DEVELOPMENT OF A SELECTED PORTION OF LOKOJA.

M. SC. (URP) THESIS

BY

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CERTIFICATE

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

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DEDICATION

DEDICATED TO MY PARENTS

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INTRODUCTION

1.00 Lokoja is situated between two outstanding physical elements viz the river Niger to the east and Patti ridge, part of the Niger Benue basement complex, to the west. For some time now these characteristics have constituted obstacles to the rapid expansion of Lokoja. However certain economic factors associated with the regional location of the town have made its expansion mandatory. Such factors include its location on a major North-South highway, the development of the iron and steel complex at Ajaokuta and the development of Abuja the new Federal Capital. There is also a proposal for an inland port for Lokoja which will enhance its commercial potentials. Based on all these anticipations and assumptions a large piece of land has been planned for developments. (Fig.1.00) Experience in other cities has shown that similar existing settlements tend to continue increasing in residential density irrespective of development of the new area and without due consideration to such environmental qualities as sanitation and aesthetics. Any haphazard development will hasten the degeneration of this old area thus creating slum conditions. This has happened in certain Nigerian cities for instance Gbagi area of Ibadan, Oke Malu of Ilorin

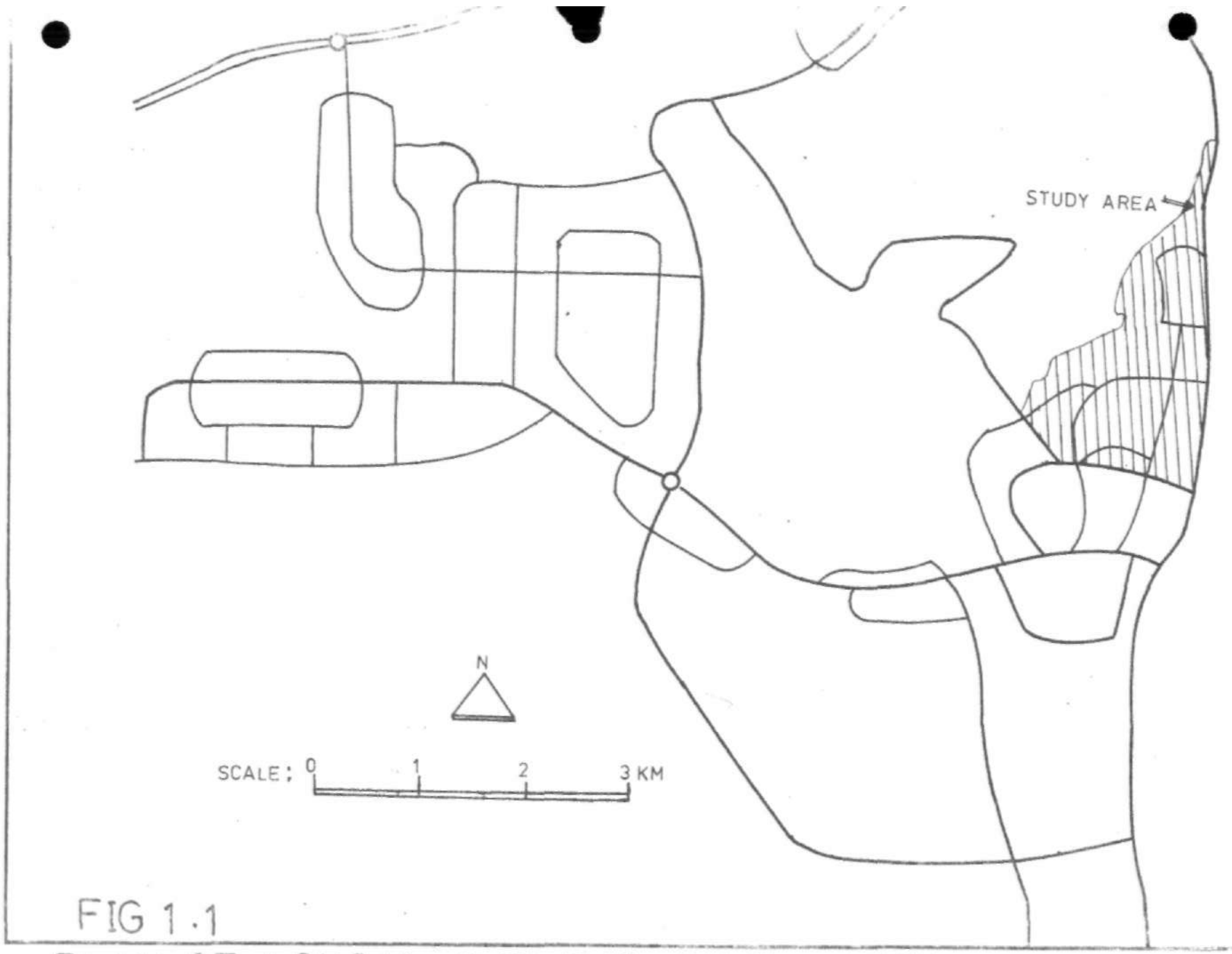


FIG 1.1

PLAN OF LOKOJA SHOWING STUDY AREA

SOURCE MASTER PLAN

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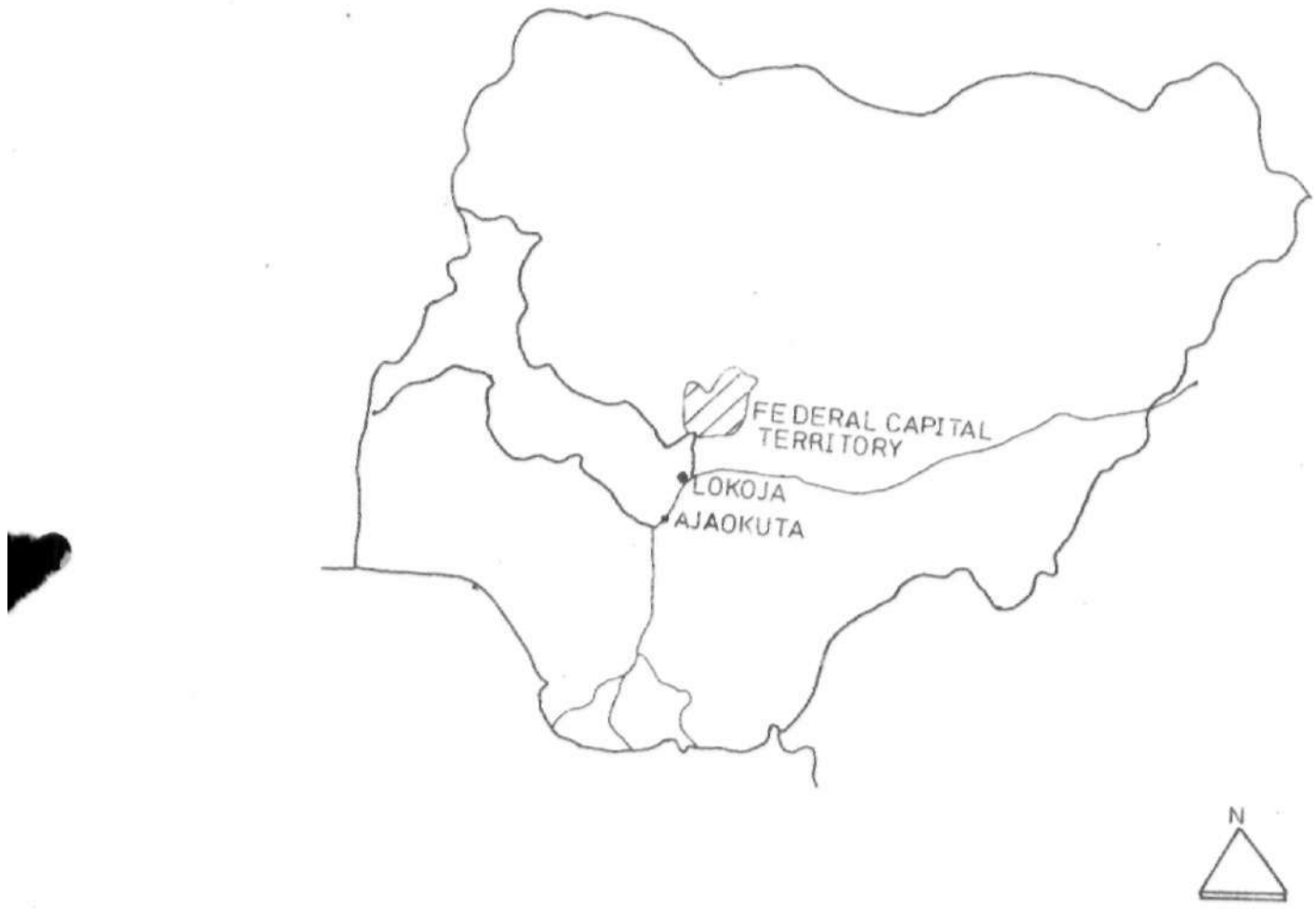


FIG 1.1.0 LOKOJA : LOCATION

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and conditions in the Kano walled city. There is always a marked distinction in environmental condition prevailing in the new area and the old core. It is for this reason that a proper and timely study and plan for redevelopment of existing area is mandatory in order to achieve desired intergration of both new and old areas.

Goal :

1.10 The aim of the thesis is to prepare a detail programme for the study area which will guide development and improve environmental conditions.

Objectives:

i. To highlight the influence of physical constraints and history on development pattern.

ii. To improve the living conditions of the inhabitants.

iii. Intergrate the area into the context of the existing master plan.

iv. Find effective strategies to guide development

v. Suggest suitable guidelines for implementation.

1.20 Statement of the problem

A current United Nation urbanization projection shows that by far the greater part of urban growth will take place around the existing centers. This is

in consonance with growth trends in Lokoja where it is envisaged that population will reach 150,000 in the year 2005 AD. 63,000 of these population is expected to reside in the existing settlement. The intrinsic problem borders on the implications of increased population size and density on capacity of employment, health, education, community facility, recreation and most importantly housing. The area worst threatened by environmental generation is the old core area where density is already high and environmental conditions fall short of expectation.

1.30 Scope and Limitation

The large size of the existing settlement and time constraint necessitated the coverage of only a portion of the town. Secondly the unavailability of a collective name for the selected portion has compel the author to rely on physical elements for demarcation. This thesis shall be limited to finding pragmatic solutions to identified problems. Attempt will only be made at broad design for the area with detail of only a selected area.

Delineation of Study area.

The study areabordered by the Patti ridge in the west, River Niger in the east, Agbaja Plateau to the North and Patti road to the South.

1.40 Methodology

Various methods were employed in data collection.

i. Intensive visual survey was used to determine the structural conditions of houses.

ii. Questionnaires were administered to establish the distribution and provision of household amenities.

iii. Secondary data from Lokoja master plan was used.

iv. The use of Chief Informants. Interviews were obtained from heads of department of agencies connected to planning i.e. Ministry of Works, Ministry of Housing and Environment, Planning Division Local Government Water Coporation, NEPA and hydrological survey Inland Waterways.

Structure of Thesis

The thesis will be divided into four sections.

Part I

The section will examine the influence of physical feature and history on the evolution and later development pattern of Lokoja.

Part II

The second section will contain analysis of field survey which depicts conditions prevailing in the study area.

Part III

Analysis and synthesis of field findings will give rise to problem inherent in the area. Strategies will be found to guide development.

Part IV

Part four deals with guidelines for effective implementation.

Brief Literature Review

Many discussions on urbanization tend to concentrate on the immediate environmental problems. Such problems are posed most obviously and directly by the physical and social conditions in which people are condemned to live in terms of slums, shant towns and congested centres. There hasn't been any clear definition as to what each term means. for example Gans defined slums as "An area where the social and environmental factors are proven to cause problems and pathologies for the residents"[1] This definition covers not only the physical but social and ties human behaviour to environemtal factors. However, another definition merely states that slums are residential areas with extreme blight condition. This is the definition which lots of literature on this topic has agreed on but disagreement still exist as to what urban blight is. Ford describe urban blight as

[1]Gans, H. (1962) An Evaluation of the redevelopment plan and Process - Urban Housing Free Press New York. P.476.

"any area in which large majority of the buildings are old and in which fundamental repairs are no longer been made"[2] While Chapin refer to blight as "mature obsolescence and the physical deterioration of large areas".[3] In its most elementary form urban blight is defined as an economic dislocation. Whatever the definition simple urban blight includes such physical characteristics as structural deterioration, missing sanitation facilities structures in disrepair or lacking in elemental maintenance, presence of trash and rubbish, missing community facilities such as school playgrounds publicavater and sewarage systems. Associated with urban blight such solutions like redevelopment rehabilitation and conservation.

Conservation is the preservation of predominantly built up areas that are in good condition. Rehabilitation is the improvement or restoration of a predominantly built up area which though consistent with a comprehensive plan in terms of intensity of development and land-use pattern, is in a stage of incipient blight. Redevelopment is the revision or replacement of an existing landuse and population distribution pattern through the acquisition of a predominantly built up area, and the clearance and rebuilding of this area according to a comprehensive metropolitan plan.

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[2] Ford J. (1967) Slums and Housing p.14

[3] Chapin J.F. (1965) Urban Landuse Planning, University of Illinios Press p.310.

Though the study area has some character intics of blightness it cannot be described as a slum ncr a blighted area. The two treatments prescribed that is rehabilitation and redevelopment cannot be applied.

Development is used as treatment for areas with minor physical defect and where environmental conditions falls below the observers expectation. It also includes urban expansion that is infilling of vacantland. Precisely this treatment upgrades existing residential area and the direction of growth on vacantland. Development involves the standardization of the urban structure and environment.

THE INFLUENCE OF PHYSICAL AND HISTORICAL FACTORS ON THE DEVELOPMENT OF LOKOJA

Lokoja is situated at the confluence of the Rivers Niger and Benue. Its origin as an important settlement can be ascribed to the activities of the British. In an effort to establish trade and communication along the river Niger the British in 1841 bought a piece of land at the confluence of the Niger and Benue rivers from the Atta of Igalaland through his representative the Anaja of Gbobe. The land was intended for use as a model farm on which the British hoped freed slaves could be taught to raise economic crops that would serve as a substitute for slave trade.

Although the model farm idea failed, the settlement thus begun grew first as a center of trade and later of trade and administration for Britain's growing enterprise in the region. In 1889, for example, the Royal Niger Company, Britain's major commercial enterprise in the region, assumed territorial control over the town, extending its southern boundary to include villages like Zongo, Zongodaji, Adankolo and Lokongoma (Fig.1.2a) When on January 1st 1900 the Protectorate of Northern Nigeria was declared, Lokoja became the first colonial headquaters for Northern Nigeria. Although the colonial headquarters was moved in 1902, Lokoja remained an important commercial, military and administrative center both during and after the colonial period.

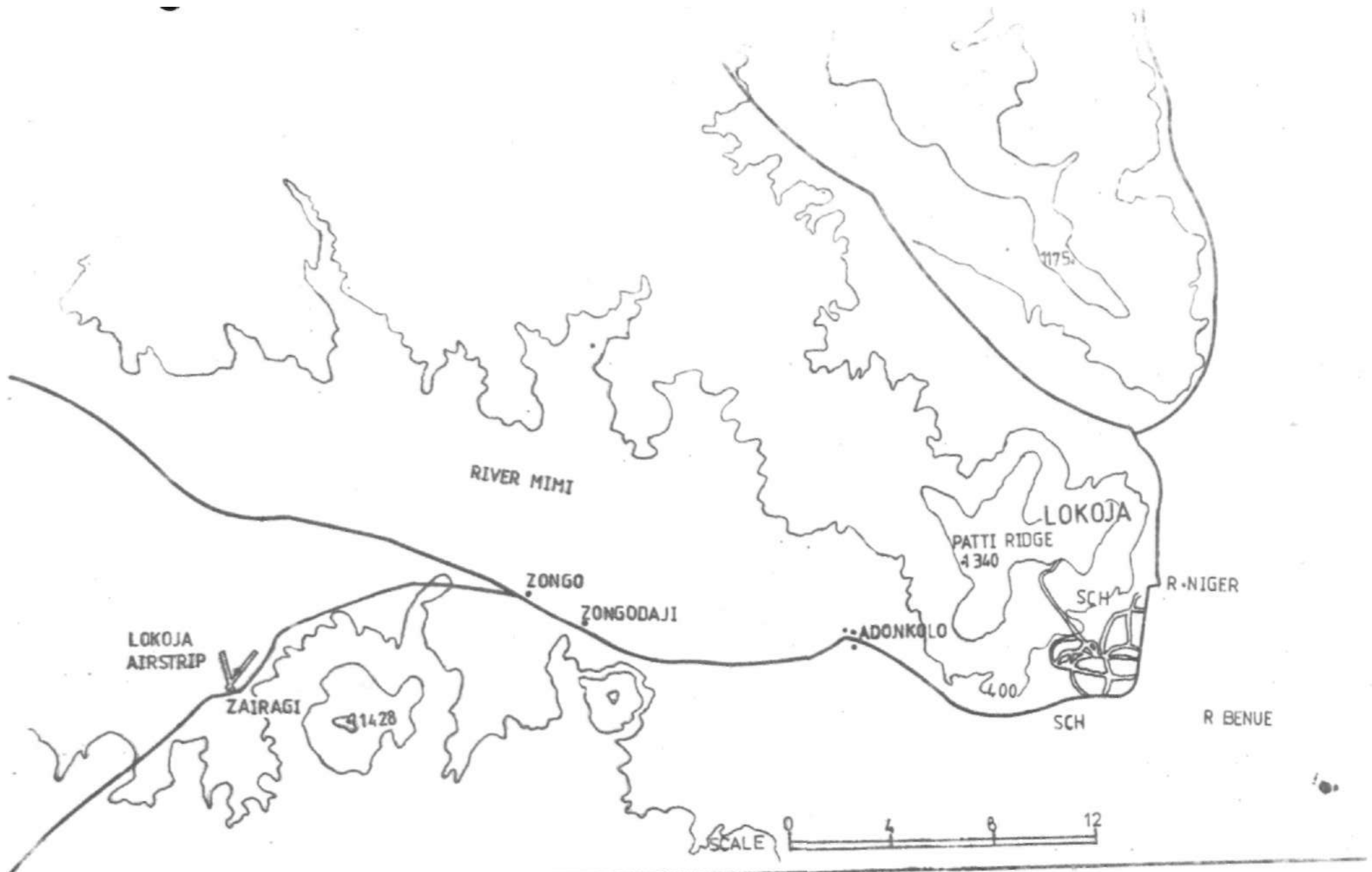


FIG I·2 LOKOJA : AREA COVERAGE

It was, for example, the provincial headquarters of the former Kabba Province and has been the headquarters of the Kogi Local Government since its creation.

