-50,000	0.75
PUBLIC/SEMI PUBLIC.								
1. Clinic.	1,400	0.1	1/40-50,000	-	-	-	1/30-50,000	0.1
2. Health Centre.	1/12,000	2.5	-	-	-	-	1/50,000	0.5
3. Post Office.	1/30-40,000	0.5	1/40-50,000	-	-	-	1/30-50,000	0.1
4. Polic Post.	1/13-15,000	-	1/40-50,000	-	-	-	1/50,000	0.1
5. Fire Fighting Station.	1/120-128,000	-	1/100-150,000	-	-	-	1/150,000	0.5
6. Central Mosque.	1/40-50,000	-	1/100-150,000	-	-	-	1/150,000	0.5
7. Mosques/Churches.	1/15-50,000	0.5	-	-	-	-	1/15,000	-
8. Cemetry.	1/100-150,000	0.5	1/100-150,000	-	-	-	1/50,000	0.5
9. Motor Park.	-	-	1/100-150,000	-	-	-	1/150,000	1.5
10. Cinema.	1/40-60,000	-	1/100-150,000	-	-	-	1/30,000	0.25
11. Koranic School.	-	-	-	-	-	-	1/5-15,000	0.1
12. Nursery School.	1/80,000	0.8	-	-	-	-	1/10,000	0.1
13. Primary School.	1/3-4,000	-	1/2,100	-	1/1000 Pupils.	2.5	1/10,000	0.5
14. Secondary School.	1/24,000	5.0	1/10-12,000	-	-	-	1/25,000	1.0
15. Reading Room.	1/25-50,000	0.6	-	-	-	-	1/50,000	0.5
16. Sports Field.	1/13-15,000	2.0	1/10-12,000	-	Prim.Sc.Fac.		1/20-30,000	0.5
17. Sports Stadium.	1/120-128,000	5.0	1/100-150,000	-	-	-	1/120,000	3.5

Other factors taken into consideration are existing number of facilities, the area coverage, availability of vacant land, accessibility and distances. The proposed standards are the ultimate target to be achieved by the year 2000. Facilities may be relocated elsewhere if found to be restricted. Services to all the residents in the neighbourhood is the most important factor. For this reason, other facilities such as unorganized open spaces or incidental spaces are integrated into land-use to serve other facilities in the region as well.

This up-grading reflects the basic minimum standard, the available land possibilities, flexibility and cultural values.

7.54 Proposed Land-Use Pattern

The proposed strategy is proposed chosen to minimise displacement. This has set limitation to the extent to which residential land use can be decreased through introduction of other land-uses. Despite this limitation, the land-use pattern has been modified such that residential use by the year 2000 will be 56 percent of the total development land, and the remaining 44 percent will be used in the provision of other complimentary facilities for convinence, economy and services to discourage haphazard development and non-conforming land uses. Some 150,000 residential units are provided for (See Table 7.4B, Figure 7.05B) which is achieved through consideration of the population.

Also this is achieved through the following methods:

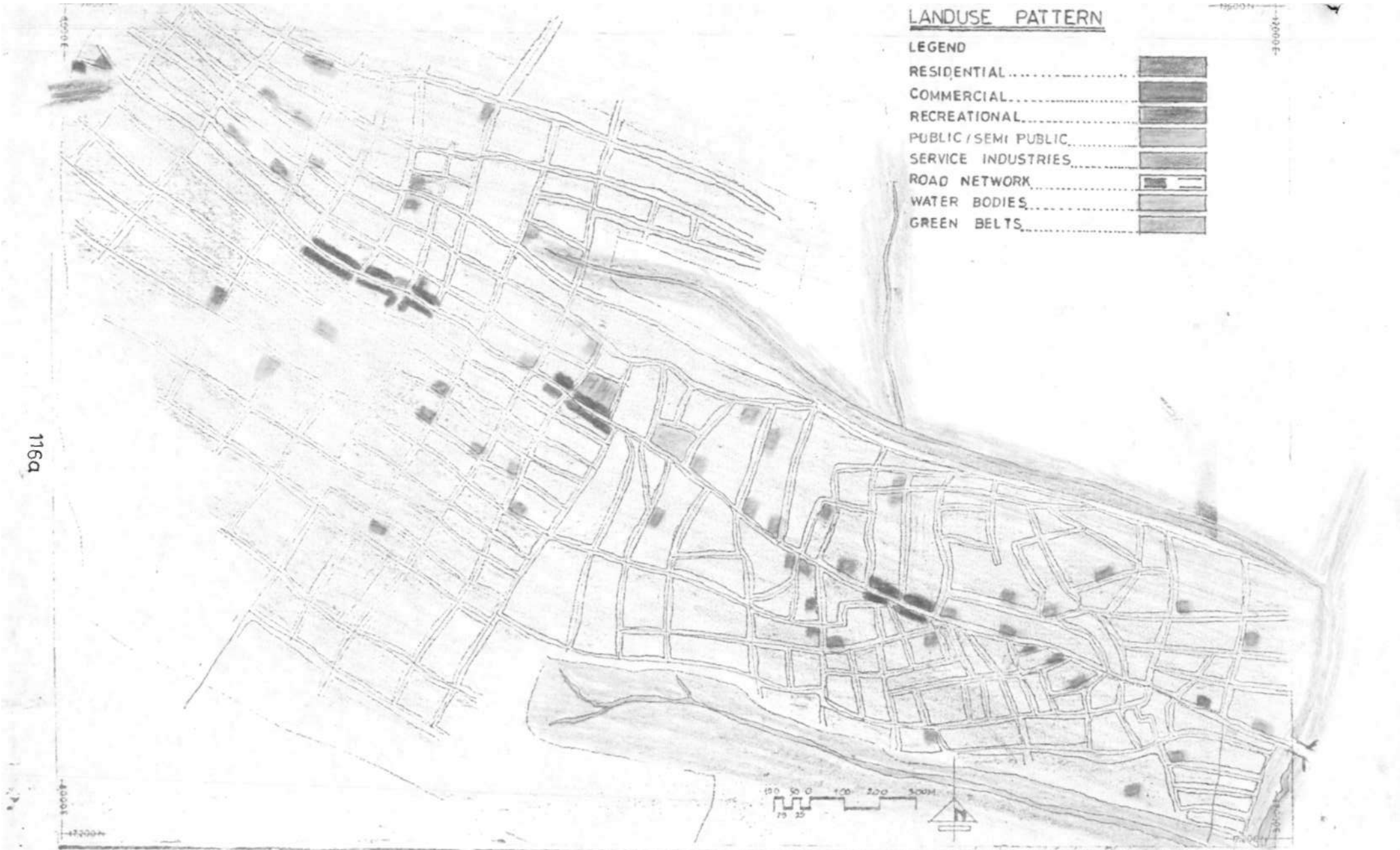


FIG 7.05A EXISTING LANDUSE IN RIGASA

UPGRADING OF RIGASA-KADUNA METROPOLIS: SCHEDULE OF REQUIREMENTS-Yr. 2000

ITEM	PROPOSED (DERIVED WORKABLE NIGERIAN) STANDARD				Adopted percentage coverage	EXISTING SITUATION POP: 71,000 LAND AREA: 726 Ha			percentage coverage	REQUIREMENTS 2000 POP: 120,000 LAND AREA: 1760 1475 Ha 769				percentage coverage	REMARK
	AREA (Ha)	UNITS/POP	COMMENT			NO OF UNITS	AREA (Ha)	UNITS/POP		ADDITIONAL NO OF UNITS	ADDITIONAL AREA (Ha)	TOTAL NO OF UNITS	TOTAL AREA (Ha)		
I RESIDENTIAL					43·5%	2880	480		6·5%					56%	
1 HOUSING	170	150 PPH	MED. DENSITY	✓		6	1	158 PPH		2400	400	44000	880		CHECK DEGRADED + INCR. POP
II COMMERCIAL															
1 DISTRICT MARKET	3·0	1/100–150,000	SOCIO-ECON	✓		—	—	—		1	3·0	1	3·0		TO SERVE THE WHOLE COMM.
2 MINI MARKET/SHOP	0·75	1/30–50000	SERV. NEIGHBOURHOOD	✓		1	0·53/	1/71000		2	1·72	3	2·25		EXPANSION UPGRADING
3 SHOPPING CENTRE	1·0	1/150,000	Socio economic	✓		—	—	—		1	1·0	1	1·0		Need to serve the whole comm.
4 BUSINESS OFFICE	1	1/50,000	+ culture "	✓		—	—	—		1	1·0	1	1·0		Need to improved life conditio
5 BANK	0·4	1/40,000	" "	✓	3·5%	—	—	—		2	0·8	2	0·8		" " " " "
6 HOTEL	1·0	1/250 Guest	" "			—	—	—	6·7 %	—	—	—	—	4·0%	Too expansive for low income grps
7 RESTURANT, CLUB	0·5	1/30–50,000	" "			—	—	—		—	—	—	—		" " " " "
8 VOCATIONAL CENTRE	0·5	1·50,000	Man power need			—	—	—		1	0·5	1	0·5		Service the whole community
9 PETROL STATION	0·4	1/6000 Car	Socio-economic			1	0·25	1/71000		1	0·55	2	0·8		Expansion & Upgrading
10 AGRICULTURE			Economic culture			1	230	1/71,000		availability of river bank & swampy land					Upgrading
III PUBLIC/SEMI PUBLIC															
1 HEALTH CENTRE	0·5	1/50,000	Poor socio-econ			—	—	—		—	—	—	—		Service needed + improved eco
2 HEALTH CLINIC	0·1	1/30–50,000	" " "			1	0·1	1/71,000		2	0·2	3	0·3		Need to serve the whole community
3 POST AGENCY/OFFICE	0·1	1/30–50,000	To improve comm			—	—	—		2	0·2	2	0·2		To serve awider Rigasa.
4 POLICE POST/STATION	0·1	1/50,000	" " "			1	0·1	1/71,000	11·5 %	1	0·1	2	0·2		Need to serve wider area.
5 FIRE STATION	0·5	1/50,000	Poor socio-econ			—	—	—		—	—	—	—		presently 1serving the whole met
6 CENTRAL MOSQUE	0·5	1/15,0000	Socio culture			1		1/71,000		—	0·25	1	0·5		Expansion & Upgrading
7 MOSQUES / CHURCHES	0·05	1/15,000	" "			21/10	Varies	1/71,000		1 / Neighbourhood				14%	Upgrading
8 COMM. CENTRE / MAGISTRATES	1·5	1 / 150,000	" "		13·0%	—	—	—		1	1·5	1	1·5		Need to service rigasa
9 TRUCK PARK	1·5	1/150,000	Socio-economic			—	—	—		1	1·5	1	1·5		" " "
10 PUBLIC LIBRARY	0·5	1/ 50,000	Economic Culture			—	—	—		1	0·5	1	0·5		" " "
11 SECONDARY SCHOOL	1·0	1/25,000	" "			—	—	—		1	1·0	1	1·0		" " "
12 PRIMARY SCHOOL	0·5	1/10 000	" "			1	0·5	1/30,000		1	0·5	2	1·0		Expansion & Upgrading
13 NURSERY SCHOOL	0·1	1/10,000	" "			9	Varied	1/2000		1	0·1	10	1·0		" "
14 KORANIC SCHOOL	0·2	1/15,000	Socio-culture value			10	"	1/15,000		—	—	10	2·0		Upgrading
15 CEMENTRY	0·5	1/50,000	" " "			—	—	—		2	1·0	2	1·0		Need to serve the community
IV RECREATION															
1 OPEN SPACE/SPORT FIELD	0·5	1/20–30,000	" " "	✓	7·5 %	1	0·5	1/71000	1·3 %	1	0·5	2	1·0	5%	Expansion & Upgrading
2 CINEMA HOUSE	0·25	1/50,000	" " "	✓		1	0·25	1/71,000		—	—	1	0·25		Upgrading
3 TELEVISION VIEWING CENTRE	0·12	1/50000	" " "	✓		—	—	—		2	0·24	2	0·24		Depend on the available land

TABLE : 7-68

116b

CONT'D

ITEM	PROPOSED STANDARD: AREA (Ha)	UNITS/POP	COMMENT	Adopted % COV.	EXISTING SITUATION: POP NO OF UNITS	LAND AREA (Ha)	UNITS/POP	% COV.	REQUIREMENTS 2000: POP ADDITIONAL NO OF UNITS	LAND AREA ADDITIONAL (Ha)	POP TOTAL NO OF UNITS	LAND AREA TOTAL (Ha)	% COV.	REMARK
V INDUSTRIAL														
1 LIGHT INDUSTRIES	0·5	1/50,000	To improve Econ.	95%	1	0·5	1/71,000	0·5%	3	1·5	4	2·0	2·0%	To serve the whole comm.
VI TRANSPORT NETWORK														
1 ROAD SERVICES	20m Collection/major 15m Minor/local 10m Service lane		Maximum use of existing.	13·5%	1	Collection/major 2Km Local & Service lane		15 %	Service road 18–20m Major road 12–16m Local " Paths and alleyways 6–10m service "				15 %	Expansion & Upgrading
2 PEDESTRIAN ROUTE									25m Wide major 14m minor					Upgrading
VII UTILITIES & SERVICES														
1 WATER & PIPE BORNE SUPPLY	50 Litre/c/day		To improve quality of life.		150mm main @ to house link ages is not connected				125 Litre/C/day	1 Stand pipe/25 Compds OR 1 Stand/100m radius.				Need to serve the whole area
2 TELEPHONE & LINE	Cable along major & some service road.	" "			No link to metropolis grid				Provision of telephone booth at public places					" " " "
3 ELECTRICITY & LINE	HV line along major LV line on service road	" "			" " " " " "				Cables lay along roads & with 75m to facilitate individual compound connections.					" " " "
4 REFUSE COLLECTION & DISPOSAL	Coll pt. at 200m interval	"		95%	Dump in open spaces			3·0%	1 COLL. PT. FOR 500 Kg (0·5 M/L) REF. DEN.				3·5%	" " " "
5 SEWAGE DISPOSAL	Central sewage sys.	" "			Open spaces / Pit latrines				Ventilated improved pit latrine / low cost type					Based on level of affordability
6 DRAINAGE	Major road – paved. Minor road – unlined.	" "			Undefined shallow and undirectional drains.				Major road 0·8–1·5 m wide Minor road 0·5–0·8 m wide					Need to serve wider areas

116b2

Concept of development

1. Compact development with minimum distance between facilities that provide complementary service should be located close together (reduce long walking distances)
2. All development area should be connected with roads & network of walkway to carter for the large population of pedestrians
3. Allow for integration of all existing development and proposed development

DEVELOPMENT FACTORS

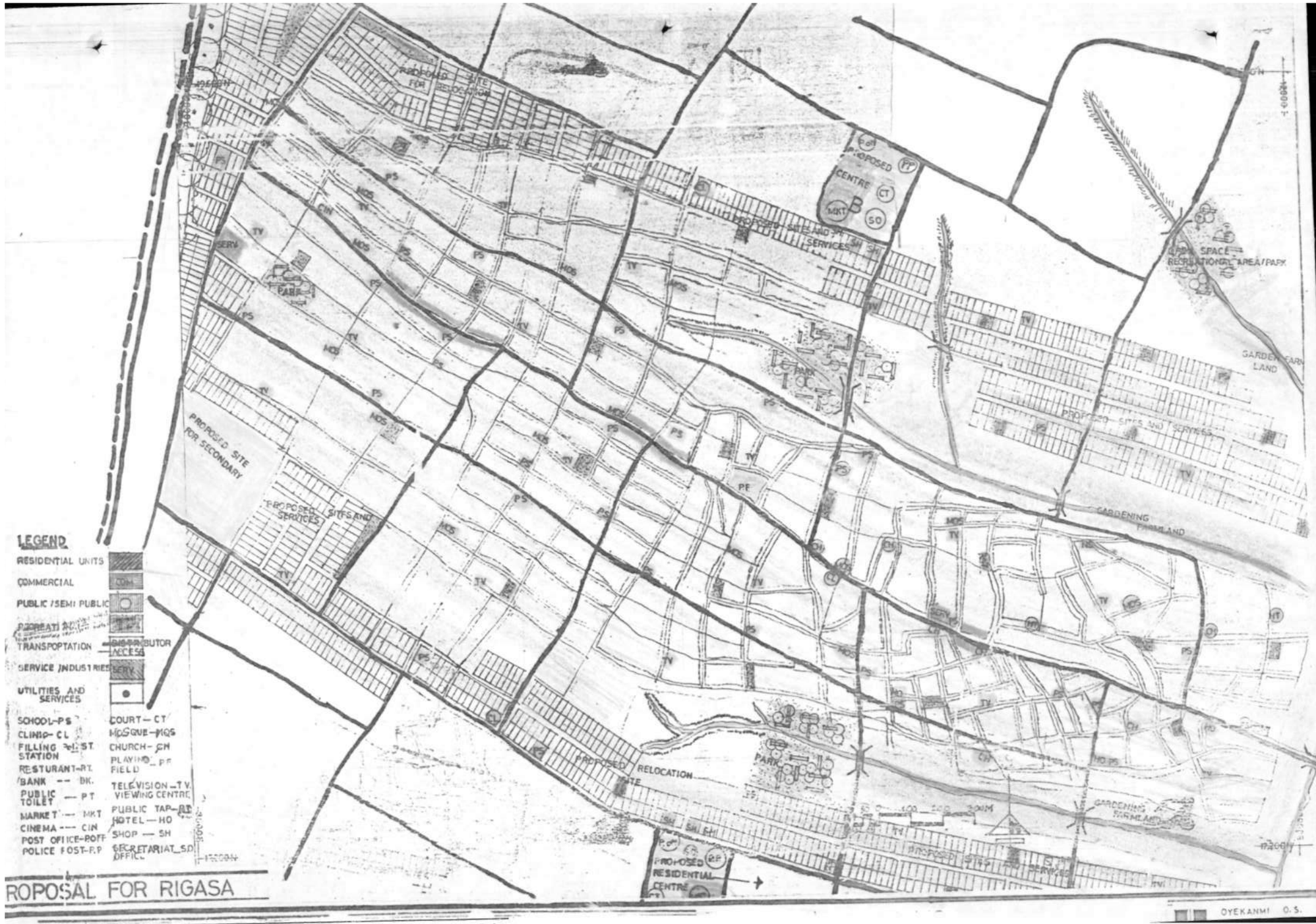
- Physical constraints.
- Physical & functional structure of proposed
- The existing development on land — % of each uses; trend of growth.

- TOTAL AREA = 1760 Ha
- TOTAL USEABLE AREA = 1475 Ha
- LAND UNSUITABLE FOR DEVELOPMENTS = 285 Ha (LAND 142, RIVER 143)
- LAND USED = 726 Ha
- LAND AVAILABLE FOR FUTURE DEVELOPMENT = 769 Ha

FUTURE RESERVATION

- FIRE STATION
- HEALTH CENTRE

TABLE: 7-48



ROPOSAL FOR RIGASA

FIG. PROPOSED LANDUSE FOR RIGASA

(a) Absolute reduction which will involve demolition of the few houses and have been dilapidated beyond repairs and also those houses in the floodable area.

(b) Infilling of vacant land, up-grading under-developable lands and correcting these for use in provision of facilities, utilities and services

(c) Another method in the relative reduction is through sites and services in the periphery of the Study area.

(d) Socio-economic characteristics and land availability.

Residential Uses

(a) Shortage of afforable housing units has been identified as a factor in blight formation. It is recommended that the National Housing Policy should take care of the frame-work of sites and services programme to be adopted and implemented for the low income group who form the majority of the blight residents.

(b) Proposal for solving Housing Shortages

Multiple stage sampling survey revealed that sample population of 1185 based upon the areal representation ratio 1:6 and 10 percent sample size.

The total sample of habitable housing units - 140 houses, making the habitable rooms to be 150 units with 18 other rooms. This indicates that the house-hold have about 356 heads, given (1.47) for approximately 2 households per house and averagely 15 persons per house. The reflection show that average number of 7.5 person per habitable room is got.

This indicates that the total number of habitable rooms are inadequate. The figure indicates a congestion ratio of 3.6 persons per habitable room, but this simply shows that about half percentage of room required is met.

The total sample numberof habitable room will only accommodate 605 people conveniently, so that out of the sample population of 1185 an estimated 595 people will need to be accommodated. 595 people will need about 168 habitable rooms to be provided in each of the six areas.

The observation is that Rigasa covers 726 hectares land area and total populations of 71,000. Presently with 65% residential coverage the net density is 316 persons per hectare. While the overall and gross density are 98 and 158 (pph), respectively. For this purpose, the land area is based on an average of 3 rooms per house. Therefore, based upon the room shortages of 168 rooms, these units are divided by 3 rooms by house, to give the total housing units as 56 in number. Some 30 percent out of these is allocated to medium income earners and remaining 70 percent to low income earner. The land area required is based on planning authority specification whereby 675 square metres is for medium density housing and 450 square metres for high density housing. The 17 medium size plots is 11.4 hectares and 38 small size plots is 1.710 hectares.

Table 7.4 Land Use requirement for Year 2000

LAND USES	Existing 1988	'Uses' Area	Proposed 2000	
	Percentage	Hectare	Percentage	Area Hactare
Residential	6.2	45.0	5.6	985.6
Commericial	6.7	48.6	4.5	79.2
Public/Semi public	11.5	83.5	1.4	246.4
Recreational	1.3	94.4	5	88
Services Industries	0.5	3.63	2.0	39.2
Transport Net-work	1.5	408.9	1.5	264
Utilities and Service	3.0	21.8	3.5	61.6
	100	726	100	1,760

The demolition of obsolete/dilapidated structures, widening of roads or siting facilities results into the loss of the whole or substantial parts of their compounds and haphazard unco-ordinated and unplanned growth. The solution will be the provision of site and services plots through the proper utilization of previously vacant sites with provision of well laid out and serviced plots in these area. This will also involve identifying suitable land for housing, acquiring the land, preparing residential layout with its supporting facilities.

Some sites and services plots are to be reserved as model houses as part of the upgrading programme for improving individual compounds. This is a way of generating funds as serviced plots could be sold to interested buyers and profits could be used for the provision and maintenance of infrastructural services and investment. The area coverage will be 56 percent at end of year 2000.

(d) Building Materials

To suggest necessary improvement for poor housing structures there is need for safe maintenance, demolition of dilapidated/obsolete housing units and those structures in the floodable area. The land could then be retained for agricultural purpose. Contract or laterite (compacted earth) blocks are local materials, which are recommended for use for its effectiveness, manageability and structural stable elements in terms of cheap foundations. The depths at least 50cm below ground to withstand the impact of rain drops.

To increase the liveability and functionality of the housing units, specific improvements are carried out on such things as walls, roofs, ventilation, etc.

For most buildings, mud with cement plaster and iron-sheet are the wall and roofing materials to be used. These local materials need improvement such that the wall will not have to be maintained every year. That is, walls should be well plastered with cement to absorb loss of water externally. As for the roof improvements, it needs insulating material such as ceiling cardboards, ot by using woven 'elephant' grass (Asabri) stakes as ceiling mats. The final alternative is the construction of flat-topped mud roof before iron-sheet roof.

The need for privacy has made the compound owners not to provide adequate ventilation openings. The means for ameliorating weather conditions without necessarily jeopardising privacy are either through small size windows at convenient height; or provision for window on top sides of thr walls. This last alternatives considers well reconstruction (See Figure 7.06) where set-back distance should be met, such that individual compound layout in the same blocks.

As for the maintenance and up-grading, there is need for the co-operation of the individual tenants/owners in order to provide facilities, utilities and services such as street widening, which might call for re-adjustment of walls of the two opposite blocks. This type of ungrading is through the supervision of an Engineer to provide the total Right of Way, so as to aid the provision of utilities as well as access to the housing units (See Figure 7.09B). The remaing internal arrangement is separated by a wall, so as to ensure privacy as well as free circulation of air. This calls for provision of housing

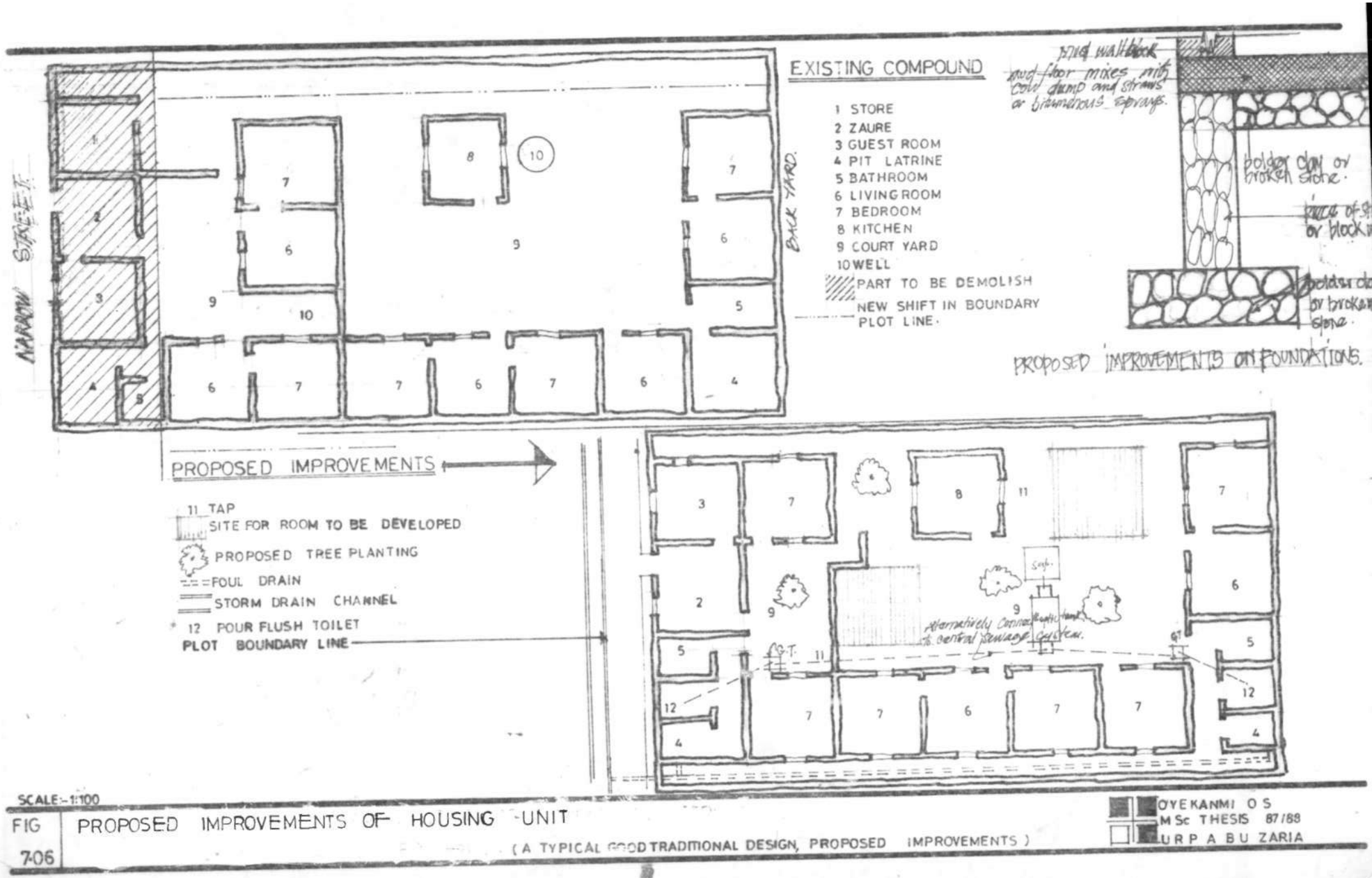


FIG 7.06 PROPOSED IMPROVEMENTS OF HOUSING UNIT

(A TYPICAL GOOD TRADITIONAL DESIGN, PROPOSED IMPROVEMENTS)

OYEKANMI O S
M Sc THESIS 87/88
URP A BU ZARIA

facilities such as 'Zaure' which have been demolished, and re-location of some existing facilities for better uses. There will be compensation for any reduction in the size of the original compound.

Proposals are also given for further improvement of the compound, where back to back arrangement and the alley in between are now used for rubbish dump. Instead of solid waste removal by night soil-men, from the bucket latrines types, these are now to be phased out. The improvement is proposed to be shared by both side of the compound as a way to discourage dirty habits (Fig. 5.15).

(e) Building and Repairing of Facilities, Utilities and Services

(i) Pipe Borne Water

The fact that water pipe line has been laid very near to each housing unit, there isneed for individual connection, and provision of public taps at convenient locations.

(iI) Kitchen and Liquid Waste Disposal

This will be provided with adequate ventilation which will also ensure the needed privacy of the resident. The kitchen drains are linked up with the main drainage line coming from the compound through provision of plastic pipe of about 50mm diameter. This is transported into storm under draiange line along the street outside the compound. The gradient is to be made in such a way as to ensure smooth flow. Wire mesh/gauze is required to protect the pipe and draingage lines from being used by vermins. Also, the drains are

to be further widened, deepened and lines where necessary to improve their condition.

(iii) Toilet and Bathroom

These are provided with walls, of semi-permanent or permanent materials, and these facilities should be separated and provided with adequate ventilation. The existing pit latrine facility should be up - graded to ventilated improved pit latrine (V.I.P) (See Figure 7.07). This involves covering of squatting plate to prevent flies from entering. An overhang should be constructed to discourage maggots from climbing out, and vent pipe to get the gas out. These could further be improved to a poor flush squatting type which is more hygenic in disposing the sewage into the septic tank. These proposals depend on the following factors:

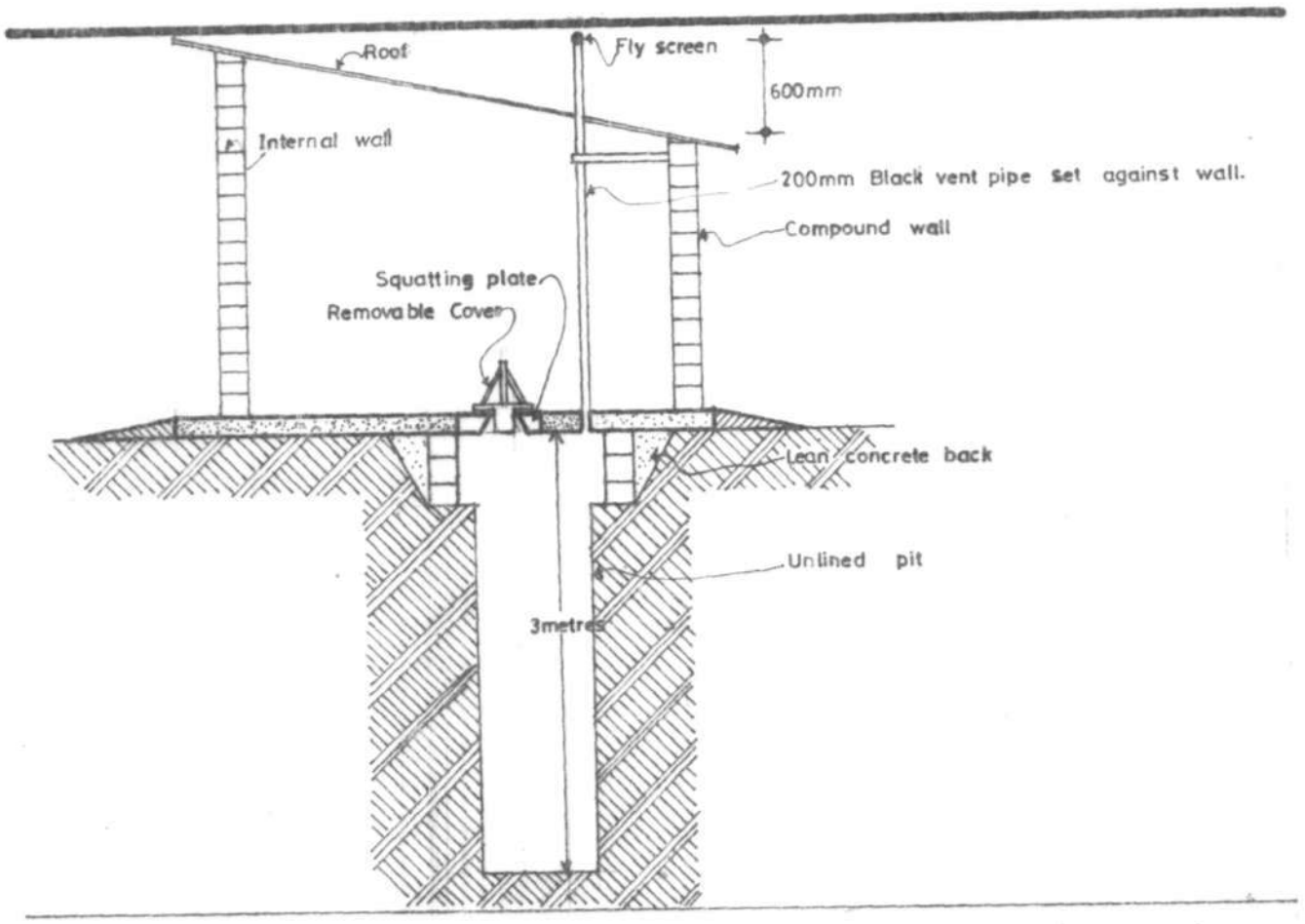
(i) good soil permeability

(ii) enough spaces within the compound spaces and

(iii) availability of skilled workmen for construction and maintenance. Finally, the alternative proposed is the central sewage where each compound is linked up directly.

