

Gambian Compounds: Their Role, Significance and Influence on Planning

by

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This thesis is dedicated to the memory of,

Landing Ceesay, a student and teacher, who died in 1996 while working on his BA degree and who despite too short a life, lived it fully and seriously, and was an inspiration because of the example he set --- to continue 'to increase one's knowledge' until the very last possible moment of life.

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M. Badji and her family, who welcomed me into their home, assisted me in taking care of 'my' house, eagerly shared their hopes and dreams and who unintentionally showed me how I could 'do more'.

B. Horne and his 'family', who unhesitatingly offered their friendship, time and hospitality and who willingly shared their energy and insatiable appetites for life.

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ABSTRACT

Peri-urban compounds were examined in order to gain an understanding of the potential role, significance and influence this group of settlement units, might have on planning in The Gambia, West Africa . Solutions to planning issues arise from a variety of sources and the investigation of an urban area in a developing country was thought of as an area of study that would provide the opportunity to learn about the differences and similarities that exist between 'developing' and 'developed' countries. Planning problems and solutions have a global component.

The relationship between the compound and its urban setting , i.e the relationship between form and context, was examined and various compound functions were identified which resulted from the interaction of human activity with the compound. Some of the compound functions included shelter, food production and disposal, security, community and family relationships.

The degree of 'fit and mis-fit' of form to context, i.e. of compound to urban setting, was viewed through a group of variables which include availability of land, infrastructure, number of individuals and environment. These variables assisted in the identification of a list of compound qualities.

Qualities result from the interaction of the compound with its surrounding urban setting. The qualities provide an understanding of the compound and an indication of its potential role in planning.

1.0 Introduction

The Gambia, West Africa, (Figure 1: Location map of study area.) is one of the smallest nations of Africa and the world, as well, it is considered to be, at least 'materially', one of the poorest nations in the world. In many other areas of human experience it could be considered to be wealthy. The small land area (11,295 km²) occupied by The Gambia was once the nucleus of a viable and expansive African political system (Quinn, 1972). For over 400 years various kingdoms (Figure 2 : Map of early kingdoms within the area now occupied by The Gambia) clustered along the banks of The Gambia River between the ocean and the Barrakunda Falls (eastern limit of river travel in the dry season), in an ethnographic and geographic zone between the edges of the tropical forest and the open savanna woodland to the north in Senegal. Today the simplicity of pressures due to these more 'natural' boundaries has been replaced by a blend of more complicated political and environmental pressures. The Gambia is now a nation that faces immediate challenges a) politically as it participates in the 'modern' world community; b) environmentally as it faces, with a limited natural resource base, global climate changes and regional environmental degradation; and c) socially as it tries to balance population growth and land use with the development potential of its most important resource, the people.

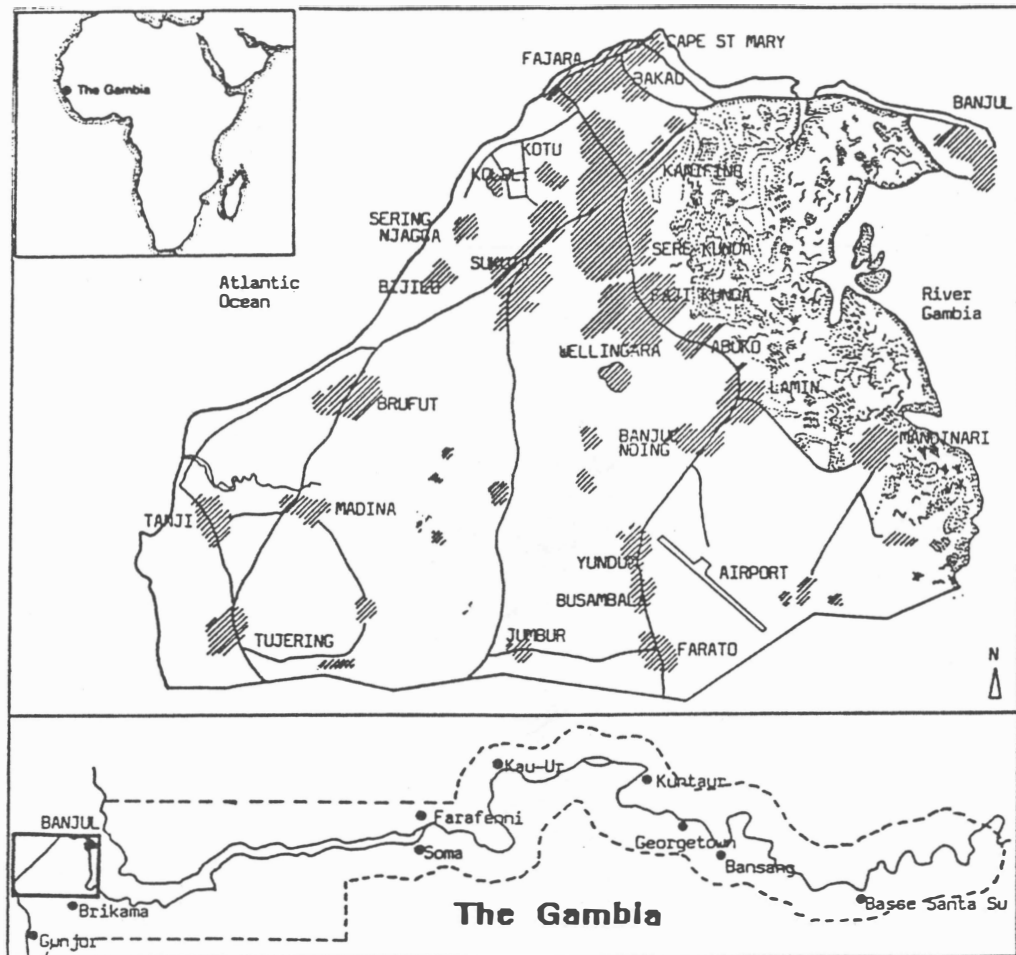


Figure 1: Location map of study area.

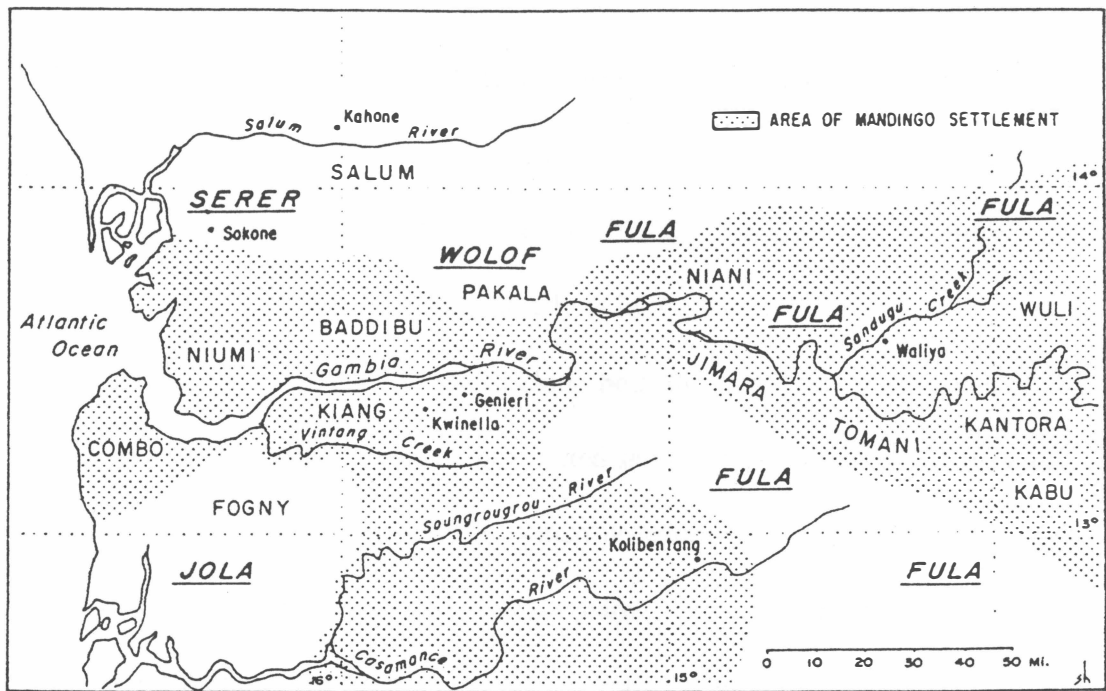


Figure 2: Map of early kingdoms within the area now occupied by The Gambia.

In the 1840's the groundnut (*Arachis hypogaea* L.), an import from Brazil via the then active trans-Atlantic slave trade, provided a specific focus for the land and the workers of the land. From the beginning, groundnuts were grown almost entirely by independent African peasant producers, on land to which they had access by membership in a community or which, if they were strangers, was leased to them by the village chief or 'alkalo'. Recent reports (Country Profile 1993/94) indicate groundnut production dominates the economy, covers about half the total area under cultivation (86,000 hectares out of 177,000 hectares in 1989/90), and involves essentially all farmers either directly or indirectly.

During the early 1800's, areas along both the north and south sides of the river supported a diverse collection of isolated settlements. Mandingo villages were enclosed by high reed or mud walls, which protected the huts inside, and which were typically grouped around an open square. Small compact Wolof hamlets appeared throughout the countryside along with Serahuli trading villages and temporary Fula camps. The latter were composed of straw huts along the edge of a central 'avenue', which was then stockaded to contain cattle during the night. Each kingdom brought with it, into the region, not only some 'similarities' of their social institutions, for example, lineage and clan identity, age-grade groupings, etc. (Wright, 1977), but also 'differences' in areas of traditions and settlement patterns. These cultural 'remnants' are still in play today and affect land use and land ownership, architectural styles, and distribution of property.

Today, in the urban areas to the south of The Gambia's capital city, Banjul, there is a steady and growing influx of people (in 1993 urban population = 26% of national population). Source areas for 'new arrivals' include, rural and 'up country' regions of The Gambia as well as locations that lie outside the country in nearby parts of Senegal, Mauritania, Mali to the northwest, and Sierra Leone to the south. The influxes include both refugee and non-refugee related migrations. Foreign nationals immigrating during the last decade are estimated at being between 20,000 and 30,000 per year. These two main types of 'immigrations' into the Greater Banjul Area account for 70 % of its average annual growth (Master Plan, 1997 Draft) . Other factors that contribute to the increased population include potential employment opportunities, drought related rural crop declines, and the increased availability of urban educational, social and health services. It is the 8% annual urban population growth rate for 1993 within the Greater Banjul Area that has and continues to put added stress not only on existing infrastructure but also on the social and cultural fabric that sustains and supports the currently established urban society. The present annual growth rate for The Gambia's total population is 4.1%.