The historical factors noted above have all had important effects on the development of the internal structure of the town. At its inception in 1841 the British had encouraged local indigenes, then resident on the Patti ridge to settle on the lowland. The first group settled at the foot of the hill close to Pandara stream. The area located in the native wards, is now called Salamalaikum Compound. From that time too European commercial activities led to the establishment of store houses along the river bank. The colonial period initiated its own developments. Like in all colonial towns, the senior colonial administrators resided far away from the Native town, while African junior officers and soldiers were quatered just south of the Pandara Stream, an area now known as Contonment with a parade ground, the Paparanda field (Fig.1.40) located nearby. Government offices, as well as a golf course, were located in between.

Since 1914 the town has witnessed continued, although irregular, growth in keeping with its various functions as a commercial and administrative center. In this period buildings for the provincial offices, hospital, Federal Inland Waterways department, police, and light industries

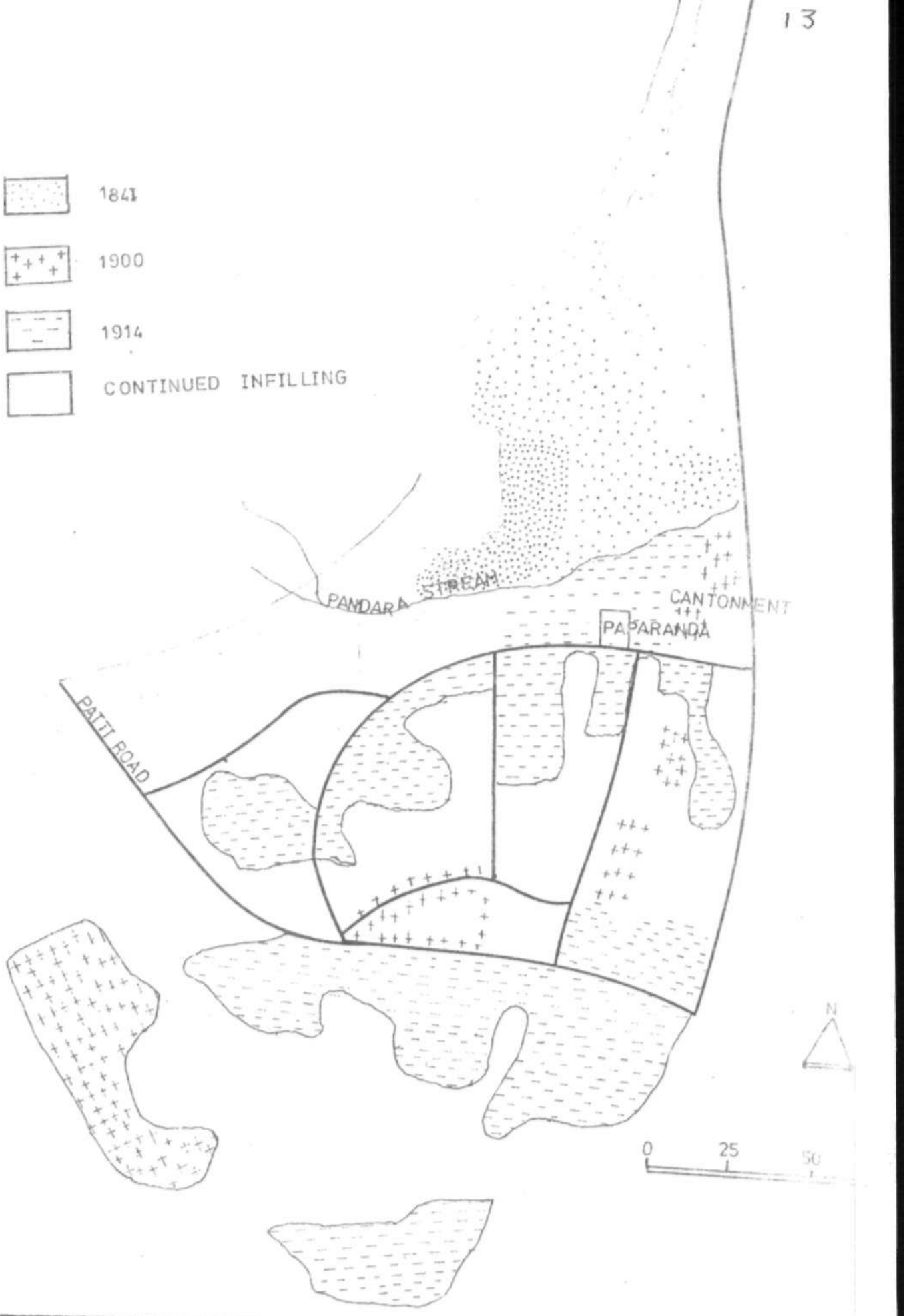


FIG 1.4 GROWTH OF LOKOJA

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have sprang up largely in the area south of the Pandara stream. New residential quaters, both government and private have also sprang up such as the Sabon Gari and the new residential layout to the Northwest. The past fifteen years, in particular, has witnessed more infilling of vacant land than external expansion.

Physical Setting

Lokoja is sandwitched between three physical elements viz the rivers Niger and Benue to the east, the Agbaja hills to the north and Patti ridge to northwest. The two highlands are separated by a pass and are part of the Niger Benue Basement Complex rocks. Patti rigde is about 445 meters above sea level and Lokoja lies between 45 and 125 meters above sea level, Other characteristics of the physical environment are dry valleys and rock outcrop which are products of differential weathering. Many streams, incise the hill slope and empty their water into the river Niger (fig 1.5) This coupled with other hill slope activities such as bushburning, cultivation and building produce alot of unconsolidated material thus accelerating the rate of erosion. Erosion has a devastating effect on the built up environment especially in areas closest to the ridge.

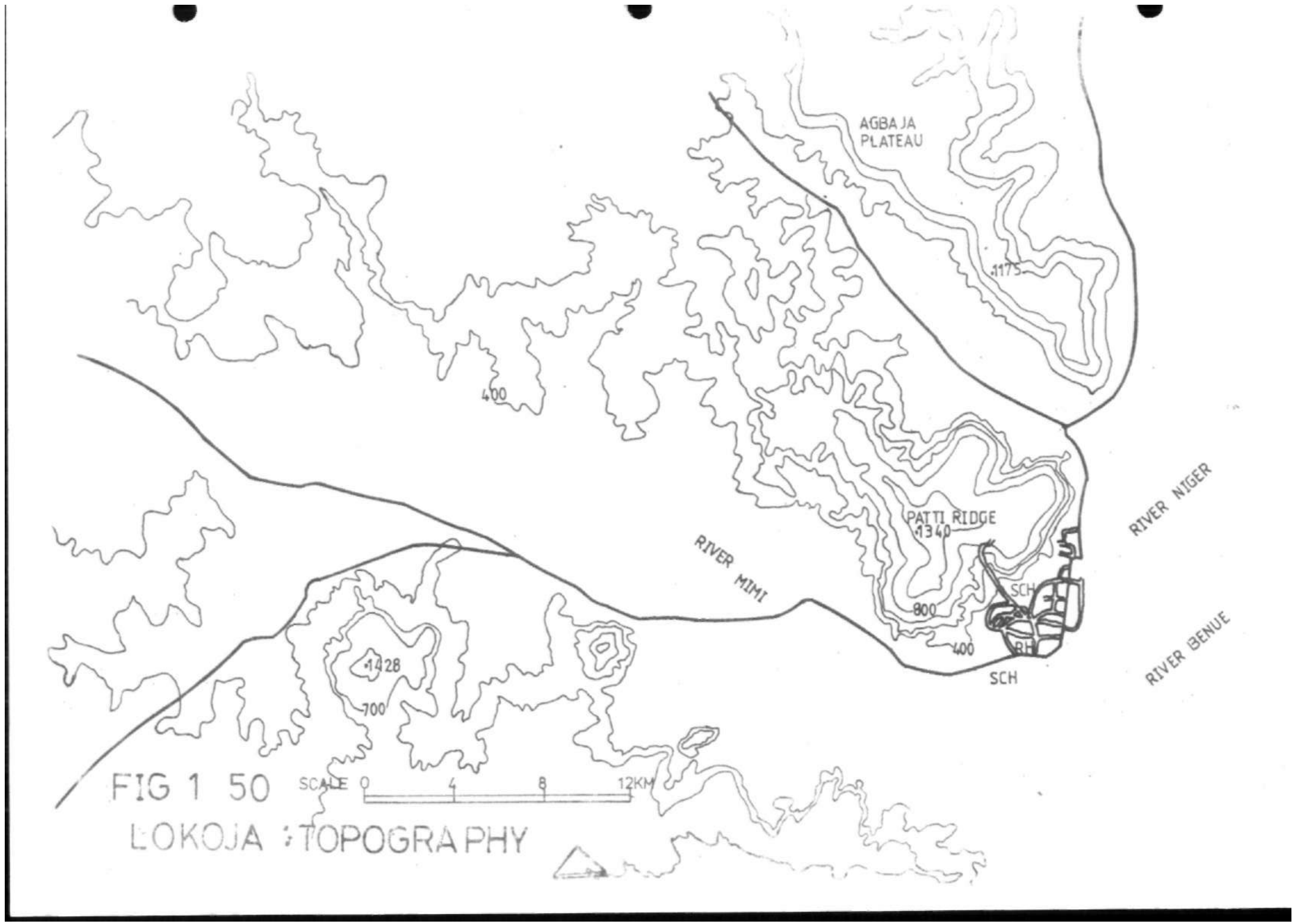


FIG 1 50 LOKOJA : TOPOGRAPHY

Any planning of Lokoja requires a consideration of its hydrological characteristics inorder to prevent flood hazards. The volume and speed of river Niger depends on the seasons of the year. The volume of water decreases drastically during the dryseason. Records taken by the Federal Inland Waterways Department shows that the lowest water level is recorded between April and May. The lowest water level within the last twenty years is 1600m recorded on 27th April 1973 and 9th August 1974. (Fig.1.60) The highest readings are recorded between September and October. The highest flood inundate all areas below 150' contour line can be considered the flood line. Subsequently areas lying below the flood line are areas liable to flood and for the purpose of simplicity can be termed potential flood area or high risk area. Proposal for highrisk area shall be dealth with later in the thesis. The period of inundation varies from year to year depending greatly on the length of the rainy season. The rivers start receeding in November to reach the lowest ebb in April. To keep away flood two complementing methods can be adopted, wither control flood works which aims at keeping water away from man or control of flood plain development through planning and regulatory efforts which aims at keeping man away from water. Whatever method is adopted for Lokoja will depend on land requirements and stage of technology. Flood render the

floodplain unsuitable for development.

Physical elements have played a major role in the initial location and development of the town. The earliest arrivals in the area settled on the hillslopes for defence purposes. The settlement remained small due to physical contraints. Secondly the rivers attracted British explorers to Lokoja and offered the potential for trade thus Lokoja developed as a trading post. Spatially the area fronting the river developed as a commercial area where major trading companies are located. These include United African Company (U.A.C.), John Holt and G.B. Ollivant. Other commercial companies and warehouses for storage of goods (e.g. marble or cashcrops) on transit to other areas of Nigeria, are still being attracted to the riverfront. The traditional market is located near the river because of its dependency on river transportation. Many traders from across the river travel down every market day which is twice a week. With faster road transport system decentralization of commercial activities is gradually taking place. Thus, for example, the new regional market is located along the bypass.

Another advantage Lokoja derived from location on the confluence is the establishment of the head-quarters of Inland Waterways Department.there. It is the single largest employer of labour in Lokoja

and occupies a large area near the river.

Just as physical elements have initial advantages to development they also have their disadvantages. Physical setting, particularly the relief has constituted a considerable constraint to the spatial growth of Lokoja. The resultant effect is development along the least line of resistance. Here we may make an important distinction between growth and development. For purpose of clarity development as used here refers to increase in quantity and quality of landuse which includes improvement in environmental conditions while growth is mere physical expansion. There is variability in the degree and type of response to physical constraints. These responses can occur in sequential form based on wealth, technology and awareness. When physical expansion supercceds technological advancement and wealth what results is mere growth. This is the situation on Patti ridge where essential facilities e.g. roads are lacking due to high expenditure in time and money required to provide them.

To the east expansion has been curtailed by the river. The marshy nature of adjoining land render them unsuitable for permanent development. Similarly stream courses within the town constitute the same problem. However, such marginal land can be utilized in such a way as will enhance their aesthetic qualities.

Discussion on the influence of physical elements on development cannot be conclusive without discussion of cost of overcoming obstacles to growth. The possibilistic view here will mean that all obstacles can be overcomed but at a substantial cost. It is this cost aspect which has been a limiting factor to the south east and southwest expansion of the town where rugged terrain requires lots of infilling of valleys and leveling out of outcrops before land can be effectively utilized. The tarrain characteristics also increase road construction cost though the geology is quite condusive, and advantageous to construction. The numerous rivers runing across the town futther increases cost of road construction because they neccesitate building of bridges. Erosion differentials over the town has a pronounced effect on land-use, duration of buildings and life span of roads. Areas near the hillslope experience the highest rate of erosion. Such areas are thinly populated.

It is clear from all the above that both physical and historical factors have had a combined effect on the development of Lokoja into what it is today. Their effects have been both positive and negative and it is essential to understand this if any meaningful plan for its future development is to be made.

CHAPTER III

STUDY OF EXISTING CONDITIONS

2.00 Brief baclground

Lokoja is a hetrogenouse city bringing together most of the major ethnic groups in Nigeria. Upsprings of the first settlers still occupy the Native Wards while later imigrants are found in Sabon Gari. 56% of the inhabitants are moslems and 43% are christians. Christians predominahe in newly settled area and most moslems live in the Native Wards however there is no residential segregation on the basis of religion.

2.01 Population.

The population of Lokoja in 1952 was 14,000 and rose to 25,001 in 1963 with an average growth rate of 3.15 per cent. Lokoja was formally the headquaters of Kabba Province and later became the headquarters of Kogi Local Government. It is also the administrative headquarter of Federal Inland Waterways. Due to increase in its administrative importance the growth rate of Lokoja rose to 5.35% in 1974 with an estimated population of 35,000. This is expected to reach 150,000 in 2005 AD if growth rate of 4.5 to 5% is maintained.

Population Characteristics

Fig 2.10 indicates a higher male population. This will have implication on employment. Higher rate of

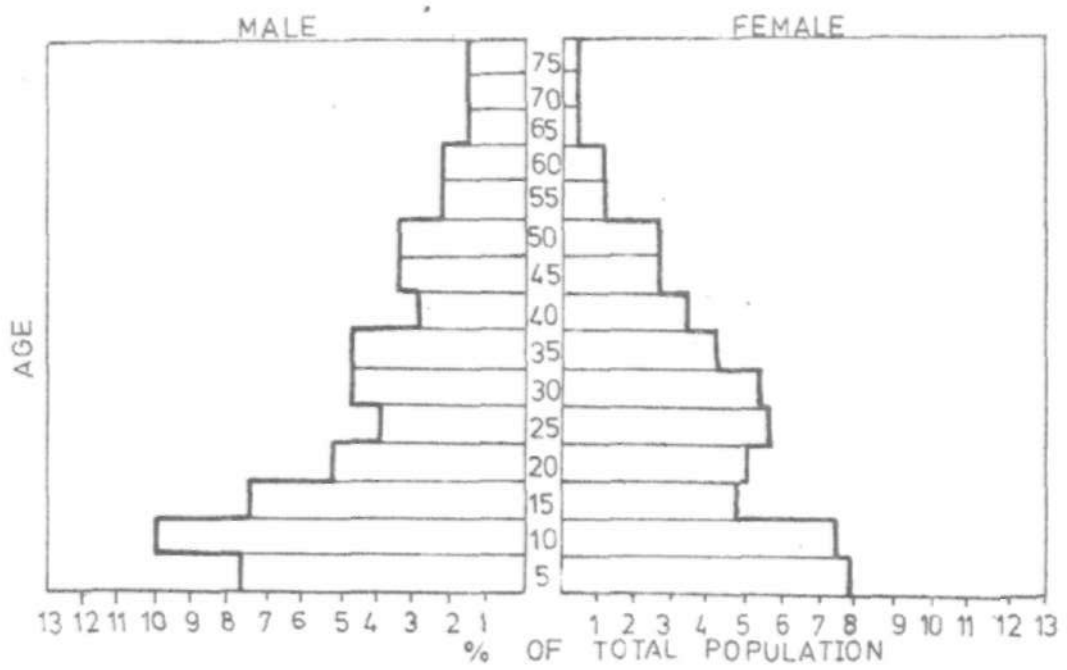


FIG 2.10 LOKOJA : AGE SEX PYRAMID

SOURCE : MASTERPLAN

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females in the 20 - 50 age group implies high birth rate and consequently a need for maternity aid infant clinics. In addition to this about 17.6% of the total population belong to the 6 - 12 years age group and 11.25 in the 12-17 age group which means high demand for primary and secondary schools.

Discrepancy exist in population distribution as shown in fig 2.20 Density is highest in Native Wards with 300 - 699 persons per hectare. This far exceeds gross density for the whole town which is 221 persons per hectare. The disparity becomes even more glaring when the Native Wards are compared to the G.R.A. where density is just 50 - 99 persons per hectare.