(iv) Soilid Waste Disposal

Each housing units has a half drum metal container with a lid for the collection of refuse and when each is filled, the person employed by either the landlord or the tenants will convey the refuse to the neigbourhood refuse collection point from where a van will convey it to the proposed landfill area.



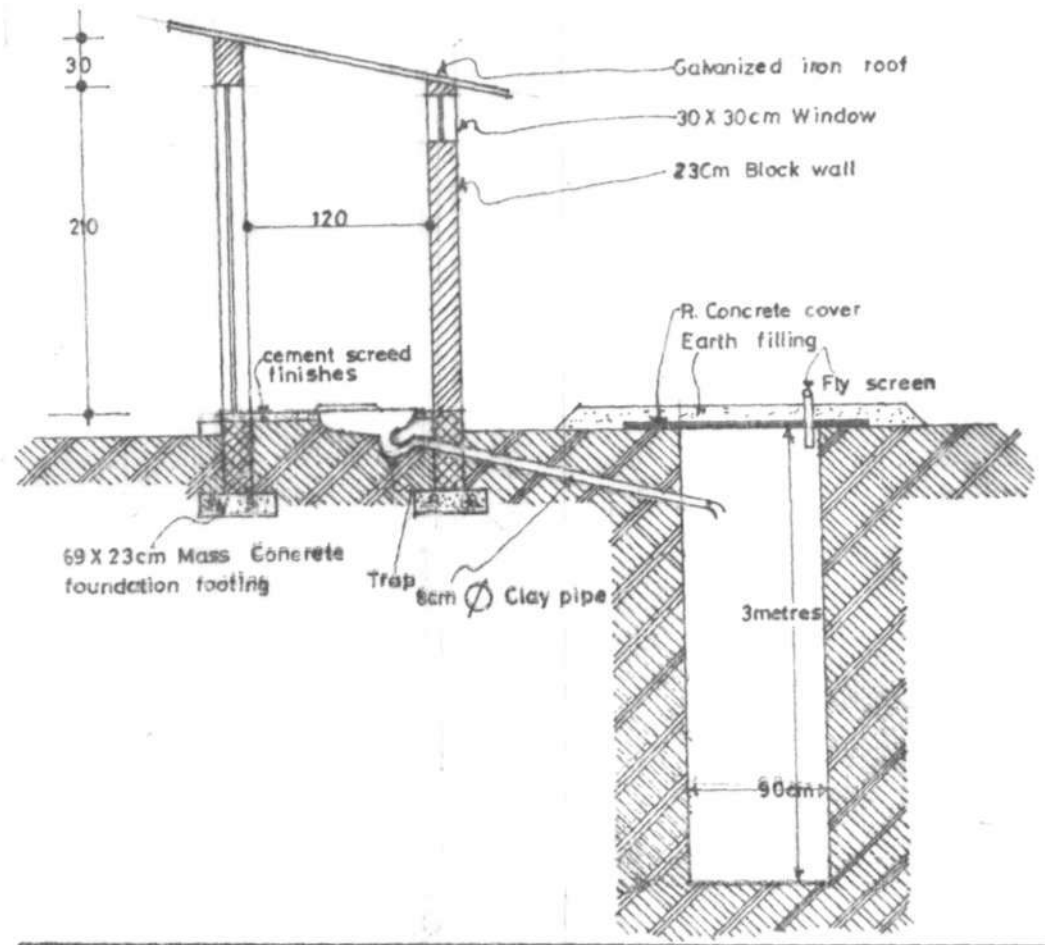


FIG.	SUGGESTED IMPROVEMENTS ON PIT LATRINES	OYEKANMI O S M.Sc. THESIS 87/88 U.R.P.-ABU ZARIA.
7·07		

SOURCE U.R.P. Library

(v) Electricity Supply

Each housing unit is connected with electricity grid line to facilitate easy connection, as there is need for domestic lighting and to provide security lights in from ot the house. As regards to this, along 30 to 50 metres/road junction are to be illuminated. This is provided in activity level areas.

The issue of Renewal is related to housing and economic regeneration. The housing solutions are discussed above, but the economic regeneration is to be induced by providing employment areas.

The survey reveals that most of the inhabitants are engaged in the informal sector of the economy. Formal jobs are not considered to be the major employment opportunities. These employment activities are spatially concentrated at different parts all through the distirct and therefore need no special attention with regards to locations.

The informal self-employed activities are also naturally dispersed within the district zone. This include mobile trade activities, auction sales and a host of other "on the spot" activities that often take place within make-shift structures. The plan has therefore provided adequate spaces within the various land use zone and the two centres to cater for informal sector activities.

Their provision also prevent their encroachment on other land use zones. It is envisaged that some small scale formal activities would also take place within the residential areas.

Commercial Land -Use

A traditional marker (.03 ha) area and the surrounding major commercially use area serves Rigasa. This is not commensurate to its function as a District/Community Market. Also the market structures are built of temporary Stalls, Zinc Sheets giving it poor surrounding. The market lacks basic facilities like parking spaces, toilets, etc. Other facilities like Police Posts, Central Mosque are not close to the market.

This market is up-graded as supplement, with arrangement such that its wet and dry parts are separated by paved pedestrian walkway. However, this market is not adequate to serve the people in the proposed district vicinity. Another market is incorporated within the district centre. Unifying elements both economically and socio-culturally as other complementary functions are also introduced such as offices for rent collection and maintenance. This is to enhance the proper functioning of facilities and services that are also proposed in the centre, to serve this planning district.

The agricultural use have reduced considerably for the changing functional role of Rigasa. This now reduces the percentage coverage of the agricultural land from 6.7% to 4.0%.

Mised Uses

There is a decrease in land devoted to mixed uses by about 10 percent. This is necessary, for the meantime, in order to up-grade environmental blightedness. This is coupled with control measures initiated to all types of mixed uses. The proposed suitable zones are along the major roads. Areas partially along primary distribution roads and areas around community centre are included in the

mixed uses with consideration for departmental stores/shops. Also kiosks at some strategy corners are to be developed by petty traders. Banks which are presently absent should be also provided in the proposed locations.

District/Community Centre

A Community Centre is necessary for community socio-cultural activities as these will be a very essential unifying element economically. Its site selection is based on consideration of the following factors.

(i) population sizes;

(ii) centrality/locational accessibility;

(iii) infrastructure and

(iv) cost of compensating for potentially available land

Three (3) hectares of land is acquired for the centre which is to include a covational training centre (See Figure 7.08).

(a) Public and Semi Public Areas

All existing public places that were supposed to serve the entire community have been provided with graded road and pedestrian links. Some were relocated to a more accessible location, within a relative walking distance. The percentage coverage is relatively increased from 11.5 percent to 14 percent to improve the economy and to serve the whole community.

(i) Offices

There is a problem of poor location of the District Court Office/Alkali Court and Police Station. This was centrally located but far apart from other Public buildings. This has

Proposed Plan

legend

1-ADM CENTRE / DISTRICT SECRETARIAT
2-DISTRICT MARKET
3-POLICE POST
4-FOUNTAIN CIVIC SQUARE
5-AMUSEMENT PARK
6-SPORT PLAYING GROUND
7-PARKING AREA
8-MULTI PURPOSE AMPHITHEATRE
9-HEALTH CENTRE
10-CHURCH
11-CINEMA HOUSE
12-PUBLIC LIBRARY
13-REST HOUSE & CAFETERIA
14-POST OFFICE
15-BUS STOP & PEDESTRIAN ZEBRA CRO
16-PETROL FILLING STATION
17-SHOPPING CENTRE, DEPARTMENTAL STO
OFFICES
18-GYMNASIUM & CONFERENCE HALL
19-MOSQUE

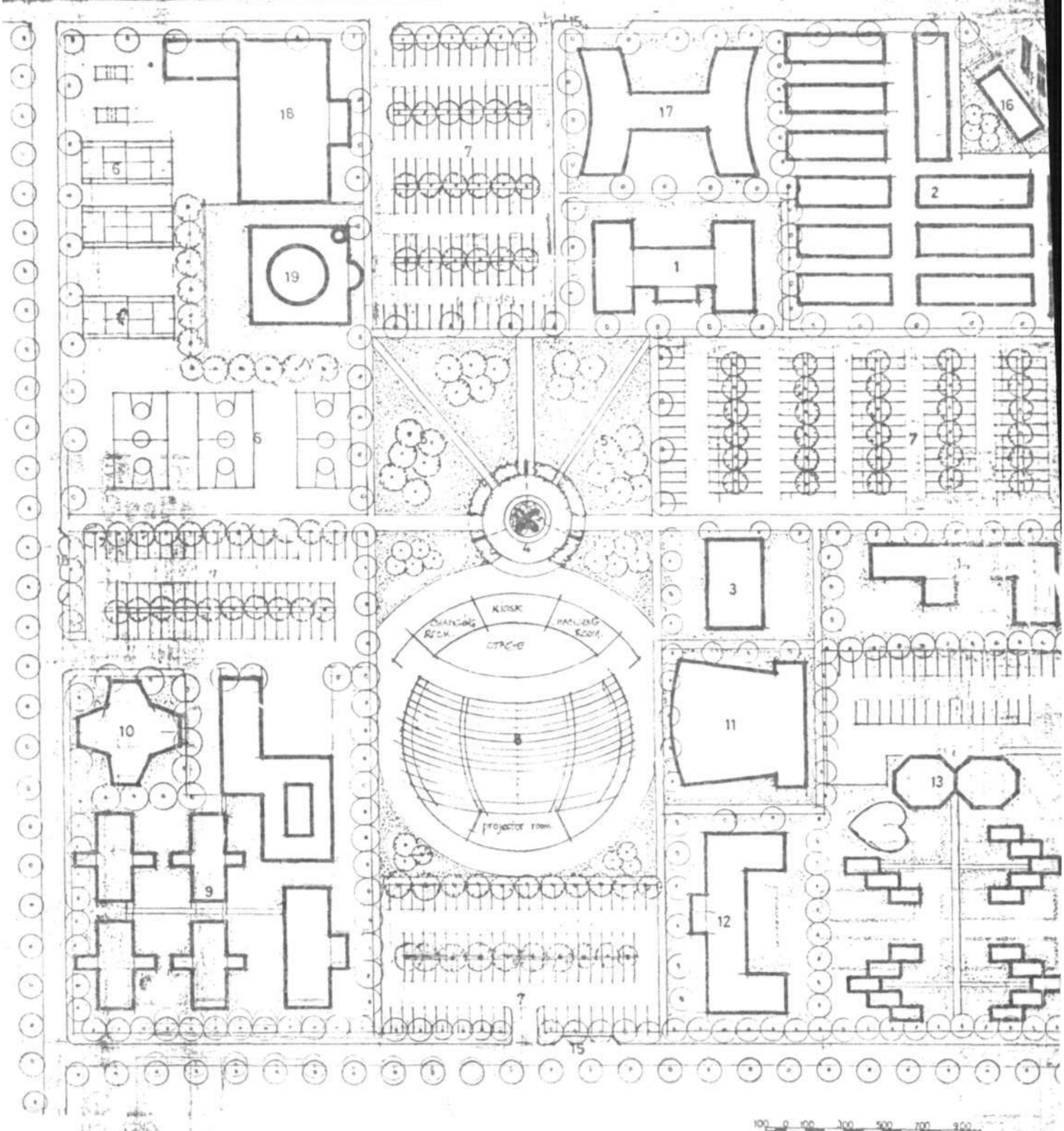


FIG. 7·08 PROPOSED COMMUNITY CENTRE FOR RIGASA

OYEKANMI C
MSc THESIS 87/
U.R.P.-A.B.U. ZA

been tackled by relocating them together close to the Mosque and providing good parking space near them (Figure 7.05B). Blocks of offices that were close to Community Centre for rental purposes, are to be taken up by insurances and private establishments etc.

(ii) Planning Secretariatr/Adminsitrative Office

A small Secretariat at the Community Centre is propsoed for maintenance of public facilities and amenities. There is also be a small department that ensure that the regulations relating to building laws, environmental sanitation laws, zoning, and the approval of building plans are strictly observed.

(b) Health Facilities

There is only one private health facility existing in this area which serves a population of 71,000. The study has therefore proposed two primary health clinics in the area for the plan period to serve as a referral Health Centre to the Ahmadu Bello Unversity Teaching Hospital. This takes into cognisance the General Teaching Hospital which is very far away and the closes being about 3.5 kilometres in Tudun-Wada (Table 4.1). An area of 0.1 hectare is set for each clinic.

(c) Fire Station

A small fire station would have been built, but it is not recommended because the existing one is serving the whole metropolis, and the socio-economic of this area is very low.

(d) Postal Agency

A Postal Agency is recommended to ensure the collection and postage of letters. This calls for the construction of a Post Office in the Community Centre to facilitate the service. However, two units will be developed on 0.2 hectares each, to serve a wider area.

(e) Religious Places

(i) There are ten (10) Churches in Rigasa which are located within walking distance in the neighbourhood. These are located in predominately Christian area. Also provision of a cementry should compliment these services.

(ii) Mosque

There are Mosques within Rigasa which are about 21 in number. TheCentral Mosque is along Zaria which is the busiest route and close to the market. It has advantages of ease of accessibility, from all directions. However, a greater number of Mosques are within private residential premises due to the number of Muslims in this area. One cementry should also compliment these services.

Educatonal Facilities

There are 10 Koranic Schools. These are generally located within the residential clusters. Their size has benn inreased from 0.3 to 1.6 hectare and their number reduced to managable size for better co-ordination in view of many religious up-risings.

One more Primary School has been propsoed for the entire area such that the maximum walking distance of 0.5 kilometres for Nursery Schools and 1.0 kilometre for Primary Schools is not exceeded. Closeness to other Higher Institutions and Recreational facilities is considered for Nursery Schools so that they can share these facilities

For maximum utilization of these facilities, teh factors considered before proposing one Day Secondary School are:

1. Walking distance from individual compounds to the Schools
2. The population to be serve by various levels of the School
3. Availability of vacant land

These three factors have to be reconciled in any provision such as location of Primary School within one kilometre radius serving a given population of 10,000 pupils for a shift or more Schools may be found within one kilometre radius, if the population is more than the 10,000 ceiling. Also, the problem of availability of vacant land is minimised by reducing the size of land required for a Primary School. Instead of the 2.5 hectares normally devoted for a Primary School, 1.25 hectare is proposed but with allowance for going 2 floors vertically.

The plot size for a Secondary School is 5.0 hectare per School as recommended by Zaria Master-Plan, but 1.0 hectare is proposed for the Day Secondary School. This building could go vertically up to 3 floors as it suggest a FAR of 150 for public uses with a maximum coverage 50 percent are permitted by the Master-Plan, thus, compensating for lack of horizontal expansion.

Recreational Facilities

These have been categorised into two:

1. In-door Recreation
2. Out-door Recreation

The percentage of coverage is increased from 1.3 percent to 5 percent to accommodate expansion and up-grading at the existing ones.

(a) In-door Recreation

The In-door recreation activities are those carried out within a building. These include Cinema halls, bars and clubs. The last two need strong zonning regulation to check their proliferation. In the proposed sites and services area these recreational facilities are included on the initial lay-out instead of haphazard conversion of residential uses into recreational uses. The Community Centre has provision for multi-purpose halls for various activities and vocational training. It also includes the open sport field. There is provision of a Television Station all over the area which are used for public enlightenment.

(b) Out-door Recreation

Recreational activities which are normally carried outside buildings have been proposed from district to neighbourhood level, mostly on open land and under-developed plots such as those likely to be flooded and vacant. These are developed into organised open spaces, parks and play-fields. These are also used for traditional informal recreational activities within this Community. Others are the Institutional play-fields.

Transportation Network

The transportation chart shows the dominant modes as pedestrian and public vehicles. These are related to the population distribution by places of work. It was also noted that a sizeable proportion of residents work in distant places. Most of the Units are well linked together with roads giving about 15 percent coverage. This is still maintained in the proposals.

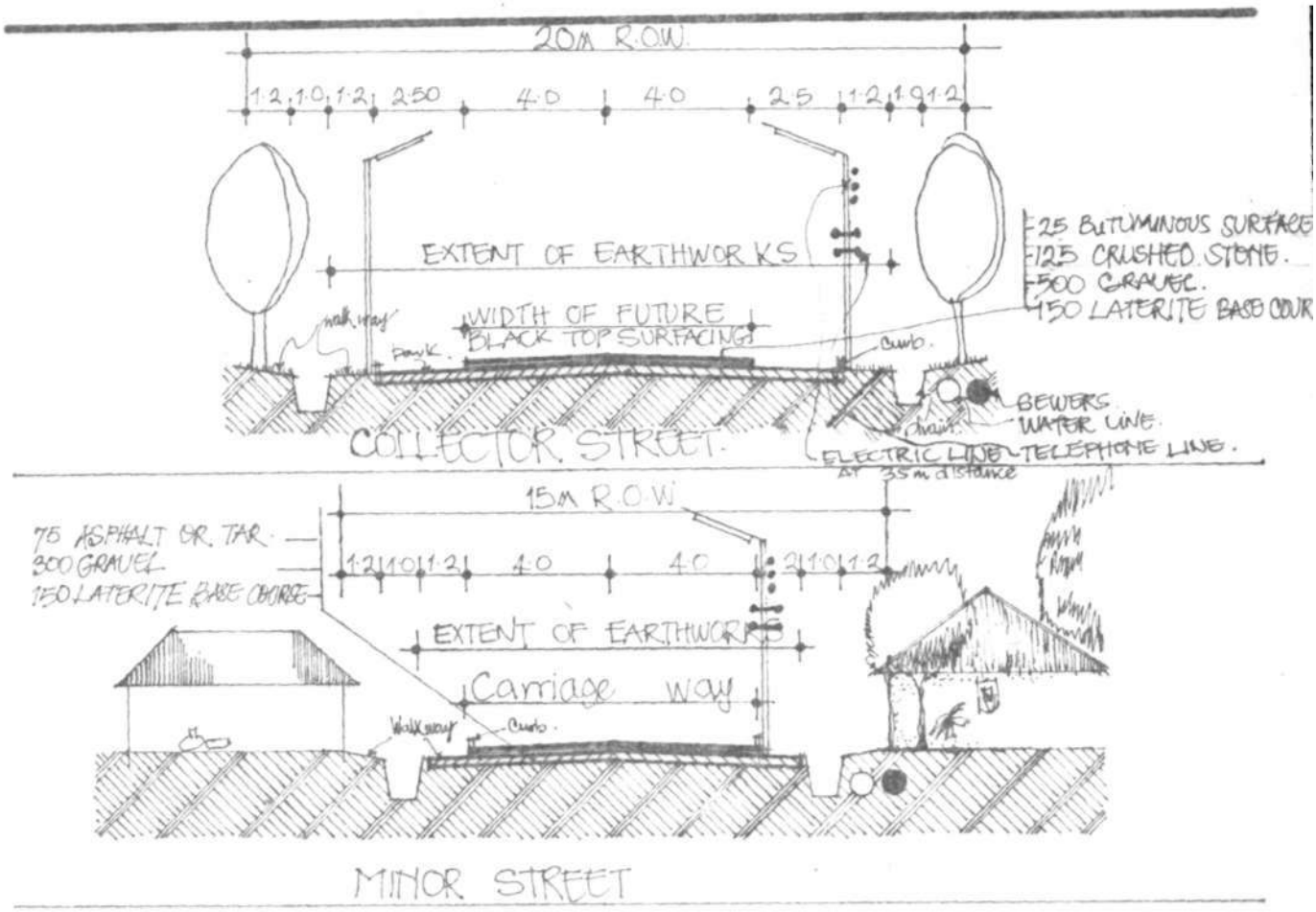
The Network system requirement is then viewed in two ways:

i. Transportation system within Rigasa

ii. Transportation system between Rigasa and the neighbouring work places and their link with other work places in the metroplis

Within Rigasa itself, it is proposed to have constructions upgrading through widening of streets and foot paths with provision of enough space for laying down of utilities and services. These areas are to be properly maintained and upgraded from the existing collector (20M ROW) road (Figure 7.09A + 7.09B). They should be tarred to make them distinct non-seasonal from (75M ROW minor Street) in hierarchical order. Also "Zebra Crossings" Pedestrian movement is emphasised here especially along the major activity areas. These are properly segregated from Right of Ways for vehicular moement.

The encroachment of parked vehicles on carriage-ways are reduced through the provided parking facilities in the open spaces especially very close to public places. Some strategic spots were selected for bus stops inside Rigasa. The major Zaria road along Rigasa bridge is upgraded and another ingress is created southward with a new bridge. Also, workshops are provided in the proposal including truck parking space to take care of vehicles which need repairs. There is also need to relocate road-side mechanics close to filling stations.



DETAIL OF LOW COST ROADS CONSTRUCTION DESIGN MATERIALS.

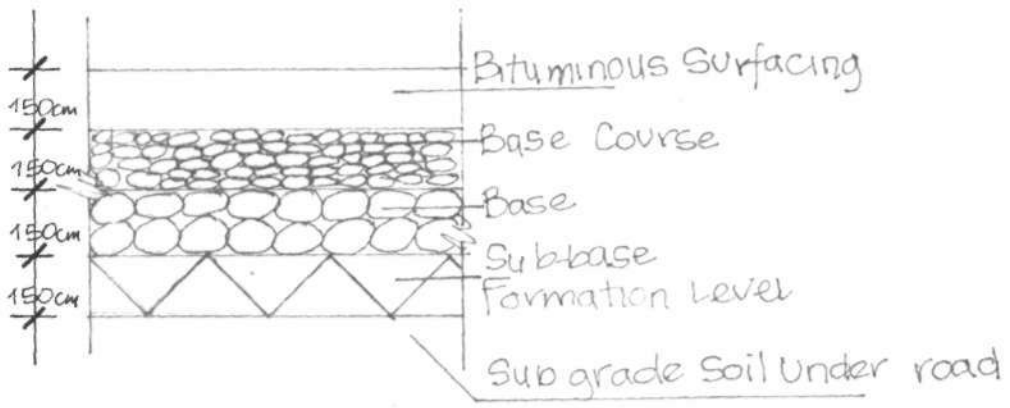
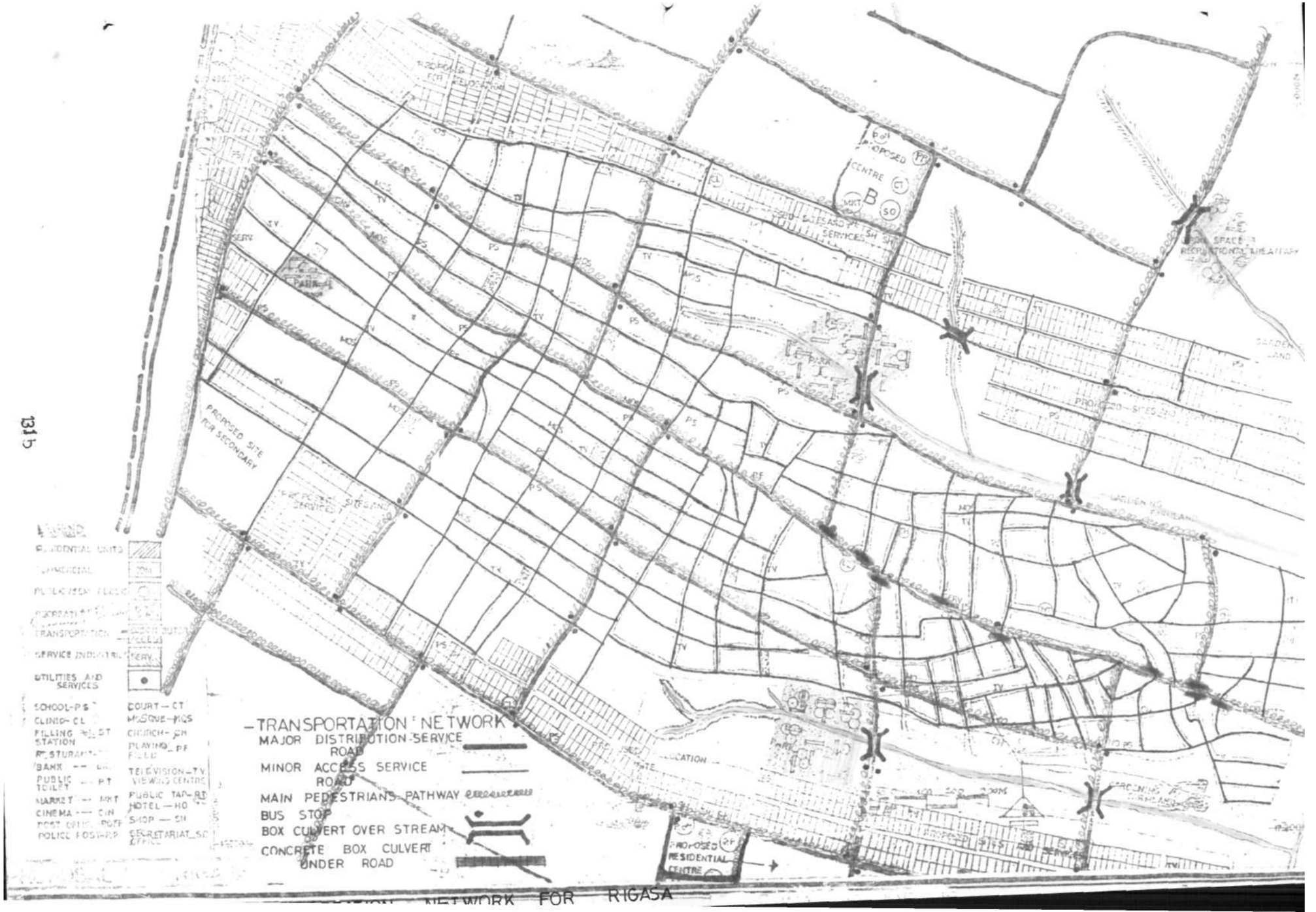


FIG 7.09A	TYPICAL CROSS SECTION FOR PROPOSED ROADS AND DETAIL OF CONSTRUCTION	OYEKANMI O.S. M Sc THESIS 87/8 URP-A.B.U.ZARIA

SOURCE: UNCH HABITAT 1985, GUIDELINES ON DESIGN OF CIRCULATION IN LOW INCOME URBAN SETTLEMENTS.



NETWORK FOR RIGASA

Service Industries

These service activities cover from 0.5 percent to 2.00 percent of the proposed Rigasa Land-uses. They are grouped into 2 basically:

i Light industries are accommodated as mixed uses to the residents such as tailoring, shoe mending wrist watch repair etc. They are sited along commercial precints in the form of shops to allow for adequate taxation.

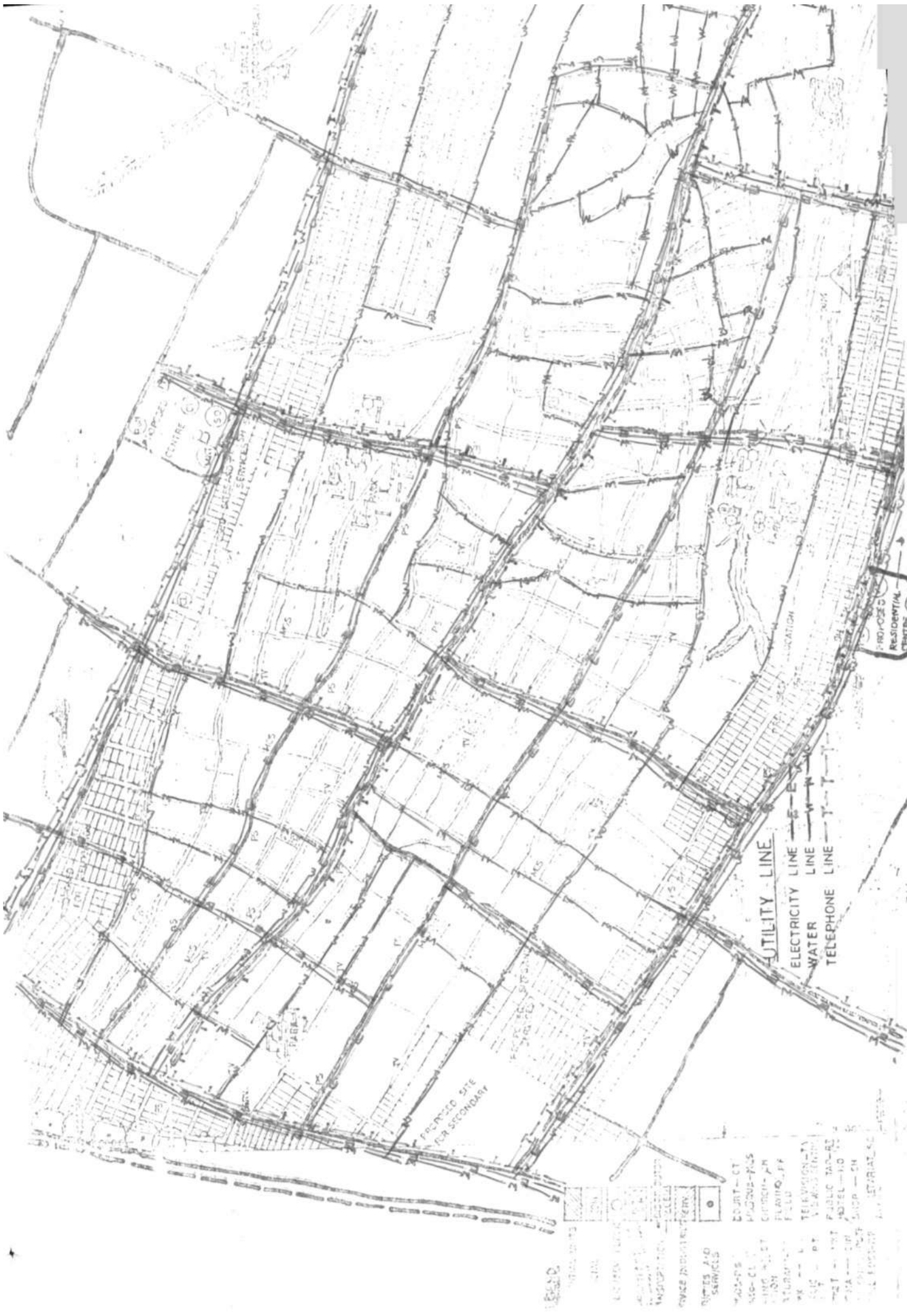
ii. The second type of light industrial activities emit pollutants into the air and conterminats underground water, soil, etc., such as pepper grinding machines, bakeries, motor mechanic workshops, welders, vulcanizers and petrol station

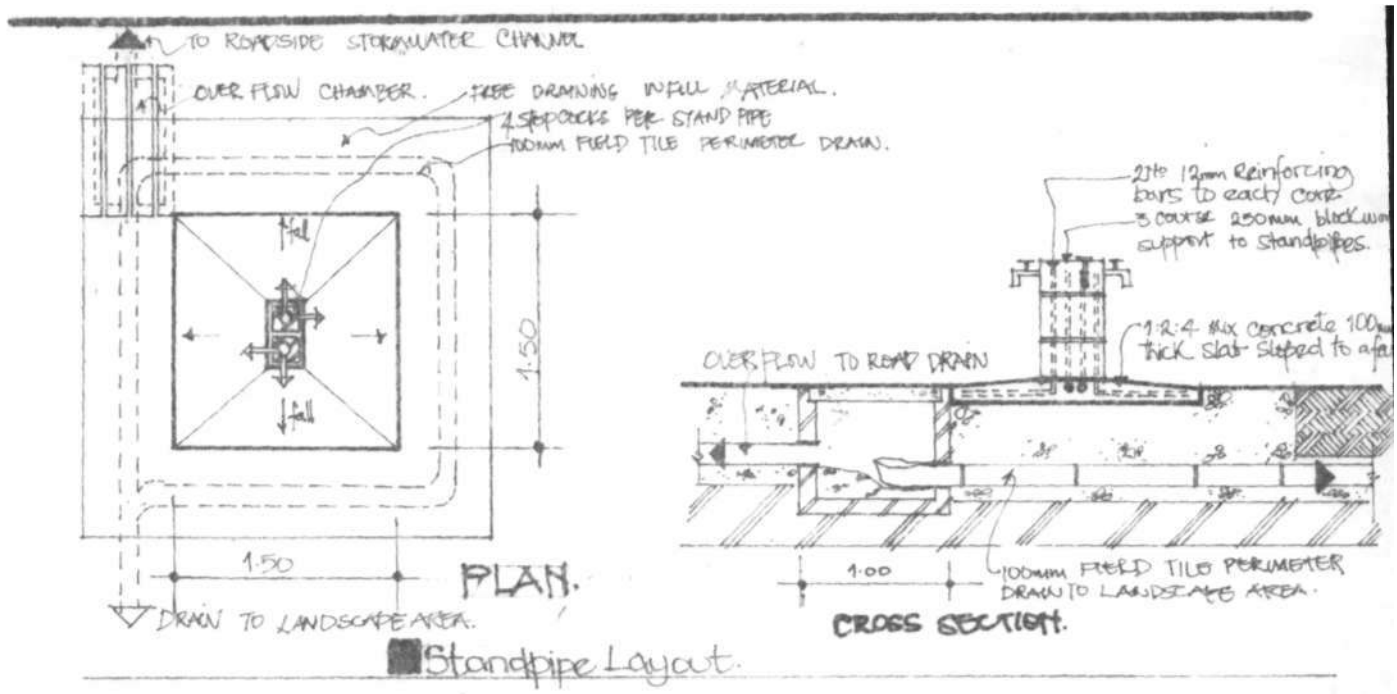
These are recommended to be sited differently and away from others. But for auto-repair services they should be grouped side by side and near petrol station and motor park. These should be fenced round to give it face lifting.