Finding solutions that will provide sensible, flexible and long term ways of managing and providing for the demands of a growing population, is the challenge that this thesis undertakes to investigate and address. Identifying and utilizing traditional methods is the philosophy that underlies this thesis. Consultation with local individuals in order to secure workable solutions and ideas is one of the methods and intents of this thesis. The group of 'experts' is considered to include

those individuals most affected by the decisions being made concerning the problems in any particular urban area.

In the human attempt to settle land, the 'compound' was a traditional 'collective' approach to not only securing 'the place' of settlement but also to provide housing for many people and sustaining some of the important traditional practices that supported (and served as) basic human networking systems. Originating from the rural setting, 'compounds' act as stabilizing interpretations of the human use of space and also have the capacity to ensure a secure, economical and physically viable way of life. Their persistence through time and space becomes essential not only to the people who live within them but to the way of life that they produce and maintain within the context of a community .

1.1 Origin of compounds

The term compound (from the Malay word '*kampung*' : village, collection, gathering) broadly means 'an enclosure'. In addition to the place where a compound was located the aspect of time matters, that is, whether it is expected to have a temporary, seasonal or permanent existence. Most urban compounds do have permanency but rural ones may still be temporary in nature.

Compounds are believed to be a primary level of segmentation of the village community (Quinn, 1972). Many early settlements in The Gambia, eventually grew into villages, and actually began as clusters of dwellings that essentially belonged to

one family group or compound of individuals or 'kunda' . With subsequent marriages and additional family group arrivals, the settlements enlarged and became permanent centers of commerce. The names of many places indicate and reveal these first family or early individual 'nucleations', for example, Serrekunda (the compound named after founder 'Sayerr'); Suarra Kunda (the compound of man by the name of Suarreh'); Kinteh Kunda and Marong Kunda (compounds established by the families of Kinteh and Marong), and so on. An interesting study could be undertaken to document the origins of place names throughout The Gambia. It would reveal an important part of the country's diverse human settlement history.

As segments or units within settlements, compounds are enclosed by walls that in rural settings are created by the exterior surfaces of buildings and that in the urban setting surround the buildings and yard area. Walls are often the first built structures that serve to initially define the boundaries of the property . Containing an extended family group, the compound was traditionally used to house members who farmed land that was assigned to their use. Traditionally, in general, women cultivated rice and men grew groundnut crops along with various grains. This situation can still exist in the rural setting but within the urban context, it plays a less significant role as many members living in an urban compound are involved in non-agricultural sectors for their principal form of employment.

Compounds characteristically involve associations and combinations of housing structures, open and enclosed private space, public or communal space that

also can be open or enclosed, dividing barrier surfaces and single or multi-functional buildings.

For the purpose of this thesis, the term 'compound' refers to 'the yard area and any built structures that are enclosed by partial and/or complete exterior walls'. In the urban areas that were observed during this study, most compounds contained two or more groups of family members related by lineage as well as by marriage. This is not always the case. A range of compound types exists. In some urban areas, for example Newtown or Kololi, a single family group may live within a compound (1900m^2 i.e. 0.19 acre), even though the compound size may be physically large enough to accommodate several family groups. The atmosphere during the day within such neighbourhoods tends to be somewhat 'deserted' as few people are found inside the compounds as well as outside in the streets. This phenomenon is largely due to work and school commitments elsewhere in urban areas. In Sukuta and parts of Serrekunda, compounds of the same area (1900m^2) are occupied by several family groups and may in addition have an area of the compound designated for a trade activity such as metal working, wood carving or tailoring. This is an example of a combination 'residential/commercial' use of the compound. A third type of compound occurs, in the core areas of Banjul and Serrekunda. This type is small (250m^2) and yet can contain several family groups. The results for such compounds are: congestion of people; lack of privacy and an increased level of both noise and air pollution due to their proximity often to crowded, vehicle filled streets.

The variability in compound types, and their corresponding social differences and influences within the urban context is an area which deserves further inquiry.

Site 'homogeneity' is striking in The Gambia. For the most part the terrain is flat lying and the ground is composed of reddish, loose, sandy soil. With sufficient water the land supports numerous and often very large tree species along with many low bushes and grasses. Compound construction on such level sites requires minimal preparation, some initial selected clearing of plants along with the delineation of paths and roadways usually suffices. Due to the variability of people's financial resources, compounds are found in various stages of development. Compound design follows some common and basic rules, i.e. exterior wall position, primary house location, open yard area, water and power intake and output, etc. On the other hand it is quite wide ranging in its expression and interpretation which nevertheless ultimately reflects directly the needs of and the number of individuals who reside within the compound.

Compounds reflect a need for humans to gather or congregate and the forces that influence communal choices are wide ranging. Community living provides cohesiveness and security, it also provides an opportunity to 'share' when resources are limited. In the past, for land and agriculturally based cultures, group living helped to ensure rights to the land and any produce resulting from its cultivation. So although family connections might serve to begin a 'nucleation' of

people, the actual compound form ensured that any clustering could be contained and maintained through time and space.

According to Tipple *et al.*, (1994), traditional housing in much of West Africa still takes the form of the 'compound', which is typically occupied by many people related by blood, marriage, or common interest, and which often results in a single and cohesive settlement 'unit'. The arrival of urbanization has not only produced physical separation for previously intact households but it has also produced an opportunity for compound owners to earn income by renting rooms within the compound. This 'commercialisation' of property disrupts the unity of house occupants in some urban compounds (Korboe, 1992). The result is that some of the individuals living within the walls of a compound may be unrelated and actually have very little in common.

1.2 Nature of compounds

In West Africa generally and The Gambia more specifically, the compound is usually secluded from public view by virtue of high (2-3m) exterior walls (Figure 3a: Typical urban compound exterior wall completed with concrete blocks; Figure 3b: Typical urban compound exterior wall incomplete with footing only that delineates the plot boundary) that surround the entire yard and house area. These walls also serve to protect the inhabitants from annual and strong, dust



Figure 3a: Typical urban compound exterior wall completed with concrete blocks.



Figure 3b: Typical urban compound exterior wall incomplete with footing only that delineates the plot boundary.

carrying winds and from a wide variety of free ranging animals. Note too, that in the urban setting, compound walls can result not only from the exterior surfaces of buildings but also from separate wall structures that often exhibit fine artistic workmanship by individuals using locally available vegetative materials such as grasses, palm fronds and wood branches (Figure 4a: Compound exterior wall using palm fronds as construction material; Figure 4b: Compound exterior wall using trimmed grasses as construction material; Figure 4c: Compound exterior wall using woven palm reed as construction material; Figure 4d: Compound exterior wall using split tree trunks as construction material). In the past compound allocation by village leaders resulted in large sizes and irregular shapes. Today new measures by the Department of Physical Planning are trying to adjust and standardize compound sizes to suit the area of development. Typical dimensions of residential compounds range from 500m² (10m X 50m) for an 'urban' plot size; 750m² (10m X 75m) for 'semi-urban' plot size and 1000m² (10m X 100m) for 'village' plot size. The high walls ensure that the important feature and cultural preference for privacy, will in fact, be maintained. The urban compound is usually surrounded by a series of streets or winding alleys as well as by open yards of neighbouring compounds that are in various stages of development (Figure 5a: Urban compound plot delineated by walls only with mature trees left in place for use in future development; Figure 5b: Urban compound plot with partial construction of house). The compound design (Figure 6a: Urban compound layout with arrangement of house units and porch areas around edges of open yard. Main door to the street is in the center of



Figure 4a: Compound exterior wall using palm fronds as construction material.



Figure 4b: Compound exterior wall using trimmed grasses as construction material.

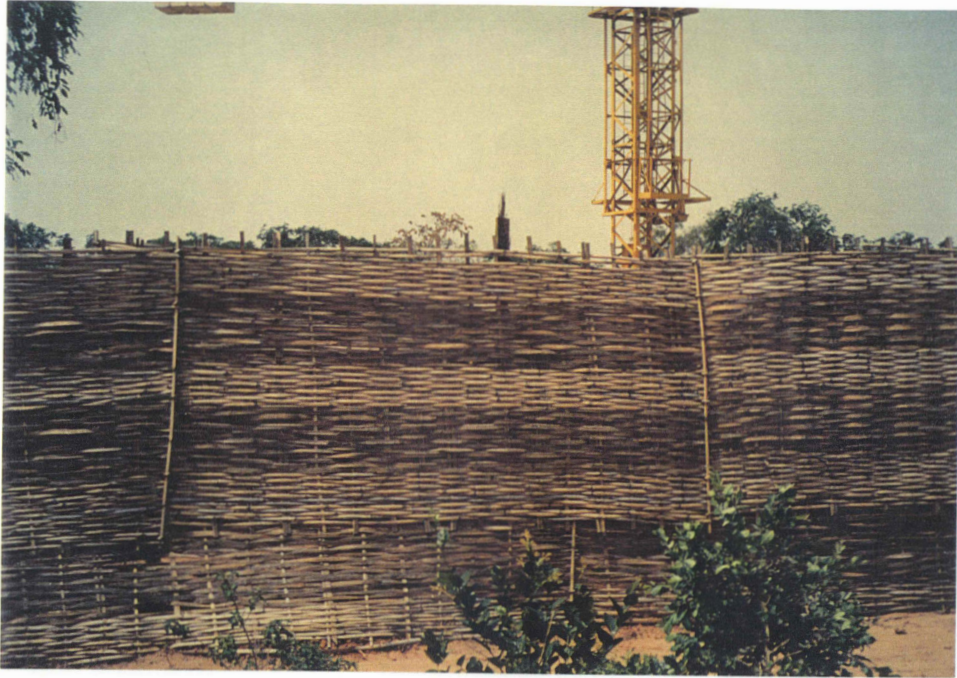


Figure 4c: Compound exterior wall using woven palm reed as construction material.



Figure 4d: Compound exterior wall using split tree trunks as construction material.



Figure 5a: Urban compound plot delineated by walls only with mature trees left in place for use in future development.