2.02 The study area had about 80% of the total population in 1963. 14,000 of the 20,000 population live in the Native Ward, an average density of 307 per hectare. This far exceeds the master plan proposal of 160 persons per hectare for such high density areas. Over tasking of existing facilities is the obvious effect of high density and environmental degeneration might also occur if adequate action is not taken promptly. Upgrading is therefore, necessary to either reduce population to meet existing facilities or increase facilities to meet demands. Due to socio-cultural and economic fac tors it will be difficult and probably unreasonable to reduce density drastically instead

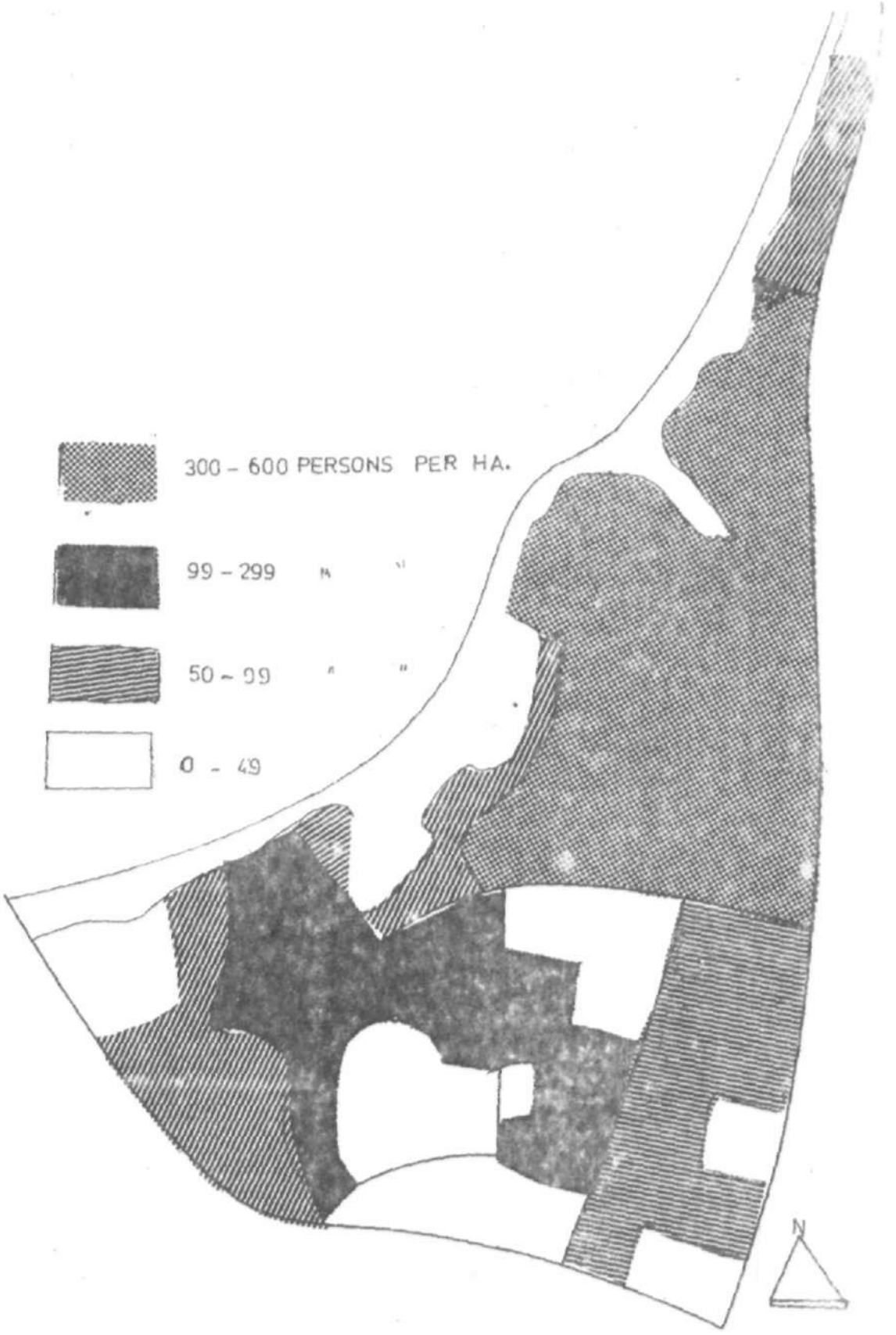


FIG 2·20 POPULATION DENSITY

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of condusive environment for human activities and health should be the target. However variation in density over the study area offers an opportunity for redistribution of population from areas of high density to those of low density. While low density on the hill slope is advantageous and adequate for such marginal land.

2.10 Landuse Pattern

The study area covers 284.8 hectares. It is divided into various uses with residential land occupying 191 hectares (67.06%)

Table 2.1 Landuse

Landuses	Coverage in hectare	Percentage
Residential	191	67.06
Commercial	15	5.26
Institutions	41	14.4
Open Spaces	13.6	4.78
Vacant Land	23.2	8.15
Industrial	1	.35
Total	284.8	100%

Table I: Source: extracted from Landuse Map.

Industrial use has the least coverage however handicraft industries located within compounds are excluded. The

coverage for open spaces also exclude incidental open spaces within residential areas. A study of the land-use distribution suggest that the area devoted to open spaces and commercial uses are much smaller than expected and there is the need to achieve an equitable distribution . Fig.2.30 shows an uneven spatial distribution of various uses. Institutions tends to concentrate within specific areas especially Sabon Gari, and commercial activities agglomerate on two major roads, the spine road and eastern bypass, which implies that people walk long distances to reach such services.

Housing Conditions.

The main aim of this section is to examine the characteristics of housing and to identify problems and opportunities.

2.20 HOUSING

2.21 Pattern of Tenure

Majority of the houses are either privately owned or rented while the rest are government property. A break down of available data (Fig.2.40)shows that 72.5% of the houses are owner occupied. Rented house predominates in Sabon Gari and the New layout, constituting 76.2% and 65% respectively. Most of the government houses are in John Holt area which inflated the percentage of rented houses. Implicit in tenancy pattern is the problem of renovation of buildings. Owner occupied

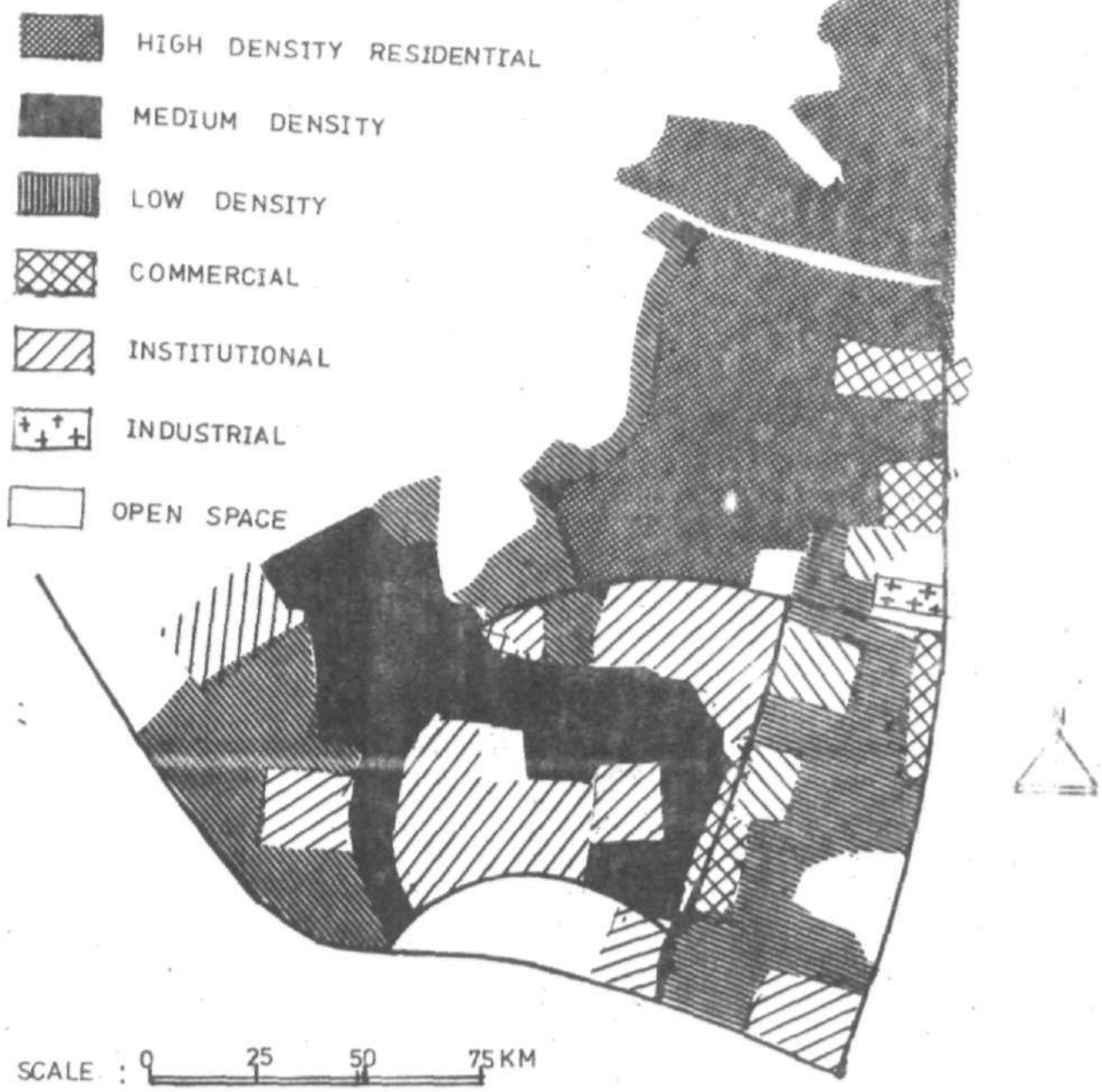


FIG 2 30 EXISTING LANDUSE

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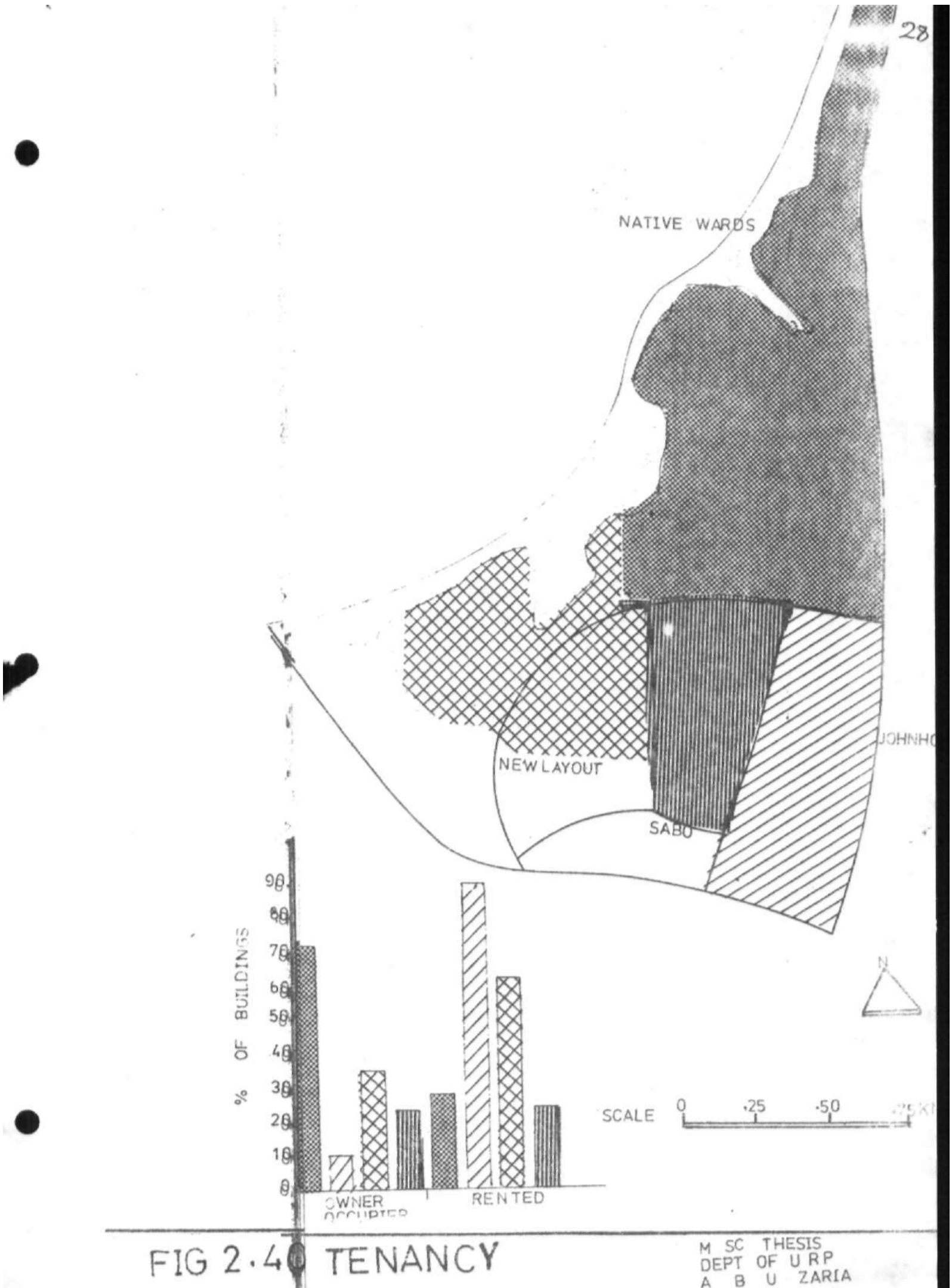


FIG 2.4 TENANCY

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houses are usually better maintained. Sabon Gari and New layout will be highly affected as existing structures get older, However tenancy pattern offers a good oppertunity for structural improvement in the Native Wards, where households can be given incentives to renovate their houses when the need arises. One may speculate that the pattern of tenancy is the concealed factor behind the moderate standard of housing especially when compared to age.

2.22 The oldest settlers occupy the Native Wards and John Holt as manifested in the building age (Fig 2.50) 52% of the houses in the Native Wards are 21 year and above while only 1% and 1.1% in Sabon Gari and New layout fall into this category. An analysis of the length of occupation of residential properties reveals a predictable correlation with type of tenure. One can make a general conclusion that rented accommodation, government property being an exception, has been occupied for a significantly shorter period than owner-occupied dwellings.

2.23 There is a predominance of compound houses which itself is a direct result of the social value attached to extended family system and interaction. Field observation revealed that many compounds depict the concept of the void space manifested in the open courtyard around which solid structures are arranged.

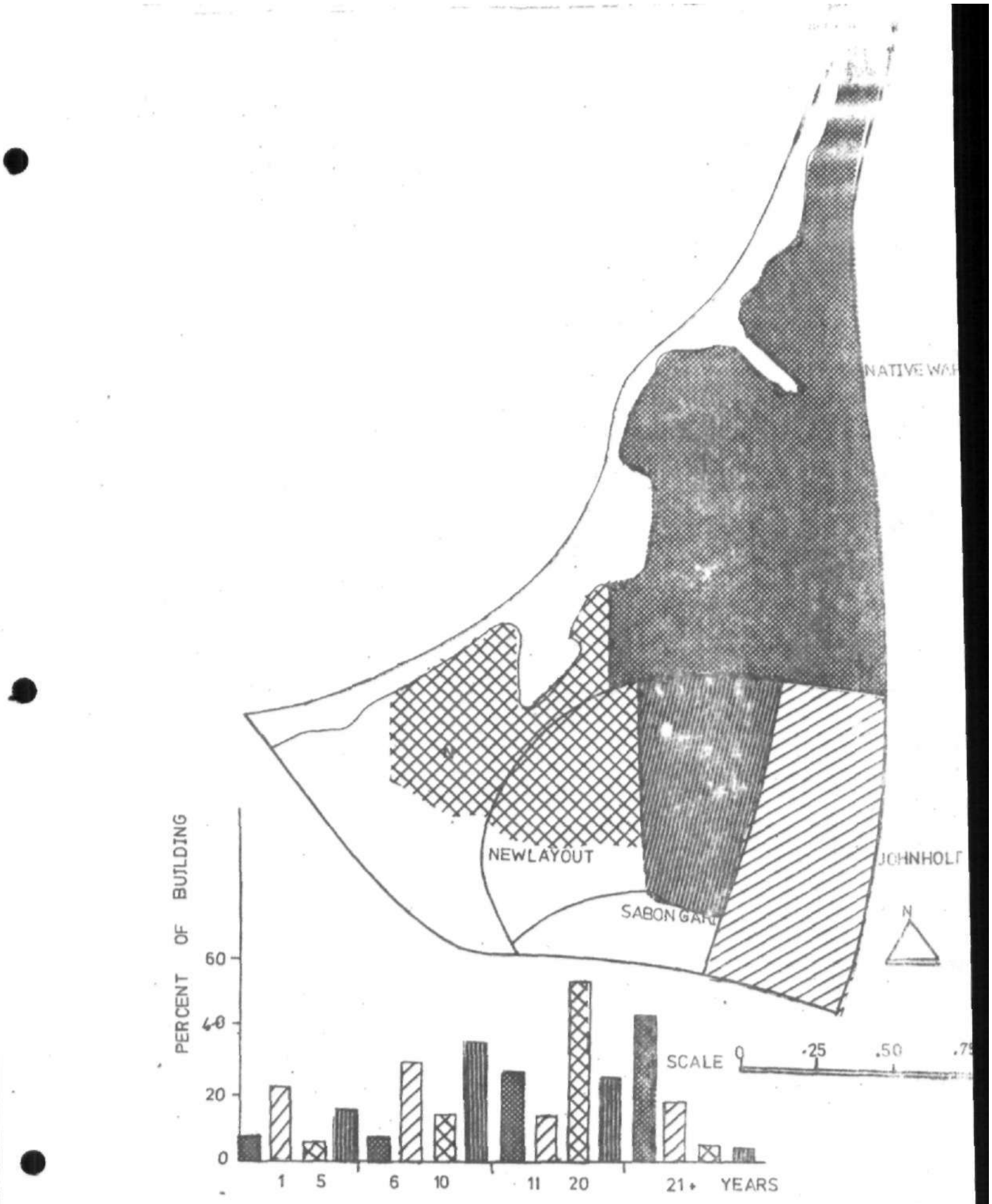


FIG. 2.50 AGE OF BUILDINGS

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Even in rented houses there is a persistent tendency for houses to be grouped around an open courtyard shared by a number of households. (Fig.2.60)Occupancy ratio of such compounds are usually high emaniating from the fact that more than one nuclear family reside in a compound. Average occupancy rate is highest in the Native.Wards where compounds are larger and family ties stronger, the figure stands at 36 persons, with 19 persons in New layout, 19.25 and 12.2 persons in Sabon Gari and John Holt respectively. (Fig.2.70) The occupancy ratio i.e. number of persons per room is 2.16 for the area.

2.24 Building materials vary alot but there is an increasing tendency towards the adoptation of modern building materials i.e. cement blocks and iron sheets. The Sabon Gari, John Holt and New layout are nearly 100% modern houses. Traditional houses build of mud or baked bricks with wooden frame are interbuilt with modern building in the native wards and even here iron sheet is the major roofing material. To some extent, there is a correlation between house type and age of building. Analysis of building materials in relation to age of structure shows that concrete blocks or bricks tend to be used more now than mud Most of the building are single storey and this depends on affordability of capital. Most of the existing housing stock were built out of personal savings and family aid which usually wouldn't be much.