Utilities and Services

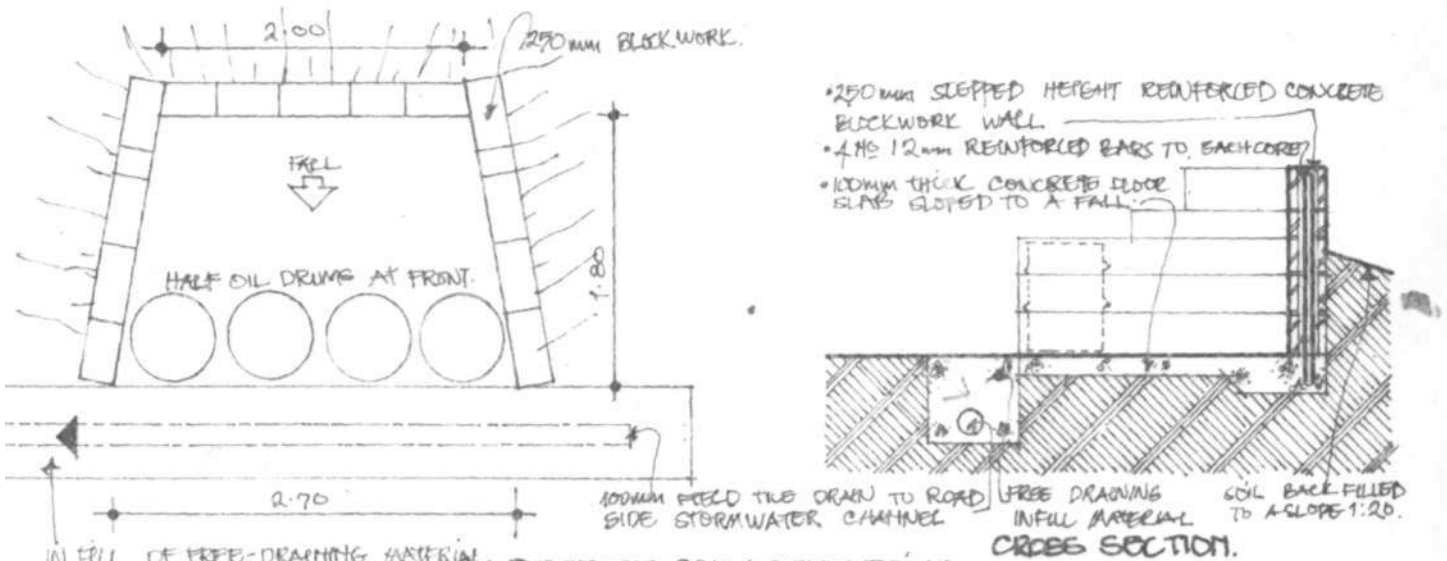
(a) Water

The connections of pipe borne water to individual houses should be facilitated to achieve the proposed 50 litre per capacity per day uptake. This will involve encouraging private connections by laying pipes as close as possible to the dwelling units. Also, the provision of public stand pipes to cater for those who cannot afford private connections due to financial constraints. One standard pipe is proposed for fifty compounds or one stand within a radius of 200 metres serving as government assistance to the neighbourhood (Figure 7.09C + 7.10A).

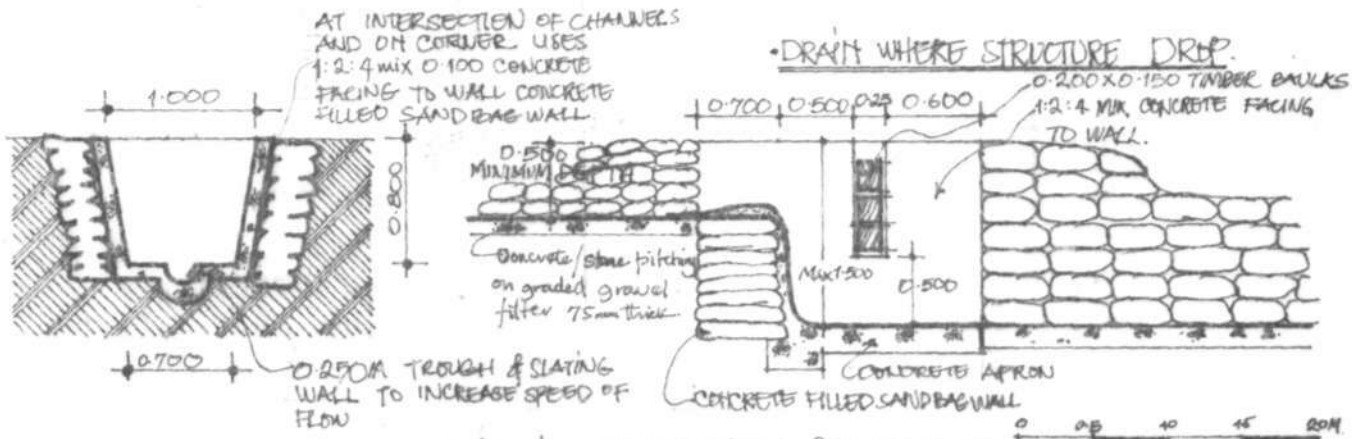

UTILITY LINE
ELECTRICITY LINE
WATER LINE
TELEPHONE LINE
PROPOSED RESIDENTIAL CENTRE
PROPOSED SITE FOR SECONDARY



Standpipe Layout.



● REFUSE COLLECTION POINT.



● DRAIN OF WASTE WATER & STORM WATER

FIG.	DETAILS OF STANDPIPE, REFUSE COLLECTION POINT AND	OYEKANMI O S M Sc THESIS 87/88 URP-A BU ZARIA.
7·10A	WATER DRAINS SYSTEM	

SOURCE: Ger al handasah consultants (shair & partners) 1978, Bauchi upgrading

As this community is still growing, there is need for two (2) 3,750,000 litre capacity tanks at the two community centres.

(b) Telephone

There is need to extend telephone links with the metropolis through the major road into Rigasa. Stand poles at 60m intervals are also installed in this area so that interested individuals are encouraged to connect it to their residences and offices. There are considerations for services schemes but it is usually connected to public telephone booths.

(c) Electricity

The proposed up-grading of access road which will also increase the availability of space for electrical equipment installation.

High voltage (HV) lines are proposed to run along major and local roads while low voltage (LV) (11KV) run along service roads for easy connection to houses and should be close to the lines as possible, to avoid purchasing of electric poles by individuals. It is also proposed that street lights should be fixed at 45 - 60 metres intervals to illuminate road junctions and public activity areas. Transformers should be installed at proper places with adequate space. NEPA should have a small office for operating an efficient Billing and Collection system so that customers should be able to get their bills regularly.

(d) Refuse Collection System (Solid Waste Disposal)

Three levels of action which are proposed for solid waste disposal in Rigasa. These are:

i. Compound level

ii. Neighbourhood level

iii. Community level

For the Compound and Neighbourhood levels, it is proposed that each housing unit should have half oil drum metal container with cover lid, for daily refuse collection estimated at 0.5 kilogrammes for inhabitant per day (Figure 7.10B). Stage 1; they can easily transport to neighbourhood refuse collection points located within 50 metres radius where oil drums are palced. Stage 2; workers of the waste disposal units will go round at least once every day (2-2 day) and empty the refuse into drum carried on hand carts. Stage 3; from the vehicle collection points wastes are emptied into collection vehicles every two days.

In the Neighbourhood, oil drum containers are provided which are not more than 150 - 200 metres apart considered to be a convinient walking distance. It is assumed that it will take care of 500 kilograms of refuse. The individuals are to provide the half empty oil drums for themselves while government provides the collection service.

At Community level, the refuse disposal action involves sanitary landfill which is the cheapest and have ability for confining these materials to the smallest possible area and volume to control vermins and other disease vectors which are usually rampant in waste disposal areas and to prevent children's access to the waste for safety. The Site to be considered should not be dangerous to underground water as to contaminate it. In view of this factor of disease, a low lying area close to a tributary of river Rigasa is found to be suitable. There is therefore, the need to make adequate demarcation of the landfill area such that an adequate space is allowed for the drainage system.

The total capacity of the area to be land filled has been found to be 32 hectares per 100,000 population per year at 2.5 metre compacted fill and to be a gentle slope.

Thus, volume = Length x Breadth x Height

= 1200 x 250 x 10m = $3 \times 10^6 m^3$

This means that the total capacity of the area is $3 \times 10^6 m^3$. The amount of refuse that will be discharged yearly is calculated on the following basis:

1. 0.5kg ber inhabitant per day solid waste
2. 500kg per collection point
3. A daily cover or at least 60 centimetres to prevent vermins access and to accelerate discomposition

The 1988 population = 71,000

Total Dialy Refuse = 35,500kg per day (34.94 ton)

508.0kg per Vehicles = 6 Vehicles required

The estiamted total solid waste for thearea, that need to be disposed of is 60,000kg^2 (120m^3 per day) that is, 43,800m^3 per year. The above calculation shows that in the next 10 years, solid waste produced in the area could be dumped in the landfill and there will still be space to be used after the year 2000.

The number of vehicles required per day for collection of refuse and the number of trips to be made depends on the capacity of the Van.

Capacity of one van = (5 tons) 5,080.0kg

Where 1 ton = 1,016.0kg

In the year 2000, (65 tons) = 66,040.0kg

12 vehicles per day per trip

60,000kg (59.051 tons) = 1 vehicle per

day per 12 trips or 4 vehicles per day per 3 trips

Each refuse collection van (Figure 7.10B) should contain a maximum of 3 persons each and the function of each should be as follows:

- 1 Person to be driving the van
- 2 other persons, bringing out refuse
- bin from the collection point, lift and pour the bins into the vehicle

As this land-fill will be reclaimed in the distant future, it is suggested that it should be put into use like parks. Market gardening could also be practised to utilize the fertile soils.

(e) Sewage Disposal System

Almost the bulk of the population disposes sewage pit latrines which are unhygenic and constitute health hazards.

Various strategis developed are:

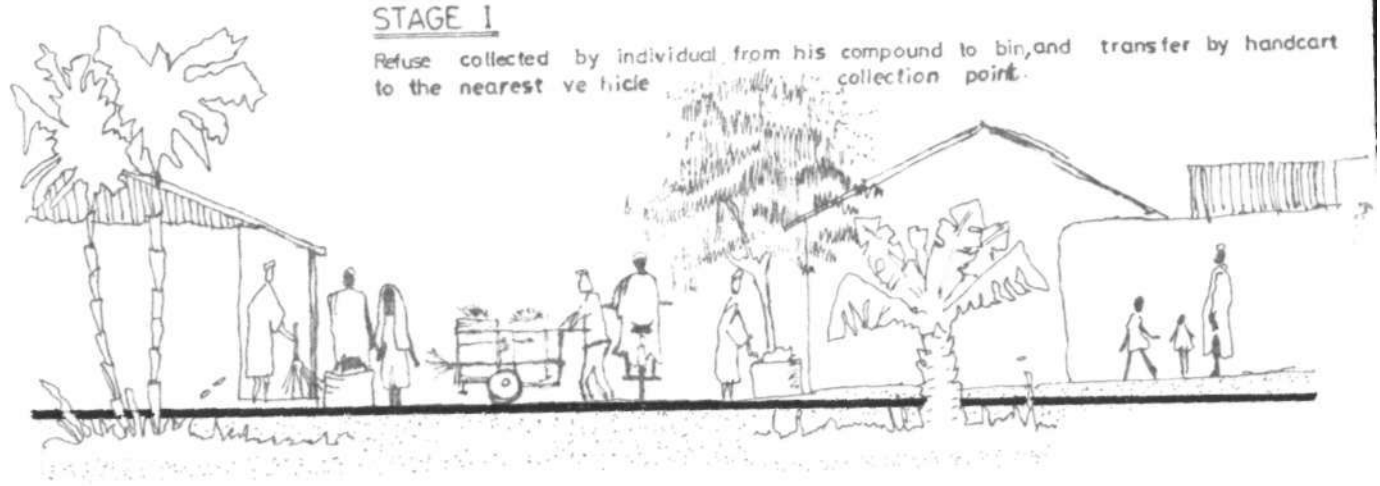
(i) Law to forbid the use of pit latrines in conjuction with wells in residents compounds.

(ii) Encourage provision of Septic tank. The septic tank/soakaway is proposed where owners are financially equipped since it is better than pit latrines. Also, increase in waste from the kitchen and bathroom soak-away are to reduce drainage problem as well.

(iii) An alternative is to improve the existint pit latrine to meet sanitary standards.



7·10 B PROPOSED PUBLIC STAND PIPES, REFUSE COLLECTION POINTS AND DRAINAGES



STAGE I

Refuse collected by individual from his compound to bin, and transfer by handcart to the nearest ve hicle collection point.

STAGE II

Refuse bins emptied into 2·00X 150 M Concrete dump with half oil drums(4)at front the collecting point. Within the nearest service distance.



STAGE III

Transfer of refuse can on the collecting vechicle for onward movement by trucks to landfill site.

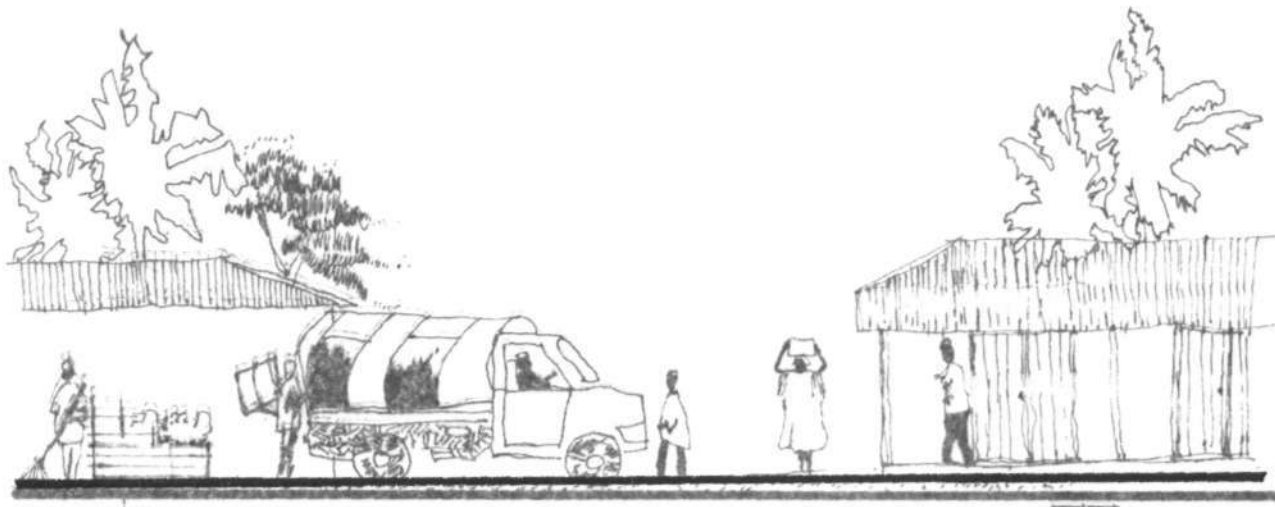


FIG. 7·10B PROPOSED CONCEPT OF REFUSE DISPOSAL COLLECTION

OYEKANMI O S
M.Sc.THESIS 87/88
U.R.P.-ABU ZARIA

SOURCE: Dar al handasah consultants (shair & partners) 1978, Bauchi upgrading

- Pit latrines are required to possess an adequate lid to cover the pit, to prevent unbearable odour and flies (See Figure 7.07).

- 5mm bitumenous felts with an over-hang of about 30cm., which prevent maggot from climbing to the mouth of the pit should be fitted just below concrete cover, on which the lid rests.

- Ventilation pipe leading out into open air with screen to reduce the nauseating steam from inside the pit at each opening.

Further more, to prevent change of site of pit latrine or alter-actions a pit water seal is to be fitted to the pit and connected to a displaced soakaway or used with pour flush pit toilet.

(iv) Central Sewage System. This has been proposed as the utilmate system for Rigasa by the year 2000. This involves a central network for disposal and treatment of all the sewage produced in this community with treatment out-side the built-up area.

(f) Drainage

Two types of drainage are recommended.

(i) Foul Drain is domestic waste water line for each housing unit that passses via either pipe or open channels into storm water system along the road or into the compound soakaway pit.

(ii) With the Storm Water drainage line, these two constitute a major problem, as the study reveals that a substantial part of the area has bad drainage and storm water erodes its channel (Figure 7.10B). It is recommended that Storm

water drainage should have two paved drainaged (concrete surfaced) channel on both sides of the major road. For other roads the drains may not be paved and should be on one side only. The water that collects from distributor and service roads are drained along the major channel for onward transmission into the river.

7.60 DETAILED ENVIRONEMTNAL UPGRADING PROPOSAL

This strategy reflects a physical planner's approach in achieving the Goals and Objectives of the design, stated earlier.

This shows how some parts of the existing Environmental Lanscape have undergrone a process of transformation taking into consideration the package of curative measures of renewal programme; such as shown in (Figure 7.12 A-C to Figure 7.14 A-C).

This application shows how specific types of upgrading measures proposed for each area. In order to understand the details, the area is shown before upgrading and after a specified upgrading have been done.

7.70 THE PROPOSED IMPLEMENTATION STRATEGY

The proposed implementation scheme calls for phasing, administrative and legal frame-work. Also, community participation, enlightenment and financial aspects.

7.71 PHASING THE SCHEME

The proposal adopted discourages mass relocation and displacement of residents for the necessary improvement, and more facilities, utilities and services need to be provided in built-up area without posing great problems. Another constraint is finance which tends to delay

TABLE 7.5

PROPOSED PHASING OF FACILITIES, UTILITIES, SITES AND SERVICES — proposals for 2000

ITEMS/ACTIVITIES	OPERATOR	PHASE I			PHASE II				PHASE III			
		90	91	92	93	94	95	96	97	98	99	2000
DECLARATION OF PLANNING AREA	KASUPDA											
MACHINERY SETTING UP AND MOBILIZATION	KASUPDA											
APPRAISAL OF THE SCHEMES AND PUBLIC ENLIGHTENMENT	KASUPDA & LOCAL GOVT											
SURVEY AND MAKING AREA AFFECTED.	LAND & SURVEY											
ACQUISITION OF ALL VACANT LAND / DELAPIDATED BUILDINGS	KASUPDA											
RESIDENTIAL HOUSING 1/CONSTRUCTION OF SITES AND SERVICES	MIN OF WORK & HOUSING											
2/DEMOLITION OF DILAPIDATED STRUCTURES, COMPENSATION & RESETTLEMENT ON "S & S"												
3/UPGRADING AND RE ADJUSTMENT OF COMPOUND WALL, VENTILATION ETC.	INDIVIDUAL											
COMMERCIAL 1/CONSTRUCTION OF COMMUNITY MARKET, SHOPS, OFFICES & BANK ETC.	KASUPDA											
2/ UPGRADING OF AGRICULTURAL FARMING AREA/EMPLOYMENT CENTRES	LOCAL GOVT											
3/ IDENTIFICATION OF ALL INCOMPATIBLE USES AND RELOCATION	KASUPDA											
PUBLIC/SEMI PUBLIC 1/ PROVISION OF FACILITIES SUCH AS HEALTH CENTRE CLINIC												
POST OFFICE, MOTOR PARK, COMM CENTRE, LIBRARY, SCHOOLS, PUBLIC CONVENIENCE	GOVT.											
2/ RELOCATION OF PUBLIC PLACES SUCH AS POLICE POST ETC.	KASUPDA											
RECREATION 1/ PROVISION OF OPENSPACES/SPORT FIELD	LOCAL GOVT.											
2/ PUBLIC RECREATION PARK, CINEMA HOUSE & TELEVISION VIEWING CENTRE												
INDUSTRIAL 1/ RELOCATION OF OBONOXIOUS SMALL SCALE INDUSTRIES	KASUPDA											
2/PROVISION OF BASIC LIGHT INDUSTRIES												
TRANSPORTATION NETWORK 1/ PROVISION OF CULVERT & UPGRADING OF ALL LOCAL ACCESS & SERVICES ROAD	KASUPDA											
2/CONSTRUCTION OF COLLECTOR & SOME PRIMARY DISTRIBUTION ROADS / water drains.												
3/ PROVISION OF PARKING FACILITIES AND TREES PLANTING ALONG WALKWAYS.	LOCAL GOVT											
UTILITIES & SERVICES 1/ PROVISION OF PUBLIC TAP AT 200m INTERVAL	WATER BOARD											
2/ TELEPHONE CABLE LAID ALONG MAJOR & SOME SERVICE ROAD. PROVISION OF TELEVISION BOOTH AT PUBLIC PLACES.	NITEL											
3/ LAIDING OF H.V. ELECTRICITY LINE ALONG MAJOR ROAD AND L.V. LINES ALONG SERVICE ROAD INSTALLATION OF TRANSFORMERS AND STREET LIGHTING	N.E.P.A.											
4/REFUSE CLEARANCE TO PROPOSED LANDFILL AREA PROVISION OF REFUSE COLLECTION POINTS AT 200m INTERVAL	LOCAL GOVT											
5/CONSTRUCTION OF CENTRAL SEWAGE DISPOSAL SYSTEM	KASUPDA											
6/CONSTRUCTION OF 0·8—1·5 WIDE CONCRETE STORM WATER DRAINS ALONG MAJOR ROADS UPGRADING AND PROVISION OF 05—08 WIDE UNLINED DRAINS ALONG MINOR ROADS	KASUPDA											

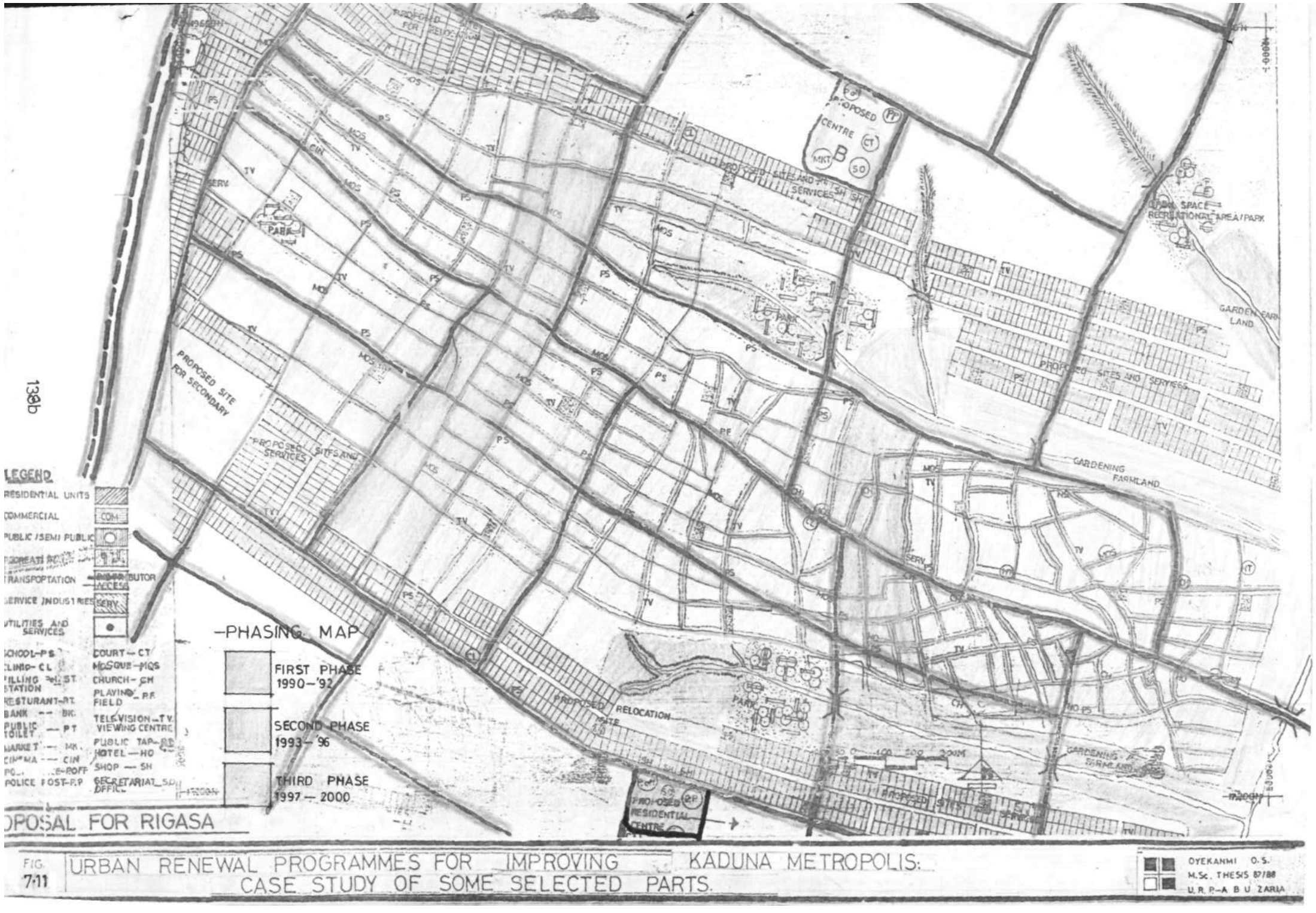


FIG. 7·11 URBAN RENEWAL PROGRAMMES FOR IMPROVING KADUNA METROPOLIS: CASE STUDY OF SOME SELECTED PARTS.

OYEKANMI O.S.
M.Sc. THESIS 87/88
U.R.P.-A.B.U. ZARIA

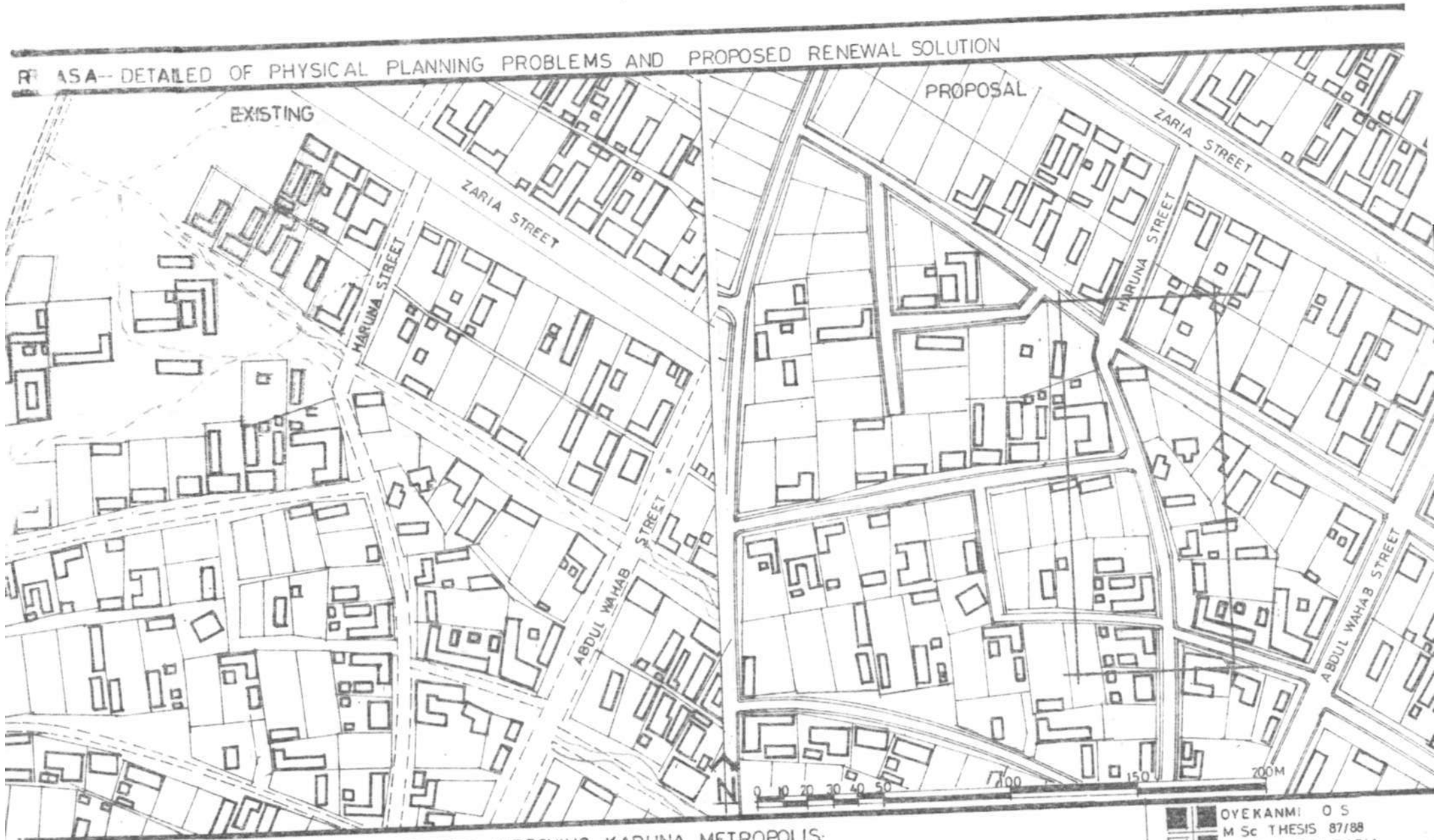
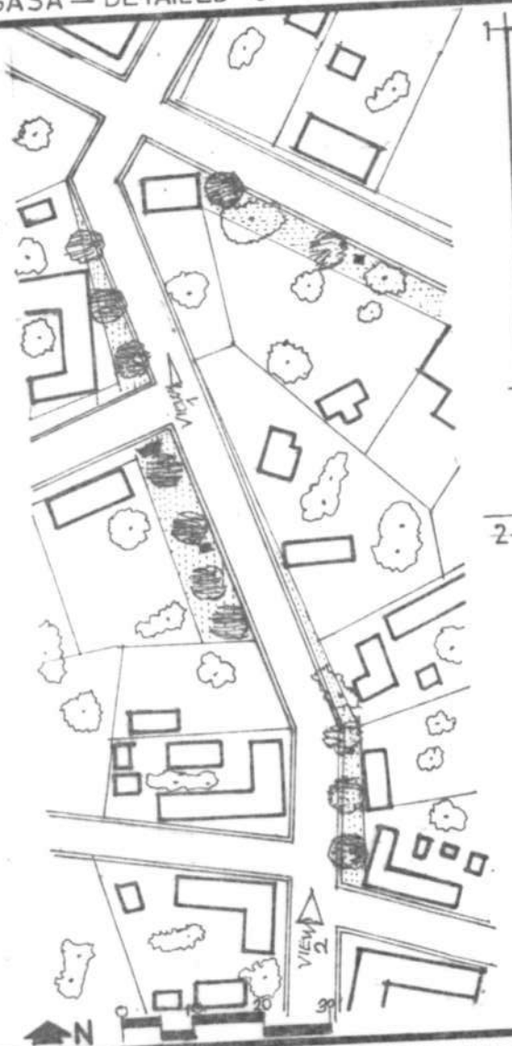