Figure 5b: Urban compound plot with partial construction of house.



Figure 6a: Urban compound layout with arrangement of house units and porch areas around edges of open yard. Main door to street is in the center of compound's exterior wall.

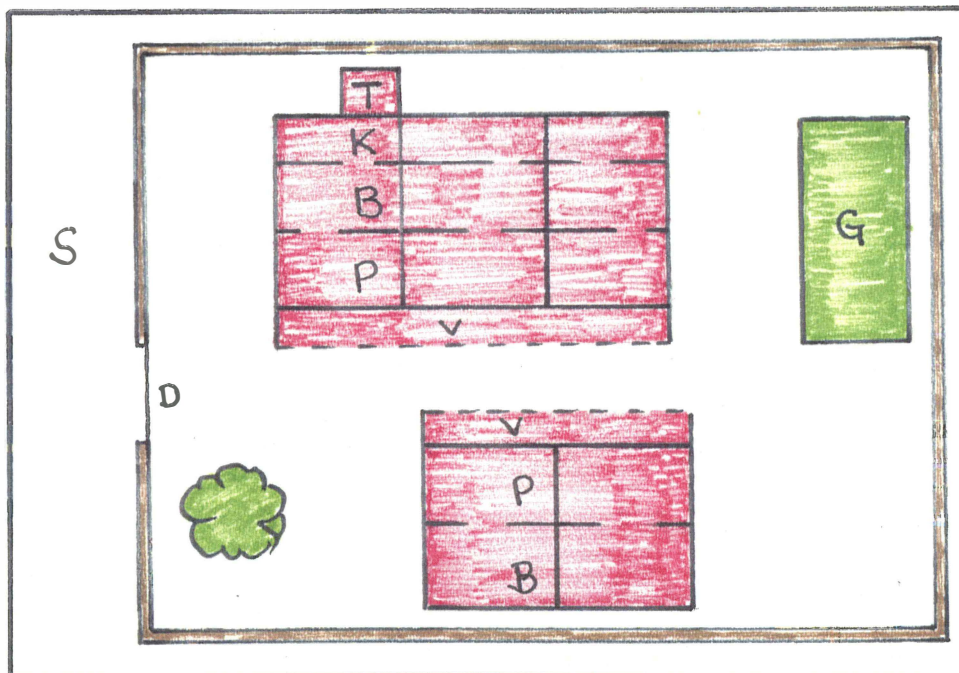


Figure 6b: Schematic plan of a basic compound layout. S= street; D= main door entrance to compound; V= veranda; P= parlour; B= bedroom; K= kitchen; T= toilet; G= garden

compound's exterior wall; Figure 6b: Schematic plan of a basic compound layout) provides not only flexibility for three or more generations but also allows for the combination of multi-families while at the same time maintaining some privacy for this mix of family relationships.

Many of the buildings are of locally made mud bricks (Figure 7a: Compound house construction using local red, sand as building material. Split palm trunks form support rafters for metal roof sheeting), cement-plastered mud brick work. Increasingly, pre-formed concrete blocks (Figure 7b: Concrete blocks which are formed on site are used for wall and house construction) are being chosen as a construction material. The characteristic one story construction method predominates and reflects to some degree affordability as well as reluctance to interfere with the privacy of neighbours which building 'up' would threaten to do (Figure 8a: Single story compound house construction with front outer porch and metal roof). At the same time single story construction demonstrates the need of individuals to be able to build and maintain the buildings independently or possibly with help from a few family members. This one level approach is of significant importance when considering density patterns, which due to difficult conditions of finding employment and housing in the urban setting, are frequently changing as compound members take in and support visiting relatives until they can live on their own elsewhere.



Figure 7a: Compound house construction using local red sand as building material. Split palm trunks form support rafters for metal roof sheeting.



Figure 7b: Concrete blocks which are formed on site are used for wall and house construction.



Figure 8a: Single story compound house construction with front outer porch and metal roof.



Figure 8b: Open yard area with latrine (enclosed by vegetative wall) placed at corner of compound walls. Neighbouring compounds also have latrines placed similarly at this common corner.

Formerly, certain extended family or lineage groups were associated with certain occupations (for example, metal working, butchering, carpentry, weaving, carving). To some extent this is still true today and some compounds are known for the inhabitants who practice a particular occupation and who are known within the neighbourhood for their specific skills.

1.3 Social structure of compounds

The internal division of the space within a compound reflects household composition, with the primary unit of the compound being the house. Fencing or walls regulate access to specific areas. Buildings and rooms have doors and entrances that are carefully and meaningfully located. Family groups inhabit the houses and rooms in ways that are linked to their relationship with each other as well as to the type of activity that is conducted.

Open areas are left along the edges of buildings in the form of porches and within the general compound yard area. These accommodate communal and social gatherings that include food preparation, recreational and ceremonial (naming ceremonies, marriages, funerals and daily prayers) activities.

Traditionally and initially a family group was comprised of a man and wife and children and so a shelter for such a nuclear group was often the first structure required. Harvested crops along with livestock needed areas for storage and so extra buildings were added along with additional fencing to contain and /or protect the

animals and garden areas. Kitchen facilities along with waste sites were installed. As families grew and generations evolved additional buildings would be added with wives, children, grandparents, siblings and livestock all receiving appropriate accommodations in locations that indicated their relationship to the initial compound builder (Roberts, 1996; Schwerdtfeger, 1982; David, 1971; Oliver, 1971). Placement of buildings also depended upon designated areas of religious and cultural importance (Fraser, 1968).

Today people's awareness of environmental issues is strong and increasing and the placement of houses so that porches face the east in the early, cooler part of the day and remain 'back to' the hotter afternoon sun, are common place practices among compound builders. Placement of latrines at corners common to neighbouring compound latrines is also a practice that ensures localized impact from such waste drainage areas until such time that infrastructure (either drainage ditches or underground pipes) is in place for a particular neighbourhood. (Figure 8b: Open yard area with latrine (surrounded by vegetative wall) placed at corner of compound walls. Neighbouring compounds also have latrines similarly placed at this common corner).

1.4 Cultural importance of compounds

Within rural areas cultural and social tradition guides much of the structure of daily living within and outside the compound, however urban society can be seen to be in more of a transitional stage, where blending of traditional and new attitudes is common. This is beginning to influence how compounds are designed and used by their occupants. For example, the lack of public and private open space in the center of some urban regions, puts added strain on the relations of the members within a compound if care is not taken to try to include some open space for relaxation. The lack of this type of space is not so much an issue in the rural areas where open, 'natural' space is still readily available and accessible, usually by foot rather than by vehicle. In most urbanized areas within and surrounding the capital city of Banjul, the population is living in a version of an 'urbanized compound'.

Traditional divisions of labour based on agricultural activities are of less relevance within the urban setting as many compound members are city wage earners and may be away from the compound most of the day to return in the evening for a final meal and rest before the next day. The use of compound areas may change because of these urban influences. Access to transportation routes is a major urban feature that can also affect compound site selection and design.

In spite of the many influences that the urban setting can have on the compound, it is still the compound that supports cultural practices that require : i) the provision of a place where large nuclear and multi-generational families can live and grow together; ii) the assurance of open courtyard areas where social, religious and ceremonial exchanges can occur; iii) the access to privacy; iv) the opportunity to conduct business and livelihood activities; and v) the opportunity to personally construct and adjust the home environment as needs change.

The challenge for many 'developing' country urban dwellers would be to try to fit the traditional family structures and relationships into the less commonly used high rise housing design. The implementation of 'vertical' architecture is used for commercial buildings but for residential areas would clearly impact on and undermine the traditional and still very much intact and preferred practice of 'face to face'/ 'hand to hand' social organization typical of West Africa and The Gambia. The simple act of passing a familiar face on the street or in the compound can develop into an exchange of greetings that lasts several minutes and compels one to physically stop and spend time and energy 'catching up' on news of families and friends. The frequency of this sort of exchange is unpredictable, inevitable and enjoyable and should be included where possible in the planning, design and development of urban neighbourhoods.

2.0 The Compound as a Planning Unit

Form can be considered to be the solution to a problem. **Context** can be considered to define the problem. Within planning an additional factor to take into consideration is that humans define needs which subsequently interact with and contribute toward the shape and interpretation of the 'form' (which in this study is the compound). At the same time human needs continually respond to the 'context' which here is taken to be the urban setting.

A 'planning unit' is considered for the purposes of this thesis to be an integral component or part that repeats itself by way of function and need throughout space and time and that at the same time meets the needs of the individuals that inhabit that place. The compound as a planning form is the planning unit for this study.

According to Alexander (1964) the city can be thought of as an ensemble and the rightness of a particular form depends on the degree to which it fits the rest of the ensemble. The challenge here thus appears to be to observe and identify where the fit of the form is absent, in other words to locate the areas of 'misfit of the form'. In order to accomplish this it is necessary to understand how the form i.e. the compound functions and any constraints and benefits that are associated with it.

2.1 Functions of the Compound

The compound as a settlement unit has a variety of functions that operate on different levels (eg. human scale, city scale) that result from a combination of physical, social, cultural and economical sources. Some of the principal functions are illustrated by (Figure 9: Diagram of activities that summarize compound functions).

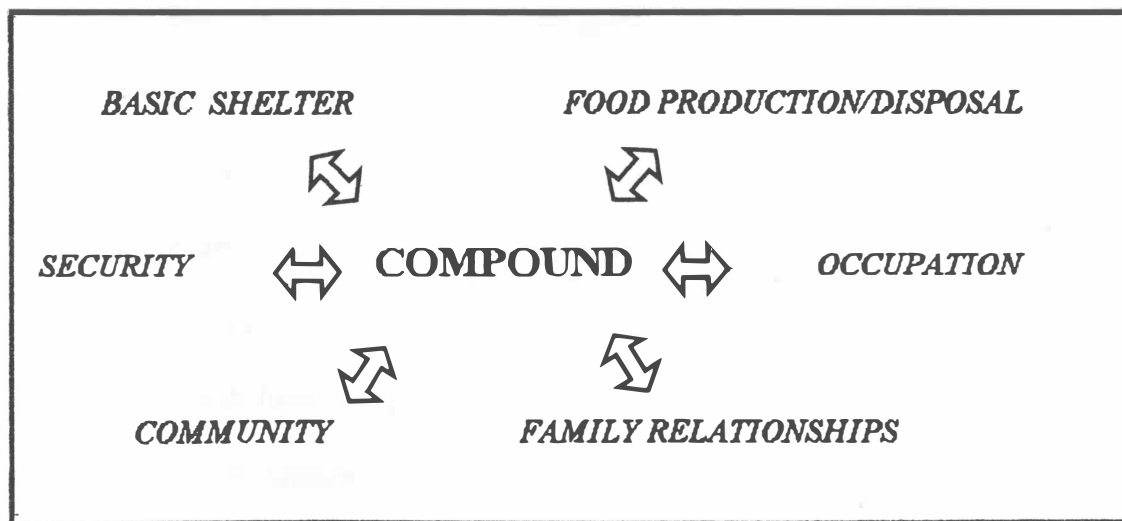


Figure 9 : Diagram of activities that summarize compound functions.