SCALE 1 : 200

FIG 2·60 USE OF HOUSEHOLD SPACE

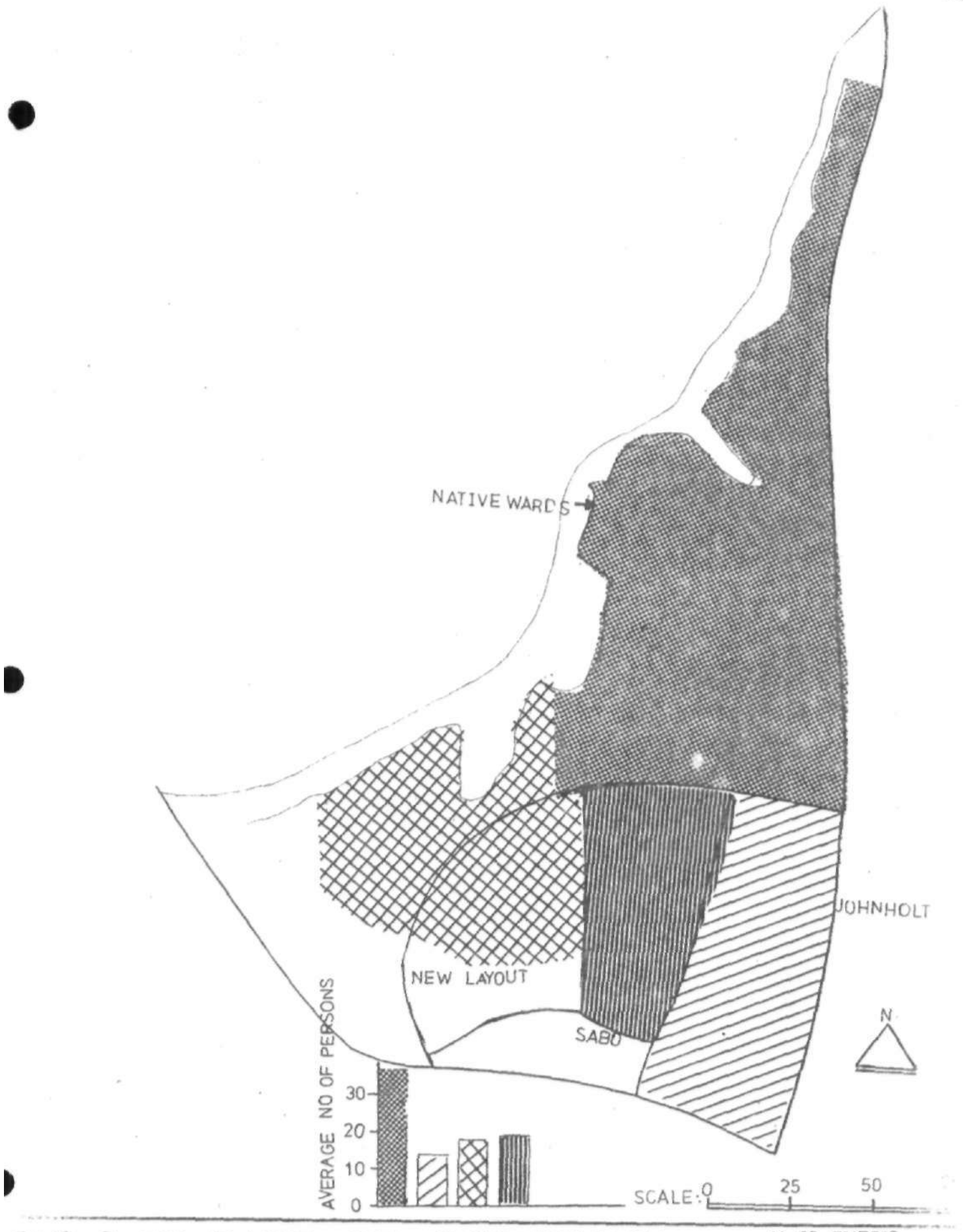


FIG 2·70 RATE OF OCCUPANCY

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2.25 Housing Conditions

The housing standards in any society boarders on the impending socio-economic, technological and external influences at that point in time. The compound structure of existing housing in the study area is a direct reflection of the socio cultural value of the people. Improvement in economic status and external influence gave rise to increased use of more expensive building materials. This tend to confirm the convention al theory that if the income of the lowest strata in the society is increased a machinery for rapid improvement in housing would be set in motion. The basic issue here however is its practicability because past happenings have shown that increase in income is instrumental to increase in spending usually in luxury goods and sumptuous projects except there is an incentive to channel it into housing. A superficial look at housing in the study area reveals a growing demand for better housing. This is not suprising as a good proportion of the working population are government employee. From field screening the housing can be said to be in fairly good condition as regards to structure.

2.26 Household amenities

Analysis of household amenities such as toilets, bathrooms and kitchen indicate a large percentage of sharing for example. 50% share toilets facilities 44.5%

and 51% share kitchen and baths respectively. A more indept analysis shows disparity in spatial distribution of such amenities (Fig 2.81, 2.82, 2.83) 61% of sampled households in the Native wards lack proper toilet facilities. Very many of them deficate on vacant land or in the river, and unhealthy condition. In the John Holt area the figure is negligible. In comparison with toilets, provision of bathrooms is higher. Most households have bathrooms except that some can be classified as makeshifts because of their building materials and suitability. Materials commonly used for makeshift bathrooms are 'Zana' grassmats or ironsheets without roofs. 21% of bathrooms in the Native Wards are of this type with only 2% of such in John Holt area.

Some households cook outside on the open courtyard or in their living room. Investigation showed that such households prefer not to share kitchens with other tenants. 32% of households in Sabon Gari don't have kitchen. This is still an improvement over the provision of other household amenities.

From available data one can deduct the household amenities is inadequate especially in the Native Wards. Standards in Sabon Gari and John Holt is tolerable though improvement is still necessary. It can also be concluded

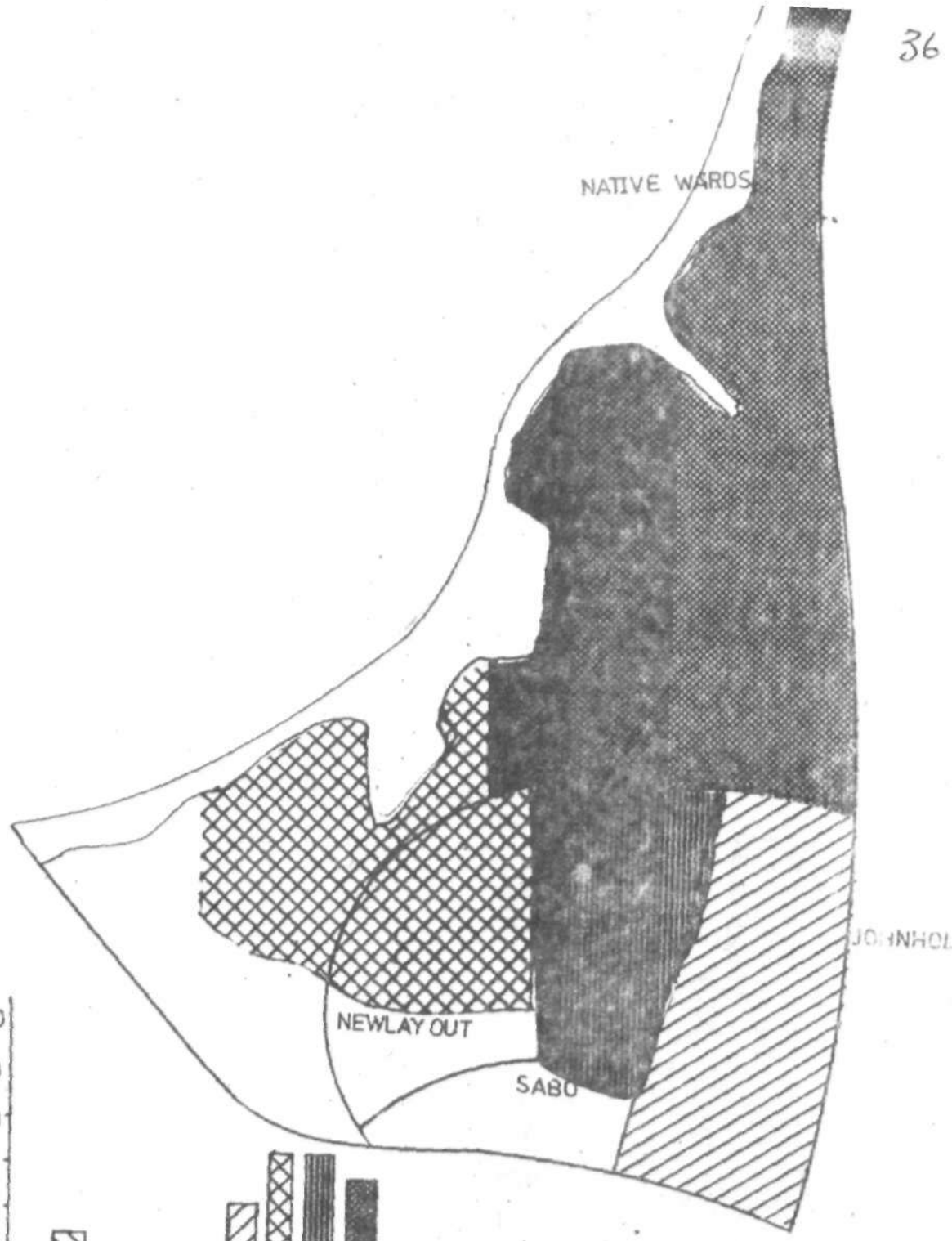
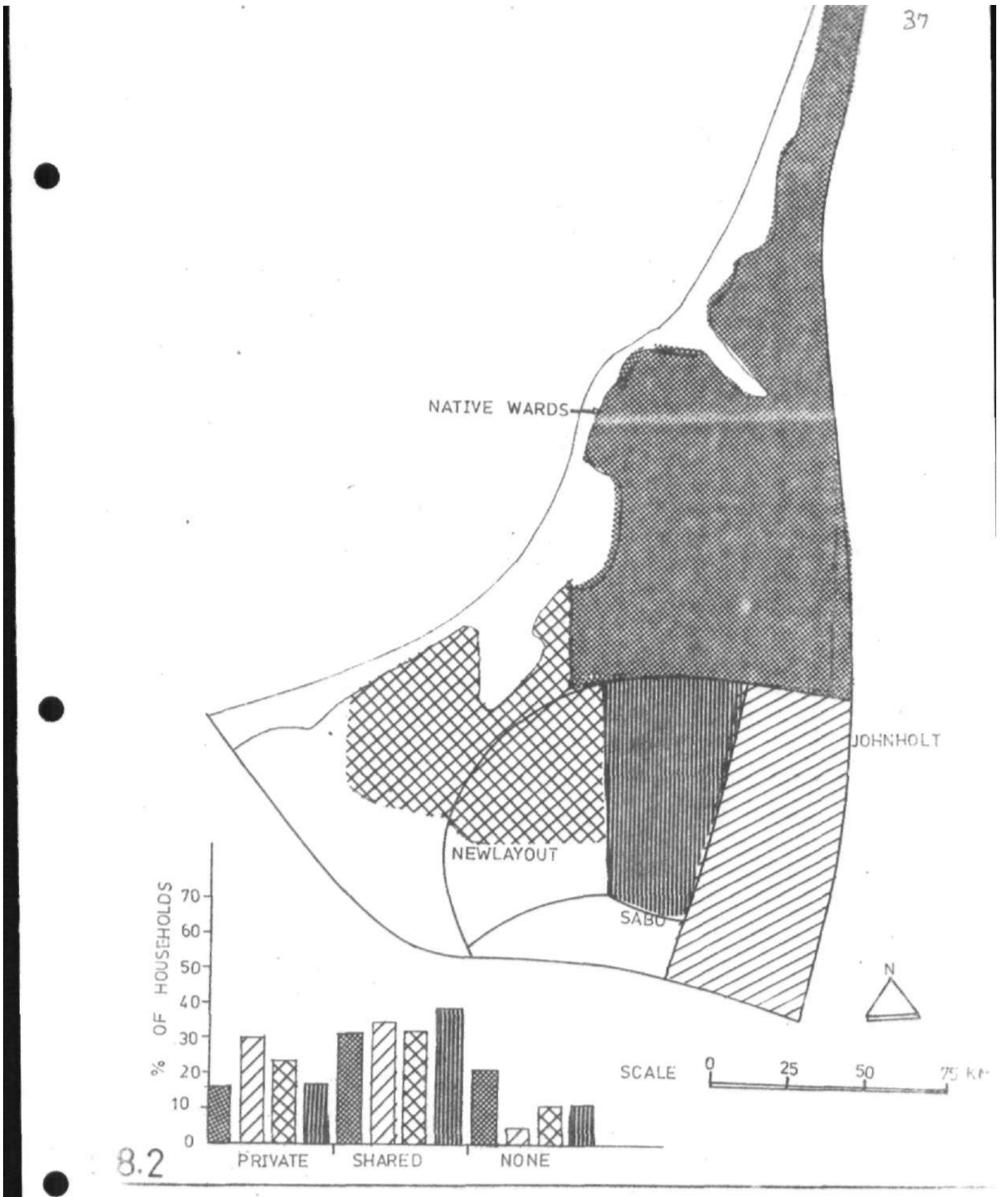


FIG 2·81

PROVISION OF TOILETS

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8.2

VISION OF SHOWER & BATH

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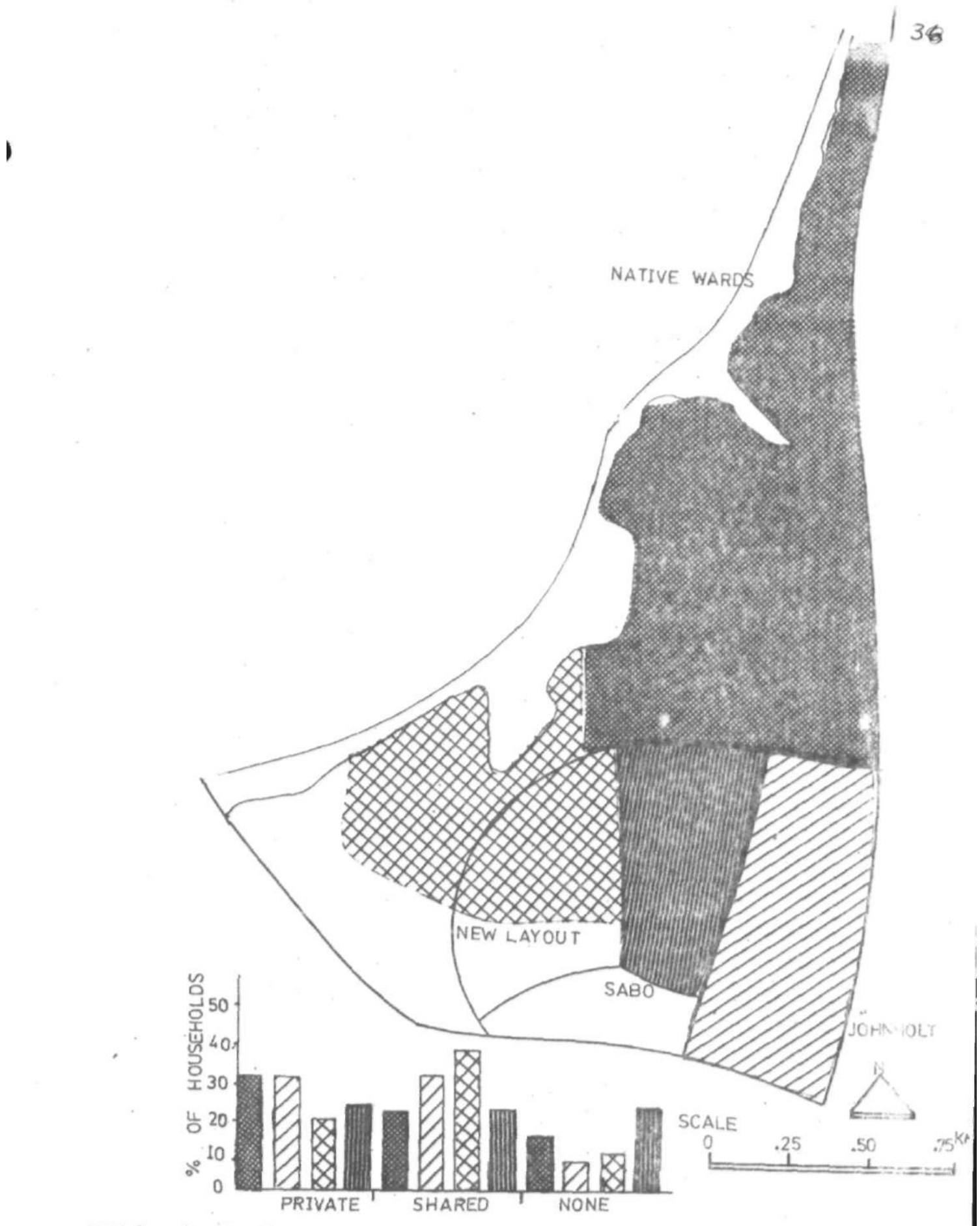


FIG 2.8.3

PROVISION OF KITCHEN

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that sharing is a common phenomenon in all areas. This situation can readily be capitalized on. Opportunity avail for persuasion of laggard households in Sabon Gari and John Holt area to provide essential amenities.

2.27 Housing Environment

It is important that housing is examined in relation to external physical setting as well as internal conditions, since environmental deficiencies are partially responsible for the deterioration of individual dwellings. The housing environment is created by a complex matrix of elements including buildings, sanitary conditions of surrounding, vegetation and colour. Poor sanitary habits in certain parts of the study area has culminated into unhygienic environment. Places greatly affected are vacant land within residential area used as waste collection dumps. While misused vacant land is localised, the green stincking stagnant pools of water from domestic uses is more spatially spread. This aspect will be further expantiated upon later under drainage system. The manitude of the situation described above differ between places in the study area. The section worst affected is the Native Wards. An improvement of the housing environment will not only lead to the creation of an attractive environment but is also closely related to

societial health and safety. Further environmental deterioration seems likely to hold serious implication for both existing housing and faster degeneration into slum conditions. Only urgent action in the area will save the situation.

2.30 Infrastructure

The main objective of studying the physical services, for example roads, network of pipes and cable, is both to gain an understanding of their distribution and also to consider any particular requirements,,or problem and ability to cope with future change. Changes which might be direct response to corresponding change in the socio-economic standards of the people.

2.31 The main sources of water supply in Lokoja are river, wells and treated piped borne water. Most people however have access to pipe borne water. Whilst mean requirement for the whole town is 45,000^{3}m per day, the existing waterworks only has a capacity of 25,000^{3}m per day. With only two of its pumps functioning properly it can only pump water for a maximum of three hours a day to the study area.