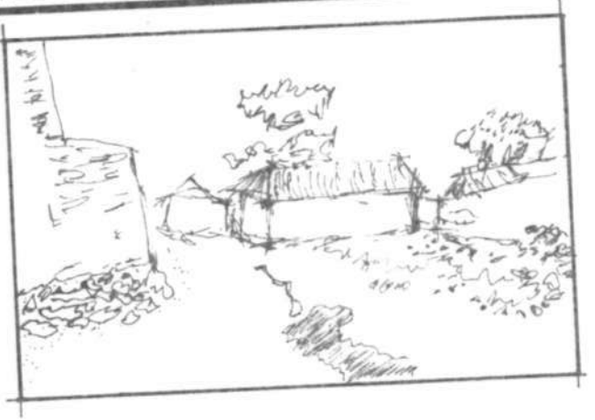
FIG 7·12A URBAN RENEWAL PROGRAMMES FOR IMPROVING KADUNA METROPOLIS. —CASE STUDY OF SOME SELECTED PARTS. (A SECTION OF RIGASA ENVIRONMENT)

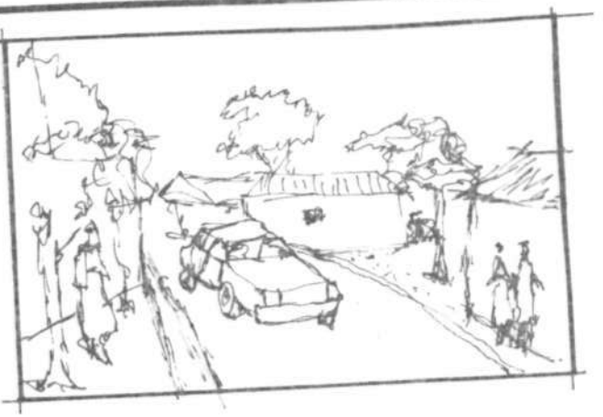
Source: Field survey '88

RIGASA — DETAILED OF PROPOSED PHYSICAL PLANNING IMPROVEMENT



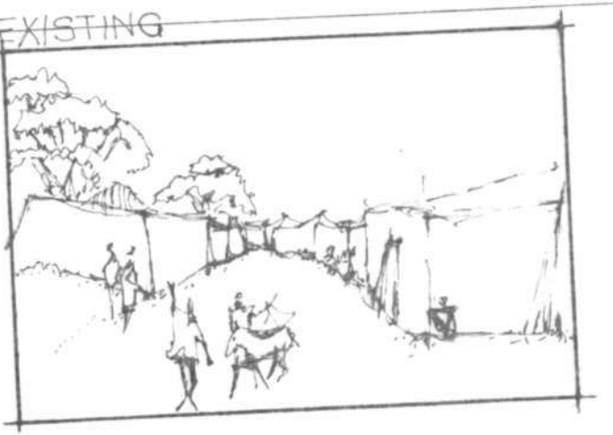
1





EXISTING

2



PROPOSED

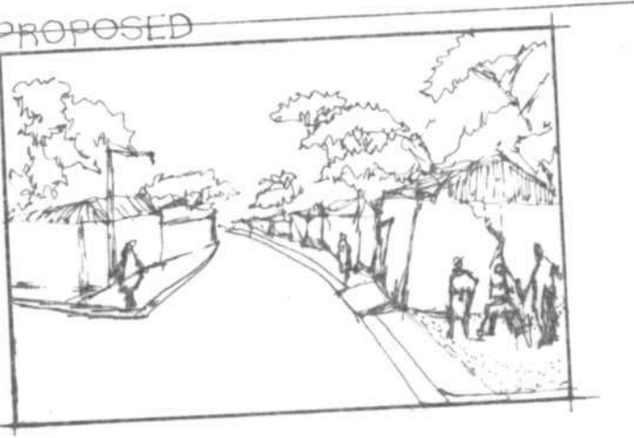
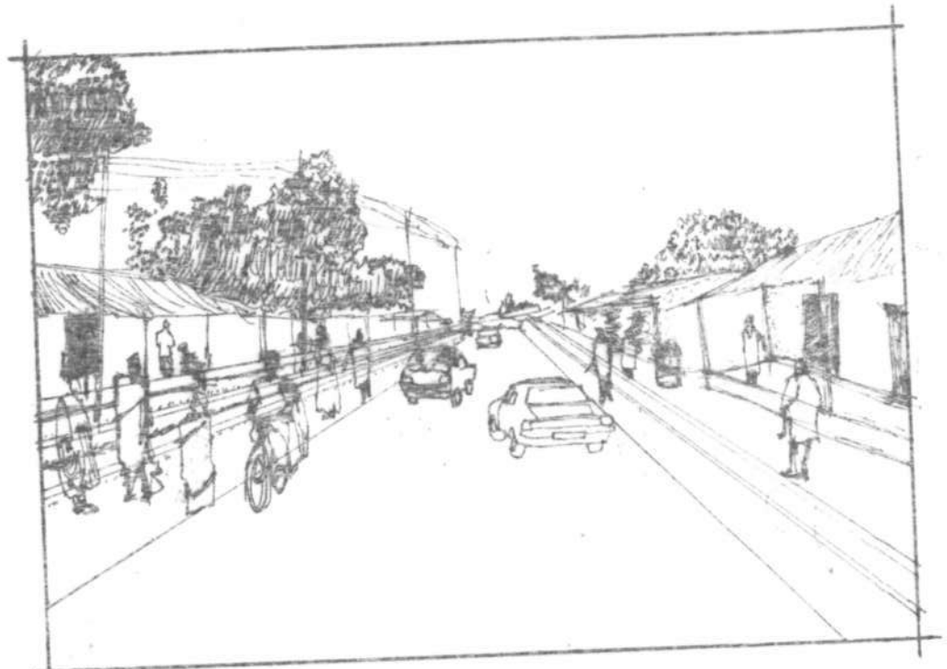


FIG 7·12 B URBAN RENEWAL PROGRAMMES FOR IMPROVING KADUNA METROPOLIS: - CASE STUDY OF SOME SELECTED PARTS (A SECTION OF RIGASA CIRCULATION SPINE)

OYEKANMI O.S.
MSc THESIS 87/88
U.R.P.–A.B.U. ZARIA



EXISTING



PROPOSED

AREAS ABOUND THE COMMERCIAL ZONE ARE MIXED USES AND ARE TRAFFIC HAZARD WITH PRESENT ENCROACHMENT ON THE VECHICULAR TRACK. THESE SHOULD BE CLEARED AND RELOCATE SPACES TO BE PROVIDE ELSEWHERE. THE ROAD COULD IN FUTURE BE MORE ELABORATELY DEVELOPED WITH PLANTS AT EDGES, PAVING SURFACING, CONTROL DRAINAGE CHANNELS, REFUSE COLLECTION POINTS ETC.. AND STANDPIPES PROVIDE A SOCIAL FOCAL POINT AT A SUITABLE RECREATION AREA LOCATIONS.

FIG 7.13 URBAN RENEWAL PROGRAMMES FOR IMPROVING KADUNA METROPOLIS: A CASE STUDY OF SOME SELECTED PA

——RIGASA ABDUL WAHAB STREET——

OYEKANMI O S
M Sc THESIS 87/88
U.R.P-A.B.U. ZARIA

Source: Field survey '88

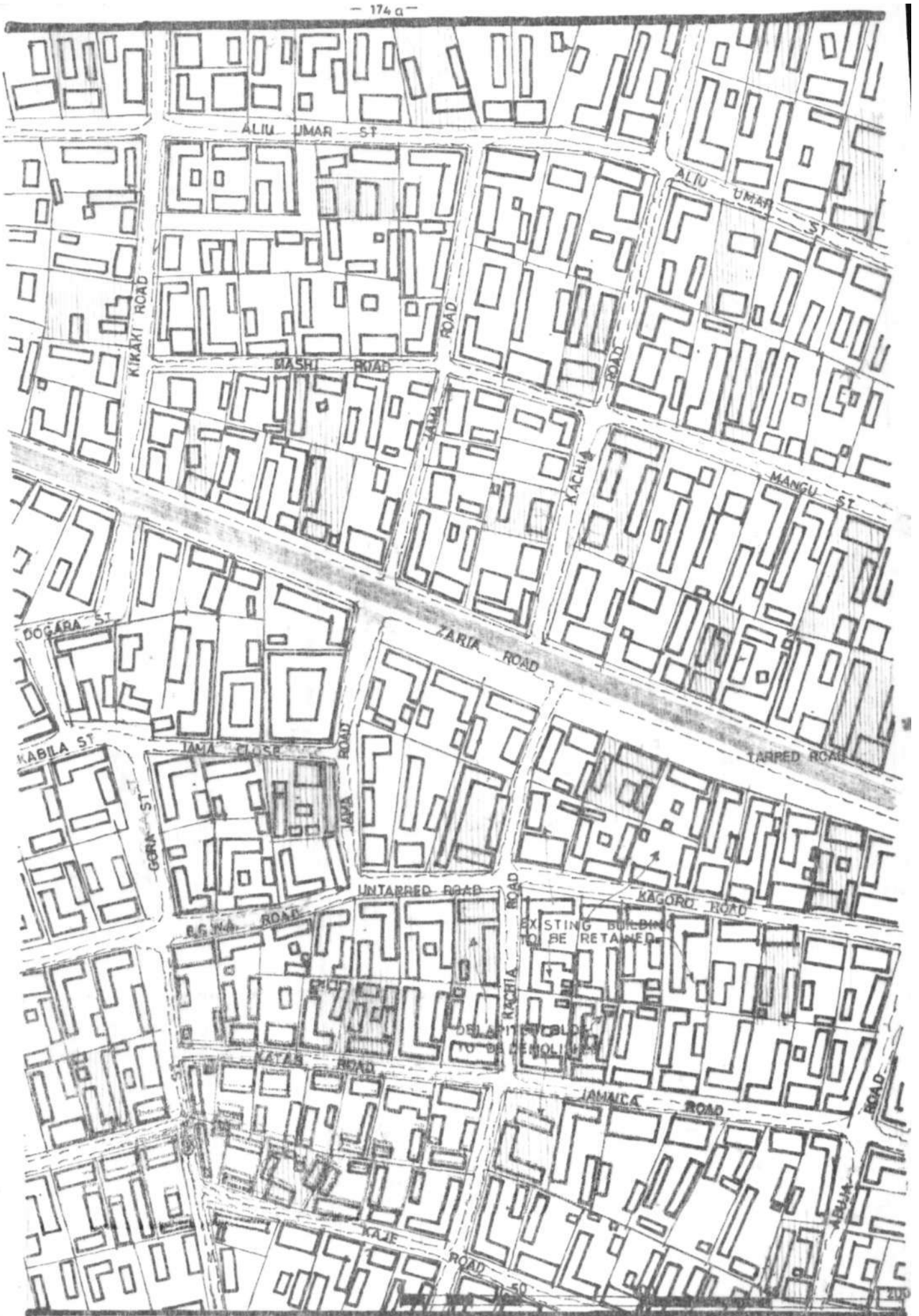


FIG. 7·14A

URBAN RENEWAL PROGRAMMES FOR IMPROVING KADUNA METROPOLIS
—CASE STUDY OF SOME SELECTED PARTS. (A SECTION OF RIGASA)

OVEKANMI O.S.
M.Sc. THESIS 87/188
U.R.P.—A.B.U ZARIA

SOURCE: Field Survey (Jan)

EXISTING SITUATION



FIG 7·14B URBAN RENEWAL PROGRAMMES FOR IMPROVING KADUNA (PROPOSED PHYSICAL PLANNING SOLUTION) -CASE STUDY OF SOME SELECTED PARTS. (A SECTION OF RIGASA)

PROPOSED



FIG 7·14 C URBAN RENEWAL PROGRAMMES FOR IMPROVING KADUNA /PROPOSED PHYSICAL PLANNING SOLUTION

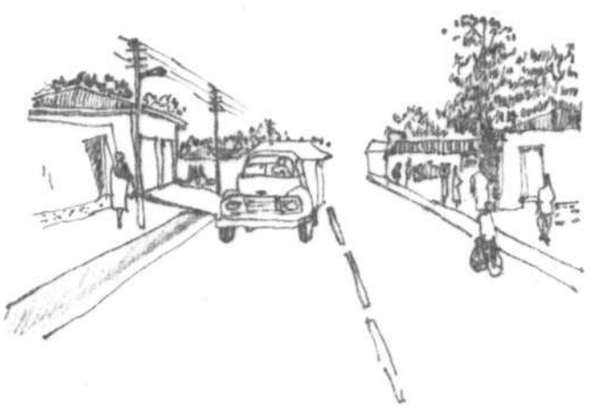
A CASE STUDY OF SOME SELECTED PARTS IN SECTION OF

PROPOSED FACILITIES & SERVICES

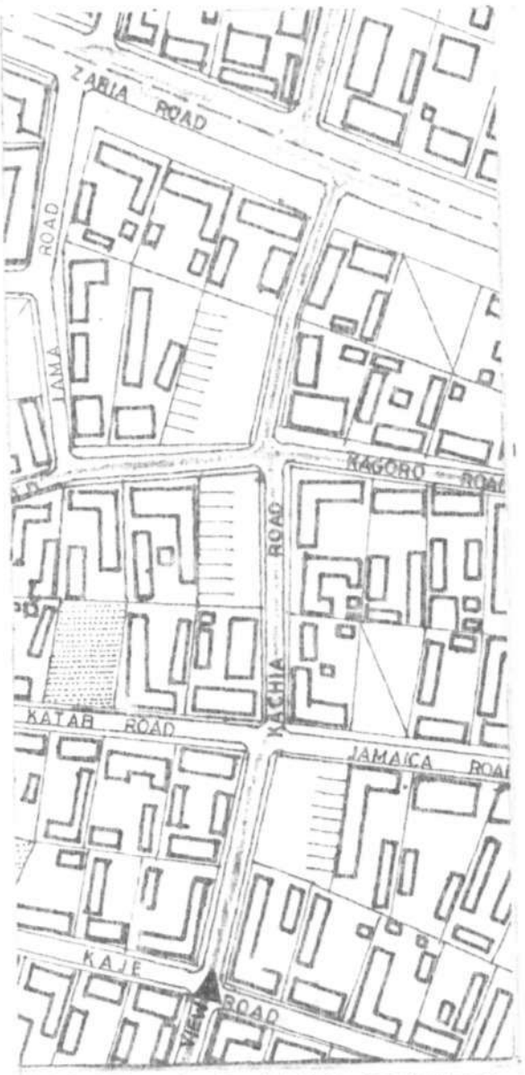
PROPOSED SCHEME



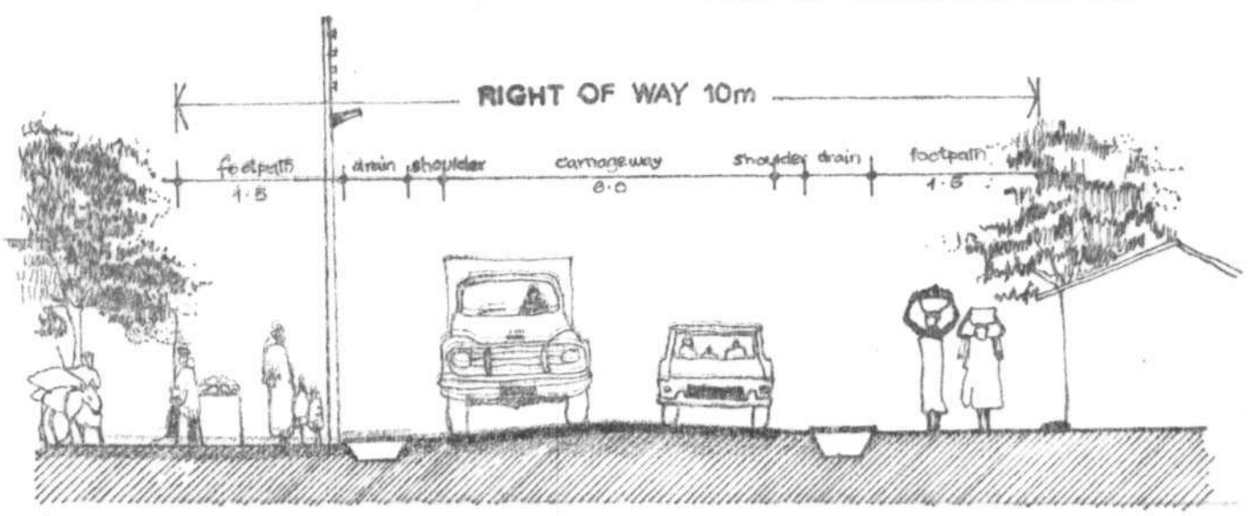
BEFORE UPGRADING



AFTER UPGRADING



LOCATION MAP AFTER CONSTRUCTION OF LOCAL ACCESS-WAY



NORMAL RESERVE SURFACE DRESSED

FIG	URBAN RENEWAL PROGRAMME FOR IMPROVING KADUNA	OYEKANMI O S
2.6	CASE STUDY OF SOME SELECTED PARTS (A SECTION OF RIGASA)	M.Sc. THESIS 87/88
		U.R.P – A.B.U. ZARIA

constructional works. this proposal then calls for proper phasing which coincides with fiscal year to ensure smooth funding of the projects which is always included within the yearly budget estimate. As sudden change in the way of life of the people are not acceptable, the phasing programme will introduce these changes over period of 10 years. These are phased-out into 3 stages with initial emphasis on major improvement and also most needed facilities and services (Table 7.5 and Figure 7.11).

7.72 ADMINISTRATIVE MACHINERY

A problem with implementation of physical planning proposals is multiple adminsitrative bodies and agencies participating without central co-ordination. KASUPDA set up by an edict in 1985, were to plan the growth and deelopment of Kaduna State Urban Centre. This organisation should be the sole authority responsible for the implementation. Its zonal office should be moved from Afaka to Rigasa district.

However, in carrying out this function, it is noted that many over-lapping administrative influences and function with different agencies are inevitable. The proposed approach envisages problem of proper co-ordination and it is therefore suggested that the task of any partici-pating body should be well defined. Kaduna State Urban Planning and Development Authority occupies a central position in this exercise so that when action falls short of projected results, the cause or origin of the short-fall can easily be identified. The zonal office is nece-ssary here, in order to have adequate technical expertise to design and supervise constructions. They should also have the ability to work with the local community. The zonal Urban Development Office is to consist of engineering, administrative and planning sections.

i. Kaduna State Urban Planning and Development Authority

(a) Plan preparation by declaring an area as planning area, through legal aspect under section 10(i) of Town and Country Planning Law of Northern Nigeria Cap. 130.

(b) Development control "made it unlawful for any body to carry out development, re-development, demolition extension repair". 11, Sub-section 6. This makes it possible for only the planning body to grant "interim development" permission to prospective developers on satisfying the scheme drawn. Section 27 states that "where a scheme has been approved in respect of a planning area, the authority shall be responsible for executing and enforcing the scheme". Also, Section 29(a) states that the authority may at any times, remove, pull down, or alter, so as to bring into conformity with provision of the scheme, any building or other works which does not conform to those provision of the scheme,

(c) KASUPDA applied Section 33(i) which empowers it to acquire property 'compulsorily' (or by agreement) for public purposes. In the same token Section 31, sub-section (i) of Town and Country Planning provides for payment and adequate compensation for that property.

(d) Planning and Financing the Programme involve in over-all co-ordination of project through technical control and supervision of local improvement, local acquisition for public purposes, land zonning, provision of street, construction of access and drainage work at community level and grant of planning permission.

Its roles are to include:

(a) Refuse collection, disposal and sanitary maintenance

(b) Construction of markets and public conveniences

(c) Investigation and organisation of local improvement of services through community development

(d) Confirmation of customary right of occupancy

(e) Construction and maintenance of public health institution

(iii) Kaduna State Ministry of Education

Provision of Primary and Secondary Schools

(iv) Kaduna State Ministry of Health

- Construction and management of health clinics
- Design of community health education programme and publicity materials

(v) Kaduna State Ministry of Works and Housing

- Determination of compensation and certificates of occupancy by statutory right (and to facilitate the provision of mortgage to individual)
- Allocation of land for non-public uses
- To provide technical advice on the execution of sites and services schemes with construction of model houses as well as house up-grading.

(vi) Kaduna State Ministry of Lands and Survey

- Undertakes survey of area and prepares survey brief
- Provide Lands

(vii) National Electric Power Authority (NEPA)

- Construction and maintenance of electricity supply net-work
- Making individual electricity connections and Billing and collection

viii Kaduna State Water Board

- Extension of pipe water supply connections to individual compounds
- Maintenance, Billing and Collection of Rates

xi Residents

(a) Up-grading of Housing Units

(b) Organising self-help project/community development

(c) Payment of levies and Rates

7.73 PUBLIC EDUCATION AND CITIZEN PARTICIPATION

The residents have to be adequately informed about the need for the renewal programme, the benefits from such exercise and their basic rights. This is because the residents have a very important role to play as only their interest and involvement in this programme could sustain the projects which affect them individually or as a group from community level to neighbourhood and finally individual household level. Participation involves up-grading of housing units and its immediate social barrier related to the surroundings. These include payment of bills and contribution of levies for development of the area.

This programme is to be actively supported with vigorious backing of government at all levels-civic, commercial, education, religion organisation and above all the media. The objectives of this scheme and its scope are to be made known to the residents through the pres,, public lectures and documentation, showing of films on related schemes elsewhere and explained in local language.

Planning zonal office through Local Government District Office has the task of mobilizing the inhabitants for the purpose of aided seld-help through their technical staff.

This is supposed to gear up public interest to feel a sense of peronal responsibility and participation in the scheme. Finallu a compaign towards continous improvement in living habits to promote environmental sanitation has to be embarked upon such as making sure that compound refuse are put in the proper collection points and dregging of drains undertaken by individual households.

7.74 FINANCIAL ASPECT

This is a social service which needs strong financial support for adequate implementation. Thus, it is necessary to specify the sources of funds to be used for implementation of the proposal.

i Federal Government

Through budget allocation made to different Federal Government bodies who are responsible for provision of some of the facilities needed in the area - such as National Electric Power Authority, Postal and Tele-communication services (NIPOST AND NITEL)

Also, through facilitation of mortgate loans grant to private sectors developers.

ii. Kaduna State Government

- Main sources of finance through direct sunvention to Kaduna State Urban Planning and Development Authority
- Indirectly through subvention made to various Ministries parastatals and local governments
- Guaranteed loans agreement between banks and Urban Board

iii. Kaduna State Urban Planning & Development Authority

- Main source of finance is the State Government subvention
- Can also borrow from banks
- Development charges such as settlement levy; property and land-use zonning tax

iv. Zaria Local Government

- Generating of loans and through tax of local resources and betterment (vaporation taxes) levies
- Ground rents, business taxes, sales taxes i.e levies within the relevant juridiction

v.
- Site rent and conservation fees, which are used in day-to-day activities
- Grants from higher level government
- Charges from beneficiaries (lumpsum taxes)
- Interest charges on late payments

vi. Private Organisations

- Provision of sites for small scale industries and also ware-house to generate revenue

Since Rigasa has commercial potential a lot of labour loss will be saved if these are used appropriately.

vii. Individuals

This form of contribution to development levies by individuals is much. The majority have shown their willingness to contribute both financially and materially, as the scheme will facilitate improvement of their neighbourhood.

viii. Public Organisations

- Charges made on provision of services such as water, electricity

Financing of the scheme should be such that in the first and second phase, it is financed by government, agencies and levies. While in the last phase, little finance should come from government, while the project should be continued self-sustained through plots, rent and other revenue arises.

7.80 CONCLUSION

The study revealed that the upgrading is the msot effective alternative renewal programme in solving planning problems in Rigasa. The relates to improvement of blightedness as a consequence of administative, socio-economic, planning implementation and physical factors. This destroys functional relationship of the city components and jeopardize meaningful urban expansion.

Physically, this area lacks maintenance and development control such as conflicting mixed uses, which have environemntal consequence on the residents. The Investigation also revealed that it is characterised by poor access and dirty environemnt.

The socio-economic status of the majority of the residents is poor, in relationship to expenditure like food, clothing and shelter, hence inability to pay for utilities and services.

Planning implementation is not effective enough and lack co-ordination, since various planning agencies are involved.

Administratively, these are felt under this different planning regions. If an area belong to two different regions, these generates conflict in project execution, also it is distanced from other administrative centres.

The understanding of the above forces will help to remove the constraints responsible for the blightedness. The proposals made in this study include curative and preventive measures. For effectiveness of up-grading programme both the policies of integrated development can hardly be used in early direction.

APPENDIX

Survey Questionnaire

A(I-IV) Physical environmental characteristic of each study area

B(I-IV) Alternative area preference of those willing to be relocated permanently each study area

C(I-IV) Each individual Study area: Introduction with work places centre in Kaduna Metropolis

D(I-IV) Socio-cultural and economic characteristics of each study area

E(I-IV) Availability and use of household utilities, services and facilities at each study area

F(I-IV) Housing supply and problems and General impression toward environmental perception and attitude towards housing supply and problems at each study area

G(I-IV) Landlord conception and attitude toward housing supply and problems at each study area

H(I-IV) Level of acceptability of improvement scheme at each study area

BIBLIOGRAPHY

Adetutu, D. A. (1977): Slum Formation in Lagos, "A Case Study of Mushin Area" Unpublished M.Sc. Thesis, Department of Urban and Regional Planning Ahmadu Bello University, Zaria.

Burn, W. (1963): New Town for Old - "The Techniques of Urban Renewal", Holy Thomas Limited, Dubin.

Dar-al Handasah Consultants (Shair and Partner) (1978): Feasibility Study for Sites and Sites, Residential Upgrading in Bauchi and Gombe

Dar-al-Handasah Consultants (Shair and Partner) (1981): Feasibility Study: Upgrading in Sokoto

Ford, C.J. (1969): Slum and Housing: Housing, Condition Policy, harvard University Press

Gans, H.J (1962): An Evaluation of the Development Plan and Process urban Housing, William, E. et al, The free Press, New York

Gans, H. J. (1965): "The Failure of Urban Renewaal: A critique and some Proposals", Commentary, 39, NO.4, Pp. 27-37

Gibson, M. S. et al, (1982): An introduction to Urban Renewal, Hutehinson, London

Jamoh, A. A. (1983): "Upgrading Strategies for Improving Sabon-Gari Northern Nigeria", A Case Study of Zaria, unpublished M.Sc. Thesis, Ahmadu Bello University, Zaria.

Kaltho, J. B. (1984): "Renewal of Residential Areas in Nigeria" A Seminar Paper Presented at Department of Urban and Regional Planning Ahmadu Bello University, Zaria.

Oyekanmi, O.S. (1987): "Urban Renewal Strategies for Improvement of Blights Residential Area in Nigeria". A Seminar Paper presented at Department of Urban and Regional Planning, Ahmadu Bello University, Zaria.

Sada, P.O (1970): "The Rural Urban Fringe of Lagos". Population and Land-Use The Nigerian Journal of Economic and Social Studies Volume NO. 2 pp. 225 - 241.

Seeley, S.R. (1959): "The Slum: Its Nature, use and Users" Journal Volume 25, NO.1 Pp. 7 - 14

Stokes, C.J. (1962): "A Theory of Slums" Land Economics 48, NO.3 Pp. 187 - 197.

United National (1958): Report of the First "International Seminar Renewal" by the International Federation of Housing and Netherland

United Nation (1964): Report of "Metropolitan Lagos" by Commission Assistance Department of Economic and Social Affairs.

United Nation (1972): Human Settlements: The Environmental Challenge

Walker, M. (1938): Urban Blight and Slums, Harvard University Press

Williams, E.O. (1975): "Slum Clearance and Urban Renewal" A Paper Presented at 6th Nigerian Institute of Town Planners, Annual Conference.

Yahaya D.G. (1979): "Slums in Kaduna Urban Area" An Analysis and Strategies for Renewal,2 Unpublished M.Sc. Thesis Department of Urban and Regional Planning, Ahmadu Bello University, Zaria

FACULTY OF ENVIRONMENTAL DESIGN
AHMADU BELLO UNIVERSITY
ZARIA

SURVEY:- URBAN RENEWAL PROGRAMME FOR IMPROVING URBAN AREA: A CASE STUDY OF SOME SELECTED PARTS OF KADUNA.

INTRODUCTION: I, OYEKANMI, O.S. is a student of the above school presently undertaken a survey of development in Kaduna Metropolis. I should be grateful, if you answer among these Question, as all information shall be kept confidential and for purely academic exercise.

The Questionnaire is to study use satisfaction based, on quality of their houses and their environment, in other to finding out individual opinion as it affect his area. As this programme results will bring out suggestion for appropriate improvement of your area, as it affect the community as at large.

QUESTION TO HOUSEHOLD HEAD

FIELD SURVEY

A. PROPERTY IDENTIFICATION/BACKGROUND INFORMATION

1. Name of Respondent ---------- Sex (Female) (Male)

(i) Religion (a) Christinaity ☐ (b) Islam ☐

(c) Others (specify) ----------

(ii) Specify the Area ----------

(iii) Compound Number (Plot No.) ----------

(iv) Number in your households ----------

(v) What is the size of your plot area? ----------

---------- X (a) (b) (c) others specify ---------- metres

2. Housing occupied owner/Rented/Inherited

Owner's occupied ☐

Any part rented ☐

No. of Housing Unit ----------

Rented ☐

Amount paid per month (a) ₦10-₦25
(b) ₦26-₦50
(c) ₦50-over

Comment ----------

(a) High
(b) Satisfactory
(c) Low

Inherited ☐

land
house
part

House belongs to ----------

(a) Government (b) Housing Authorities
(c) Private Individual (d) Companies
(e) Others

B. SOCIO-CULTURAL AND ECONOMIC CHARACTERISTICS

3. State of Origin ---------- (a) Kaduna City ☐

(b) Kaduna State ☐ (c) Others (specify) ----------

(ii) Have you stayed in any other house in Kaduna before coming to this area?

Yes ☐ No ☐

If YES, how long? ----------

(iii) Specify the area you have previously stayed

(a) Anguwan Sanusi (b) Tudun Wada ☐ (c) Sabon Gari ☐
(d) Others (Specify)

(iv) Why did you move to the present house?
(a) Nearness to children school ☐
(b) Closeness to workplace ☐
(c) Nearness to public amenities ☐
(d) Cannot afford high income neighbourhood ☐
(e) Others (Specify) ----------

(i) No. of person migrated ----------

Year of migration	How Long will he stay	Age	Sex		Relationship	Depent	Independent
			Male	Female			
		0-15					
		16-30					
		31-45					
		46-60					
		60-over					

(ii) Cause of migration (give reasons) Could be

(a) Services ☐ (b) Business ☐

(c) Relative ☐ (c) Others (specify) ----------

(iii) Previous occupation before migration

(a) Agriculture ☐ (b) Business ☐

(c) Service ☐ (d) Others (specify) ----------

(iv) Income in Naira per month ----------

5. ----------

(ii) No. of Children ----------

(iii) No. of children staying with you ----------

(iv) No. of children attending school ----------

(v) Approximate distance of School/High School

(vi) How many of your children are not employed?

(vii) How many of your children are employed? --------

(viii) Their total income/month

N100-200	201-300	301-400	401-500	501-over

6. What is your Educational background?

(a) Koranic Education ☐ (b) Primary ☐

(c) Secondary ☐ (d) Post Secondary ☐

(e) University ☐ (f) Illiterate ☐

7. How many household (HH) family live in this compound?

---------- including yours.

(ii) Number of rooms

Age Group	Number of Persons							
	HH1		HH2		HH3		HH4	
	M	F	M	F	M	F	M	F
0 -10								
11-20								
21-30								
31-40								
41-50								
51-60								
61-over								
No. of Rooms								

(iii) Occupation/Type of job opportunities of other households.

Type of Job	Number of [illegible]	
	HH2	HH3
Farming		
Trading		
Handicraft		
Services		

8. Your own household income

₦---------- per week. ₦---------- per Month

₦---------- per annum.

Main Occupation	Income
i. Agriculture	(a) ₦0-150
ii. Business/Trade	(b) ₦151-200
iii. Service	(c) ₦201-250
(a) Public	(d) ₦251-300
(b) Private	(e) ₦301-500
iv. Industry	
v. Others	

Secondary Occupation ----------

Income ----------

(ii) Expenditure

₦---------- per week ₦-------- per month

₦---------- per annum

Avenues of Expenditures

(a) House rent/maintenance ☐ ₦----------

(b) Transportation ☐ ₦----------

(c) Education ☐ ₦----------

(d) Feeding ☐ ₦----------

(e) Others (Specify) ---------- ₦--------

9. Name of work place area ----------

Distance ----------kms

(ii) How do you get to work? Any of them or combination of the following:

(a) Bicycle ☐ (b) Motor Cycle ☐

(c) Public Transport ☐ (d) Foot ☐

(e) Car ☐ (f) Others (specify) .....