One of the most important functions of the compound at the human scale is to provide basic housing shelter. Within many compounds the materials needed to build a house are literally supplied by the plot of land that defines the particular compound. Examples were seen where enough sand was dug and subsequently mixed to form bricks that were then used to construct the initial house of the owners. The circular 'dug' areas were then used as refuse disposal sites and eventually filled and covered. At the city scale this housing function provides a 'social service' as many family members, old and young, may require temporary accommodation and might otherwise not be able to find such space elsewhere within the urban areas, since rental and retirement housing does not currently exist at the 'developed' country scale.

Food production is an important function that compounds provide when sufficient land area, water and human resources exist. In most compounds visited some area of the yard was left naturally growing (mango, banana and citrus trees) or were planted with food crops (cassava, corn, peppers and tomatoes being some common examples) (Figure 10a: Garden plot surrounded by extra cement blocks; Figure 10b: Small side area planted with corn). In addition to plants, livestock is commonly kept for compound member consumption and usually includes chickens for egg production as well as meat and goats, if affordable, for ceremonial consumption.



Figure 10a: Garden plot surrounded by extra cement blocks.



Figure 10b: Small side area planted with corn.

Compounds function as places not only where people can reside and raise families but also as places of employment. Some of the area within the compound is often designated as a metal shop, tailoring room or carpentry work space. Along with such occupations an area has to be available for storage of materials and display of finished products. Both of these requirements must have some level of security surrounding them which the compound provides not only by virtue of its high walls but also by having a large number of related individuals who occupy it.

The compound functions as a line of security within the broader 'city scale' when the individuals are not only related to each other within their own compound but often are also related to members in the compound next door and several down the street. It is this wider level of 'city scale' security that influences the remaining two areas where compounds function, those of community and family relationships.

The configuration of most compounds encourages the sharing of space along with the interaction of people. Although the walls that define a compound are usually high, the fact that individuals are related as siblings or cousins ensures that the walls do not become physical barriers to the daily social and cultural practices which include visiting, praying, eating and conversational exchanges. The strengthening of human relationships is on going within compounds. This carries over to the city scale at the community level where a membership in a neighbourhood, comprised of many families that are connected by lineage or marriage and who are aware and familiar with each other, will notice and recognize unfamiliar people and activities. The idea of 'neighbourhood watch' is naturally in

place for many parts of the urban setting and the compound functions to support this characteristic.

The compound functions to bring members of the same rural areas together, because migrant individuals will often seek out and stay in a particular urban neighbourhood that is peopled by families from their own village or region. The open yard area of a compound functions to further build family and community relationships. It is used by children and adults alike for everything from food preparation, playing games, visiting, tethering livestock, house construction and planting gardens. This multiplicity of function is one of the most striking features of compounds and this is supported by the flexible and semi-permanent design of the open space. The open yard area is used as it is needed, for the purpose or combination of purposes most required at any given time. As Norberg-Schulz (1985) states when he is defining a dwelling, "...it is a means to meet others... exchange ideas and feelings,... to experience life as a multitude of possibilities."

2.2 Constraints of the Compound

In terms of functions, compounds were found to have some constraints and these are as follows:

Food/Shelter: Compounds can be seen to be restricting when the area they occupy is so small that they cannot include significant agricultural activity. In densely populated urban areas such as Banjul and Bakau, compound plot size is small ($< / = 250 \text{ m}^2$), and plot coverage by buildings, pathways etc. is

high (70 - 90% visually estimated). Recommended percents should lie between 50-60% (Landuse Regulations, 1995). Densities are also high (1996 estimates = 440 persons/hectare). The result is little or no available space for growing food. The buildings at the same time are small and yet often house more people (6 people/house) than is ideal or desired. The result is overcrowding and stress on the infrastructure.

In contrast to this previous constraint of too little land available for agricultural activities, compounds can restrict when they are too big, having been allocated to include extensive areas of farmland that may or may not be actively cultivated. Past land allocation by village leaders following traditional norms often resulted in such practices and can now interfere with and prolong the process of planning and the reclamation of land for agricultural purposes.

In some semi-urban and rural fringe areas the 'random arrangement' of compounds can be seen as a constraint that interferes with attempts to provide services to widely separated dwellings with variable degrees of access. Such unplanned distribution contributes to high costs of development. In some cases where roadways have been put in place they have resulted in the division of formerly intact compounds.

Compounds if too large in size and too scattered in their distribution and location can be seen as a constraint for a community if proximity to important features such as mosques, market areas, water taps, recreation and cemeteries is lacking.

An additional constraint is present at the human scale when buildings are built against the exterior compound wall. This lowers the quality of the environment inside the house by reducing the circulation of air and light. As well, having such high and usually solid walls can adversely affect the environment within the compound yard area. The use of solid and open blocks (Figure 11a: Compound exterior wall using solid and open blocks which help to increase air circulation) and a combination of blocks / vegetation (Figure 11b: Compound exterior wall incorporating both block work and vegetative material) would work towards reducing the effects of this particular constraint.

Security/Occupation: The common occurrence of trades and various occupations within the confines of a compound can potentially put constraints on surrounding compounds of the nearby neighbourhood. If a trade generates a particular noise or air pollution, these effects will be imposed on all in the area. The placement of such residential/commercial compounds seems to have occurred near and along well travelled road routes for obvious business reasons and has resulted in 'logical' but un-regulated ribbons of 'light industry'. However, the increased growth and development within the urban areas may lead to the requirement that some restrictions be introduced to minimize the impact of this type of combined use compound.

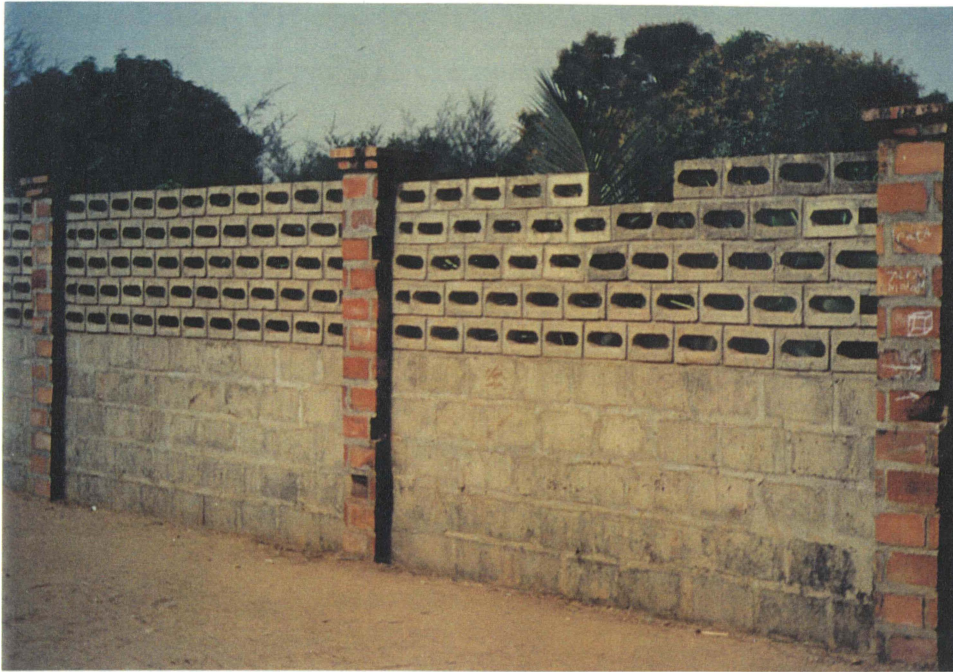


Figure 11a: Compound exterior wall using solid and open blocks which help to increase air circulation.



Figure 11b: Compound exterior wall incorporating both block work and vegetative materials.

Community/Family Relationships: Compounds are increasingly being seen as rental opportunities, for example where an absentee landlord owns a compound and rents the entire house or rooms within it. This type of compound can act as a constraint on the make-up of the immediate community when some of the resulting members are temporary residents and have little vested interest in the problems or future of the particular neighbourhood. The effects of such 'economical' compounds can include a less careful level of building maintenance and a reduction in the efficient use of land (for example landlords who do not allow or encourage gardening where possible and/or desired by the renters).

The occurrence of staggered rates of compound development, due to the varied financial circumstances of owners, can act as a constraint and influence the corresponding rate of a neighbourhood's development. This is most noticeable with regard to the installment of utility and transportation services and can result in inefficient, uneven, planning and in some cases result in long term delays for some urban areas. These delays in turn lower the willingness of individuals to settle in such areas of the community.

2.3 Benefits of Compounds

Food/Shelter: Compounds may begin as vacant land lots surrounded by partial or complete walls and may exist for several years as plots that are used for cultivation purposes until such time that the individual or group accumulates sufficient financial resources to start building structures within the outer walls. This

'staggered development' was previously mentioned as a constraint but it is a feature of compounds that can also be thought of as a social benefit, particularly for the individual. Within a compound built structures may in fact start out as minimal shelters but overtime are gradually improved and eventually become substantial and permanent parts of the urban fabric. In this way compounds serve well as 'flexible' means by which urban areas may grow at a rate in keeping with the inhabitants as well as assisting in maintaining change at a human scale. This human scale rate of change may in fact work well with planning policy development because the documents have the opportunity of being implemented and monitored at a more detailed level and manageable pace.

The fact that the exterior outlines of compounds are usually square or rectangular does not limit them to this shape and in fact this ease of shape change can be a benefit for situations within the urban setting where oddly shaped lots may be made available and can still be filled by this type of planning unit. In this way urban space is not wasted when the possibly smaller, less expensive and unconventionally shaped plot is available.