Water is pumped directly from the waterworks to the main reservoir on the hill from where its distributed through large pipes to consumers. Fig 2.90. Smaller pipes

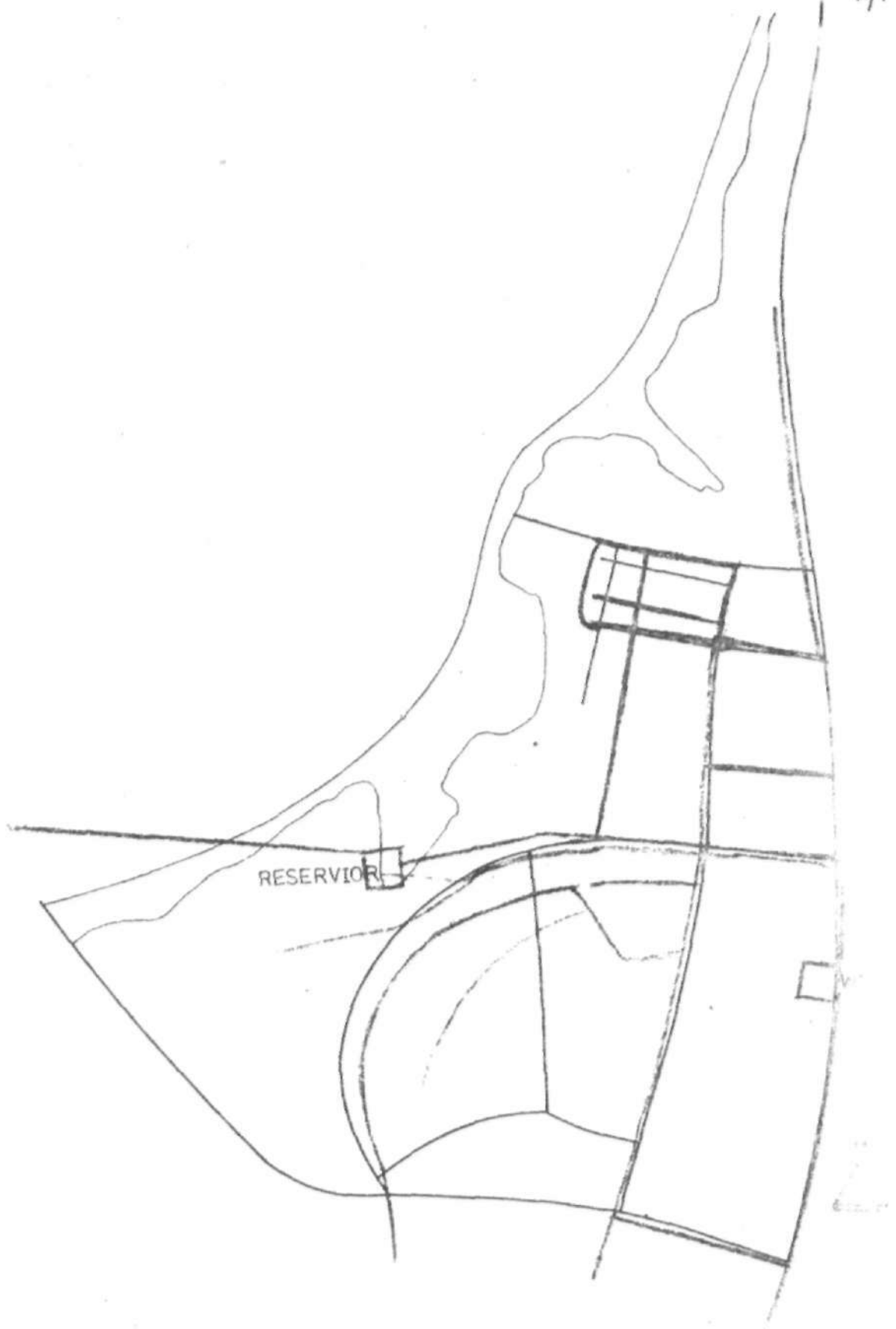


FIG 2.90

EXISTING MAIN WATER PIPELINES

SOURCE FIELDWORK

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which channel water to individual houses are connected and maintained by users. Apart from other materials needed connection fee ranges from ₦26 when house is on same side with main pipeline to ₦46 when at the opposite side. This cost factor combine with compact development in the Native Wards curtain free extention of small pipes to building. Another contributing factor is the location of the main reservior. Residential buildings located 100 m above sea level on which the reservior is, is cut off from distribution because water cannot yet be pumped to such areas. Water supply is faced with two problems viz ability to meet demand and secondly distribution due to compact development and cost. Except the Waterworks capacity is increased it can not face future challenges, especially asdemand continues to increase even in the face of scarcity.

2.32 Sewage

There is no organised sewage disposal system in the study area rather a variety of ways exists. Until 1972 the most common method was the bucket laterine. However, due to persistent problems associated with this method, for instance availability of waste collectors, funds for salaries, proper supervising staff and adequate disposal areas, it was phased out. Only pit laterines and water closets, connected to individual septic tank

or open ditches are accepted. The analysis of household amenities showed paucity of toilet facilities in the Native Wards. Even within the areas sections highly affected are the rocky and marshy areas where soil condition render construction and maintainance of toilets very expensive. Poor sewage disposal have adverse effect on environment conditions, health and safety.

2.33 The topography of Lokoja allows storm water to be diverted into streams which run through the town, ultimately emptying both water and seditment into River Niger. However, artificial drainages to facilitate faster draining of rainwater and household wast - water is inadequately provided for, although efforts are been intensified by the Ministry of Work to construct more drains. This followed the realization that lack of drainage reduces the lifespan of roads.

2.34 At the time of the field survey the waste collection scheme initiated by the local government had vitually broken down. The failure was attributed to the uncooperativeness of the users. It involved provision of large drums at strategic positions and within walking distance to households. Only dry wastes were supposed to be collected instead such drums to allow burning of content in circumstances where waste collector vans failed to remove them. Unfortunately human waste was often

dropped into the drums making burning impossible and collection replusive. The method is worth reactivating with inbuilt public enlightenment to ensure proper usage and solve the problem of waste which is often littered around. This problem exists in all sections of the study area. There is also in adequate provision of collector vans and sanitary inspectors who oversee and advice household on proper sanitary requirements. The few employed by the local government are not well trained.

2.35 Electricity

The study area is located within the supply area of the National Electricity Power Authority which is responsible for distribution of electricity to consumers from the National grid. Electricity is supplied through the 33 kw lines and distributed to substations which transform the voltage for normal commercial and domestic uses. The main electricity lines and cables are already fixed in the study area only households unable to afford connection fee lack supply. Present consumption stands at 1,410 kw per day and is likely to increase as socio economic conditions improve. The area office, however does not envisage any problems in meeting future demands.

2:36 Transportation

Presently Lokoja has only three grades of roads - the two lane tarred roads, the untarred roads

and footpaths. With the completion of the bypass most of the regional traffic has been diverted on to the road thus reducing the volume of traffic on the town's spine road. All major roads intercept the mainspine to form T junctions or cross junction.

Generally the collectors roads can be said to be in good order they are being maintained by the State Ministry of Work. Due to high erosion rate and difficulty in maintaining open drainages, the road conditions degenerate fast thus a resultant high cost of maintainance.

The minor and access roads unfortunately are not properly maintained, often they are characterised by potholes and minigullies created by flow of domestic waste water. The situation is worstaned because some of such road terminate abruptly. The distribution of these access roads are very inadequate hence many houses are not accessable and cannot be reached by cars. This poses a great threat to life and property in case of fire disasters. Places worst affected by this lack of access, are areas on the hill-slope and the old town though generally the geologic attribute of Lokoja is favourable for construction of roads.

The estimated car ownership in Lokoja is 1 car to 157 persons adjusted to contain motor cycle ownership. Other road users within the town are public commercial

vehicles. On the most part they ply the major roads With the mainspine road commanding the highest volumes of public vehicles. Also the number of taxi curbs plying the internal roads are on the increase.

Although pedestrian and bicycle trips form a large proportion of internal journey no adequate provision is made for these users for instance there is no provision for pedestrian walk along any of the roads.

The relatively low car ownership will have inferred that maximum utilization capacity of existing road has not been reached. Yet traffic congestion exist on certain roads due to three reasons. First mixed landuses residential and commercial and secondly non provision of off street parking which means that vehicles park at the road side generating congestion and road accidents. However the main cause of traffic congestion and accidents is the intermingling of pedestrian and bicycle movements with vehicular traffic.

Though the problem of parking space has been mentioned in passing above it should not go without emphasis that parking spaces are very essential especially where function attract lots of vehicular traffic e.g. market, Department shops, banks etc but presently parking spaces are lacking.

The masterplan has suggested the conversion of the major road running parallel to the river to a bypass thereby diverting heavy vehicles off the main town streets. One can summarise the transport problems into the following:

(a) The geometric design of alignments and intersections of some roads is poor and there is need for additional links to provide a more versatile network.

(b) Due to the fact that many roads are untarred and some are on steep gradients traffic moves slowly and vehicles suffer heavy wear, requiring much maintenance.

(c) There is a lack of proper pedestrian footways.

(d) Traffic congestion is a result of intermingling of motor vehicles with animals and pedestrians and also by unregulated parking.

2.40 Social Services Fig. 2.91

Lokoja is an administrative headquarters of Kogi Local Government as such it benefits from a number of social services. Aspects considered includes education, health and other community services. It shall also include entertainment and recreational facilities in the area.

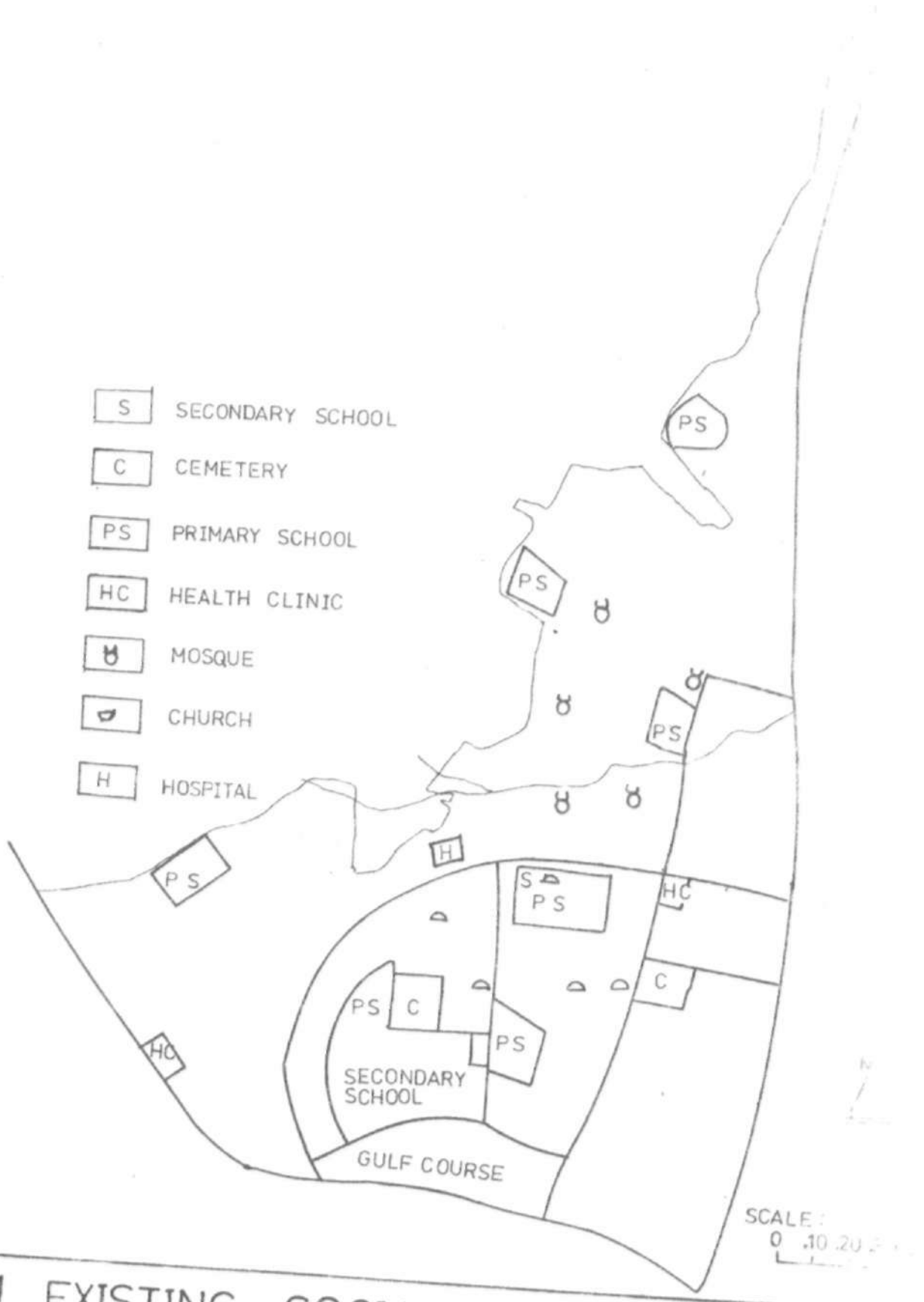


FIG 2.9.1 EXISTING SOCIAL SERVICES

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2.41 Education:

The number of primary schools in the study area stands at six and each has kindergarten classes for pre school age children. With the introduction of free primary education intakes have increased drastically. Demand for school enrolment far exceeds available school facilities. This has resulted in the use of structurally unsound and uncomfortable ironsheet classroom building, even this has not solved the problem. In 1974 only 3828 (62 percent) children of school going age were enrolled in schools. At the time of survey there had not been any increase in the number of schools while the population of school age children 5 - 12 year is estimated to have risen to 8,400 and is expected to reach 11,088 in 2000AD. The inadequacy in the provision of primary school becomes apparent when population of school age children is compared to existing schools.

Only two of the six secondary schools in Lokoja are located in the study area. All the schools except Bishop Delle have regional catchment area. Secondary school age group children, 12 - 17 year is estimated at 7,088 which implies that a large percent of such children cannot get into secondary schools in the area.

2.42 Health Facilities

Its essential while discussing such amenities lik

2.43 Recreation and Open Spaces

The two existing open fields in the study area, gold ground and preparanda field are used as ceremonial grounds (fig 2.91).

Public meetings and cultural shows take place infront of the Local Government Secretariat. Most sporting activities and competitions use the Nigerian Police field. Children utilize school playground in the evenings but many of them because of the distance to such grounds play by the roadsides, a very unsafe situation.

Recreational space provides for the physical and psychological needs of man and also encourage social interaction. In a heterogeneous society, like Lokoja, provision of such places for social interaction will enhance understanding between the various groups . Incidentally very little attention has been given to it.

4.44 Community Services

The establishment of places of worship has always been considered interest groups prerogative as such they are built whenever the need arises and funds are available. Observation reveals that most religious institutions are located on major roads this not unconnected with their accessibility requirements. Most of the churches are located in Sabon Gari and the mosque in the Native Wards. This is a direct reflection

of distribution of religious groups. Many other community facilities are lacking for example town hall, library, firestation.

2.50 Participatory approach to planning, which involves the identification of community needs and aspirations, has been recognised as a way of enlisting citizens interest acceptance and even participation in planning activities. From their perception of the environment, individuals are able to express a set of needs and desires. Collectively these desires may be conflicting but when ranked a set a priorities can be arrived at. Table II shows the order of preference for different facilities. All these shall be given due consideration in the proposals. Infrastructural facilities is in the highest demand due to problems already discussed but it is also implies that its a problem which needs urgent solution.

Table 3.2: Citizen's Expressed Needs

No.	Needs expressed	% of hous hold headr
1	Water supply	41.9
2	Electricity	39.0
3	Transportation and communication	35.8
4	Employment facilitiesq	22.3
5	Educational facilities	20.2
6	Housing facilities	8.6
7.	Agriculture and fishing	5.5
8	Commercial facilities	5.5
9	Medical facilities	5.4
10	Sewage system	4.5
11	Regional transportation and communication	2.9
12	Cultural facilities	2.9
13	Recreation and Leisure facilities	0.6

Source: Masterplan

An assessment of proposal by masterplan in study area

The master plan, meant to guide development between 1974 - 2005 AD, has not been approved by the Kwara State government for implementation. However when it finally takes off proposals for the study area comes within the first of the four phases.

The master plan proposed the study area for upgrading to this end it stated that efforts should be directed towards major improvements and provision of facilities and infrastructure in existing areas to overcome further deterioration of the environment. Recouing of old town to make adequate provision for necessary services. Existing conditions however shows variety in type and degree of problems requiring different solutions. For instance some vacant land existing within the area will be marked out for development inorder to guard against unplanned growth.

To solve traffic problem the master plan has proposed a bypass at the eastern part of the town. This will divert some traffic especially regional traffic from the internal roads.

The road standards, proposed by the master plan that is 24 meters for major roads. 18 meter for minor and 15 meters for collector roads cannot be

applied in the Native Wards as it will involve mass demolition of building. Instead collectors roads about 7 meters to which foot paths 4 meters wide will be connected will provided where necessary.

The masterplan suggested that the existing eight primary and 2 post primary schools be retained with some modification to their boundaries to admit more students. The maximum pupils to be admitted by any primary school is 750. If we use this standard the area requires 15 primary school for its 11,088 children of school going age. Walking distance and travel time were not taken into consideration in the proposal. No child should work more than one kilometer to primary school.

The heirachy of open spaces as proposed by the masterplan will provide enough recreational space which presently is lacking. However the sewage system proposed is impracticable at this stage of development. It is foreign and expensive therefore the existing water closet and lavatory.with seperate septic tanks shall be retained.