(iii) How many minutes (time) do you always spend to reach your work place?_____ minutes.

c PHYSICAL AND ENVIRONMENTAL CHARACTERISTIC

10 How many rooms are in this house? (excluding kitchen/toilet/store/bathroom)----------

(ii) What is the approximate size? ---------- X -----metres

(iii) Number of rooms with window ----------

(iv) Number of rooms without window ----------

(v) Age of the building structure

0-5	6-10	11-15	16-20	21-25	Over 25 (specify)------

(vi) Building material used - Wall

(a) Mud block ☐ (b) Cement Mud ☐

(c) Burnt Brick ☐ (d) Sand Screed Block ☐

Roof

(a) Thatch ☐ (b) Mud/Timber ☐

(c) Asbestos/Irons sheet ☐ (d) Others (specify)

(vii) Is the condition of the building satisfactory?

If NO, then it

(a) Need repairs ☐ (b) Need part demolition and rebuilding (c) Need complete demolition and rebuilding ☐

(b) Common ☐

Do you have it as (a) Pit toilet ☐

(b) Bucket ☐

(c) Flush (W.C) ☐

Bathroom - Do you have it as (a) Individual ☐

(b) Common ☐

(c) Do you have it as (a) Open ☐

(b) Covered ☐

Refuse Disposal

(a) Along the Street ☐ (b) Garbage Collector ☐

(c) Stream ☐ (d) Any others (specify) ----------

Liquid Waste

(a) On the street ☐ (b) In the drainage gutter ☐

D. HOUSING SUPPLY AND PROBLEMS

12. Landlords

(i) Are you a landlord? If YES, answer the following:

(ii) Why do you chose to build your house in this area?

(a) Investment purpose ☐ (b) Family land ☐

(c) Desired for personal shelter ☐

(iii) How many houses do you have in this area?

1	2	3	4

(iv) How did you get the plot to build this house?

(a) Loan ☐ (b) Saving ☐ (c) Inherited ☐

(d) Others (specify) ----------

(v) How did you carry out this construction of this house?

Built by (a) Self/Owner ☐

(b) Contract to local builder ☐

(c) Co-operative body ☐

(d) Others (Specify) ----------

(vi) Sources of finance

(a) Loan ☐ (b) Saving ☐

(c) Others (specify) ----------

(vii) What is the average rent cost/room/space?

10-20	21-25	26-30	31-35	36-40	40-over

(viii) How do you collect your rent?

(a) Monthly ☐ (b) 3 monthly ☐

(c) 6 monthly ☐ (d) Annually

(e) Others (specify) ----------

(ix) Maintained as (a) Group collection ☐

(b) Individually ☐

(x) What problems do you encountered in maintaining this house? List them.

---

13. Tenants.

(i) How much do you pay per month?

10-20	21-25	26-30	31-35	36-40

(ii) Is the size of your accomodation sufficient for your need? Yes/No

(iii) What is the condition of maintenance?

(a) Good - properly maintained ☐

(b) Fair - partly maintained, need repairs ☐

(c) Bad - so poor, it should be pulled down ☐

(iv) Do you have a plot of your own? Yes/No.

If YES, answer the following:

(a) Where is it located? ----------

(b) Have you developed it? Yes/No

(c) If No, when do you intend to develop it?

(d) Do you intend to move into it? Yes/No

(e) How will you finance it? ----------

E. GENERAL IMPRESSION AND ENVIRONMENT PERCEPTION.

14. Are you satisfied with the general condition in this area? Indicate by ticking the level of satisfaction).

Factors/Condition	Very Satisfied	Satisfied	Partially Satisfied	No Satisfied
1. Drainage				
2. Road				
3. Services (Health/ Education)				
4. Electricity				
5. Recreation (free time activities, shady tree, meeting places),				
6. Water Supply				
7. Cost of Rent				
8. Compound Environment				

15. What do you need most in this

House	Area
(a) ----------	(a) ----------
(b) ----------	----------
(c) ----------	(c) ----------

16. What is not needed in this

House	Area
(a) ----------	(a) ----------
(b) ----------	(b) ----------
(c) ----------	(c) ----------

17. What do you like most about this

House	Area
(a) ----------	(a) ----------
(b) ----------	(b) ----------
(c) ----------	(c) ----------

18. What are problem living in this

House | Area

(a) ---------- (a) ----------

(b) ---------- (b) ----------

(c) ---------- (c) ----------

7. LEVEL OF ACCEPTABILITY OF IMPROVEMENT SCHEMS

The basis of this question, is to find out the [illegible] opinion of the people regarding the appropriate scheme to be adopted for the betterment of this area e.g (i) may result in relocation of your house, or your plot partly or fully based on your level of satisfication or (2) demolition of your house or the area entirely and how you will want to be compesated or the scheme might be upgrade of the environment or/and provision of basic services of your choice.

19. Do you desire to change your residence? Yes/No

(i) Within this area only ----------

(ii) Move out of this area (give reasons)

lack & inadequate

(a) Sites and Services ☐ (b) Environment ☐

(c) Facilities ☐ (d) Others (specify) ----------

---

20. If the answer to 19 is (ii), state where you would prefer to live.

(a) Barnawa ☐ (b) Malali ☐ (c) Angwan Rimi ☐

21. Would you mind being relocated temporarily somewhere else to implement the development of this area? Yes/No.

If YES, what are the factors you consider important.

Indicate by ticking.

(a) Closeness to work place ☐

(b) House condition ☐

(c) Health, Education, Service, etc ☐

(d) Water, Electricity, Telephone, etc. ☐

(e) Moderate route rate ☐

(f) Others (specify) ----------

22. If you were to build the house again, would you prefer

(a) A compound house ☐ (b) A storey house ☐

(c) Flats ☐

(ii) If you have the means, would you prefer

(a) To renovate your house

(i) What will you renovate? ----------

(ii) How much do you have for the renovation?

(iii) How much will you need for renovation?

(b) To alter a part of the house

(i) What will you alter? ----------

(ii) How much do you have for the alteration?

(iii) How much will you need for alteration?

---

2. Tick the order of preference of the following facilities, utilities and services that you think will improve the living condition in this area.

	Priorities							
	I	II	III	IV	V	VII	VIII	
1. Drainage								
2. Road								
3. Water								
4. Electricity								
5. Educational Facilities								
6. Health Facilities								
7. Park and Amenities (Public Entertainment)								
8. Any others (specify)								

23. General opinon regarding neighbourhood and its maintenance.

(i) (a) Need complete rebuilding ☐

(b) Complete rebuilding unnecessary certain house need cement plastered ☐

(c) It is good as it is ☐

(ii) If the answer to 23 is (a) who would you suggest?

(a) Government should be in charge ☐

(b) Community development efforts ☐

(c) Partially Government/Community Development ☐

(d) Government Subsidy ☐

(e) Others (specify) ----------

24. In order to rebuild your house, will you prefer to

Financial Aid	Material Aid
(a) Accept aid from co-operative society ☐	(a) Accept aid from co-operative society ☐
(b) Accept aid from friends ☐	(b) Accept aid from friends ☐
(c) Accept aid from Government ☐	(c) Accept aid from Govt. ☐
(d) No Aid ☐	(d) No Aid ☐

(ii) If you prefer Government aid and to re-pay, the cost of the loan over specific period, state the form: (a) Government to build house on your plot ☐

(b) Government build house on a resettlment plot ☐

(c) Government give out-loan: Window, door, roof, etc ☐

(d) Government should service the

25. Mode of repayment:

(a) Would you like to belong to a Saving and Loan Society?

(i) Society lends to building house)
(ii) You repay loan gradually) ☐

(b) Would you prefer loan from Government Credit Agency (G.C.A.).

(i) He loans your money for housing)
(ii) You repay regularly to him) ☐

(c) Would you prefer material loan from Government Credit (G.C.A.)

(i) You prefer raw material)
(ii) You prefer pay regularly for the material) ☐

(d) Would you prefer material loan already made into doors, windows and roofs members?

(i) The G.C.A. supplying labour)
(ii) You repay regularly for the material) ☐

26. Saving-Organisation

(a) Any saving organisation? Yes/No

If YES, give detail ----------

(b) Any Credit Organisation? Yes/No

If YES, give details ----------

(c) Any popular saving system? Yes/No

If YES, give details ----------

(d) Any domestic saving system? Yes/No

If YES give details ----------

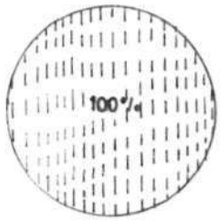
---

27. Would you like to make any further suggestion for steps and major consideration by Government in any development programme? Yes/

If any:----------

Thank you.

APPENDIX – A



COMPOUND TYPE

ROOMY TYPE

FLAT TYPE (Bungalow, Row & Storey housing

MUD-BLOCK

CEMENT-MUD

BURNT BRICK

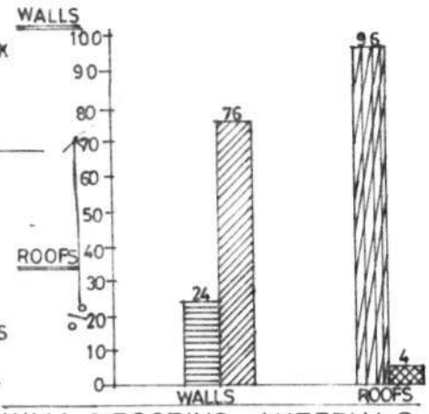
SANDCRETE BLOCK

THATCH

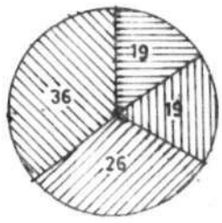
MUDTIMBER

ASBESTOS/ IRON SHEETS

CONCRETE & OTHERS



● HOUSING TYPE



% DISTRIBUTION

0–10 YRS

11–20 "

21–30 "

31–40 "

40 + "

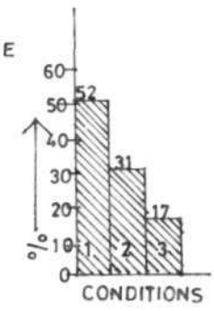
AGE

● WALL & ROOFING MATERIALS

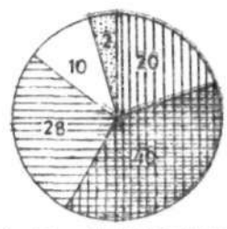
1 NEED REPAIRS

2 NEED PART DEMOLITION & REBUILDING

3 NEED COMPLETE DEMOLITION



● AGE & CONDITION OF THE BUILDINGS



% OF MAINTENACE LEVEL

0– 6 MONTHS

6 – 12 MONTHS

1 – 2 YEARS

2 – 3 "

3 + "

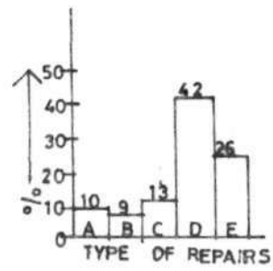
A WALL

B FLOOR

C ROOF

D DOOR

E WINDOW

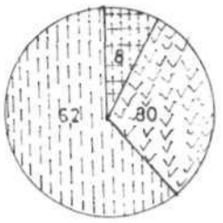


● LEVEL OF MAINTENCE AND TYPE OF REPAIRS

A–1 PHYSICAL ENVIRONMENTAL CHARACTERISTICS OF THE OLD G.R.A.

OYEKANMI O S
MSc THESIS 87/88
U R P - A. B.U. ZARIA

SOURCE: Field Survey (Jan '88)



COMPOUND TYPE

ROOMY TYPE

FLAT TYPE (Bungalow, Row, Detached & Storey housing

MUD-BLOCK

CEMENT-MUD

BURNT BRICK

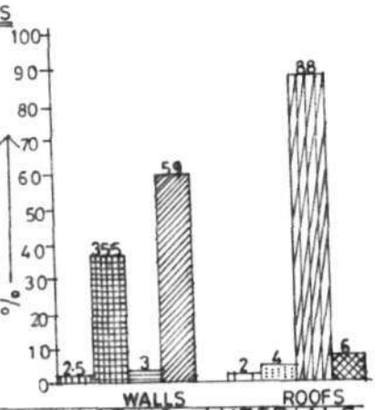
SANDCRETE BLOCK

THATCH

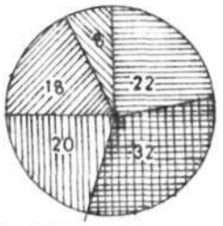
MUD TIMBER

ASBESTOS/ IRON SHEETS

CONCRETE & OTHERS



HOUSING TYPE



% DISTRIBUTION

0—10 YRS

11—20 "

21—30 "

31—40 "

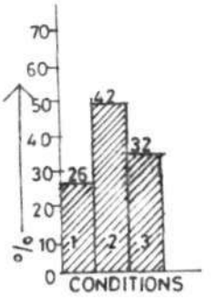
40+ "

AGE

1 NEED REPAIRS

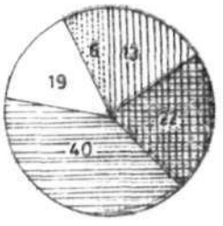
2 NEED PART DEMOLITION & REBUILDING

3 NEED COMPLETE DEMOLITION



WALL & ROOFING MATERIALS

AGE & CONDITION OF THE BUILDINGS



% OF MAINTENANCE LEVEL

0—6 MONTHS

6—12 "

1—2 YEARS

2—3 "

3+ "

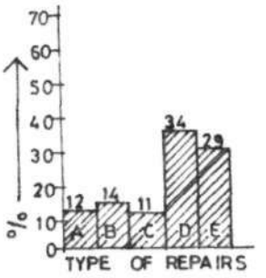
A WALL

B FLOOR

C ROOF

D DOOR

E WINDOW



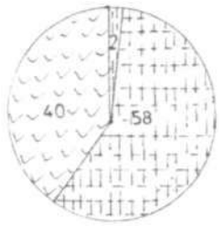
LEVEL OF MAINTENANCE AND TYPE OF REPAIRS

A–11

PHYSICAL ENVIRONMENTAL CHARACTERISTICS AT TUDUN WADA

OYEKANMI O S
M Sc THESIS 87/88
U.R.P-ABU ZARIA

SOURCE: Field Survey(jan' 88)



COMPOUND TYPE

ROOMY TYPE

FLAT TYPE (Bungalow, Row, Detached & Storey housing)

MUD-BLOCK

CEMENT-MUD

BURNT BRICK

SANDCRETE BLOCK

THATCH

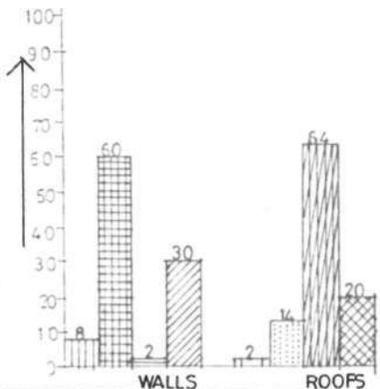
MUD TIMBER

ASBESTOS/ IRON SHEETS

CONCRETE & OTHERS

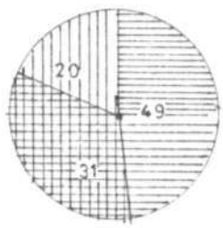
WALLS

ROOFS



HOUSING TYPE

WALL & ROOFING MATERIALS



% DISTRIBUTION

0—10 YRS

11—20

21—30

31—40

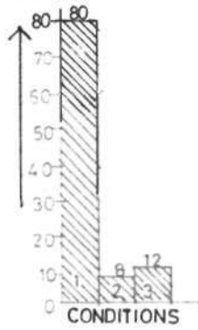
40+

AGE

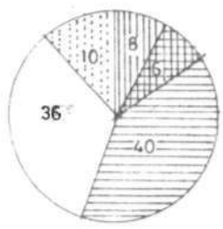
NEED REPAIRS

NEED PART DEMOLITION & REBUILDING

NEED COMPLETE DEMOLITION



AGE & CONDITION OF THE BUILDINGS



% OF MAINTENANCE LEVEL

0—6 MONTHS

6—12 "

1—2 YEARS

2—3 "

3+ "

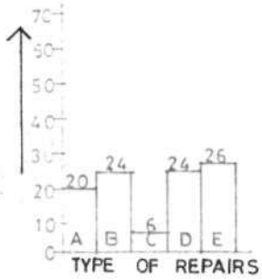
A WALL

B FLOOR

C ROOF

D DOOR

E WINDOW



LEVEL OF MAINTENANCE AND TYPE OF REPAIRS

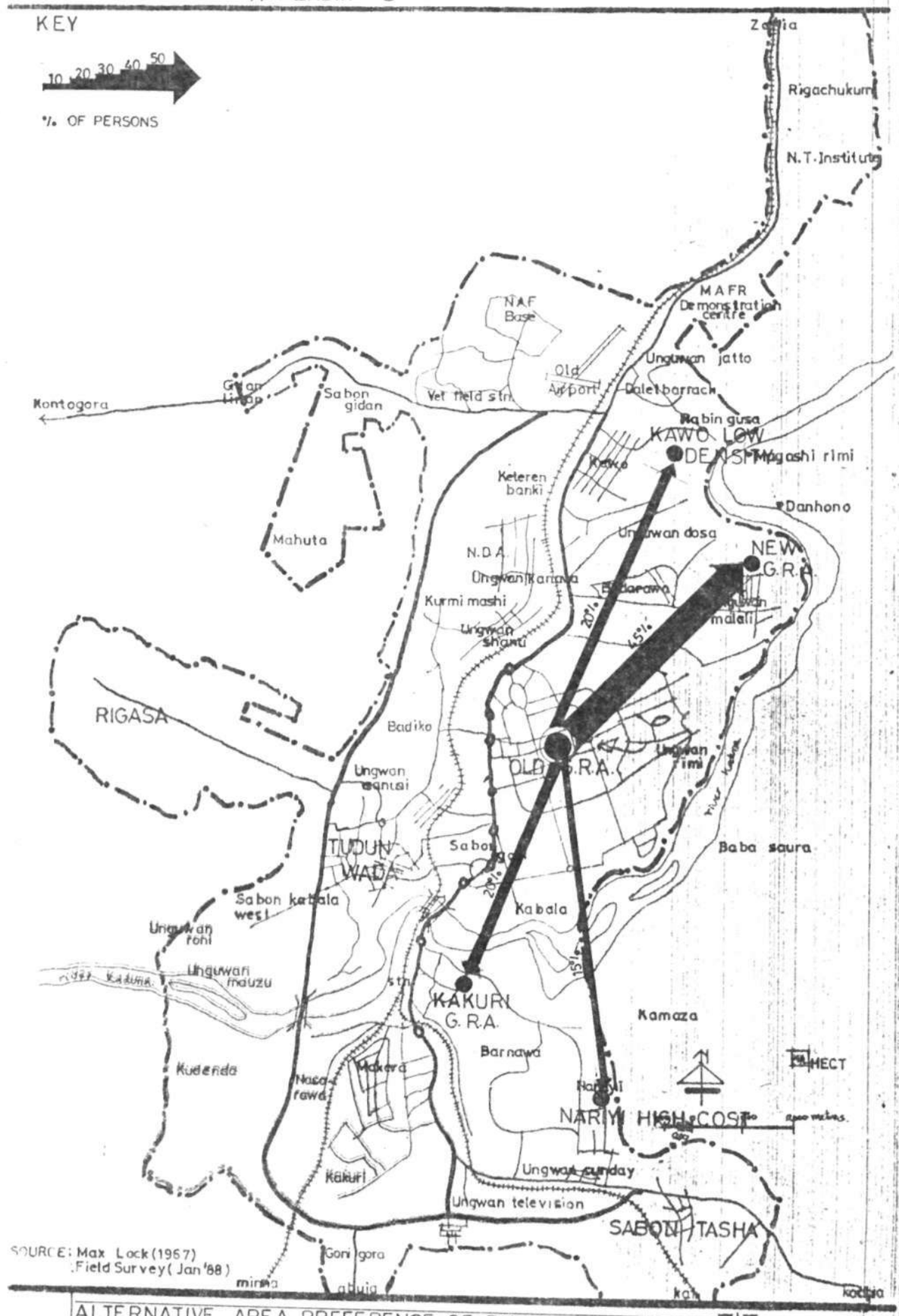
A-IV

PHYSICAL ENVIRONMENTAL CHARACTERISTICS AT RIGASA

OYEKANMI O S
M Sc THESIS 87/88
U.R.P-ABU ZARIA

SOURCE: Field Survey (jan' 88)

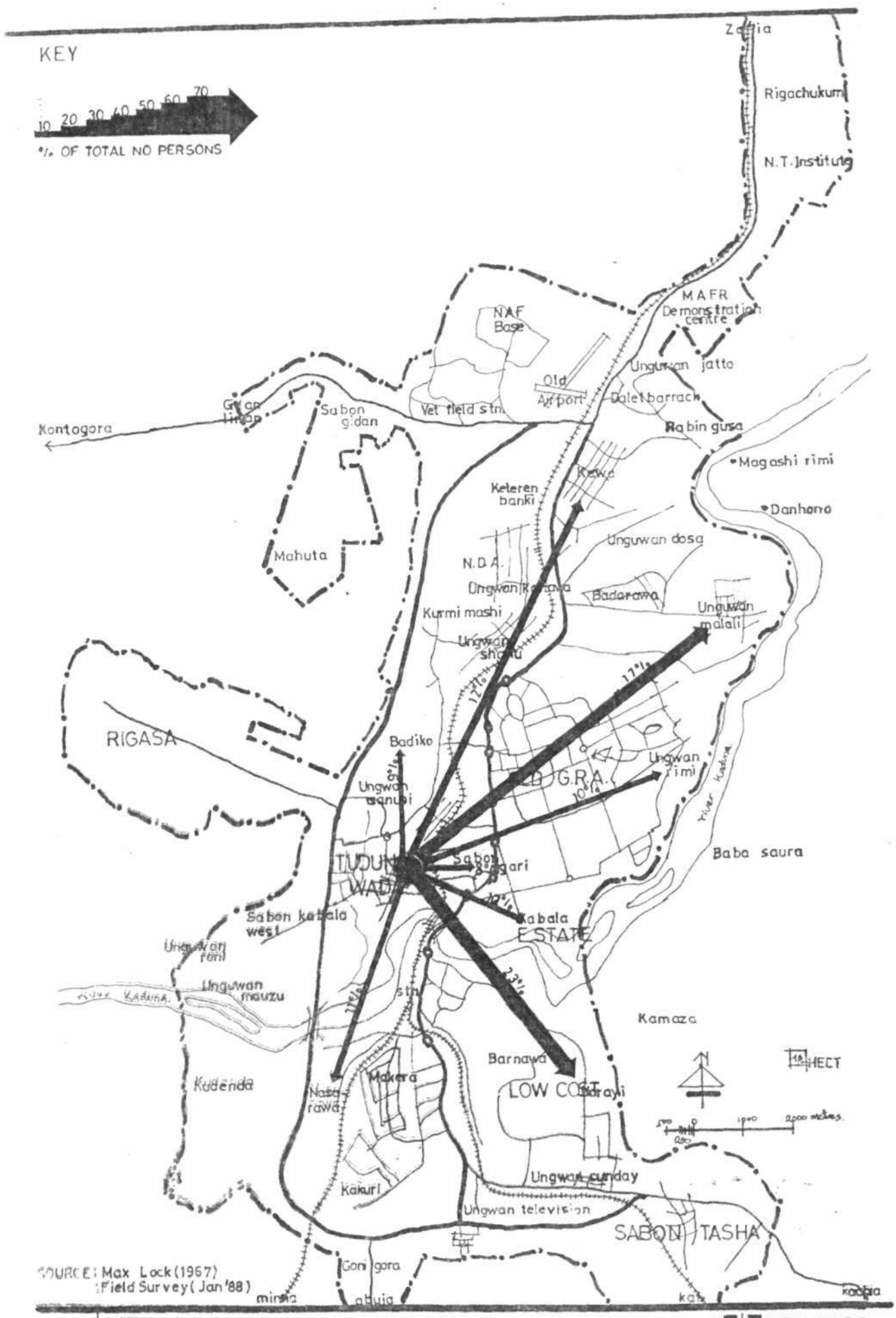
APPENDIX – B



SOURCE: Max Lock (1967)
Field Survey (Jan '88)

B–1 ALTERNATIVE AREA PREFERENCE OF THOSE WILLING TO BE RELOCATED PERMANENTLY AT OLD G.R.A.

OYEKANMI O S
MSc THESIS 87/88
URP – ABU. ZARIA

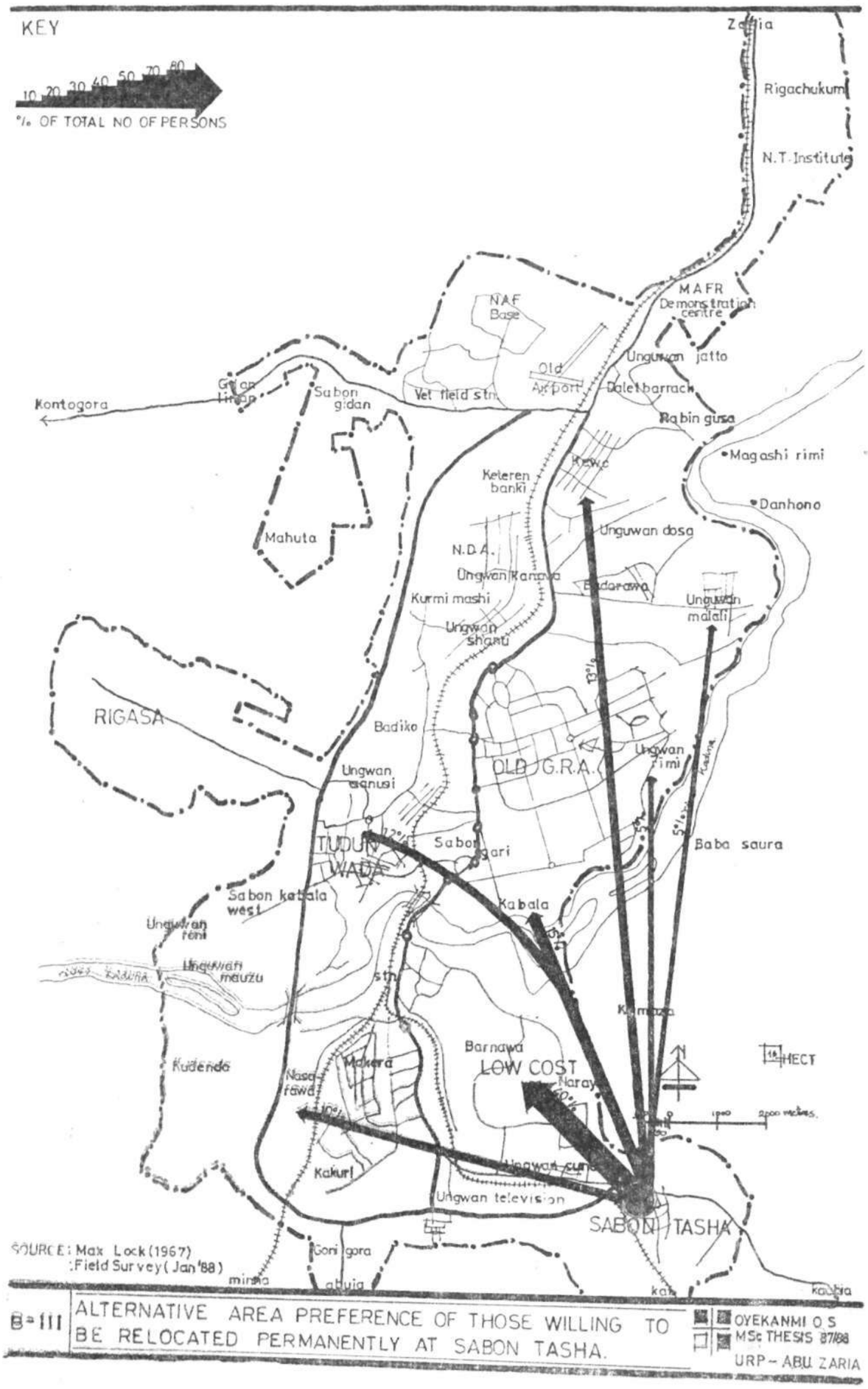


SOURCE: Max Lock (1967)
Field Survey (Jan '88)

B-11

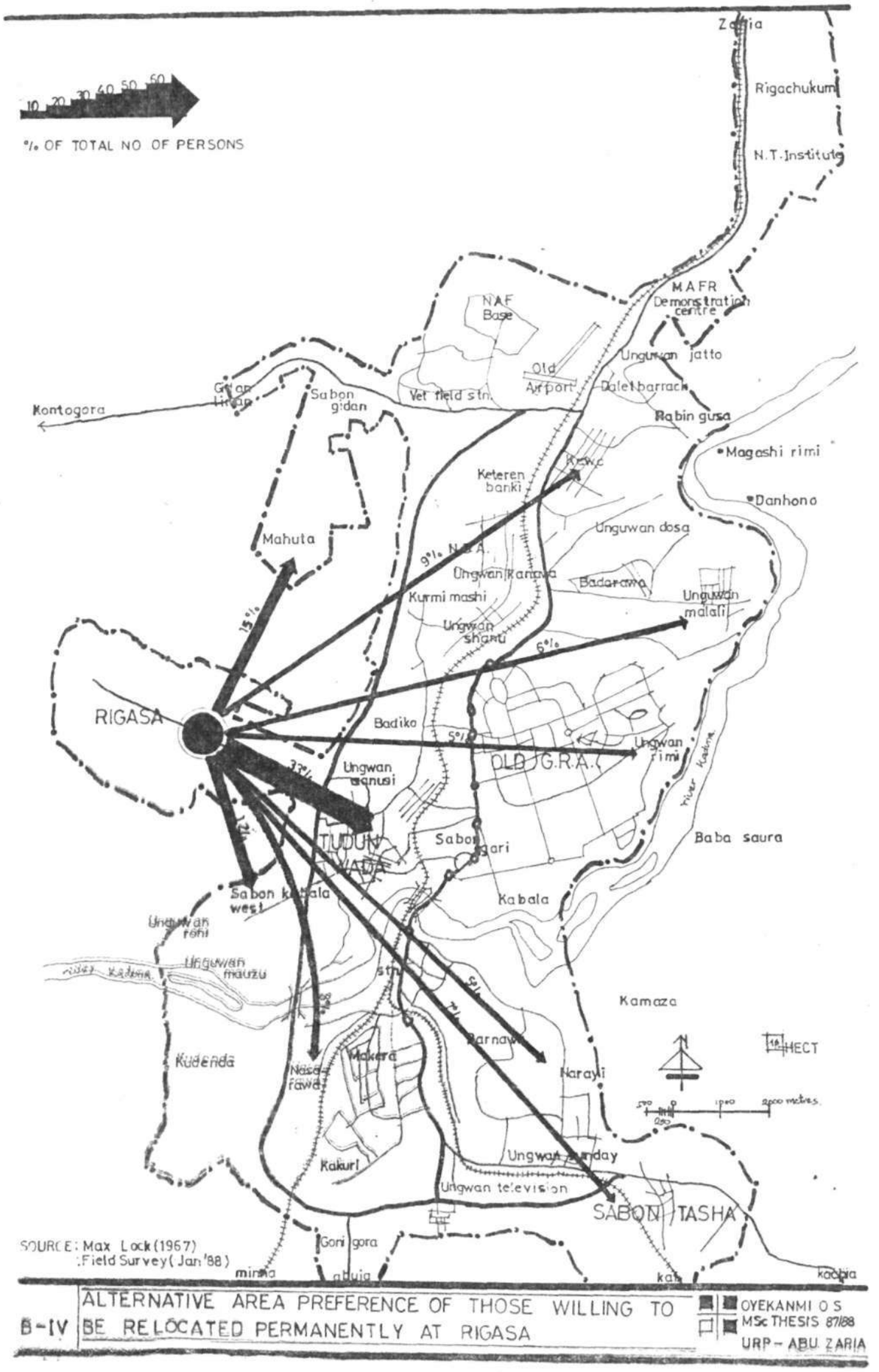
ALTERNATIVE AREA PREFERENCE OF THOSE WILLING TO BE RELOCATED PERMANENTLY AT TUDUN WADA

OYEKANMI O S
MSc THESIS 87/88
URP - ABU ZARIA

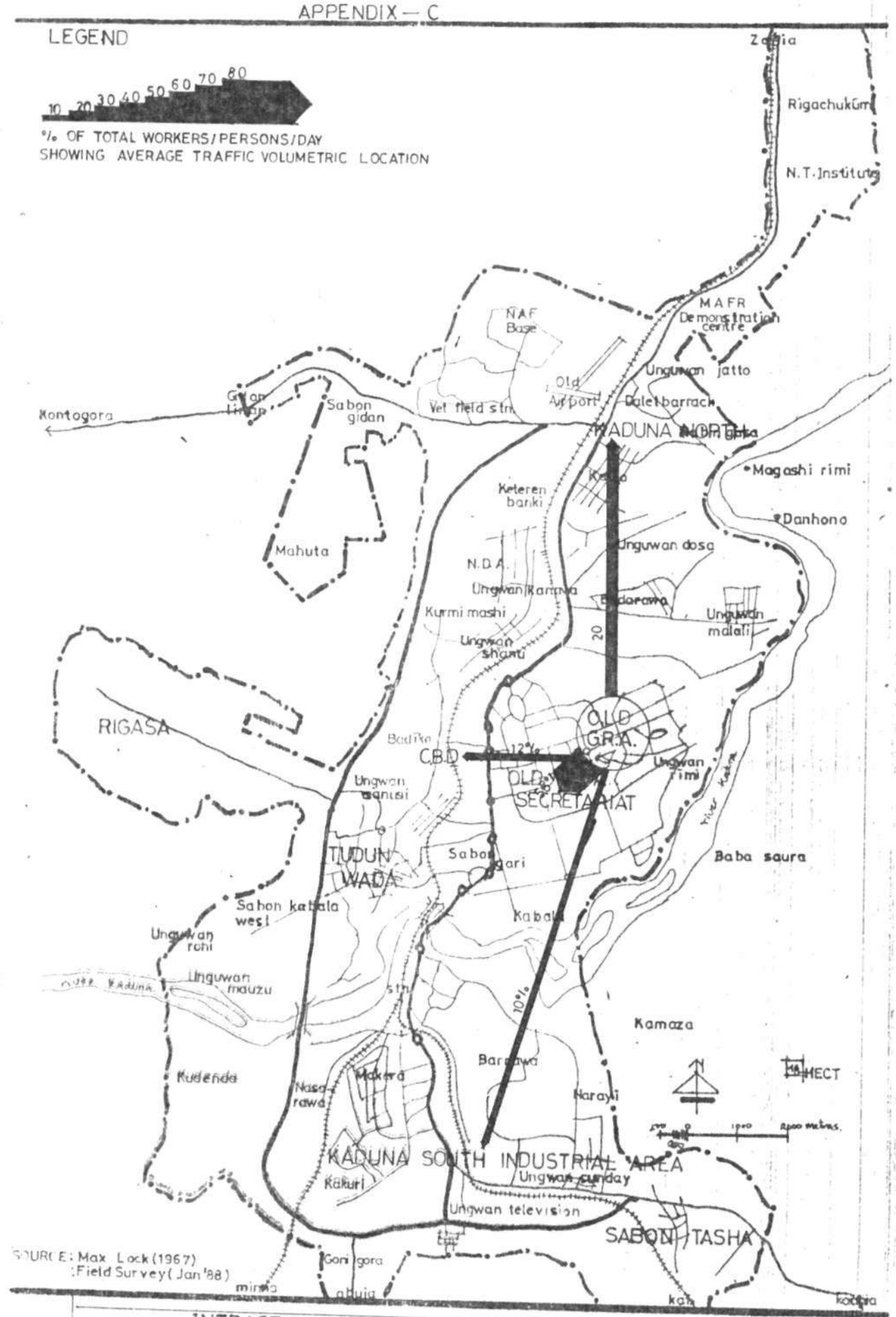


B-111 ALTERNATIVE AREA PREFERENCE OF THOSE WILLING TO BE RELOCATED PERMANENTLY AT SABON TASHA.