Security/Occupation: One benefit of compounds is the way in which they help individuals to secure initial occupancy of land and also add to the likelihood that long term occupancy will be in place for other family members and subsequent generations.

The possibility of future financial security is available by the sale of the compound, by the rental of all or portions of the compound or by the establishment of a small business or trade within the compound.

Community/Family Relationships: The most striking benefit of the compound form is the influence it has on maintaining and strengthening the 'organization' of family, kinship and friendly relationships. Within The Gambia and throughout much of West Africa, human relationships are seen as essential parts of a social network that supports and contributes significantly to a person's life.

The compound can be of benefit when it is viewed as a social microcosm within the confines of the compound walls. Here the complete range of activities associated with life can occur. The control of everything from birth to death to food production to shelter construction to recreation and religion can and do take place within most urban compounds. A closer look into the complete spectrum of activities and their placement within the fixed boundaries of the compound wall may serve, with further study, as a 'blueprint' for larger scale designing of neighbourhoods in communities elsewhere.

Coping with increasing urban populations is an area where the compound form is also of benefit. The compound design allows for densification to occur without any immediate physical change to the surrounding urban setting being involved. There is of course a limit to how many people can be accommodated but

the compound does provide a certain capacity, both culturally and physically, to absorb moderate population increases.

2.4 Summary Considerations

Variables or areas can be identified within which to observe how well the form, i.e. the compound either 'fits' or 'mis-fits' the context, i.e. the urban setting. The process of fit which occurs between the compound and the urban setting is seen to take place through or by way of human reactions and activities. The process therefore will not be a simple or constant exchange. It will be a process that is always fluctuating and one that will require a planning strategy that can adjust to the numerous variety of consequences that result. Some important variables cited from the present study (although there are probably additional ones that exist) in The Gambia include the availability of land; the presence of infrastructure; the number of individuals that do or will be living within a compound; and finally the environment, including the proximity to water and the type of soil and amount of vegetation found within the compound.

As a dwelling unit the compound seems ideally suited in much the same way that quilt pieces fit together, to spread quickly across an urban area. The important aspect to pay attention to is the use of the space within the compound

boundaries and the compatability of these uses with the ones found in neighbouring compounds.

Any planning approaches should try to maintain the flexibility and multi-functionality that the compound offers while at the same time work with and through social and cultural traditions.

3.0 Greater Banjul Area

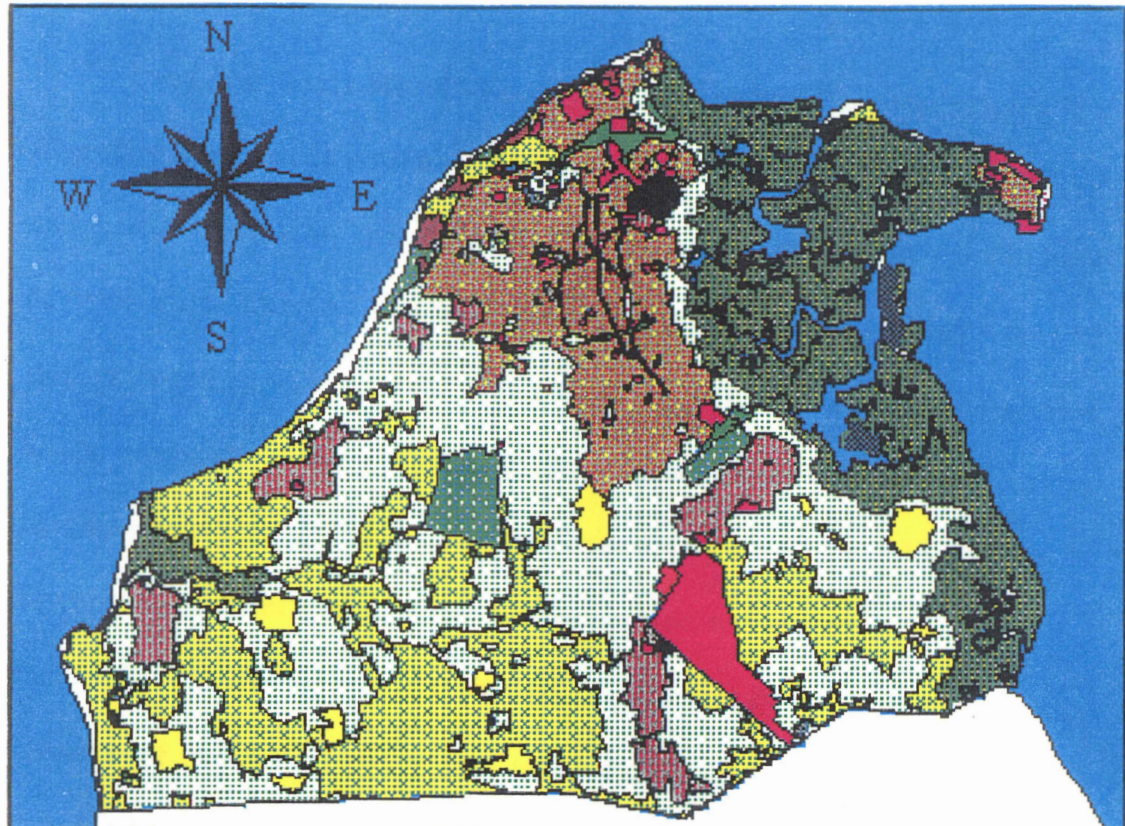
A 1985 'Physical Development Plan' describes the twenty year period prior to the report as a time when the capital city of Banjul and the suburban areas surrounding it developed "...without any major guidance and control by authorities...". Some of the results cited include haphazard land allocation, urban sprawl into agricultural land, stress on water resources, and depletion of forested areas. The urban requirements for land, the daily needs of people and the expansion of compounds were seen to be in conflict with each other and existed without guidance or regulation. A more recent (1997) version of an earlier Banjul Master Plan states that the 1985 plan 'adequately served its purpose' but that urban growth in the Greater Banjul Area was not anticipated at the rate that actually occurred. The 1983 census forecast that the population for the urban area would double in 10-15 years when in fact it doubled in less than 10 years (1993 Census Report). The current population for the Greater Banjul Area is around 350,000 and is expected to reach close to 800,000 by the year 2005 (Personal communication, Department of Physical Planning and Housing, 1997).

The Greater Banjul Area (Figure 12 : Land use map of the Greater Banjul Area) covers an area of approximately 236 km² and is bound on the west by the Atlantic Ocean and on the east by Mangrove swamps that line the shores of The Gambia River. Within these environmentally sensitive confines an expanding urban district is trying to adjust to an increasing population which will require service

systems that if not carefully designed and constructed will compromise the very surroundings that make the area so attractive. Availability of funds for such 'careful' development will be a critical factor in the future of the region.

Approximately 50 settlements, classified as urban (Banjul, Bakau, Sukuta, Lamin), semi-urban (Busumbala, Yundum) and rural (Mandinari, Jumbur, Madina) are included in the Greater Banjul Area region and present a variety of needs and challenges for development.

The capital city of Banjul is restricted spatially due to the fact that it is located on an island (its population has been decreasing in the last ten years) and is somewhat isolated due to the fact that it is at the northeast corner of the entire Greater Banjul Area. Because access from the city to other urban communities is only along one causeway road, a complicated network of roads throughout the outer urban area has developed which leads to this single road which in turn leads in and out of this busy port city.



LEGEND

	AGRICULTURE
	COMMERCIAL
	FORESTS
	GREEN BELT RESERVE
	INDUSTRIAL
	LARGE INSTITUTIONS
	MANGROVES
	MILITARY
	PLAYFIELD
	QUARRY
	RES/COMMERCIAL
	SAVANNAH WOODLAND
	SEMI URBAN RESIDENTIAL
	URBAN RESIDENTIAL
	VACANT LAND
	VILLAGE
	WATER

Scale 1:125000

Figure 12: Urban land use map (From The Greater Banjul Area, Master Plan 2005 Draft, 1997)

Until after World War II villages grew fairly slowly. The areas (Figure 13 : Map showing some of the main communities within the Greater Banjul Area. Sukuta and Lamin study areas are indicated by black rectangles.) between the three communities of Abuko, Kanifing and Fajara were separated to a large extent by thick bush and agricultural land. However, in the 1970's in this same broad area, which surrounds the community of Serrekunda, settlements started growing together and eventually formed an extensive semi-urbanized zone which is now far bigger in areal extent and possesses a larger population than Banjul. An additional factor that has affected urbanization within the Greater Banjul Area has been the presence of two main types of land tenureship covered respectively by --- **The Lands (Provinces) Act** and **The Lands (Banjul and Kombo St. Mary) Act**. The first was imbedded in 'customary tenure', the traditional system of land allocation by village leaders and the second was controlled more by the government. Both have been active during the recent growth of urban areas. A third type of land assignment is 'freehold' which includes land that was given to individuals during colonial settlement. In some urban areas parcels of this category of land still exist. In an effort to reorganize land tenureship the **State Lands Act** was enacted in 1991 to try to consolidate the methods of land acquisition and begin to replace the practice of 'customary tenure'. The role of village leaders as land allocators is being replaced by their role as advisors in decisions regarding important functions within the community and its subsequent development. Under the States Land Act 1991,