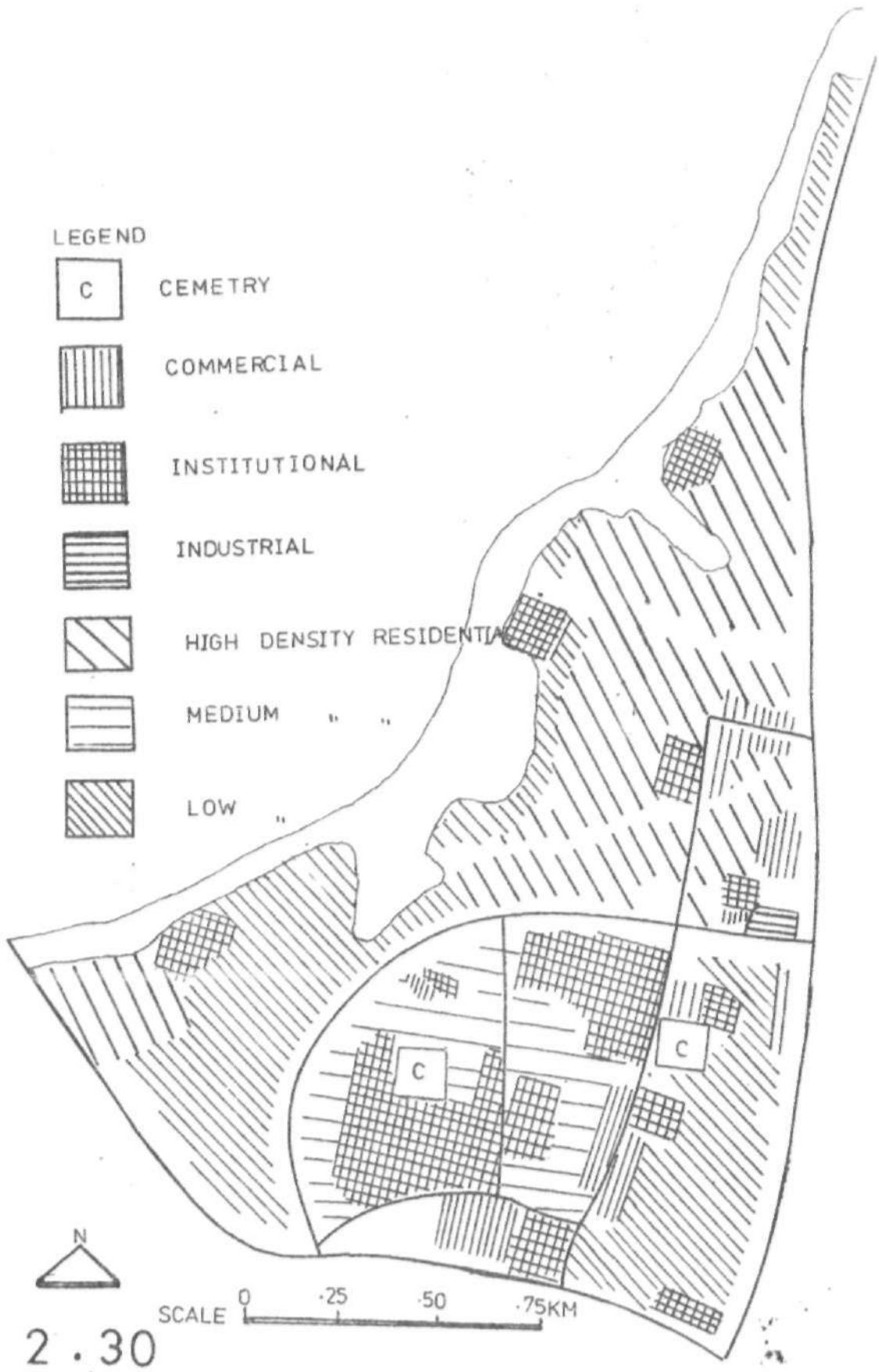


FIG 2·30

PROPOSED LANDUSE
BY MASTER PLAN

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CHAPTER IV

STRATEGIES FOR DEVELOPMENT

3.00 Introduction

A number of problems which a planner encounters arises from uncertainty. This uncertainty might be as a result of his dealing with human beings whose behaviour is difficult to forcast. To reduce uncertainties in planning flexibility should be built into plans to make them more adaptable. Its envisaged that one way of producing plans with high degree of flexibility is by emphasising on short term solutions. The main focus of this short term solution will be current problems and actions which could possibly be taken now to overcome them thereby creating a better environment. The solution of current problems is the main philosophy behind the strategic choice approach to planning which does not offer a piecemeal solution to urban problems.

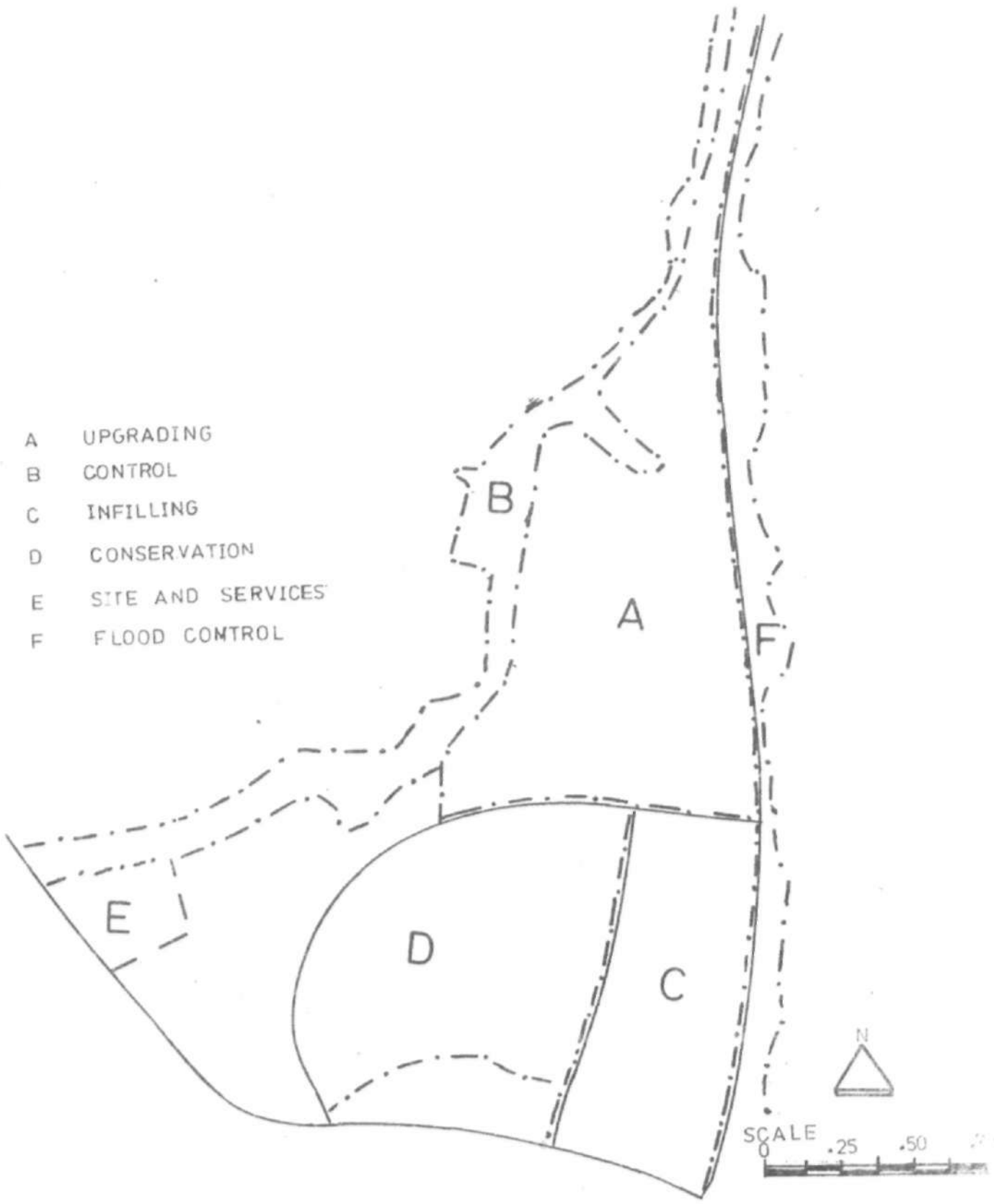
3.10 STRATEGIES FOR DEVELOPMENT.

Consideration of problems inherent in the study area reveals their diversed nature in terms of location. Consequently, no one single approach for the total area no matter how elaborate can solve all the problems rather a set of possibilities will be explored. In the light of the above the study area will be split into six planning areas to facilitate and hasten meaningful development based on the problems identified within these areas. (Fig.3.10).

3.10 PLANNING AREA A

3.11 Problems identified

Emaniating from the conditions prevailing in the area as enumerated in the previous chapter is the identification of certain problems which includes



10 STRATEGIES FOR DEVELOPMENT

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3.12 Infrastructure

(i) Due to the structure of the Native Wards there is general lack of infrastructure such as accessroads drainage system and pipe borne water. There are a few roads in the area but they are very inadequate as manyhouses are not accessible. The spatial structure also increase the problem of connecting pipelines from mainlines to individual houses.

3.13 Housing

(ii) Field survey reveals that the highest number of house over 20 years are found in this area. However observation shows that many are still in fairly good condition but some lack proper maintenance. The planning implications would be how to rehabilitate such structures and provide household amenities.

3.14 Planning Control

(iii) Absence of development control as revealed by encroachment on the right of way. Also unauthorised temporary stalls are pitched by roadsides. This includes those of women cooking for sale. These situations increase congestion on narrow roads existing in this area.

3.15 Services

Littering of refuse around the neighbourhood. This apart from being an indication of dirty living habit is also a result of improper provision of refuse collection facilities. The area has about 31,000 population. For this population two

schools are inadequate. The problem is compounded by lack of health and other community facilities.

3.20 Solutions Proposed Fig. 3.20

Due to the problems elucidated above the area has altimately been earmarked for upgrading. Upgrading means general improvement of the area by providing lacking infrastructures and services, improve existing building structures which invariably will improve environmental conditions.

3.21 Housing

Incentives will be given to household to improve and maintain their houses. Incentives can be in terms of loans or encouragement. Household who can afford sanitary facilities shall be encouraged to include these.

3.22 Residential Structure

The area is divided into seven neighbourhoods of about 4,500 population. Each neighbourhood is divided into residential clusters. These seven neighbourhoods will constitute a community.

3.23 Commercial facilities

Each neighbourhood will have a neighbourhood centre which will provide convince goods, entertainment facilities nusery schools, mosques and a handicraft centre.

The community will have a community center. The area around the traditional market shall be rehabilitated and a community center developed around it. The new community centre will have some facilities and services including departmental stores, restaurants, bookshops, police post & library.

Selective demolition will be done to give space for neighbourhood and community facilities. The people displaced by the upgrading scheme will be relocated in area E.

3.24 Infrastructural and Social Services.

Each housing cluster will have a cluster open space which will contain the core unit facilities, like water standpoints and toilet facilities. This will reduce the problem of paucity of housing amenity. More water pipes has been proposed to ease connection to individual houses. Fig.2.30

As far as possible individual houses not served with the roads will be connected by footpaths about 4 meters wide. Waste collection drums will be provided along the sanitary lane to facilitate its final removal by waste collection vans. Social services to be provided includes 4 health clinics, 4 more primary schools and 2 day secondary schools. All these are based on 31,000 population.

Schedule of requirements for study area ~~supporting Demand~~

Supporting Demand

~~Table 4.1~~ Facilities	Population	Population	Existing	Proposed	Area in ha.
Institutions					
Nursery School/ Kindergaten	1/ 3,000	63,000	6	15	3
Primary school	750	11088 (6-11 years)	6	9	5.4
Secondary School	1,500	7088 (12 - 17 years)	2	3	9
Health Clinic (no beds)	6,000	63000	2	9	1.8
Hospital	150,000	63000	2	-	-
Social Center	50,000	63000	-	1	.2
Library	20,000	63000	-	3	.6
Police Station	-	63000	2	1	.2
Fire station	1/town	63000	-	1	1 ha
Town hall	1/town	63000	-	1	.5
Commercial					
Market	30,000	63000	1	1	2
Cinema	30,000	63000	1	1	.2
Bank	30,000	63000	1	1	.2
Restuarant	30,000	63000	-	2	.5
Recreation					
Sport Center	1/town	63000	-	1	5
Local Park	90,000	63000	-	1	2.0
Play ground	4,500	63000	-	14	7

Table 4.1.1
Road Standards

Type	Right of Way	Metal portion
Major roads	24 m	7.2m
Minor roads	18 m	7.2m
Collector	15m	6.7m
Footpath	4m	-
Pedestrian walkway	2m	-

Table 4.1.2
Neighbourhood Center

Facilities	Coverage in Hactares
Convinience shops	.1
Nursery School	.2
Neighbourhood open space	.5
Handicraft	.5
	1.3 hactares

Table 4.1.3
Cluster Center

Facilities	Coverage in Hectares
Recreational Open Space	0.2
Sanitary Unit (toilet waterstand)	0.2

Table 4.2

Schedule of requirement for Area A

Facilities	Coverage in Hectare	Remarks
Commercial		
Market	Existing	to be reorganised consideration given to access especially pedestrian movement.
Motor Park	.4	To be moved to a new location i.e. along major road.
Restuarant	.25	Strategically located to provide catering services mainly for travellers and shoppers.
Departmental Stores	.5	To deal with retailing. A parking space to be provided. Provide for tenshops and offices can be located on secondfloor.
Cinema	.2	
Institution Social Center	.2	To provide educational social and humanitarian services.
Police Post	.2	To serve area A
Health Center	.5	4 beds health center provide nursing and midwivery care with ambulance services.
Library	.2	

Facilities	Coverage in Hectare	Remark
Church	Existing	Intergrate into community Centre.
Mosque	Existing	Provide open prayer ground within the compound to avoid overspill of worshippers on Fridays onto roads.
Primary School	Existing	Intergrate into community center.
Recreation		Hill project shall be developed for recreational activities.
Neighbourhood Center	1.3 ha.	See neighbourhood Center facilities.
Health Clinic	.2	Located in 4 selected neighbourhood
Secondary School	3	Provide 2 day secondary schools.
Primary School	.6	Provide 4 more to supplement existing 3 to be located in Neighbourhoods without Primary school.
Cluster facilities	.4	
Road		See road standards width of collector roads will be adjusted to suit existing structural condition. Demolition be avoided as much as possible.

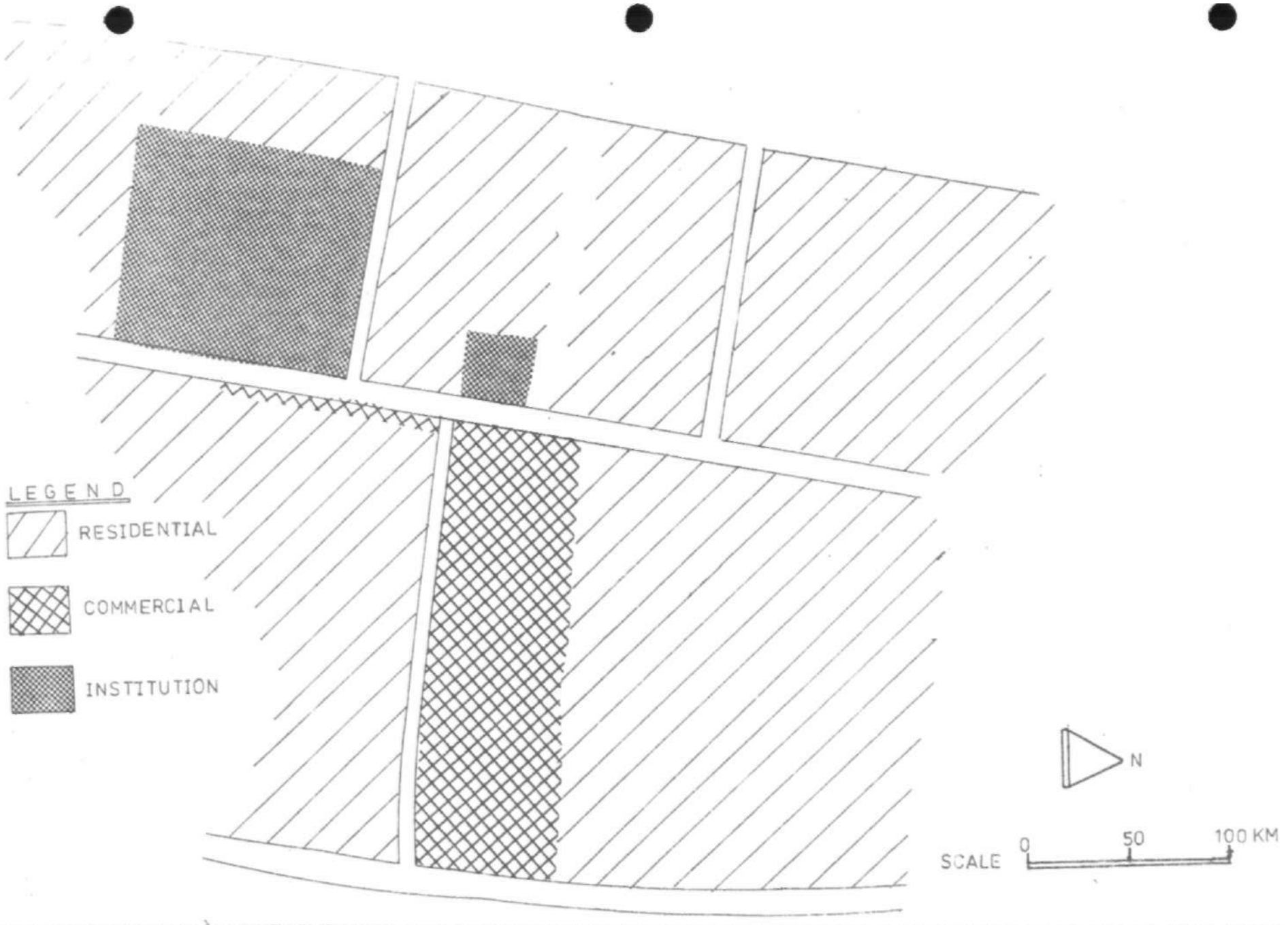


FIG 3.2.1 COMMUNITY CENTER EXISTING LANDUSE

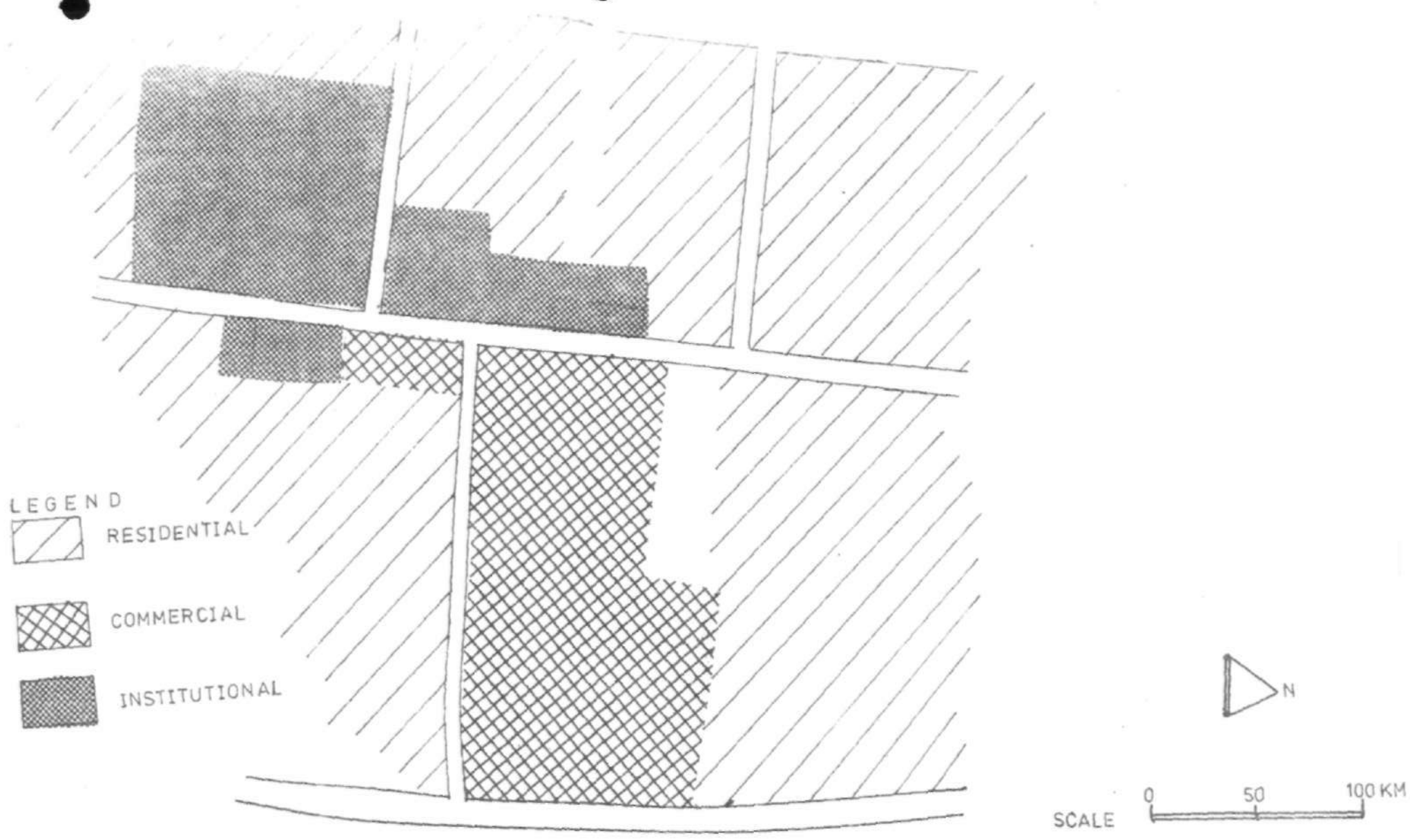


FIG 3·2·2 COMMUNITY CENTER PROPOSED LANDUSE

3.30 PLANNING AREA B

This is the area at the hillslope. Fig.3.10). By virtue of its physical location certain planning problems exists.