OYEKANMI O.S
MSc THESIS 87/88
URP – ABU ZARIA


10 20 30 40 50 60
% OF TOTAL NO OF PERSONS
Zaria
Rigachukum
N.T. Institute
MAFR
Demonstration centre
NAF Base
Old Airport
Unguwan jatto
Dalet barrack
Rabin gusa
Magashi rimi
Danhono
Unguwan dosa
Badarawa
Unguwan malali
Ungwan shanu
Kurmi mashi
Ungwan Kanawa
Keteren banki
K.R.W.C
Vet field stn.
Sabon gidan
Kontogora
Mahuta
9% N.A.
15%
6%
5%
RIGASA
Badiko
Ungwan rimi
OLD G.R.A.
River Kaduna
Baba saura
Ungwan sanusi
TUDUN WADA
Sabon gari
Kabala
Sabon Kabala west
Ungwan rofi
Ungwan mauzu
Kamaza
Karnawa
Narayi
Kudenda
Nasarawa
Makera
Kakuri
Ungwan Sunday
Ungwan television
SABON TASHA
Gonigora
HECT
SOURCE: Max Lock (1967)
Field Survey (Jan '88)
B-IV
ALTERNATIVE AREA PREFERENCE OF THOSE WILLING TO BE RELOCATED PERMANENTLY AT RIGASA
OYEKANMI O S
MSc THESIS 87/88
URP - ABU ZARIA

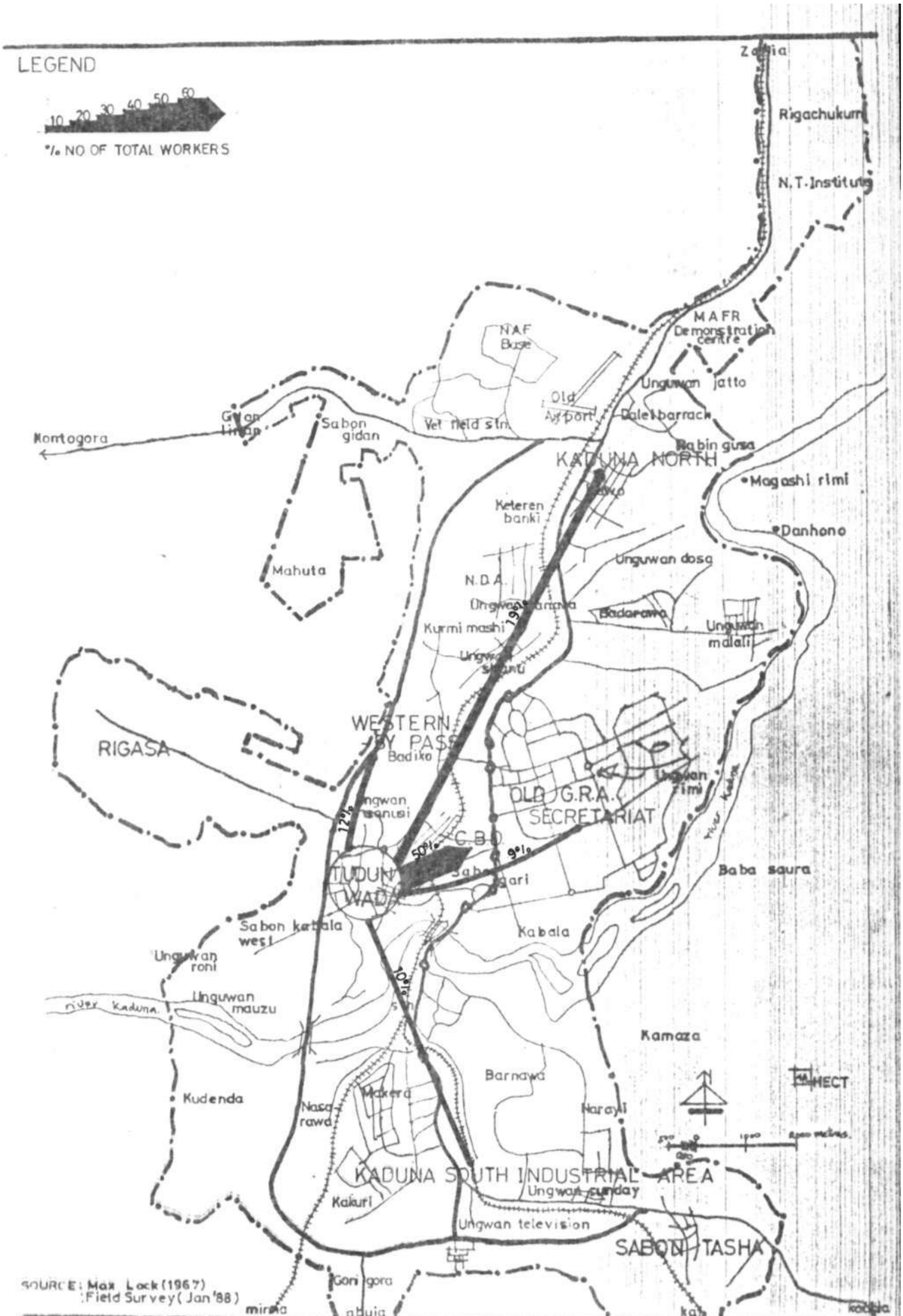
APPENDIX — C

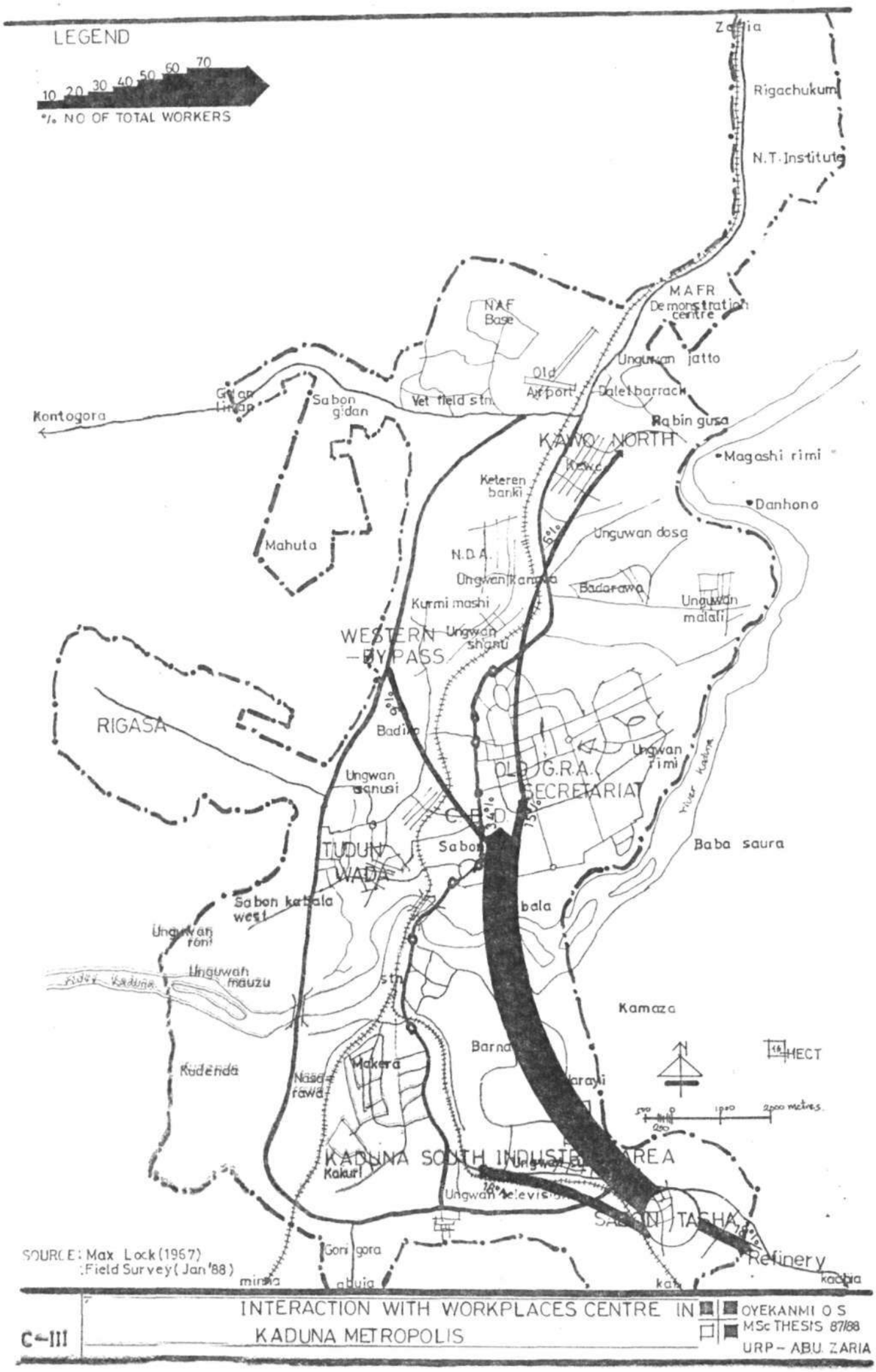


C—I

INTRACTION WITH WORK PLACES CENTRE IN KADUNA METROPOLIS

OYEKANMI O S
MSc THESIS 87/88
URP — ABU ZARIA

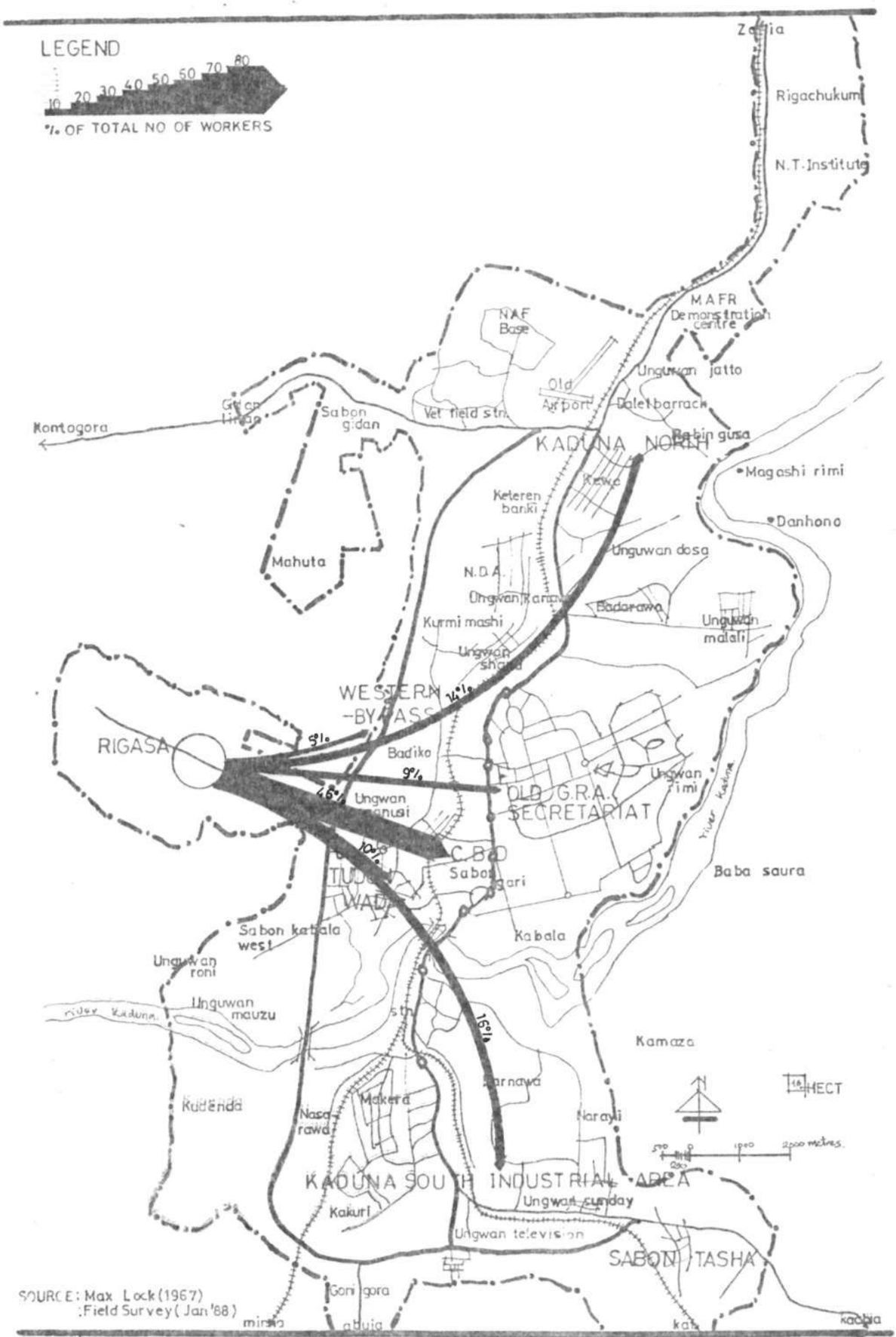

LEGEND
10 20 30 40 50 60
% NO OF TOTAL WORKERS
Zaria
Rigachukum
N.T. Institute
MAFR Demonstration centre
NAF Base
Old Airport
Unguwan jatto
Gwan Linan
Sabon gidan
Vet field stn.
Kongotogora
Dale barrack
Babin gusa
KADUNA NORTH
Magashi rimi
Danhono
Keteren banki
Unguwan dosa
Mahuta
N.D.A.
Badarawa
Unguwan malali
Kurmi mashi
RIGASA
WESTERN BY PASS
Badiko
OLD G.R.A. SECRETARIAT
C.B.D.
TUDUN WADA
Baba saura
Sabon kabala west
Kabala
Unguwan roni
Unguwan mauzu
river kaduna
Kamaza
Barnawa
Kudenda
Nasarawa
Makera
Narayi
KADUNA SOUTH INDUSTRIAL AREA
Kakuri
Ungwan television
SABON TASHA
Gonigora
mirria
abuja
kafanchan
SOURCE: Max Lock (1967)
: Field Survey (Jan '88)
INTRACTION WITH WORKPLACES CENTRE IN KADUNA METROPOLIS
E-11
OYEKANMI O.S.
MSc THESIS 87/88
URP – ABU. ZARIA



C-III

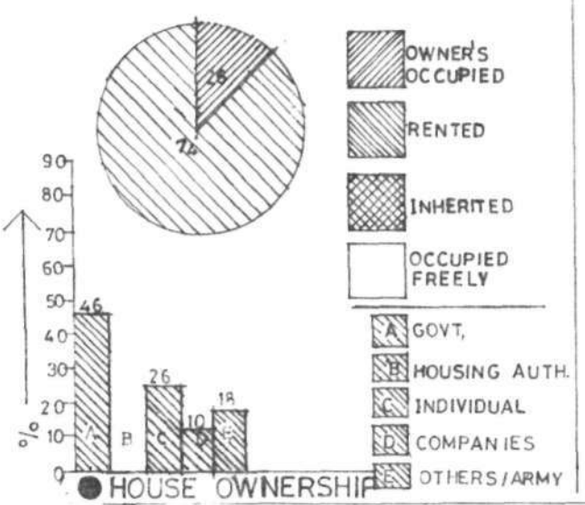
INTERACTION WITH WORKPLACES CENTRE IN KADUNA METROPOLIS

OYEKANMI O.S.
MSc THESIS 87/88
URP – ABU. ZARIA

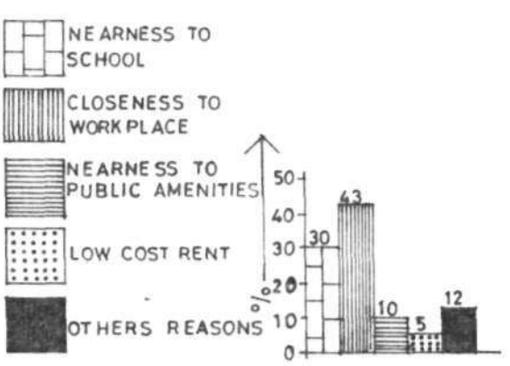


INTERACTION WITH WORKPLACES CENTRE IN KADUNA METROPOLIS

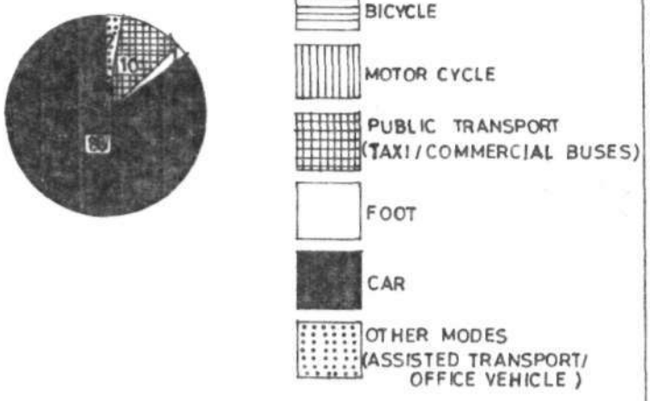
OYEKANMI O.S
MSc THESIS 87/88
URP – ABU. ZARIA



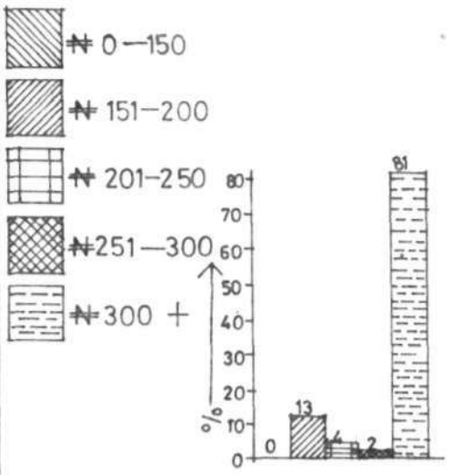
● HOUSE OWNERSHIP



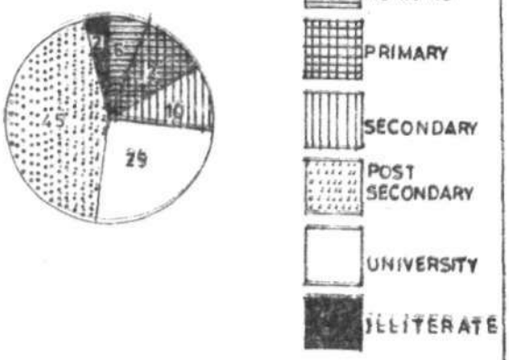
● CHOICE OF PRESENT BUILDING LOCATION



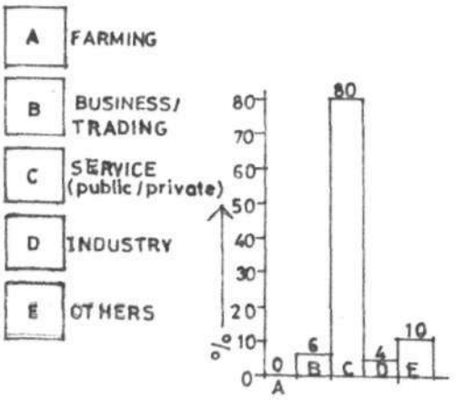
● MODE OF TRANSPORT TO WORK PLACE



● MONTHLY INCOME DISTRIBUTION



● EDUCATIONAL QUALIFICATION

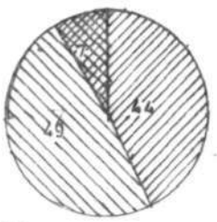


● OCCUPATIONAL STRUCTURE

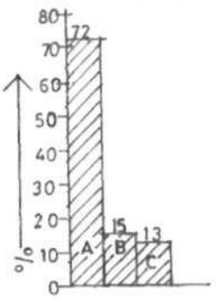
D—1 SOCIO CULTURAL & ECONOMIC CHARACTERISTIC OF OLD G.R.A.

OYEKANMI O.S.
MSc THESIS 87/88
U.R.P.—A.B.U. ZARIA

SOURCE: Field Survey (Jan '88)

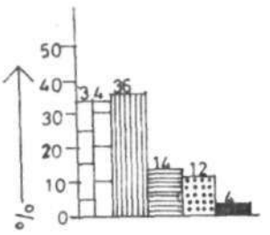


OWNER'S OCCUPIED
RENTED
INHERITED
OCCUPIED FREELY

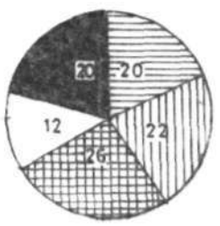


A COMMERCIAL
B INDUSTRIAL
C OTHERS

CLOSENESS TO SCHOOL.
NEARNESS TO WORKPLACE
NEARNESS TO PUBLIC AMENITIES
LOW COST RENT
OTHERS REASONS



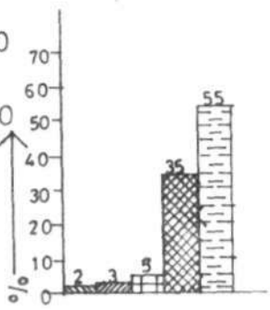
● HOUSE OWNERSHIP & OTHER USES



BICYCLE
MOTORCYCLE
PUBLIC TRANSPORT (TAXI/COMMERCIAL BUSES)
FOOT
CAR
OTHERS MODE

● CHOICE OF PRESENT BUILDING LOCATION

₦ 0--150
₦ 151--200
₦ 201--250
₦ 251--300
₦ 300 +



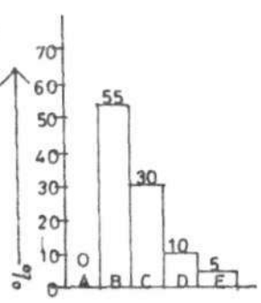
● MODE OF TRANSPORT TO WORKPLACE



KORANIC
PRIMARY
SECONDARY
POST SECONDARY
UNIVERSITY
ILLITERATE

● MONTHLY INCOME DISTRIBUTION

A FARMING
B BUSINESS/ TRADE
C SERVICE (PUBLIC/PRIVATE
D INDUSTRY
E OTHERS



● EDUCATIONAL QUALIFICATION

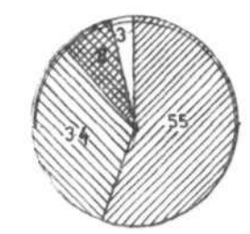
● OCCUPATIONAL STRUCTURE

D-11

SOCIO CULTURAL & ECONOMIC CHARACTERISTICS AT TUDUN WADA

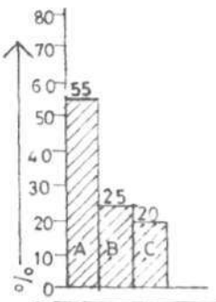
OYEKANMI OS
M ScTHESIS 87/88
U.R.P.-ABU ZARIA

SOURCE: Field Survey(jan'88)

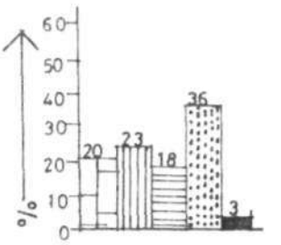


OWNER'S OCCUPIED
RENTED
INHERITED
OCCUPIED FREELY

A COMMERCIAL
B INDUSTRIAL
C OTHERS

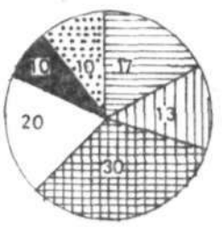


NEARNESS TO SCHOOL
CLOSENESS TO WORKPLACE
NEARNESS TO PUBLIC AMENITIES
LOW COST RENT
OTHERS REASONS



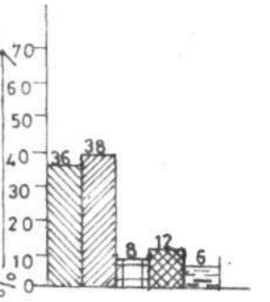
HOUSE OWNERSHIP & OTHER USES

CHOICE OF PRESENT BUILDING LOCATION



BICYCLE
MOTORCYCLE
PUBLIC TRANSPORT (TAXI/COMMERCIAL BUSES)
FOOT
CAR
OTHERS MODE

₦ 0 — 150
₦ 151 — 200
₦ 201 — 250
₦ 251 — 300
₦ 300 +



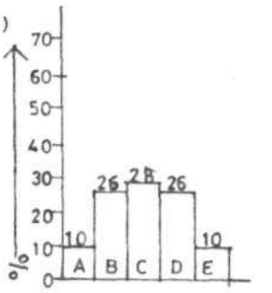
MODE OF TRANSPORT TO WORKPLACE

MONTHLY INCOME DISTRIBUTION



KORANIC
PRIMARY
SECONDARY
POST SECONDARY
UNIVERSITY
ILLITERATE

A FARMING
B BUSINESS / TRADE
C SERVICE (PUBLIC/PRIVATE)
D INDUSTRY
E OTHERS



EDUCATIONAL QUALIFICATION

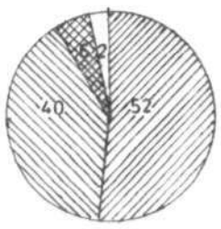
OCCUPATIONAL STRUCTURE

D-III

SOCIO CULTURE AND ECONOMIC CHARACTERISTICS AT SABON TASHA

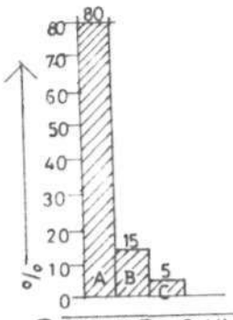
OYEKANMI O S
M Sc THESIS 87/88
U.R.R.-A.B.U. ZARIA

SOURCE: Field Survey (Jan'88)

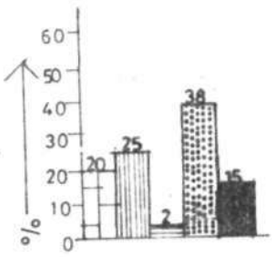


OWNER'S OCCUPIED
RENTED
INHERITED
OCCUPIED FREELY

NEARNESS TO SCHOOL
CLOSENESS TO WORKPLACE
NEARNESS TO PUBLIC AMENITIES
LOW COST RENT
OTHERS REASONS

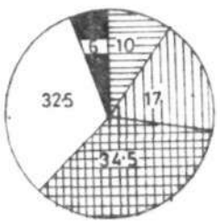


A COMMERCIAL
B INDUSTRIAL
C OTHERS



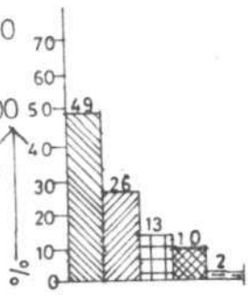
HOUSE OWNERSHIP & OTHER USES

CHOICE OF PRESENT BUILDING LOCATION



BICYCLE
MOTORCYCLE
PUBLIC TRANSPORT (TAXI / COMMERCIAL BUSES)
FOOT
CAR
OTHERS MODE

₦ 0 — 150
₦ 151 — 200
₦ 201 — 250
₦ 251 — 300
₦ 300 +



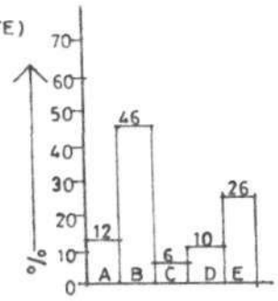
MODE OF TRANSPORT TO WORKPLACE

MONTHLY INCOME DISTRIBUTION



KORANIC
PRIMARY
SECONDARY
POST SECONDARY
UNIVERSITY
ILLITERATE

A FARMING
B BUSINESS / TRADE
C SERVICE (PUBLIC/PRIVATE)
D INDUSTRY
E OTHERS



EDUCATIONAL QUALIFICATION

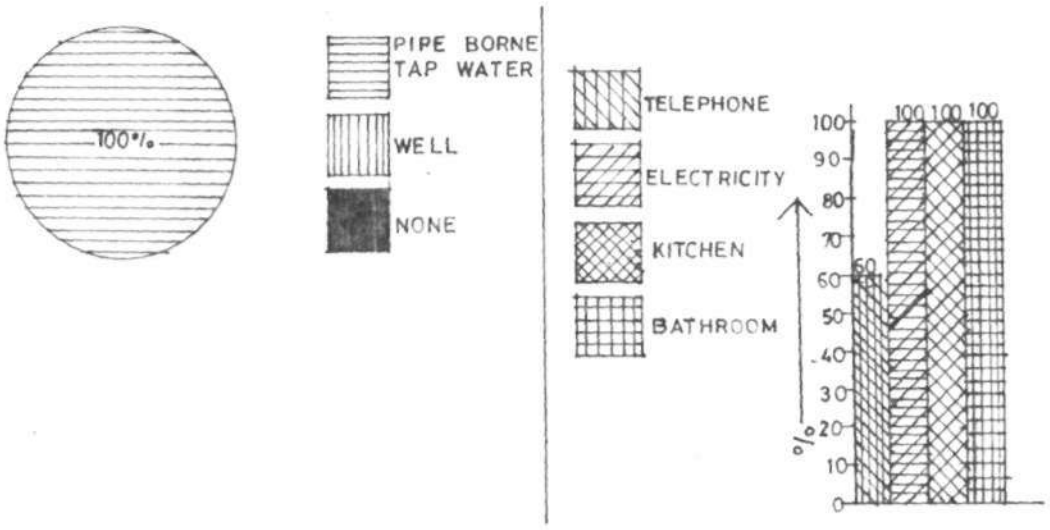
OCCUPATION STRUCTURE

D-IV

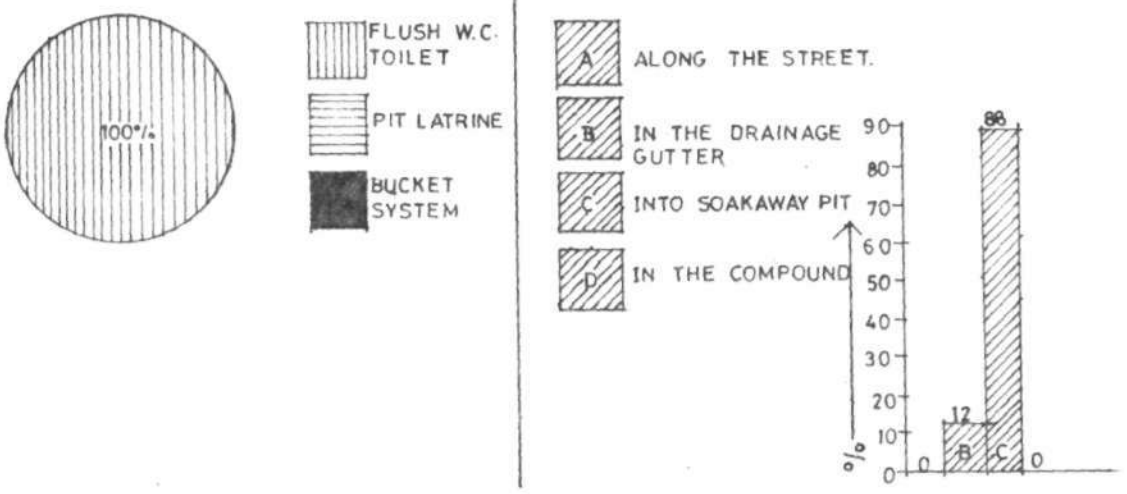
SOCIO-CULTURAL AND ECONOMIC CHARACTERISTICS AT RIGASA

OYEKANMI O.S.
M Sc THESIS 87/88
U.R.P.—A BU ZARIA

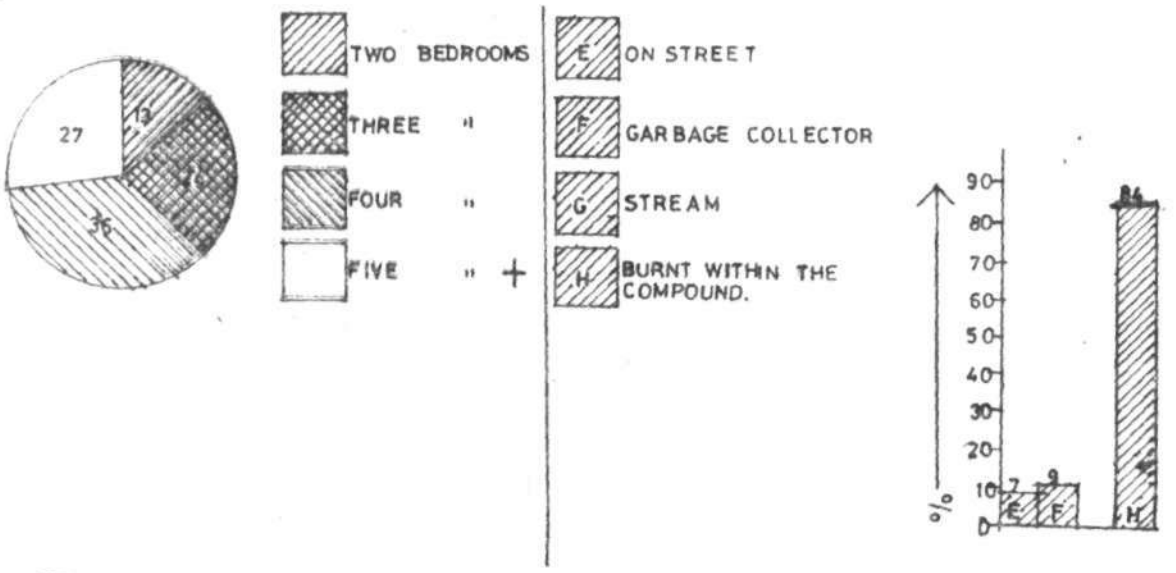
SOURCE: Field Survey (jan'88)



● SOURCE OF WATER AND TYPES OF UTILITIES & SERVICES FOR EXCLUSIVE USE.