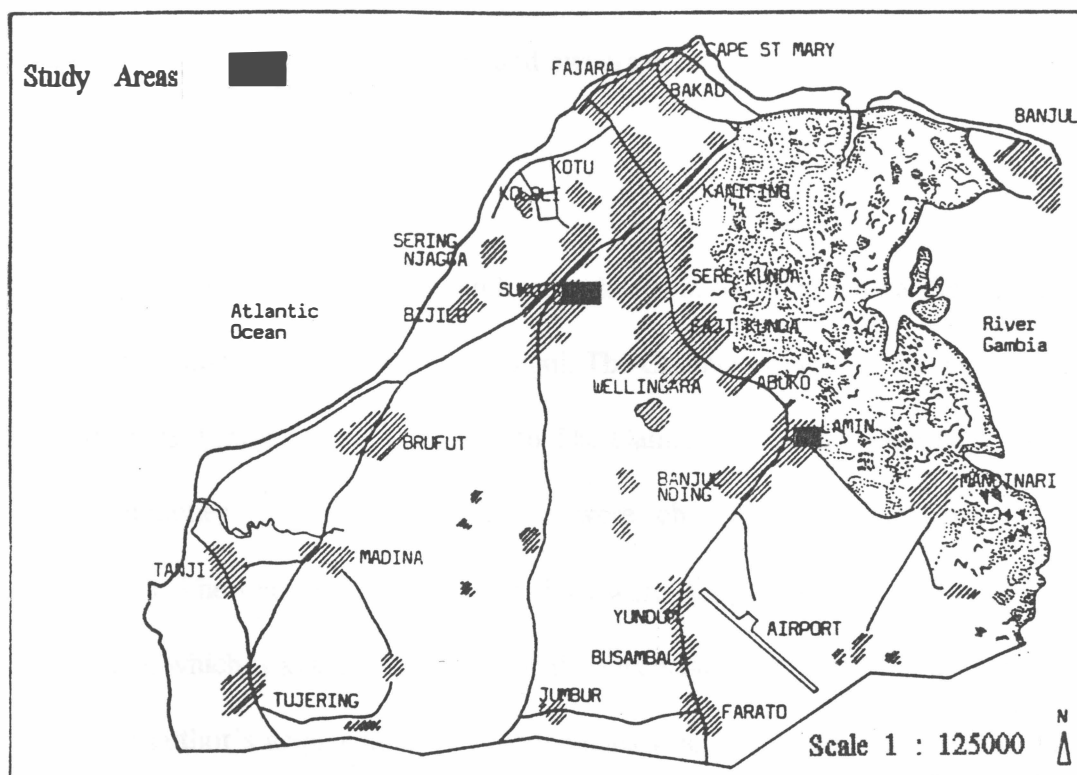


Figure 13: Map showing some of the main communities within the Greater Banjul Area. Sukuta and Lamin study areas are indicated by black rectangles.

areas are designated by the Ministry of Local Government and Lands as State Land areas and all land matters will be handled by Land Administration Boards. In order to maintain land everyone holding customary tenure or year to year tenancy must now apply for a lease of 99 years. In this way a systematic organization of land ownership will be established to provide a framework for planning and development decisions with respect to land use and land ownership.

3.1 Methodology

In addition to library research completed in Halifax, Nova Scotia and interviews conducted with planners in Banjul, The Gambia, observations were made of compounds during a three week visit to The Gambia in January-February, 1997. The communities of Sukuta and Lamin were chosen to conduct compound observations. The reason these two locations were designated was in part due to accessibility, which is available through local transportation services and also in part due to the author's acquaintance with individuals who live in the communities and who were able to assist, during the visit, with the collection of information from the neighbourhoods. Information was gathered by interviewing compound owners, renters and builders. Land use and Census maps were obtained from the Department of Physical Planning and Housing in Banjul. Aerial photographs, obtained from the Department of Lands, also in Banjul, were combined with drawings and photographs of compounds and neighbourhoods.

The study sites were also chosen for the presence of nearby 'features'

(Nature Reserve, agricultural areas, tourist facilities, major transportation route, airport) which will influence the communities and determine how and where the communities can develop and grow. The study areas were also selected because they are urban / peri-urban locations that are currently experiencing urban growth. (Banjul for example was not chosen because it has reached a spatial limit and is experiencing a decline in population). Sukuta and Lamin are study areas that provide viewers an opportunity to observe the effects of urban growth. Both contain vacant and large partially developed compound plots that can be incorporated into planning decisions either by the re-assignment of vacant plots to increase agricultural land use areas or by the subdivision of large plots into additional housing areas.

3.2 Study Areas

For this thesis compounds were looked at within the communities of Sukuta and Lamin two communities which have functions specific to the areas immediately surrounding them, such as supplying commercial goods and services. Increasingly they also provide places for people to live who work outside of the settlement. They also both lie within a region that still has some suitable land for additional residential growth and both include areas where sporadic spatial development has been rapid and has involved low densities in unserviced areas. These factors ultimately will determine the cost and success of timely infrastructure development. The study

areas were approached with four variables in mind --- availability of land; infrastructure; number of individuals and environment.

Sukuta

Sukuta used to lie within extensive forested and agricultural areas. Urban growth has removed much of the forest and reduced the agricultural areas to local fields. It is a community with a population of 12,000 and extends along a road that is 4-6 km west of and approximately parallel to the National Highway of The Gambia. Vehicular congestion in the center of Sukuta is increasing as commuter traffic from areas to the south (Jarbang, Jumbur, Yundum) 'passes through' this alternative route to Banjul. The community has been expanding in all directions but growth is limited in the northeast and east sectors where its boundary approaches the limits of Serrekunda and in particular the settlements of Bununka Kunda and Latri Sabiji. To the west, Sukuta is expanding towards a popular and rapidly growing tourist area which consists of numerous beach front hotels. As well, the Bijilo Nature Reserve (one of only two Nature Reserve Forests in this part of The Gambia) and a research station contribute to an increase in the flow of traffic from this western direction and act as barriers to the spread of Sukuta.

Availability of Land: There is limited land area remaining upon which Sukuta can expand. (Figure 14: Map of Sukuta showing 'presently' developed settlement areas (area to north of dotted line) and 'proposed' growth (dashed line) areas. Rectangle indicates study area location).

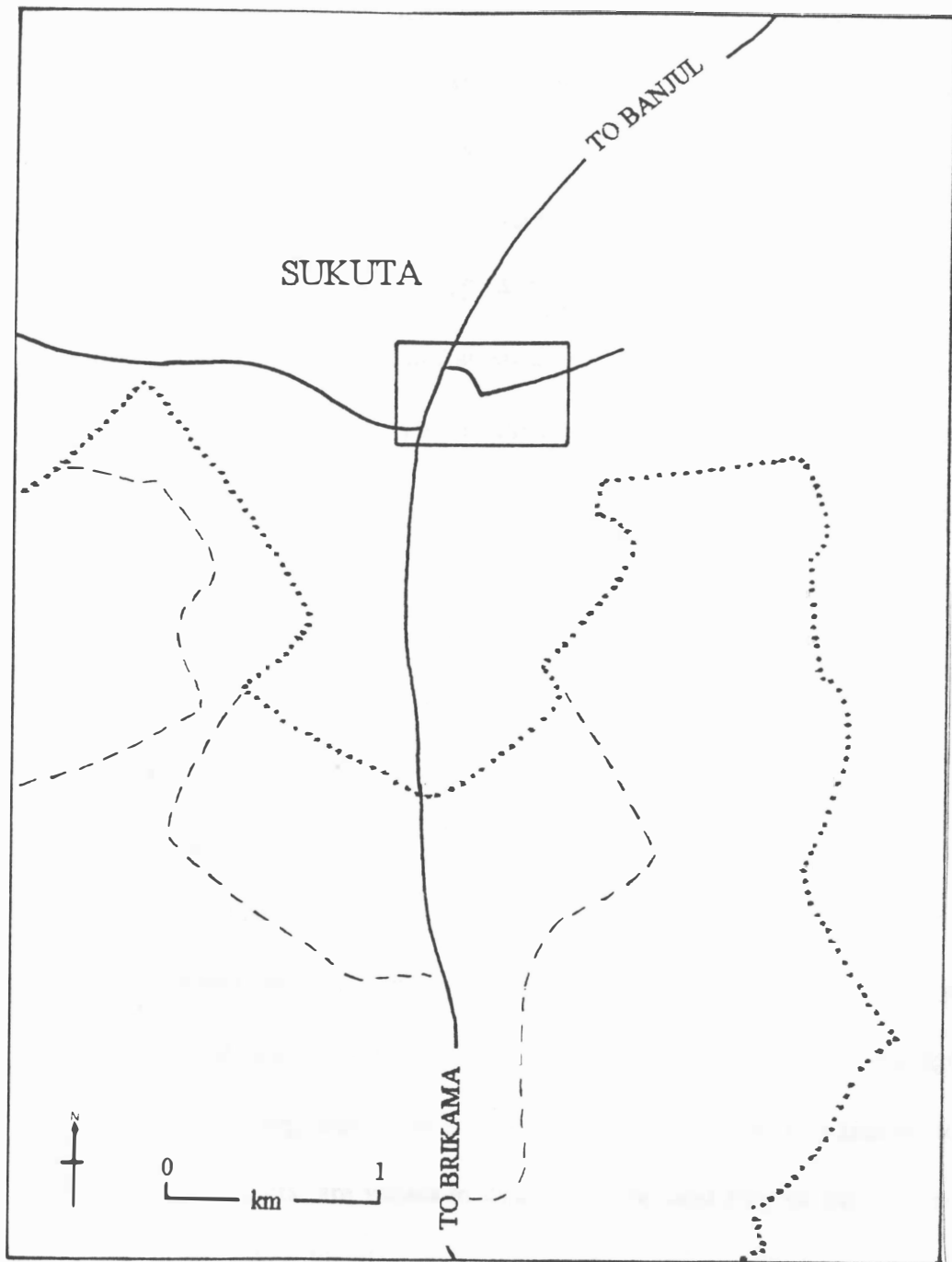


Figure 14: Map of Sukuta showing 'presently' developed settlement areas (area to north of dotted line) and 'proposed' growth areas (dashed line). Rectangle indicates study area location.

The study area in the eastern part of Sukuta lies within a 'presently developed' area (Figure 13) although some of the land is still under-developed in that plots remain free of houses and exist as open fields that may or may not be under some type of cultivation. It is therefore an area where there is still time and physical room for planning decisions to be made. Expansion of the community has been in an eastward direction (Figure 15: A 1993 map of the Sukuta area which shows housing density and compound / street layout. Rectangle outlines the study area which is illustrated in Figure 16 and Figure 17). A few roads have been extended and some compounds have been subdivided during the last decade (Figure 16: A 1983 aerial photograph of the study area in the eastern part of Sukuta, which shows fewer roads and houses). The land uses (Figure 17: Land use map for study area in eastern part of Sukuta. Vacant compound plots are indicated by the letter E.) include Public (i.e. schools, clinic, cemetery), Recreational / Commercial (i.e. football field, orchards), Residential (i.e. occupied and empty residential plots) and Roads (i.e. secondary roads that are not paved). All of the land within the study area has been assigned and is in various stages of development. The compounds in this area are large and range in size from 625m^2 to $11,000\text{m}^2$, with the average being 5000m^2 . Most compounds have at least one house and in some cases up to five. Other compound plots are vacant in which case the land may or may not be under seasonal small scale cultivation.