Problems Identified.

3.31 Lack of Control

There is no developmental control as a result people continue to build on the hill slope despite the fact that is is not suitable for development.

Topography

The unsuitability of steepslope for development and the threat to life and property caused by intensity of development on the hillslope.

High rate of erosion caused by increased human activities on the hillslope. This includes building, farming, hunting and bushburning.

3.32 Inadequacy of essential facilities.

Analysis of existing conditions in Chapter II indicated that the area lacked basic facilities like water roads and toilet facilities. Presently water cannot be pumped above 100 m above sea level. Also topography increases the cost of providing such facilities.

Based on the physical characteristics and inherent planning implications area B has been recommended for strict development control inorder to avoide physical catastrophy.

3.40 Solutions Proposed.

3.41 Control measures

Control can be defined as all those governmental actions which directly or indirectly have substantial impact upon use of land. The application of control and building byelaws is recommended for this area. Hillslope development should be discouraged as much as possible but where settlements already exists its essential for the planning authority to adopt measures which includes refusal of building permit to new developers to keep down density. Frequent checks should be carried out to dictect unauthorised structures. Citizen education to enlighten people on havoc of landslide should be undertaken by the planning authority.

Places beyond the 30% slope to be sealed off with trees to form buffer zone in order to prevent encroachment.

Prevent excessive erosion of top soil by stopping all deleterious activities on the slopes and by planting trees.

3.42 Provision of facilities.

Section B shall planned along with section A, D and E in the provision of required facilities.

PLANNING AREA C

This sector includes the water front which developed as colonial tradepost. It also contains colonial residential developments, mainly for junior staff. Increase in demand for housing has result in rapid sprout of residential development which if not controlled night create planning problems in the future.

3.50 EXISTING CONDITIONS

3.51 Demand for land

High demand for land and rapid construction calls for checks to ensure that plots are properly allocated and building regulation especially as regards to building bulk and standards are strictly adhered to inorder to prevent substandard development.

3.52 Overtasking of Facilities

Influx of new residents means greater demand on existing facilities and land formerly reserved as open spaces are been developed for residential uses.

Deficiency of household amenities is not a serious problem in this sector as only a few houses are affected.

Due to the above condition that is existence of pockets of vacant land and overtasking of existing services this sector has been earmarked for infilling and services.

3.60 PROPOSALS

3.61 Infilling

Pockets of vacant land shall be layed out for residential development. Plot sizes are 18 m by 30m and 24m by 30 m variation

in plot sizes is to make room for differences in household sizes. The sector will develop at medium density of 100 persons per hactare. (gross density). Care should be taken when marking out plots to conserve as many trees as possible.

3.62 Infrastructure and Services.

Achieve a better geometric alinement of roads and provide new ones to meet increasing demand.

Two primary schools and 1 day secondary school will be provided in the sector. Two more health clinics will be included in the neighbourhood centre.

3.63 Commercial facilities

The sector is divided into two neighbourhoods (fig. 3.30) with two neighbourhood centres. The existing colonial commercial development will be retained and reorganised. Through development control ensure harmonious coexistence of various landuses and protect stream courses by selling them off with rows of trees.

Table 4.3 Schedule of requirements for Area C

Facility	Coverage in hectare	Remark
Plots	18m by 30m 24m by 30m	Variation in Plotsize to make room for difference in household size. To develop at medium density.
Roads		See road standards
Health clinic	.2	Provide two in the area.
Secondary School	3	Locate one day secondary school on the area.
Primary school	.6	Two to be provided since non exist.
Neighbourhood Centre	1.3	Two neighbourhood centres.

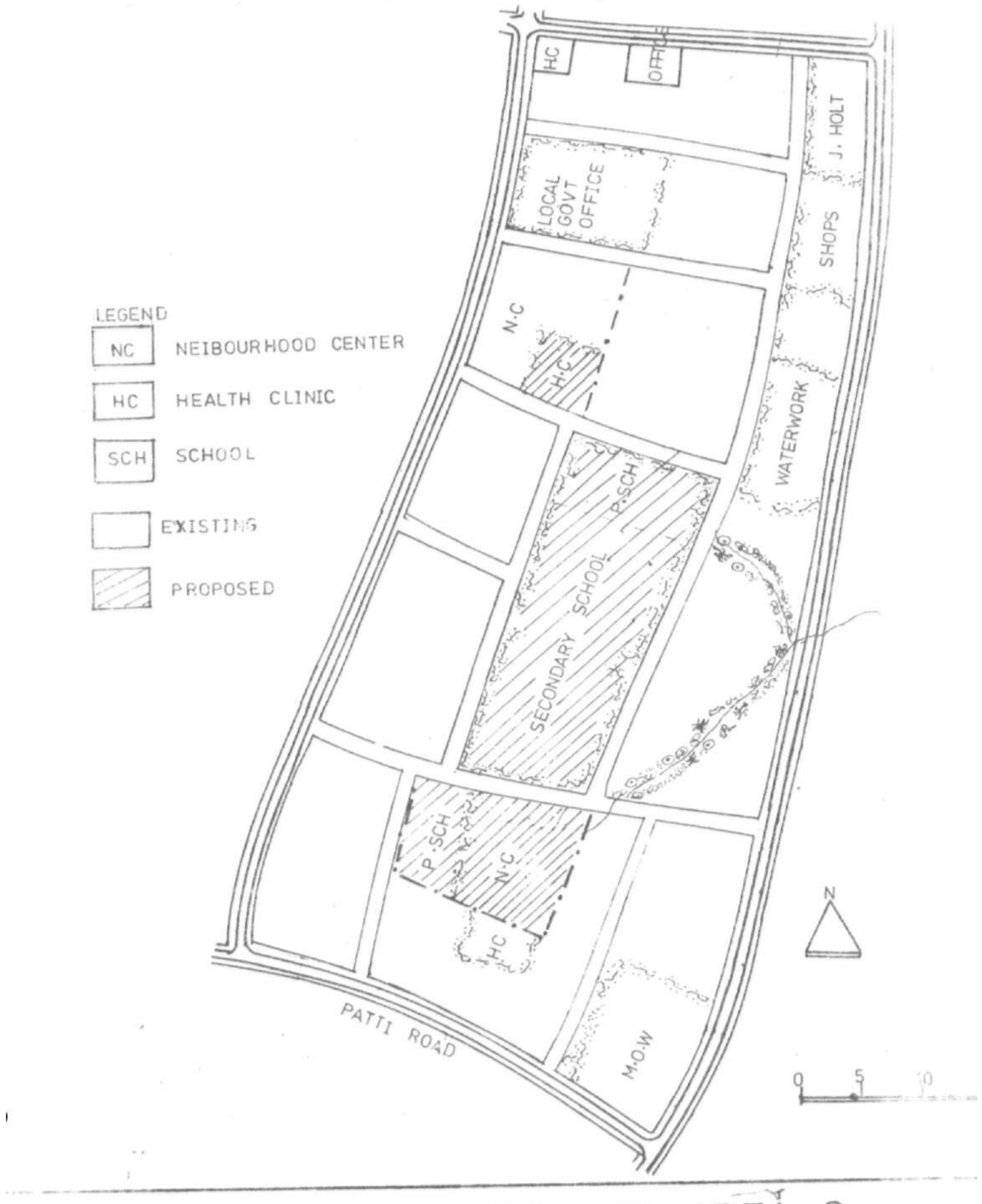


FIG 3.3.0 PROPOSALS FOR AREA C

PLANNING AREA D

The sector comprises of Sabon Gari and New Layout. They have acquired an acceptable standard but certain problems have been identified.

3.70 PROBLEMS IDENTIFIED

Endroachment of commercial activities onto the right of way. This is more pronounced on the spine road. The worst offenders are Kiosk owners and Motor Mechanic. Useless broken down vehicles are dumped at roadsides. Along hospital road Kiosks are placed indiscriminately on the right of way.

3.71 No Parking Spaces.

The spine road carries the highest volume of traffic in Lokoja. Non provision of off-street parking compelling vehicles including heavy commercial ones to park by the road thus causing obstruction to traffic and increasing the incidence of accidents.

3.72 Mixture of Pedestrian and vehicular traffic. The conflict is pronounced where traffic volume is high, especially from Kogi Local Government Secretariat to the Offices near the Golf Course.

3.73 Sqwatters encroachment on stream courses and incidental open spaces. Dumping of refuse on open spaces conservation measures is proposed for the area to prevent it from degenerating below standard already achieved. The term conservation is often applied to a residential area that has achieved a desirable or acceptable standard in terms of housing and environmental conditions

3.80 Proposed Solutions (Fig. 3.40)

3.81 Clearance of all encroachments on the roads particularly Kiosks and mechanic sheds and removal of broken down vehicles to a safe distance out of the town.

3.82 Provide pedestrian walkway along all major streets. They should be 2 meters wide.

3.83 Provide offstreet parking along the roads

3.84 Remove refuse on open spaces and provide waste collection drums on sanitary lane considering walking distance.

3.85 Provide organised open spaces and plant trees to improve the aesthetic value of the environment.

3.86 For the provision of additional services the area will be divided into neighbourhoods with neighbourhood centres.

Table 4.4 Schedule of Requirement for Area D

Facilities	Coverage in hectare	Remark
District Center		
Commercial		
Bank	.2	to supplement existing one.
Market	2.5 ha	To sell higher order goods.
Departmental Stores	.5	To house offices on the second and third floors.
Institutions		
Fire Station	1 ha	To serve the whole district.
Town hall	1 ha	To contain offices, meeting and conference facilities.
Offices	1 ha	Space to be allocated for administrative purposes.

Facilities	Coverage in hectare	Remarks
Recreation		
Local Park	2	To serve the whole district provide amusement and relaxing recreational facilities e.g. picnic grounds, zoo.
Sport Centre	5	Provide to all sporting activities.
Car park		
Institutions		
Primary Schools	1.8	Provide 3 more to supplement existing 3
Health clinic	.2	Provide 2 more
Roads	-	See standard
Off-street parking		
Cluster facility	.2	No provision for sanitary facilities people will be encouraged to make their own provision. Open space and waste collection will be provided.
Neighbourhood Center	1.3	See neighbourhood center facilities

PLANNING AREA E

3.90 This sector is located at the southwestern portion of the study area. People displaced from area E will be resettled here. Its location near area A means that social contact and interaction can still be maintained with friends and relatives. Displaced persons can retain their trade in native wards if they so desire. The scheme occupies an advantageous position in that infrastructures can be extended from surrounding built up area. Adjacent administrative area will offer wider scope for employment. From conditions prevailing in the Native ward where residents for the scheme will be drawn shows low ability of this socio economic group to provide core facilities. Ignoring this aspect will only result in quick degeneration of the new area consequently this calls for a set of well articulated action.

3.91 Solutions Proposed

Housing:

Already marked out and surveyed plots will be allocated to individual households. This is aimed at reducing the formalities and cost of acquiring and surveying land which has been identified as a major cause of squattering in urban centres. Standardization of plot sizes can also be achieved thus giving rise to an impressive layout. Plot sizes will be allocated according to family size for example 15 by 30 meter to small households and 30 by 24 meters for very large families.

Provide sample designs of building types from which households can choose, this is optional households willing to produce their own design could do so as far as its based on stipulated standard.

Building materials will be made available on the site to reduce transportation cost. This is a way of providing subsidy to these low income group. Experience in other field has shown that loans given to some low income people are not used for purposes for which they are meant. The problem can be eliminated in housing by providing the building materials on the site.

Planning authority is to make available on the site qualified manpower who will offer technical advice to households and ensure high quality structures. Households will be encouraged to construct the buildings through selfhelp using labour of friends and relatives.

3.92 Infrastructure and Services

Extension of infrastructure i.e. electricity, water drains and roads from the surrounding area.

Each cluster will be fitted with core unit facilities consisting of toilet facility, water points and waste collection drums. In addition households will be persuaded to provide such amenities in their houses.

3.93 Commercial Services

Area E is a neighbourhood and will have a neighbourhood centre serving about 4,500 people.

Local craft industry provided in the center will supplement employment opportunities offered outside the site and services area.

Table 4.5 Schedule of requirements for Area A

Facility	Coverage in hectare	Remark
Plots	15 m by 30 m 24 m by 30 m	variation will take care of differences in family size.
Roads		See standard
Health clinic	.2	To provide nursing and dispensing services. 1 in the area.
Neighbourhood Center	1.3	To include all neighbourhood center facilities
Cluster	.4	Include all cluster facilities.
Cluster	.4	No provision for sanitary facilities. People shall be encouraged to fit such amenities into their houses.

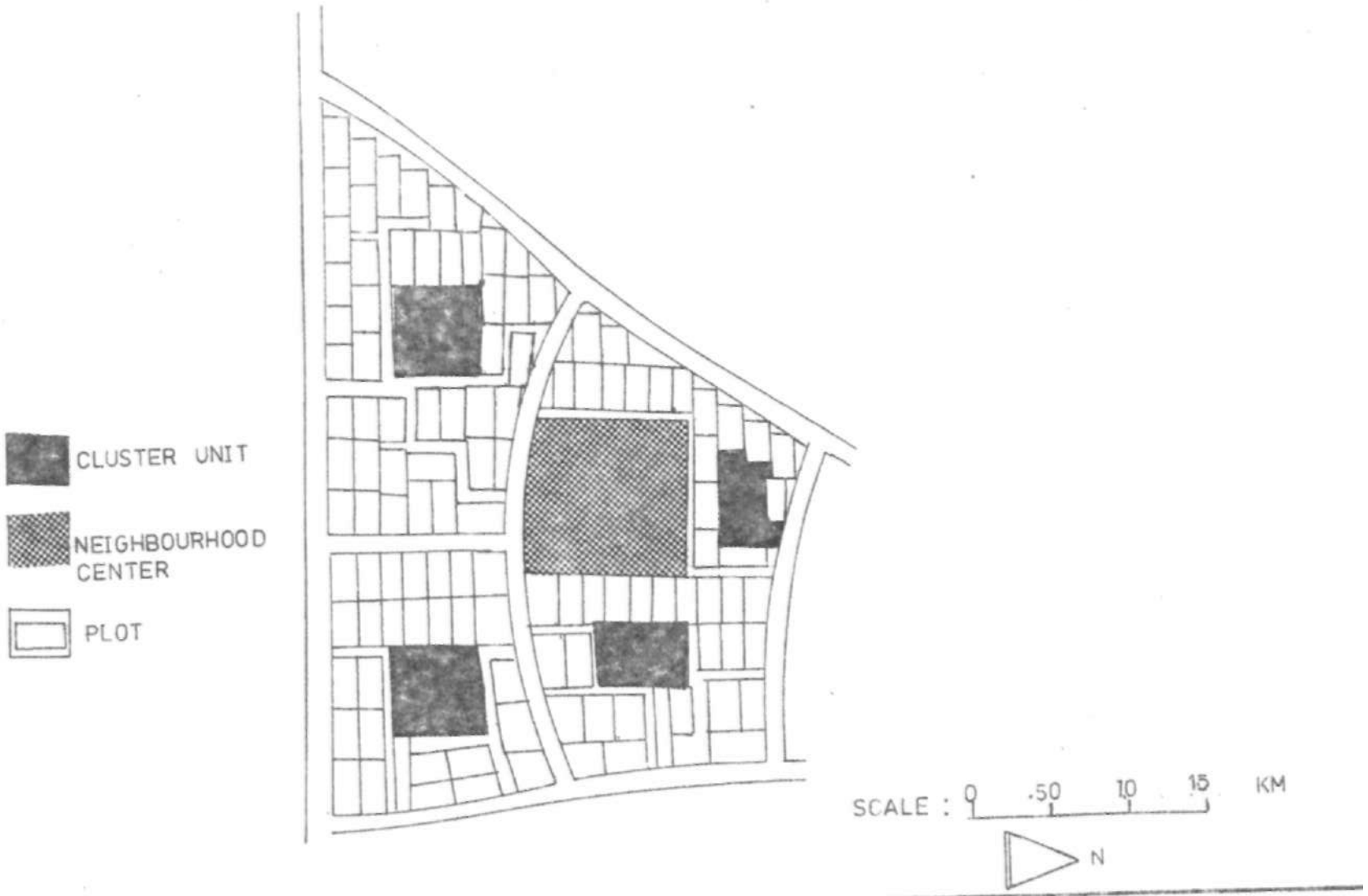


FIG 3.4.0 AREA E

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PLANNING AREA F

3.94 Area F is the floodplain. The need for planning of this zone is the increase in flood hazards due to increased urbanisation. This area is classified linited use area and control is introduced in cognizance of existing situation. The floodplain is categorised into high risk and marginal land based on flood records. Highrisk area are places below 150m above sea level usually submerged during high water level. While what is left of the floodplain is classified marginal land based on its limited capability for development.