● TYPE OF TOILET AND LIQUID WASTE DISPOSAL SYSTEM

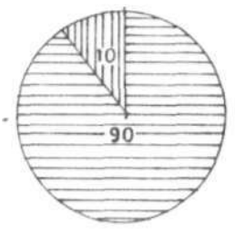


● PERCENTAGE OF HABITABLE ROOMS & SOLID REFUSE DISPOSAL SYSTEM

E–I AVAILABILITY AND USE OF HOUSEHOLD UTILITIES SERVICE AND FACILITIES AT THE OLD G.R.A.

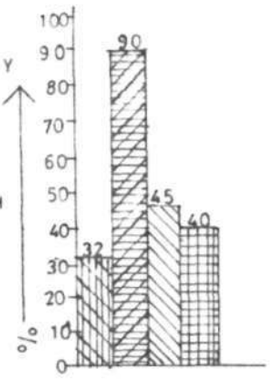
OYEKANMI O S
M Sc THESIS 87/88
U.R.P. – A.B.U ZARIA

SOURCE : Field Survey (Jan '88)

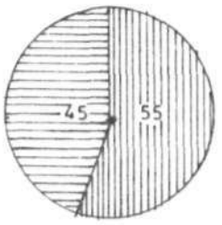


PIPE BORNE TAP WATER
WELL
NONE

TELEPHONE
ELECTRICITY
KITCHEN
BATHROOM

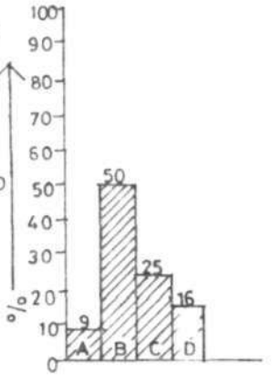


● SOURCE OF WATER AND TYPES OF UTILITIES & SERVICES FOR EXCLUSIVE USE.

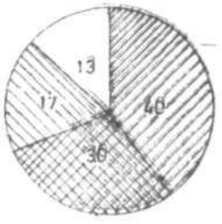


FLUSH W.C. TOILET
PIT LATRINE
BUCKET SYSTEM

A ALONG THE STREET
B IN THE DRAINAGE GUTTER
C INTO SOAKAWAY
D IN THE COMPOUND

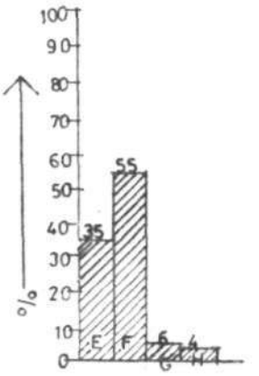


● TYPE OF TOILET AND LIQUID WASTE DISPOSAL SYSTEM



TWO BEDROOMS
THREE "
FOUR "
FIVE " +

E ON STREET
F IN GARBAGE COLLECTOR
G IN STREAM
H BURNT WITHIN THE COMPOUND.

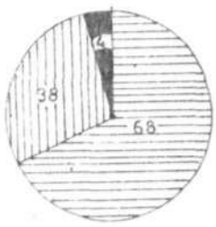


● PERCENTAGE OF HABITABLE ROOMS & SOLID REFUSE DISPOSAL SYSTEM

E-II AVAILABILITY AND USE OF HOUSEHOLD UTILITIES, SERVICE AND FACILITIES AT TUDUN WADA

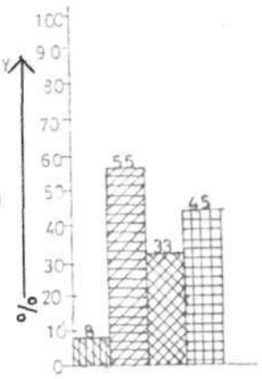
OYEKANMI O S
M Sc THESIS 87/88
U.R.P.-ABU ZARIA

SOURCE: Field Survey (Jan '88)

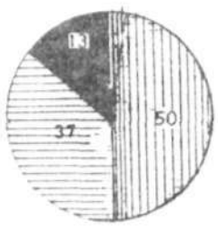


PIPE BORNE TAP WATER
WELL
NONE

TELEPHONE
ELECTRICITY
KITCHEN
BATHROOM

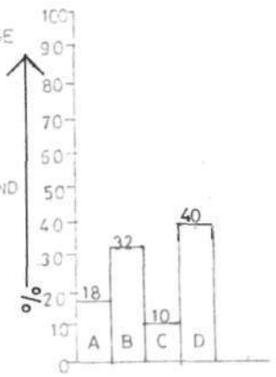


○ SOURCE OF WATER AND TYPES OF UTILITIES & SERVICES FOR EXCLUSIVE USE.

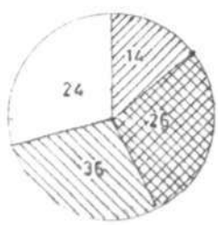


FLUSH W.C. TOILET
PIT LATRINE
BUCKET SYSTEM

A ALONG THE STREET
B IN THE DRAINAGE GUTTER
C INTO SOAKAWAY
D IN THE COMPOUND

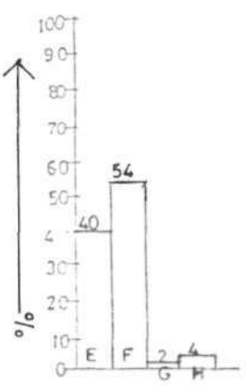


○ TYPE OF TOILET AND LIQUID WASTE DISPOSAL SYSTEM



TWO BEDROOMS
THREE "
FOUR "
FIVE " +

E ON STREET
F IN GARBAGE COLLECTOR
G IN STREAM
H BURNT WITHIN THE COMPOUND.

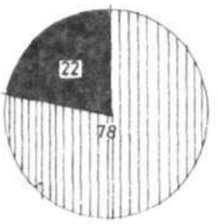


○ PERCENTAGE OF HABITABLE ROOMS & SOLID REFUSE DISPOSAL SYSTEM

E–III AVAILABILITY AND USE OF HOUSEHOLD UTILITIES. SERVICE AND FACILITIES AT SABON TASHA

OYEKANMI O.S
M.Sc THESIS 87/88
U.R.P-ABU ZARIA

SOURCE: Field Survey (Jan '88)



PIPE BORNE TAP WATER

WELL

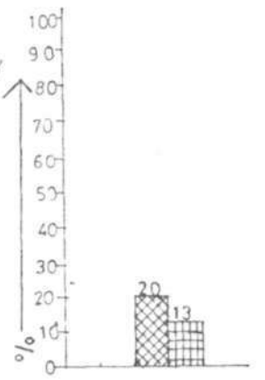
NONE

TELEPHONE

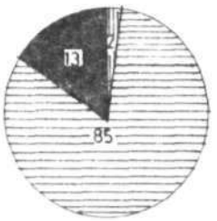
ELECTRICITY

KITCHEN

BATHROOM



O SOURCE OF WATER AND TYPES OF UTILITIES & SERVICES FOR EXCLUSIVE USE.



FLUSH W.C. TOILET

PIT LATRINE

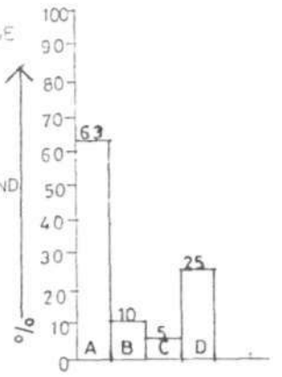
BUCKET SYSTEM

A ALONG THE STREET

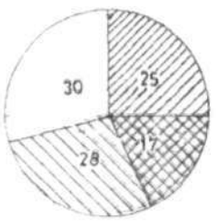
B IN THE DRAINAGE GUTTER

C INTO SOAKAWAY

D IN THE COMPOUND



O TYPE OF TOILET AND LIQUID WASTE DISPOSAL SYSTEM



TWO BEDROOMS

THREE "

FOUR "

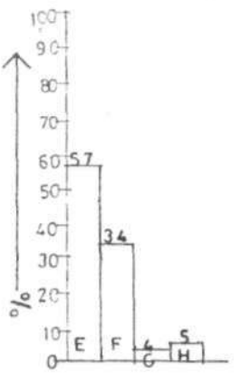
FIVE " +

E ON STREET

F IN GARBAGE COLLECTOR

G IN STREAM

H BURNT WITHIN THE COMPOUND.



O PERCENTAGE OF HABITABLE ROOMS & SOLID REFUSE DISPOSAL SYSTE M

E-IV

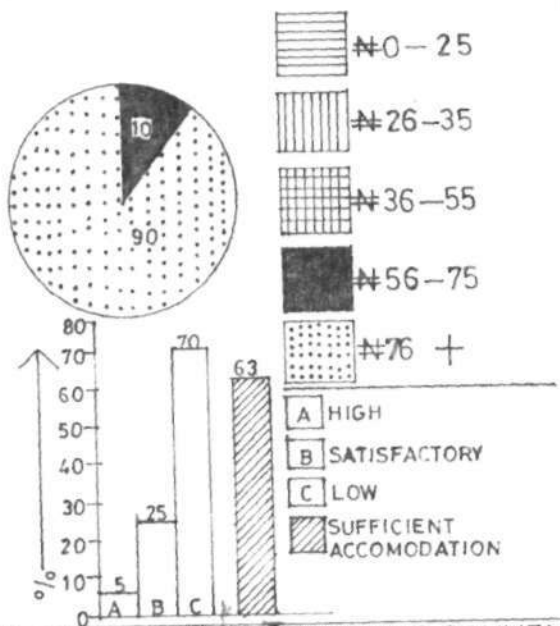
AVAILABILITY AND USE OF HOUSEHOLD UTILITIES, SERVICE AND FACILITIES AT RIGASA

OYEKANMI O S

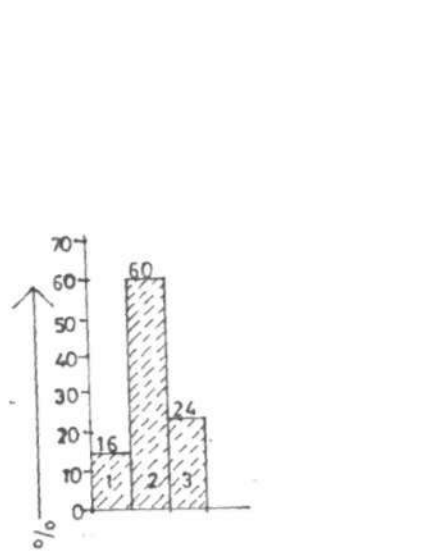
M Sc THESIS 87/88

U.R.P.-ABU ZARIA

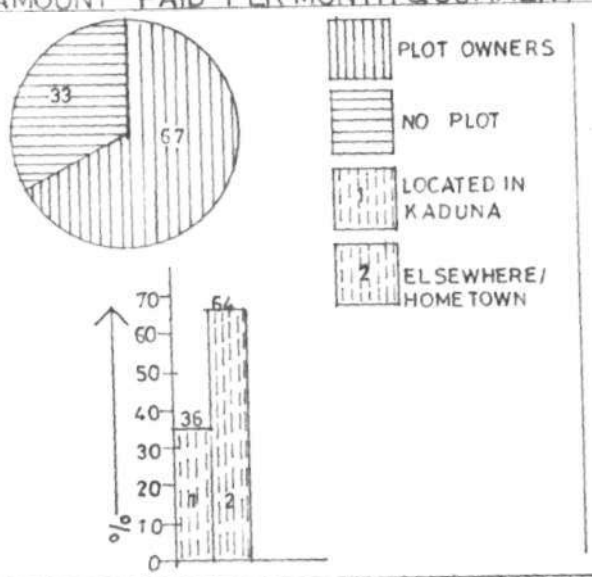
SOURCE: Field Survey (jan '88)



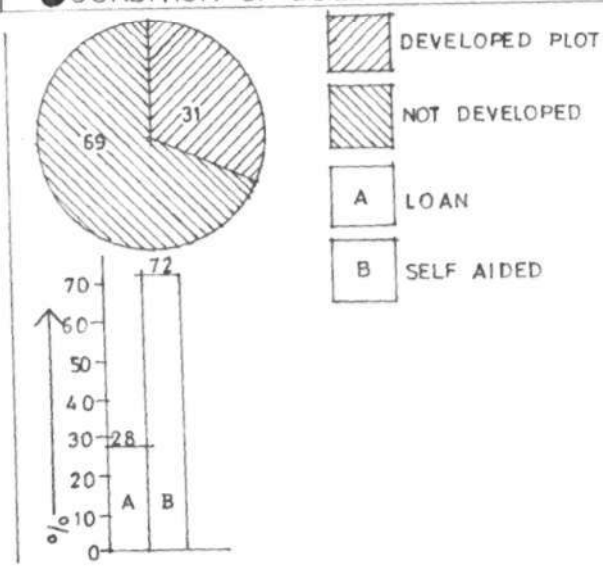
● AMOUNT PAID PER MONTH & COMMENT



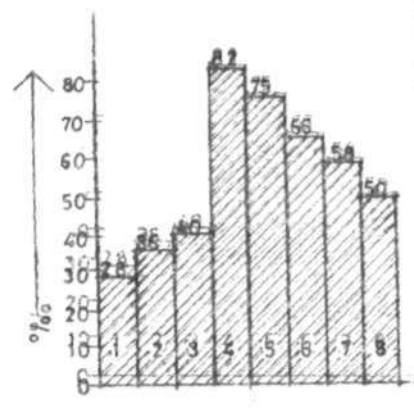
● CONDITION OF BUILDING



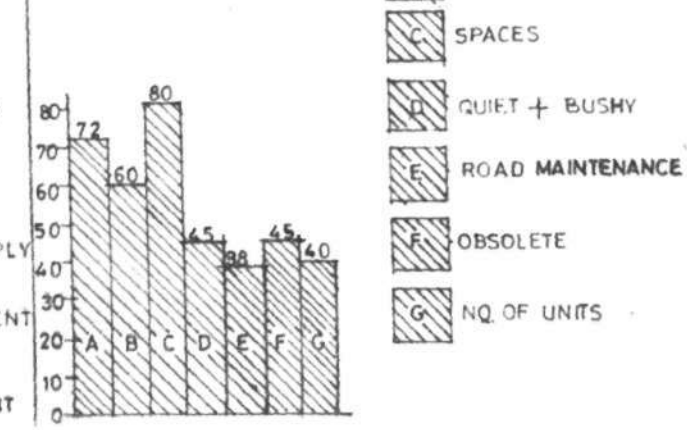
● PERCENTAGE PLOT OWNERS & LOCATION



● PLOT DEVELOPMENT & FINANCE



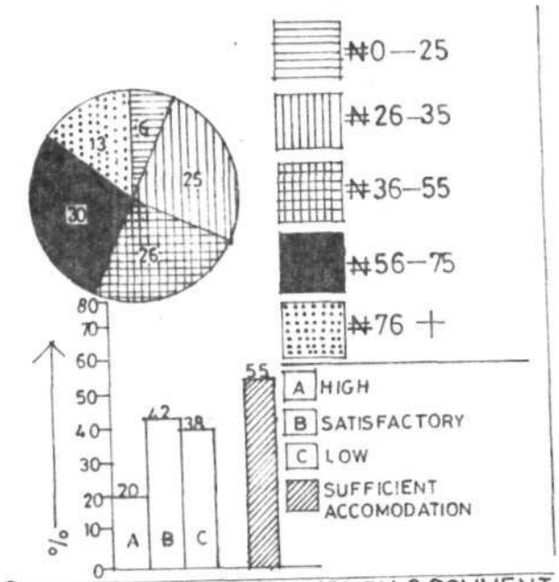
● % NO OF PERSONS SATISFIED

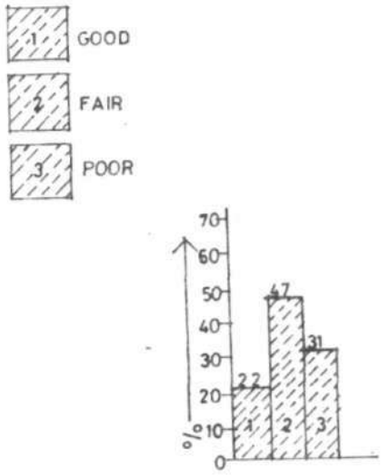


● HOUSE/AREA DESIRED IMPROVEMENT

F-I	HOUSING SUPPLY & PROBLEMS AND GENERAL IMPRESSION TOWARD ENVIRONMENTAL PERCEPTION AT OLD GRA	OYEKANMI O S M Sc THESIS 87/88 U.R.P.– A.B.U. ZARIA

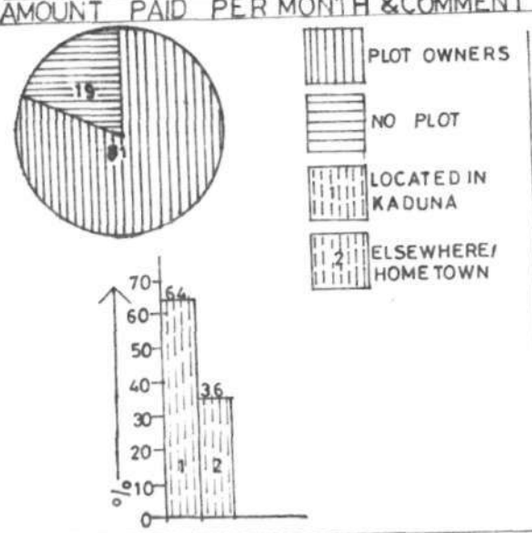
SOURCE: Field Survey (Jan'88)

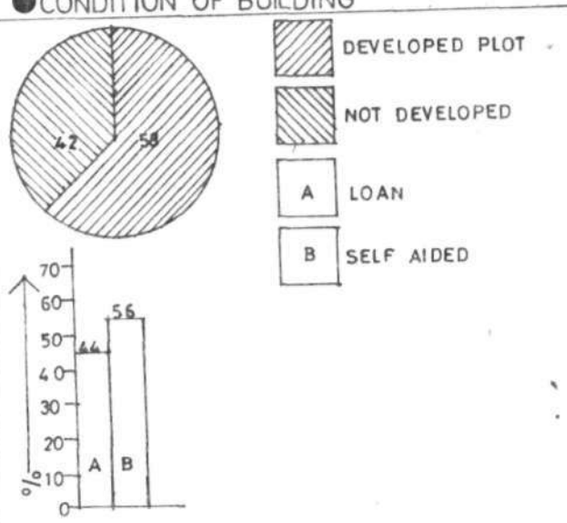




● AMOUNT PAID PER MONTH & COMMENT

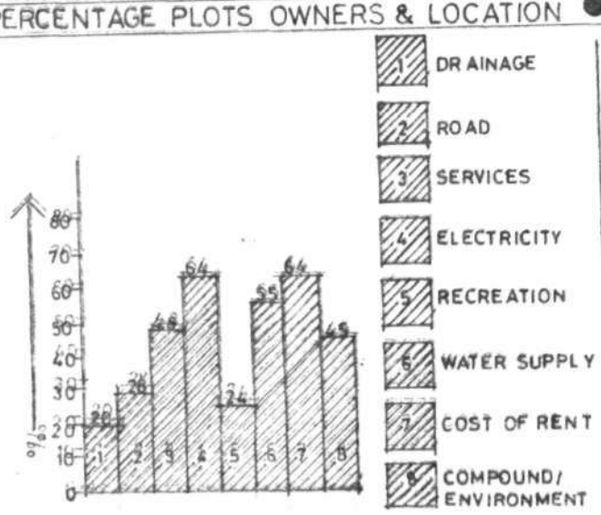
● CONDITION OF BUILDING

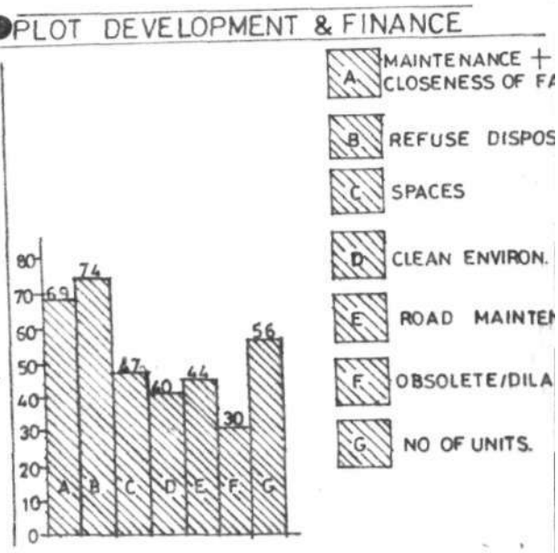




● PERCENTAGE PLOTS OWNERS & LOCATION

● PLOT DEVELOPMENT & FINANCE





● % NO OF PERSONS SATISFIED

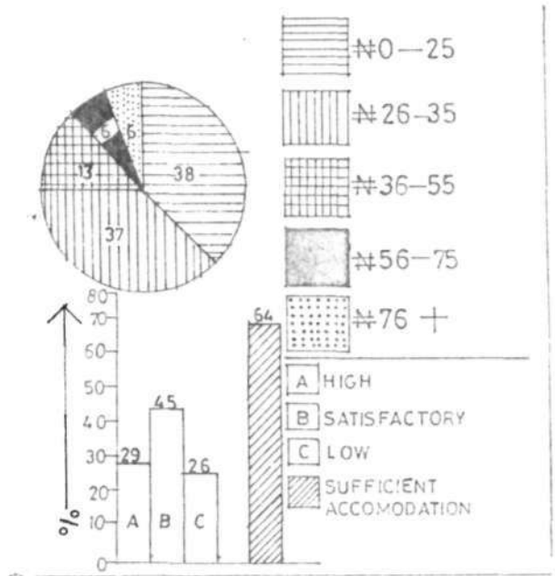
● HOUSE/AREA DESIRED IMPROVEMENT

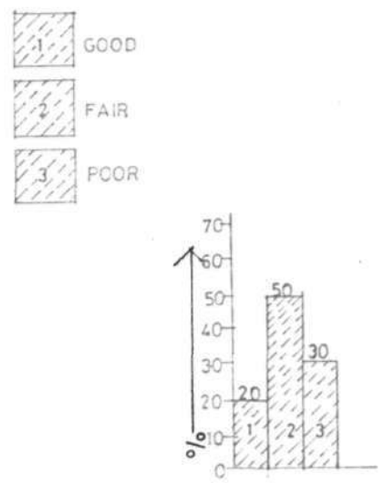
F-II

HOUSING SUPPLY & PROBLEMS AND GENERAL IMPRESSION TOWARD ENVIRONMENTAL PERCEPTION AT TUDUN WADA

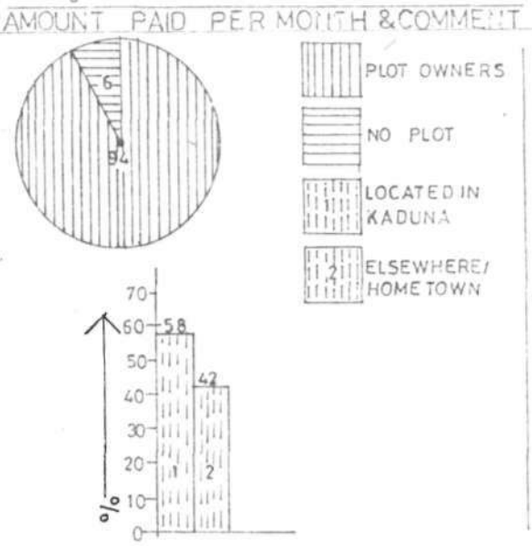
OYEKANMI O S
M ScTHESIS 87
U.R.P—ABU ZARI

SOURCE : Field Survey (jan '88)

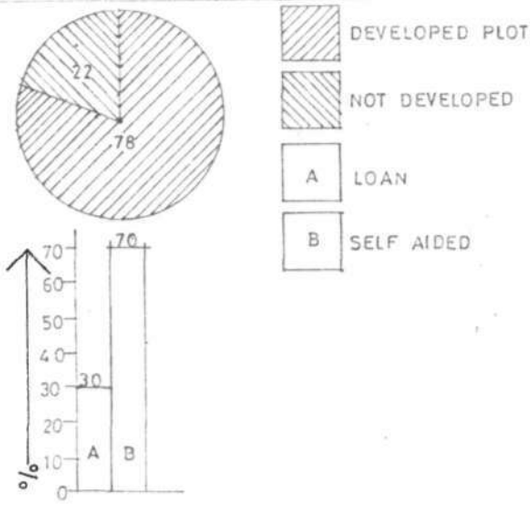




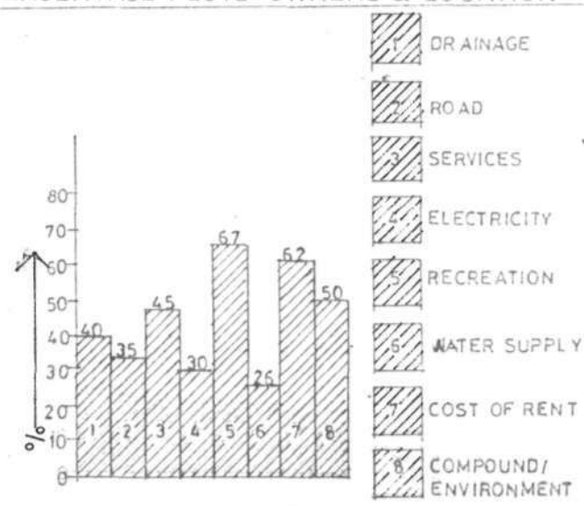
○AMOUNT PAID PER MONTH &COMMENT



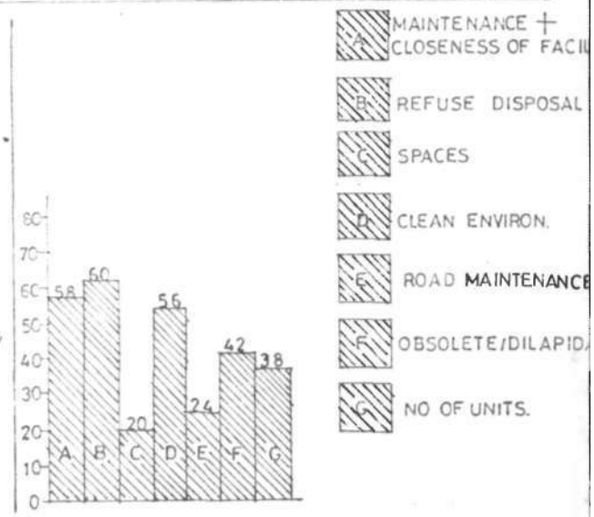
○CONDITION OF BUILDING



○PERCENTAGE PLOTS OWNERS & LOCATION



○PLOT DEVELOPMENT & FINANCE



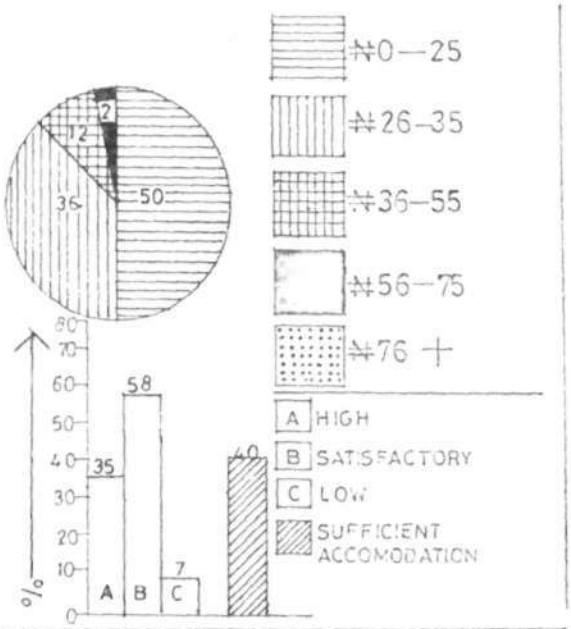
○% NO OF PERSONS SATISFIED ○HOUSE/AREA DESIRED IMPROVEMENT

F-III

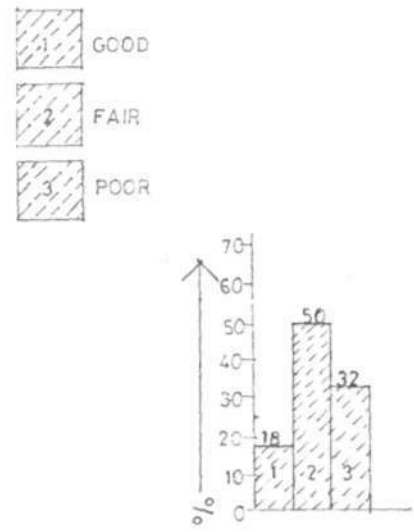
HOUSING SUPPLY & PROBLEMS AND GENERAL IMPRESSION TOWARD ENVIRONMENTAL PERCEPTION AT SABON TASHA