Figure 15: A 1993 map of the Sukuta area which shows housing density and compound/street layout. Rectangle outlines the study area which is illustrated in Figure 16 and Figure 17.

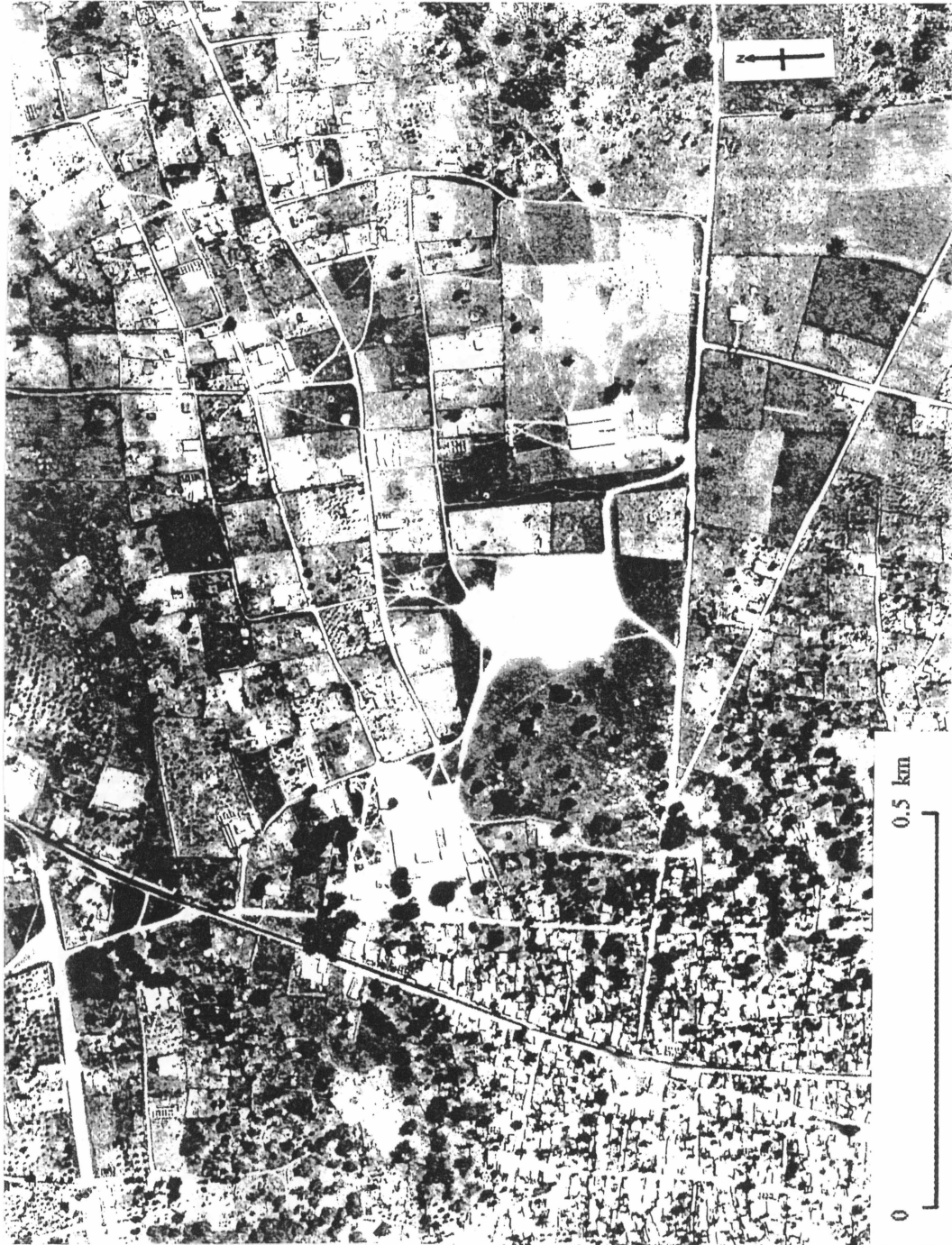


Figure 16: A 1983 aerial photograph of the study area in the eastern part of Sukuta which shows fewer roads and houses.

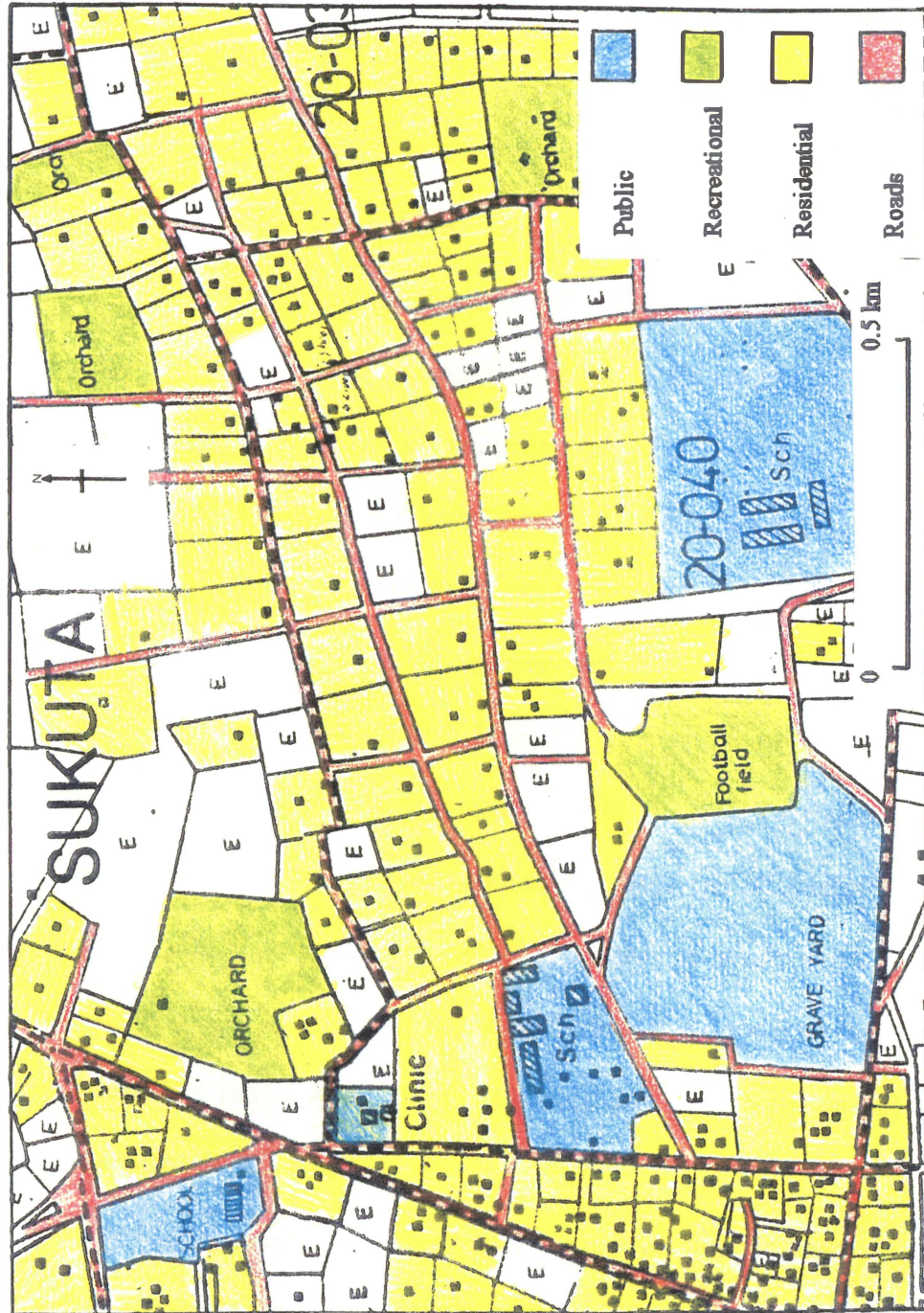


Figure 17: Land use map for study area in eastern part of Sukuta. Vacant compound plots are indicated by the letter E.

Infrastructure: In general, throughout the Greater Banjul Area, infrastructure services have been unable to keep pace with rapid urban growth. The Sukuta area is no exception. The study area has a well formed grid work of compounds and roads, however the latter vary in width and surface condition. Roads are not paved but rather are sandy and in some areas suffer extensive erosion during the rainy season. Adequate and consistent road widths although not always present, are important in order to facilitate and allow enough room for infrastructure development. Water service presently includes a few standing water taps. As the area's population grows more will be needed. The ones that were observed are often too far (> 500m) from some compounds to make even small scale gardening a practical option. In such a situation water is carried by hand in buckets or in several five gallon plastic containers by hand or on a donkey drawn cart. Most compounds have dug wells that intersect the shallower (20-50m) of two aquifers. Sewage systems for the area consist of pit latrines, or septic tanks. Given the current population of Sukuta and the soil conditions these methods are still manageable. Electricity supply in the study area has not kept pace with demand and is not widely in place yet.

Number of Individuals: The population density for the area is still relatively low ---15 people per acre, as compared to Banjul which is 160 people per acre (Master Plan, 1997 Draft). As well there are still many compounds that exist as open fields with the result that this part of Sukuta is not yet congested. Within a compound, a single house (160 m²) may provide shelter for up to 15 or 20 people.

The number of individuals will vary depending on the time of year and how long visiting family members stay. Some of the compound plots are vacant and this creates an uncertainty about how great the demand will be for services and what types will be most needed. The kinds of activities that will eventually take place or be required in the area (i.e metal shops versus small store versus need for school or mosque) are also uncertain as a result of the vacancies.

Environment: Due to the existence of compounds that are used either as orchards, or as vacant plots the 'environment' of the study area is still fairly 'natural' and pleasant. The fact that some of the vacant compounds are large ensures that there is space for some urban gardening to occur. The vacant compounds need to be cleared of vegetation once or twice a year which involves burning that quickly removes unwanted vegetation and begins the preparation of the land for any cultivation that might later be undertaken. The burning process is cause for concern with regard to air pollution for the surrounding compounds that are occupied. Vehicle related air and noise pollution to date, is minimal as traffic is not very congested in this particular area in part due to the road conditions, affordability of cars and also due to the relatively low population density.