Temporary structures dominates in the high risk area. Most of these are market stalls while permanent structures mainly residential and administrative building exist on the marginal land. Erosion is prominent on the slopes of the floodplain.

To prevent increased flood due to encroachment on river bank the following action has been proposed.

SOLUTION PROPOSED

3.95 Control

Educate the people on the unsuitability of marginal land for residential development. Planning permission should not be given to intending developers.

The high risk area is marked out for preservation, trees to form buffer zone will be used to prevent encroachment.

3.96 Recreation

Develop part of the floodplain for recreation and swimming can be confined to this area where rescue team will be easily available. People especially children got drowned while swimming.

3.10.1 PRINCIPLES USED IN DEVELOPMENT

An advisory and allocative policy should be adopted in housing with the establishment of a housing center, an affiliate of the local planning authority which will dessominate information on housing opportunity of all kinds and also make assistance available for new households, and households displaced by development. It will also regulate multipurpose dwelling and general maintanance of the housing stock. Locate and give advice on inclusion of household amenities into existing structures.

Population is the basis for distribution of physical and social infrastructure. Regulatory measures is introduced as a tool for controlling waste disposal, drainage, encroachment on water courses and hill slopes.

Efforts will be geared towards improving the socio economic situation of the people. To this end selected residential area land is reserved for introduction of light hand craft industries. In granting approval for such industrial development regards should be towards employment needs of the local community. Such industries might include leather works, weaving, net maling. Agriculture and fishing potentials will be tapped to increase production.

The policy for commercial development in the town is undertaken within the framework of heirachy of shopping centers (Fig 3.50 Submerged in this policy is the possibility of including cultural, educational leisure and religious functions in the centres so as to enhance these as focal points.

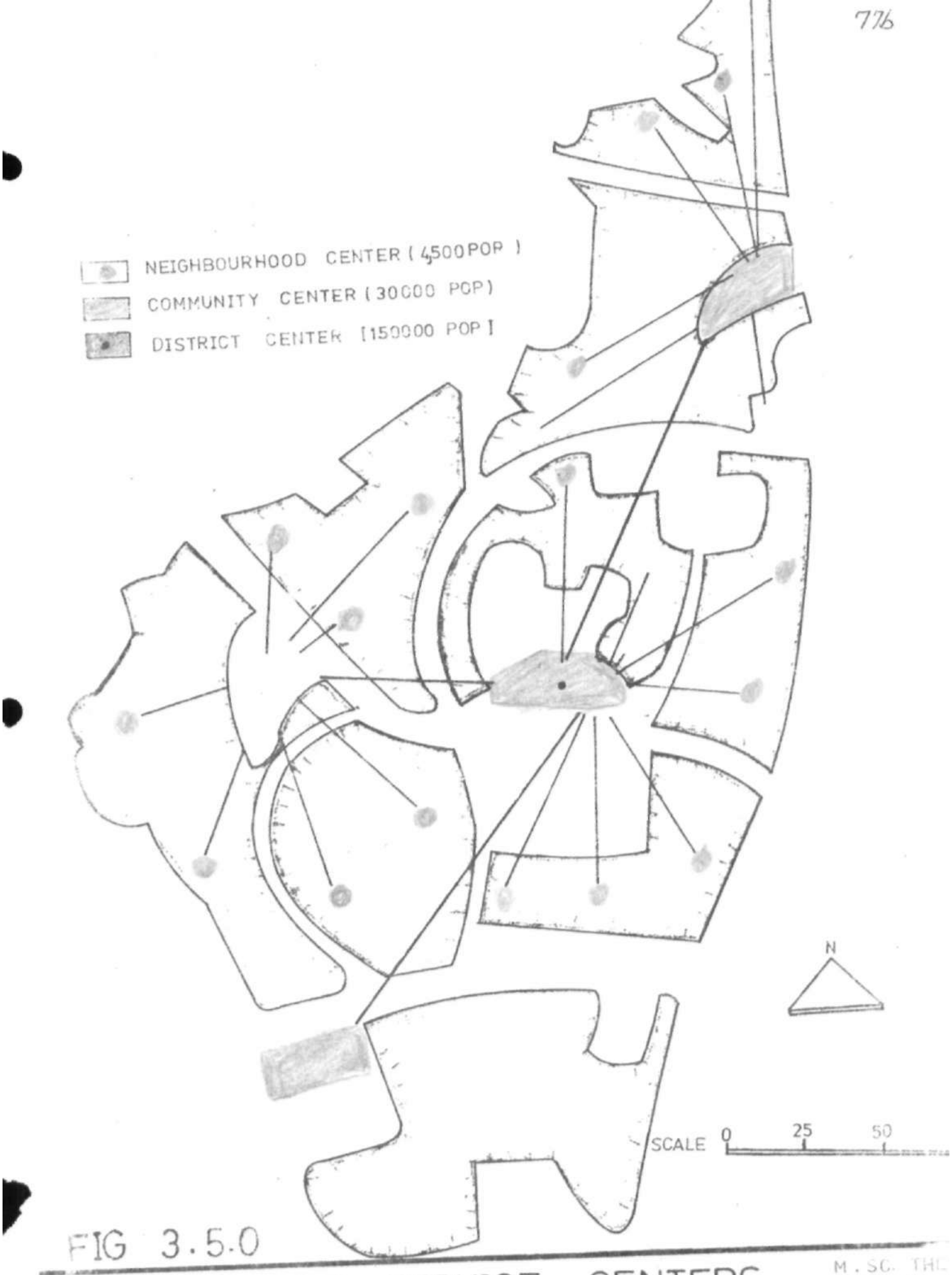


FIG 3.5.0

HIERACHY OF SERVICE CENTERS

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CHAPTER V.

GUIDELINES FOR IMPLEMENTATION

4.10 Phasing of Development Scheme

The Translation of plans into programmes and projects allow them to be phased in time and assured adequate finance. While time element is introduced into programmes room is still given for flexibility and programmes are reviewed at the end of each phase. With such feedback mechanism adjustments are made in programmes for the next phase. In relation to strategic choice approach already adopted phasing will be in short-term. Each phase covers a period of only one year and there shall be three phases. This has been made to correspond with the local government council life span (3 years) since it will constitute the planning authority for plan implementation.

Emphasis in the first phase will be on those facilities which citizens gave most priority.

4.11 Phase I Jan 1982 to December, 1982.

1. Formation of the planning authority and declaration of a planning area.
2. Publish plan to generate discussion and objections from those who are injuriously affected.
3. Formation of cluster and Neighbourhood organizations to aid implementation
4. Raise fund for the programmes from state, local government and community.
5. Extend pipelines alongside minor roads to enable more household connections.
6. Construction of collector roads.

7. Footpath to be provided through community efforts.
8. Provision of cluster unit facilities through community effort backed technically and financially by local government.
9. Provide incentives for renovation of old houses and start site and services programme.

4.12 Phase II January 1983 to December, 1983

1. Construction of two new primary schools in the Native wards. One in area C and one in area D.
2. Construction of Community Day Secondary Schools. One in Area A and the other in Area C.
3. Construction of health clinics - two in area A. One in area C and two in area D. Through community effort.
4. Renovation of houses to continue. Work continues on site and services scheme.
5. Development of floodplain for agriculture.
6. Construction of Neighbourhood centres.

4.13 Phase III January 1984 to December 1984

1. Allocate funds to various programmes.
2. Construction of remaining primary schools.
3. Construction of a community secondary school in area A.
4. Construction of health centres - two in Area A one in Area C and one in area D.
5. Renovation of houses and continuing work on site and services scheme.

6. Development of fisheries
7. Construction of community centre.
8. Construction work starts on district center.

Proposals made for development e.g. Planning Control, incentives for renovation of housing, improving sanitary conditions etc. will continue after the third phase to ensure that standards achieved during development is maintained.

4.21 Administration for Implementation

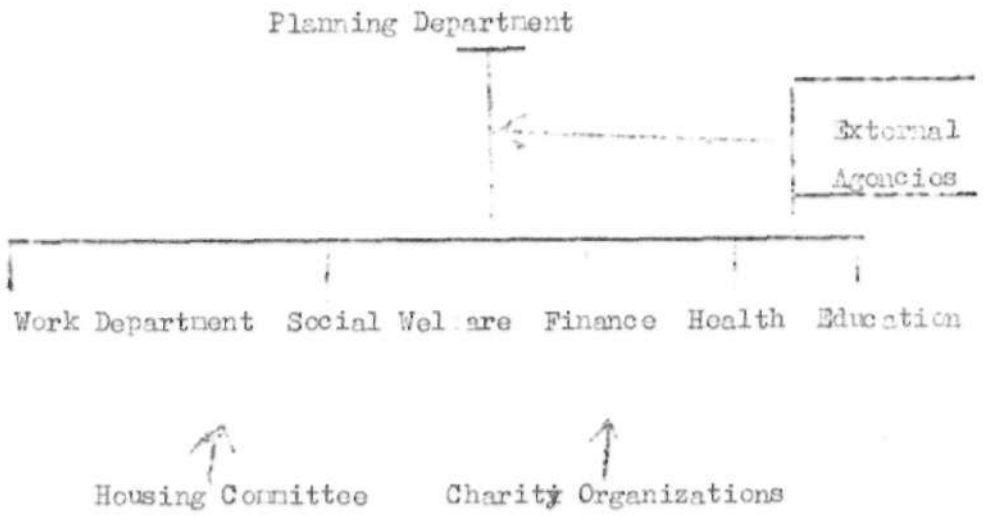
Planning administration in Lokoja is the responsibility of two bodies - the local government and the state ministry of Housing and Environment. Each body has its own jurisdiction with responsibility for the urban area vested in the state and rural area to the local government. However since there is no distinct demarcation of boundary between urban and rural area within Lokoja friction often develop in administration. The administrative shortcomings of this system is apparent and could lead to disentergrated and uncoordinated programmes especially where different job components are executed by other independent corporations, like NEPA or Water Corporation. Such administrative structure also gives room for petty rivalry among various heads of department and their field agencies which is far from conducive to effective implementation of programmes and projects. The eradication of problems, calls for the immediate establishment of a planning body charged with the responsibility of directing development in the town. The authority will coordinate the activities of all implementation agencies such as Ministry of Works, Water Corporation and NEPA.

Many advantages can be derived from making the local government authority the planning authority. It is the government at the grassroot level, therefore, it can provide the means for coordination at the local level of a wide range of interdependent project activities and can adapt it to the existing circumstances. As the local government is composed of the people own representatives they will be more responsive to the wishes and aspiration of their electorate. Unlike state appointed authorities they often have the ability to anticipate and respond to changing local expectations. It is easier for such a grassroot authority to stimulate participation in planning, initiate and mobilize finance for projects. It is for the aforementioned reasons that the local government should be made the planning authority and charged with all planning activities. To this end the local government machinery should be revitalised to meet the challenges. Since one of its setbacks is that of manpower, the local authority should increase its supply of managerial, technical and administrative personnel and the new Federal Revenue Allocation will provide more money for the local government.

Local Government Planning Structure

The local governments structure in Nigeria is made up of various departments such as Works Department, Social Welfare Department, Finance Department, Health and Education Departments. Those are charged with the responsibility of all works related to or supplementary to their existence. In addition they coordinate the activities of committees and organizations related to their function. The planning department coordinates the activities of all the departments in all matters related to planning. It makes suggestions and interpretes broad policies

to them and monitors the activities of external agencies envolve in plan implementation.



Citizen Participation

4.22 There is a strong feeling that local government authority should be the basis for implementation of a plan based on organizational heirachy e.g. district community, neighbourhood and cluster. The cluster, made up of a few households, could be made the most coasive, and a core for citizen participation in planning, is highly essential.

James O. Wilson has observed that "Citizen participation often proved troublesom for urban renewal directors and that therefore participation had not always been encouraged." On the contrary objection to such programmes are direct results of poor communication and unencouragement. Sufficient awareness and commitment at the local level are imperative so that as many opportunities as possible should be open to citizen participation in decision making on what is to be in the community and how it is to be executed. Since the citizens are the ultimate beneficiaries of development, their interest and participation must be

See footnote on the next page.

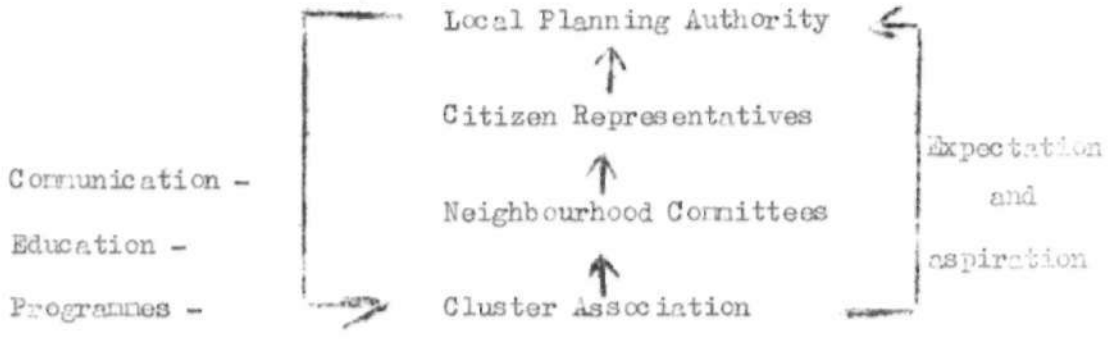
4.23 One of the main aspects of implementation is the financing of such programmes and projects by allocating task to different agencies or phasing the project. It will be easier to apportion cost to each task or phase. It is important if not mandatory to estimate how much the projects would cost and what aspect must be accomplished in the earliest possible time inorder not to jeopardise the whole project. Available funds will be channelled toward the critical task while fund is seen raised for other aspects.

The programme can be financed by three bodies.

(a) Government Finance: This include Federal State allocation to the planning authority. Where the local government is directly involved in planning it could supplement such funds by raising money directly from rents and taxes on use of buildings and land. Money so collected is filtered back into physical development for the benefit of the taxpayers. Except where capital expenditure can yield fast profit e.g. building of commercial centers it would be extra credit burden for planning authorities to raise loan. Such loans are used for specific projects. Where project have low capital forming capacity e.g. social services the tendency is to lean heavily on government finance. Unfortunately, government finance are slow in coming while city problems with influx of migrant continue to worsen.

[4] James O. Wilson citizen participation in Rose Murray. Community Organization Theory and Practice 1955 New York.

secured. A properly organised and directed participation can contribute greatly to the success of the plans and projects. To achieve a high degree of participation requires efficient communication or and formal machinery of local representatives.



Communication includes the use of locally printed pamphlets, information vans and public lectures. Citizen representatives are drawn from the different clusters in the neighbourhood. The neighbourhood level is where various cluster opinions are reconciled so as to constitute a common front.

By far the most important organised form of citizen participation is the community development projects. When properly monitored it can stimulate the voluntary popular participation in planning activities and hasten development through the contribution of community finance and labour. The magnitude of the project involved will determine at what level it should be executed e.g. cluster core facilities provided in the plan shall be the responsibility of clusters. Citizens involved in such programme should continously be kept informed through their various community leaders and consultation meeting as to what is required from them and what areas their efforts could be channelled.

A pragmatic solution to slow rate of progress due to lack of fund is to divert attention to community efforts and emphasise on selfhelp. Such selfhelp projects when given moderate government backing will have preponderant effect on society because they tap local labour, knowledge and capital which otherwise would have been expended on other things or lay idle. It would be preposterious imagination to expect enough government finance over the required three years. time for development project. Whatever is realised from government could be used to supplement local community, efforts.

Legal Aspect

4.24 To enable a planning authority raise fund and implement its programmes legal backing is required. The implementation requires lots of control measures which definitely will infringe on certain individual or community interest. Such a venture demands that one authority is vested with the power to prosecute non-conformers to landuse zoning and planning standards.

CONCLUSION

It is a familiar, but still valid, criticism of landuse planning that not enough emphasis is given to the implementation whilst lots of effort is directed to its preparation. The suggestion made above should facilitate early development of Lokoja. Very few new settlements are created to meet the rising needs and urge of man today for urban life. Consequently the existing centres continue to increase in population culminating in over-tasking of existing resources. This situation over time can have adverse effect on environmental conditions. Quick action

interms of large scale development projects will rescue the settlement from decay and increase the human quality. This is because settlements are the main setting for man's economic and social activities and constitutes the most important element of his environment. Consequently the price of a poorly planned and managed environment is too high in terms of social cost and the threat it poses to the destruction of natural resources. It is to avert such situations that systematic change which involves the proper interrelationship between the various component should be encouraged. This interrelationship holds the various elements into a system thus any impairment in one sector e.g. social services or sanitation will invariably affect the whole environment. This is the main reason for giving equal attention to all problems of the study area. Such development scheme when completed will introduce a large scale changes into the area. Such changes will include the proper identification of residents with the planning problems and their environment. It will also involve citizen participation in the implementation of projects, expected to transform the environment and improve the quality of life.

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Questionnaire administered by J. A. Kwanashie

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Zaria.

DEVELOPMENT OF LOKOJA

Date of Survey _____

Name of enumerator _____

Property Identification _____

Name of Ward _____

Compound Number _____

Ownership

(a) Owner occupied _____

(b) Rented _____

(c) Free _____

No. of people in the house _____

Rent _____

Comment on Rent

High _____

Low _____

Satisfactory _____

Physical characteristics of buildings.

Building type.

(a) Bungalow _____

(b) Rooming type _____

(c) Compound _____

Height of building

a. Single floor

b. 2 floors

c. 3 floors.

Age.

Constructed within

0 - 5 years

5 - 10 years

10 - 15 years

15 - 20 years

over 20 years

Material used

a. Mud

b. mudbricks

c. Burnt bricks

d. Blocks.

Uses.

a. Residential

b. Commercial

c. Mixed.

d. Any other _____

Facilities.

Bath.

Available ▱ Not Available ▱

a. Shared

b. Private.

Toilet.

Available ☐ Not available ☐

a. Shared

b. Private.

Kitchen

Available ☐ Not available ☐

a. Shared

b. Private

What building did you use for your wall?

1. Mud
2. Concrete cement block
3. Baked bricks

What is your roof made of

1. Thatch
2. Iron sheets

How many rooms have you?

What is the size of your family?

Socio economic factor.

What is your occupation?

What is your Income?

What is your religion?