OYEKANMI O S
M ScTHESIS 87/88
U.R.P—ABU ZARIA

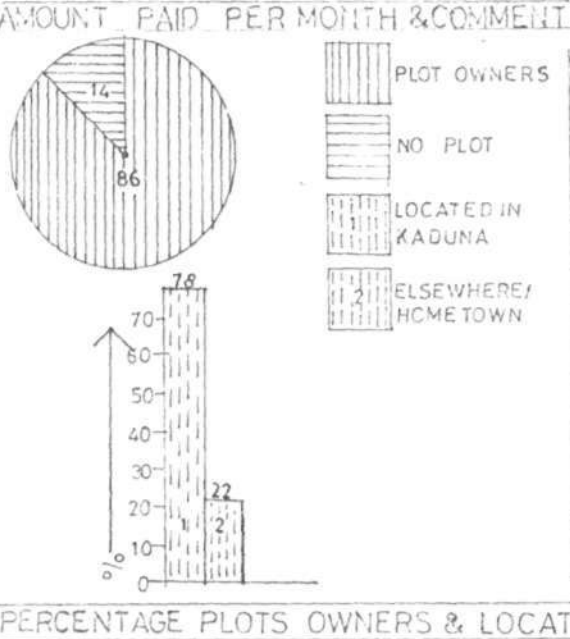
SOURCE: Field Survey (jan '88)



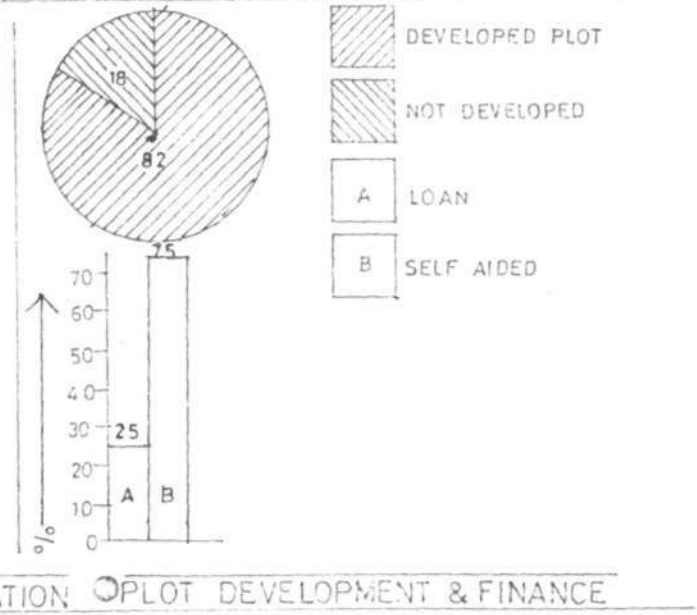
○AMOUNT PAID PER MONTH & COMMENT



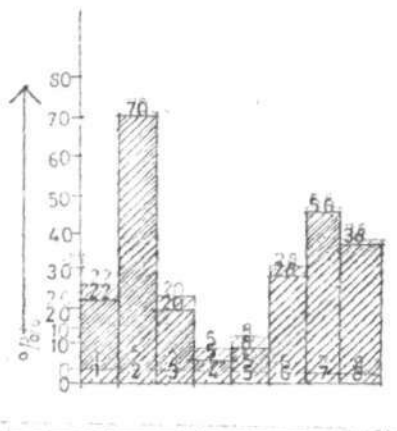
○CONDITION OF BUILDING



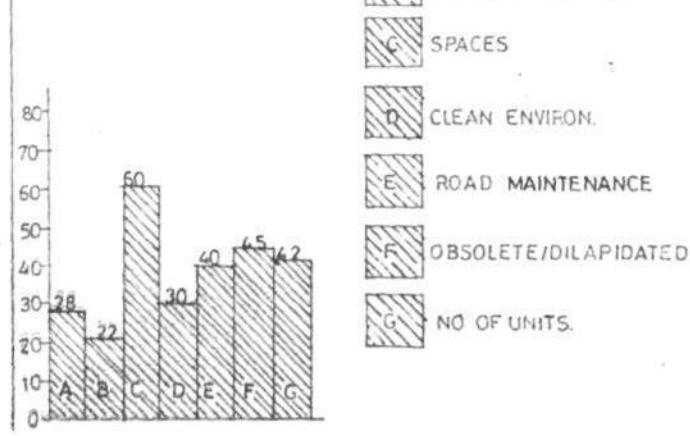
○PERCENTAGE PLOTS OWNERS & LOCATION



○PLOT DEVELOPMENT & FINANCE



○% NO OF PERSONS SATISFIED



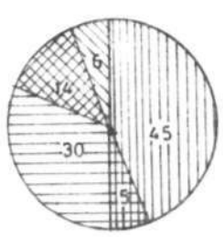
○HOUSE/AREA DESIRED IMPROVEMENT

F-IV

HOUSING SUPPLY & PROBLEMS AND GENERAL IMPRESSION TOWARD ENVIRONMENTAL PERCEPTION AT RIGASA

OYEKANMI O S
M ScTHESIS 87/88
U.R.P—ABU ZARIA

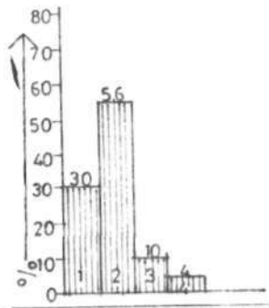
SOURCE: Field Survey (jan '88)

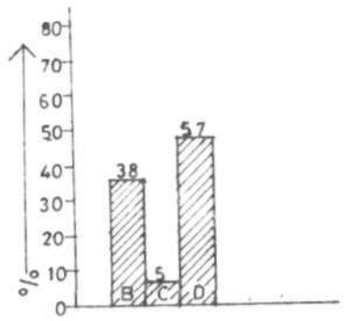


INVESTMENT PURPOSE
FAMILY LAND/HOUSE
CHEAP LAND VALUE
NEARNESS TO WORKPLACE.
OTHERS REASONS.

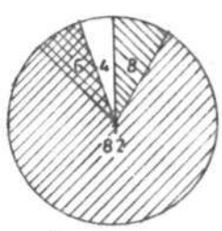
NO OF HOUSE
1
2
3
4

A TRADITIONAL HEAD
B LOCAL GOVERNMENT.
C INHERITED
D MUNCIPAL GOVT.
E PURCHASE/ GIFT
F OTHERS



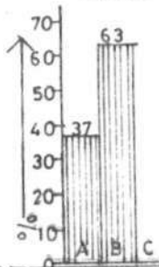


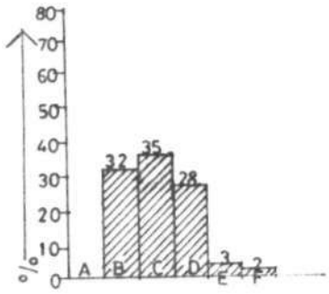
● REASONS FOR HOUSE IN THIS AREA ● LAND ACQUISITION



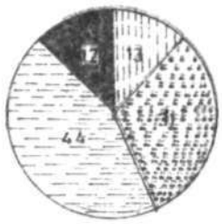
SELF/OWNER.
CONTRACT TO LOCAL BUILDER.
CO–OPERATIVE BODY.
OTHERS
A LOANS
B SAVING
C ANY OTHERS

1 ₦0 — 20
2 ₦21 — 25
3 ₦26 — 30
4 ₦31 — 35
5 ₦36 — 40
6 ₦40 +

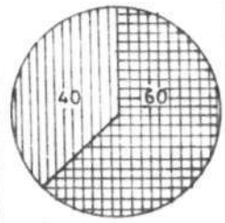




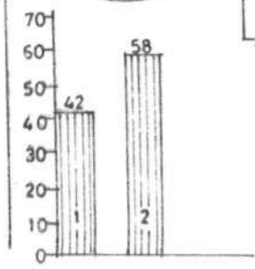
● CONSTRUCTION METHODS USED & FINANCE ● AVERAGE RENT PER HOUSEHOLD



MONTHLY
3 MONTHLY
6 MONTHLY
ANNUALLY



FRUSTRATION & LESS CONCERNS
NO MONEY
HOUSE IS TEMPORARY
OTHERS REASONS



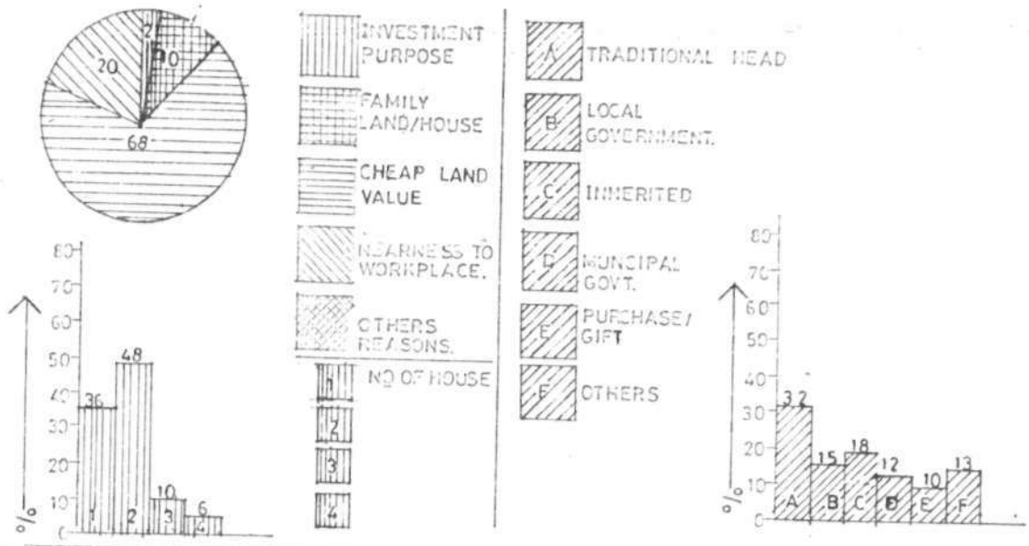
MAINTENANCE METHOD
1 GROUP COLLECTION
2 INDIVIDUALLY

● RENT COLLECTION MODE ● REASONS FOR LACK OF REPAIRS & MAINT. METHO

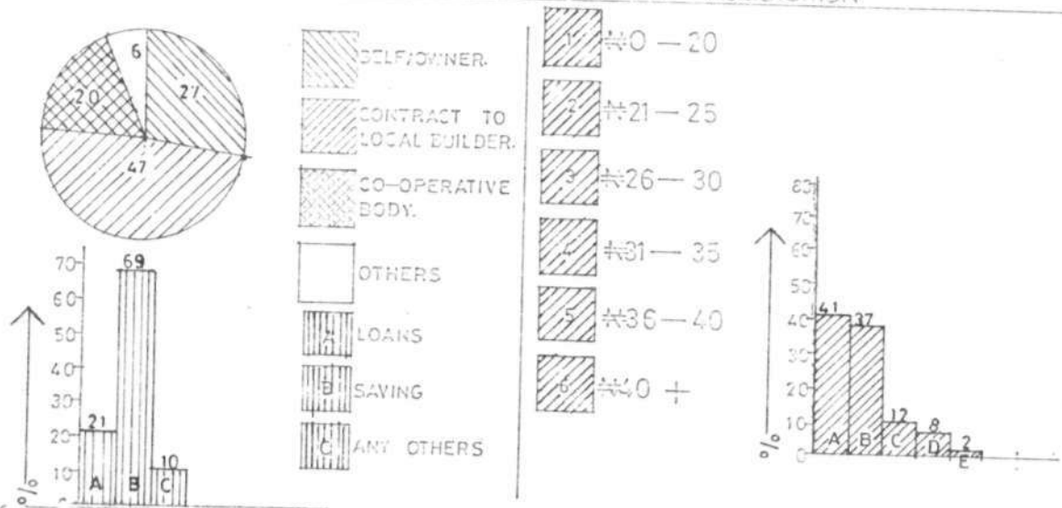
G–11 LANDLORDS CONCEPTION AND ATTITUDE TOWARDS HOUSING SUPPLY AND PROBLEMS AT TUDUN WADA

OYEKANMI O S
M ScTHESIS 87/88
URP-A BU ZARIA

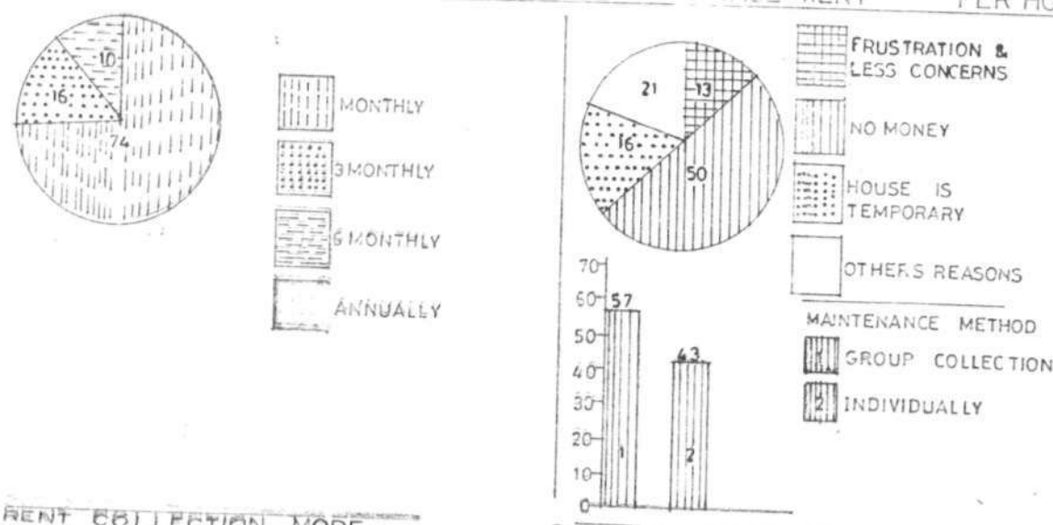
SOURCE Field Survey (jan '88)



REASONS FOR HOUSE IN THIS AREA — LAND ACQUISITION



CONSTRUCTION METHODS USED & FINANCE — AVERAGE RENT PER HOUSEHOLD



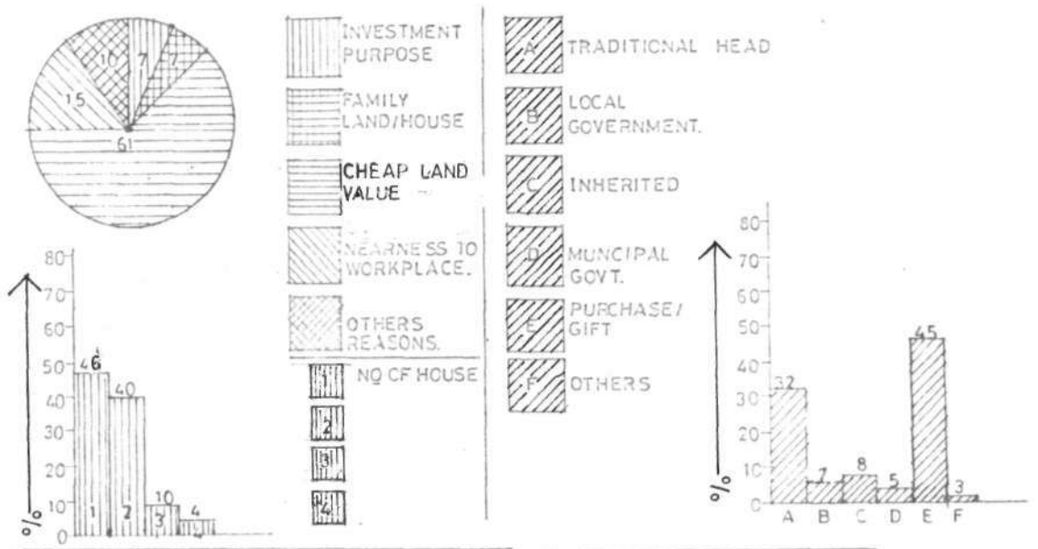
RENT COLLECTION MODE — REASONS FOR LACK OF REPAIRS & MAINT. METHOD.

G-III

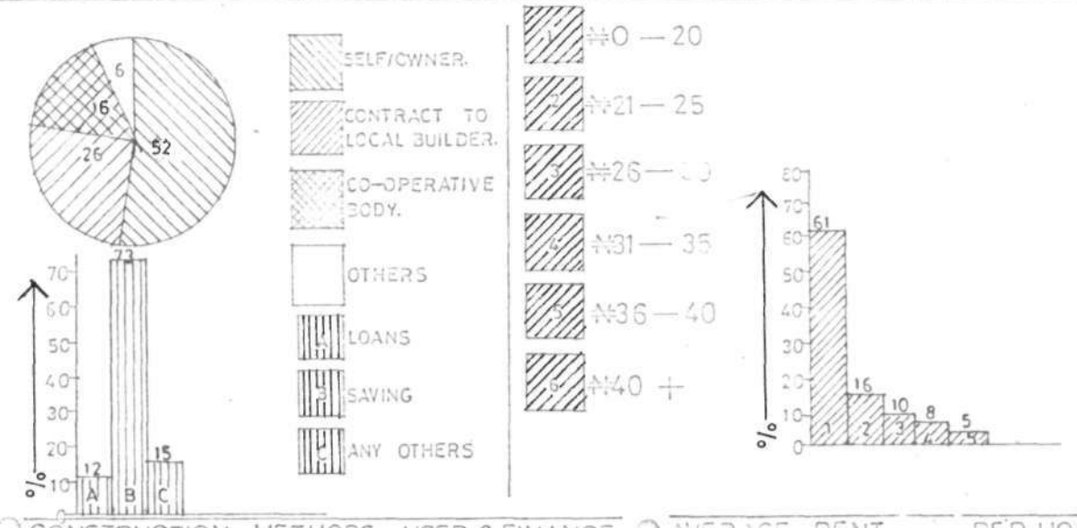
LANDLORDS CONCEPTION AND ATTITUDE TOWARDS HOUSING SUPPLY AND PROBLEMS AT SABON TASHA.

OYEKANMI O S
M Sc THESIS 87/88
URP-A B U ZARIA

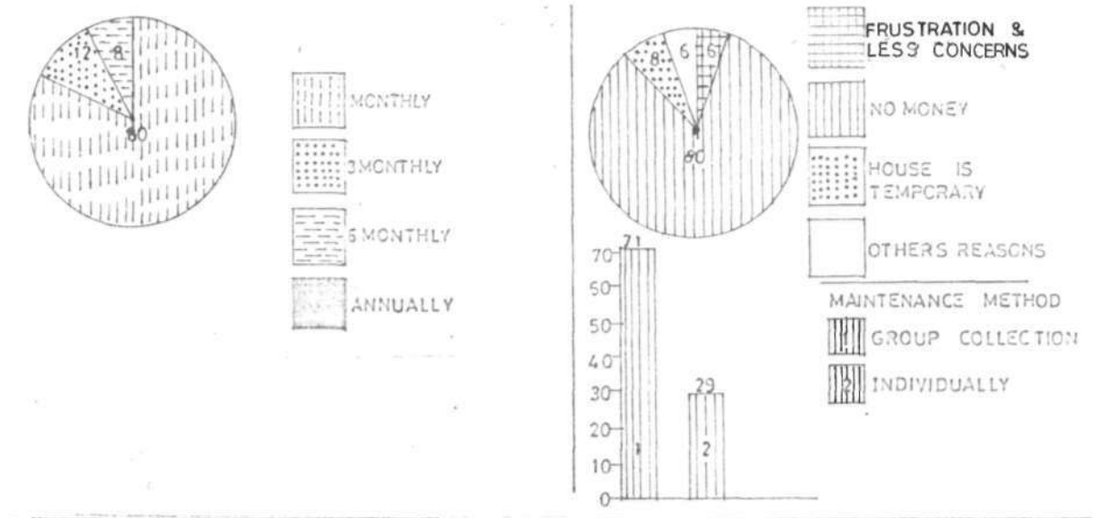
SOURCE Field Survey (jan '88)



REASONS FOR HOUSE IN THIS AREA LAND ACQUISITION



CONSTRUCTION METHODS USED & FINANCE AVERAGE RENT PER HOUSEHOLD



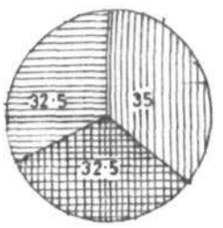
RENT COLLECTION MODE REASONS FOR LACK OF REPAIRS & MAINT. METHOD.

G-IV

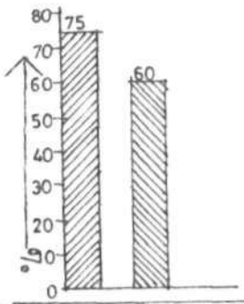
LANDLORDS CONCEPTION AND ATTITUDE TOWARDS HOUSING SUPPLY AND PROBLEMS AT RIGASA

OYEKANMI O S
M Sc THESIS 87/88
URP-A B U ZARIA

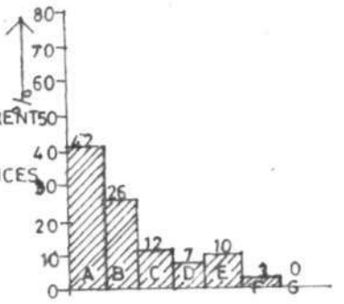
SOURCE Field Survey (Jan '88)



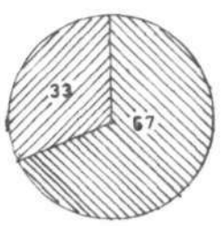
NONE
TEMPORARY
PERMANENT
TEMPORARY WITHIN AREA
PERMANENT WITHIN AREA



A CLOSENESS TO WORK PLACE
B HOUSE & ENVIRONMENT CONDITIONS
C FACILITIES
D AMENITIES
E MODERATE RENT
F SITES & SERVICES
G OTHERS

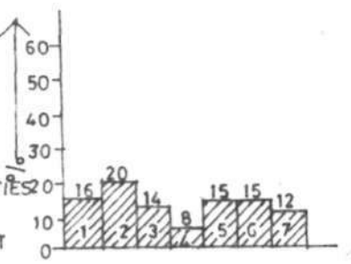


RESIDENTS RESPONSE TO RELOCATION, NATURE & FACTORS OUTSIDE AREA

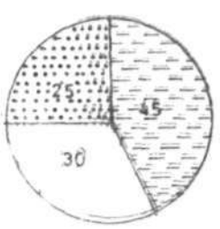


ALTERATION
RENOVATION
NONE

1 DRAINAGE
2 ROAD
3 WATER
4 ELECTRICITY
5 EDUCATIONAL FACILITIES
6 HEALTH FACILITIES
7 ENTERTAINMENT AMENITIES



RESIDENTS PREFERENCE CHANGE IN HOUSE

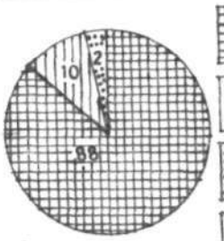


NEED COMPLETE REBUILDING
NEED REPAIRS
GOOD/DO NOT NEED REPAIRS
NEED FACILITIES, UTILITIES & SER.



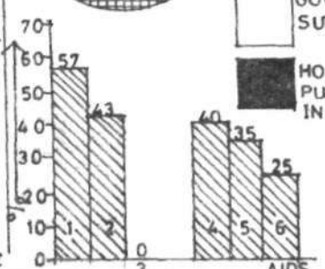
A COMMUNAL WORK
B FINANCIAL
C MATERIAL
D ANY TWO ABOVE
E ALL THE ABOVE
F NONE OF THE ABOVE

ORDER OF PREFERENCE FOR UTILITIES



GOVT SHOULD BE IN CHARGE.
COMMUNITY DEVT. EFFORT
BOTH THE TWO
GOVT. SUBSIDY
HOUS. AUTHOURITY PUB/PRI. COMPANY INDIVIDUAL

AIDS
1 FINANCIAL.
2 MATERIAL.
3 NO AIDS.
4 SAVING LOAN.
5 CREDIT LOAN.
6 CO OPERATIVE SOCIETY.

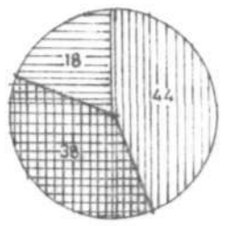


OPINION ON THE NEIGHBOURHOOD & CONTRIBUTION TYPE OF ORGANISATION & AIDS

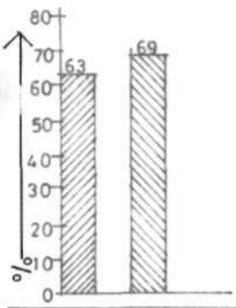
H-I LEVEL OF ACCEPTABILITY OF IMPROVEMENT SCHEME AT THE OLD GRA

OYEKANMI O S
M Sc THESIS 87/88
U.R.P.- A.B.U. ZARIA

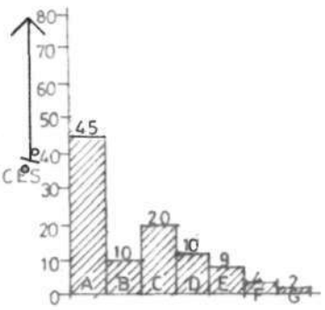
SOURCE Field Survey (Jan '88)



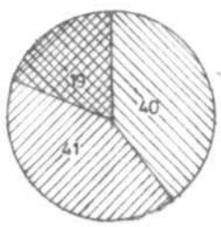
NONE
TEMPORARY
PERMANENT
TEMPORARY WITHIN AREA
PERMANENT WITHIN AREA



A CLOSENESS TO WORKPLACE
B HOUSE & ENVIRONMENT CONDITIONS
C FACILITIES
D AMENITIES
E MODERATE RENT
F SITES & SERVICES
G OTHERS

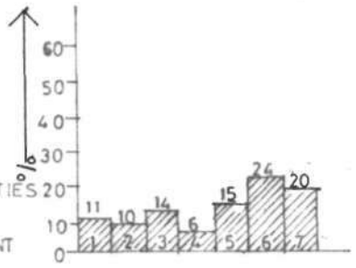


RESIDENTS RESPONSE TO RELOCATION NATURE & FACTORS OUTSIDE THE AREA

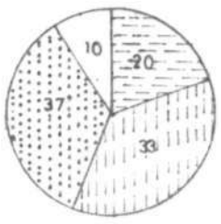


ALTERATION
RENOVATION
NONE

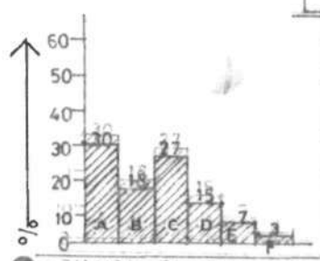
1 DRAINAGE
2 ROAD
3 WATER
4 ELECTRICITY
5 EDUCATIONAL FACILITIES
6 HEALTH FACILITIES
7 ENTERTAINMENT AMENITIES



RESIDENTS PREFERENCE CHANGES IN HOUSE

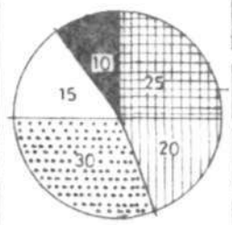


NEED COMPLETE REBUILDING
NEED REPAIRS
GOOD/DO NOT NEED REPAIRS
NEED FACILITIES UTILITIES & SERVICES.

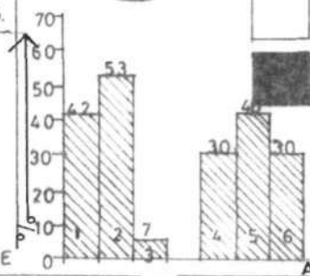


A COMMUNAL WORK
B FINANCIAL
C MATERIAL
D ANY TWO ABOVE
E ALL THE ABOVE
F NONE OF THE ABOVE

ORDER OF PREFERENCE FOR UTILITIES



GOVT SHOULD BE IN CHARGE
COMMUNITY DEVT EFFORT
BOTH THE TWO ABOVE
GOVT. SUBSIDY
HOUS AUTHOURITY PUB/PRI.COMPANY INDIVIDUAL



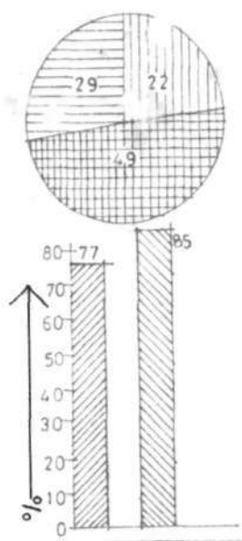
AIDS
1 FINANCIAL
2 MATERIAL
3 NO AIDS
4 SAVING LOAN
5 CREDIT LOAN
6 CO OPERATIV SOCIETY.

OPINION ON THE NEIGHBOURHOOD & CONTRIBUTION TYPE OF ORGANISATION & AIDS

H-II

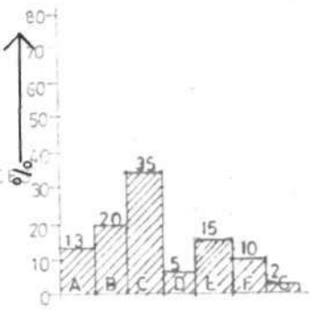
LEVEL OF ACCEPTABILITY OF IMPROVEMENT SCHEME AT TUDUN WADA

OYEKANMI O S
MSc THESIS 87/88
URP—A.B.U. ZARIA

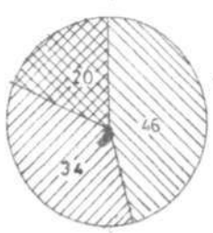


NONE
TEMPORARY
PERMANENT
TEMPORARY WITHIN AREA
PERMANENT WITHIN AREA

A CLOSENESS TO WORKPLACE
B HOUSE & ENVIRONMENT CONDITIONS
C FACILITIES
D AMENITIES
E MODERATE RENT
F SITES & SERVICE
G OTHERS



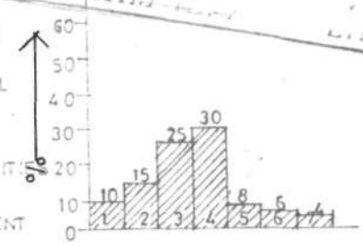
RESIDENTS RESPONSE TO RELOCATION NATURE & FACTORS OUTSIDE THE AREA



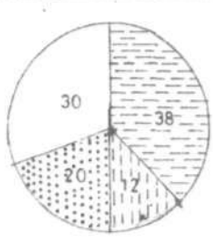
ALTERATION
RENOVATION
NONE

1 DRAINAGE
2 ROAD
3 WATER
4 ELECTRICITY
5 EDUCATIONAL FACILITIES
6 HEALTH FACILITIES
7 ENTERTAINMENT AMENITIES

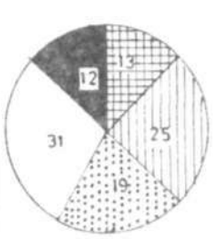
AHMADU ... KASHIM ... RSITY ... LIBRARY



RESIDENTS PREFERENCE CHANGES IN HOUSE ORDER OF PREFERENCE FOR UTILITIES

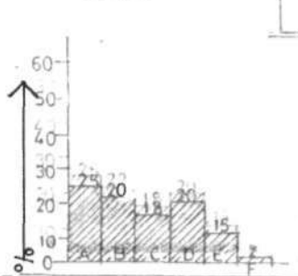


NEED COMPLETE REBUILDING
NEED REPAIRS
GOOD DO NOT NEED REPAIRS
NEED FACILITIES UTILITIES & SERVICES.



GOVT SHOULD BE IN CHARGE
COMMUNITY DEVT EFFORT
BOTH THE TWO ABOVE
GOVT. SUBSIDY
HOUS AUTHOURITY PUBLIC COMPANY INDIVIDUAL

AIDS
1 FINANCIAL
2 MATERIAL
3 NO AIDS
4 SAVING LOAN
5 CREDIT LOAN
6 CO OPERATIVE SOCIETY.



A COMMUNAL WORK
B FINANCIAL
C MATERIAL
D ANY TWO ABOVE
E ALL THE ABOVE
F NONE OF THE ABOVE



OPINION ON THE NEIGHBOURHOOD & CONTRIBUTION TYPE OF ORGANISATION & AIDS

H-IV

LEVEL OF ACCEPTABILITY OF IMPROVEMENT SCHEME AT RIGASA

OYEKANMI OS
MSc THESIS 87/88
URP—A.B.U. ZARIA