Lamin

The community of Lamin, population 10,500 is bisected (Figure 18: Map of Lamin showing 'presently' developed settlement (dotted line) and 'proposed' growth (dashed line) areas. Rectangle indicates the study area location.) by the National Highway of The Gambia which is a paved, two lane roadway. Numerous market stall areas line both sides of the road and result in extensive areas of mixed commercial and residential use. Recent expansion of the settlement has occurred in an eastward direction (Figure 19 : A 1993 map of Lamin area which show housing density and compound / street layout. Rectangle outlines the study area which is illustrated in Figure 20 and Figure 21) and along a road to the southeast that leads towards the rural/mangrove/riverine village settlement of Mandinari.

Lamin's future growth will be influenced by several significant surrounding features some of these are: the presence of the National highway which leads to the nearby (3.5 km) International Airport at Yundum; Lamin's proximity to the edge of the Abuko Nature Reserve in the northwest; the closeness (0.5 km) of extensive and environmentally sensitive areas of Mangrove swamps; the additional nearness to Lamin Bolon (a tidal river way); and finally productive rice fields and a tourist attraction (**Lamin Lodge**, a small restaurant and river tour operation). Surrounded by these significant features the future growth of Lamin will obviously be complicated if they are all to remain intact and viable elements.

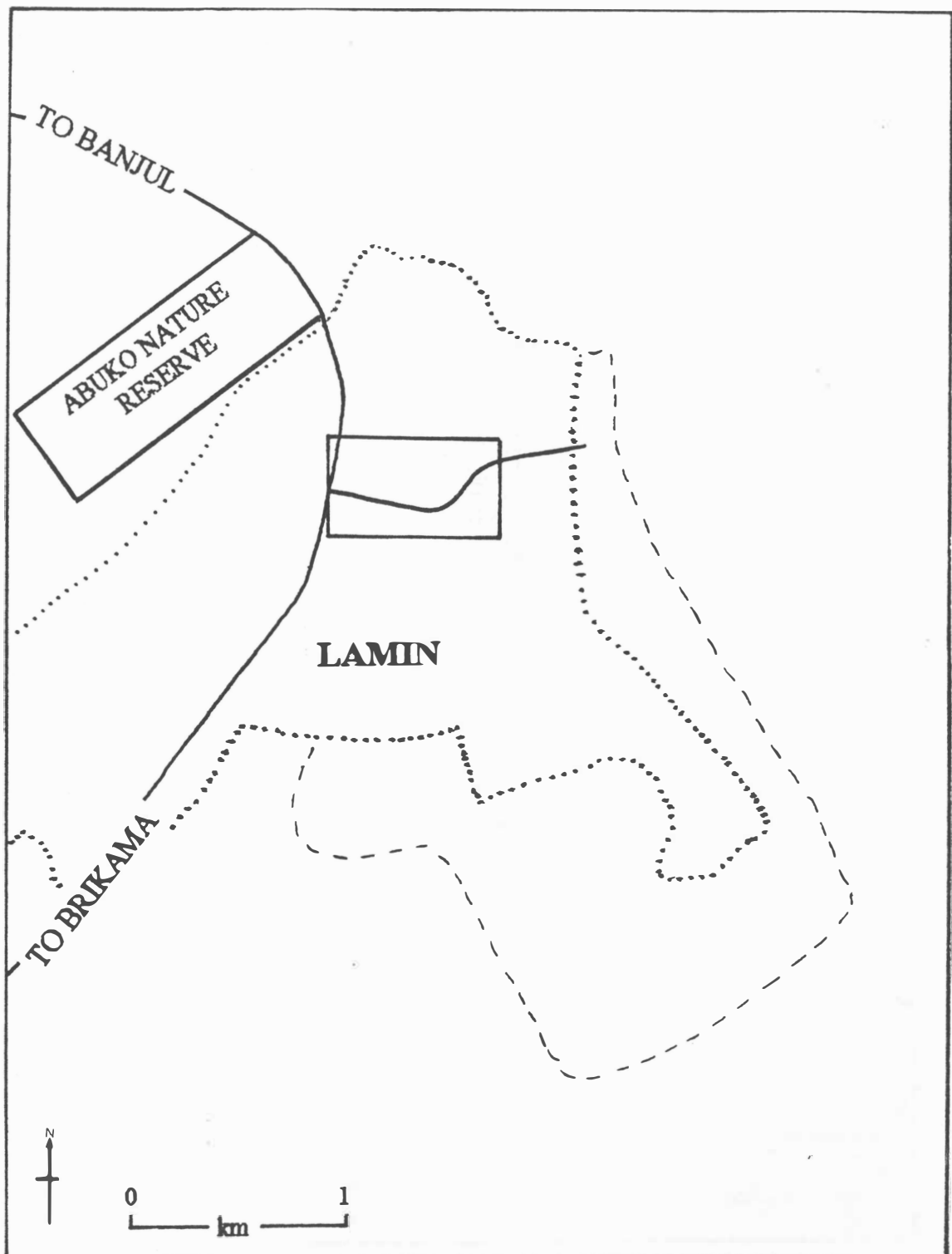


Figure 18: Map of Lamin showing 'presently' developed settlement (dotted line) and 'proposed' growth (dashed line) areas. Rectangle indicates study area location.

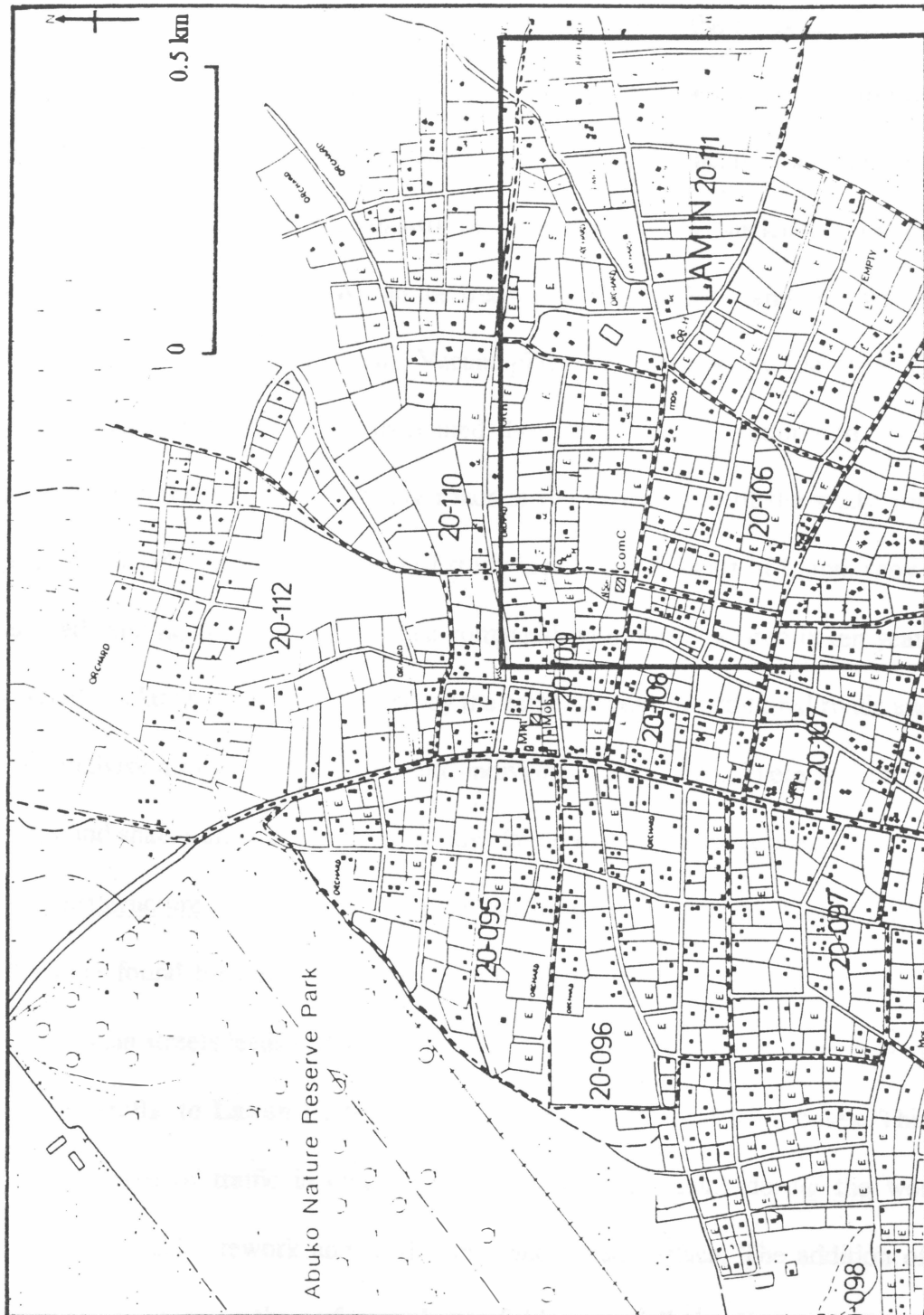


Figure 19: A 1993 map of Lamin area shows housing density and compound/street layout. Rectangle outlines study area which is illustrated by Figure 20 and Figure 21.

Availability of Land: Clearly land is very restricted in the areas surrounding Lamin (Figure 18: Map of Lamin showing 'presently' developed settlement (dotted line) and 'proposed' growth (dashed line) areas. Rectangle indicates the study area location) and room for growth consists of a narrow margin particularly on the eastern side of the community. Within the study area (Figure 20: Land use map for study area in eastern part of Lamin. Vacant plots are indicated by the letter E) numerous vacant compounds are distributed throughout the neighbourhood. The absence of several north-south trending roads in the eastern part of the study area (Figure 21 : A 1983 aerial photograph of study area in eastern part of Lamin shows fewer roads and houses) is striking when compared with the same area in ten years later. Land availability has been reduced by the establishment of additional roads and by the subdivision of agricultural land into individual compounds. There is a range of compound shapes and sizes in this recently altered part of the study area.

Infrastructure: Similar conditions exist for the Lamin study area as were found for Sukuta. Unpaved roads form a less defined grid work and one of the main streets leads to **Lamin Lodge** on the river. This street is fairly busy with tourist traffic to **Lamin Lodge** which can include small and large buses. This increased volume of traffic in combination with the heavy rains during the wet season, continuously rework and erode the sandy road surface. The addition of pavement would improve the surface and use of this potentially busy street. Water taps are located throughout the neighbourhood but are too few in number and often too far from individual compound gardens. Some water lines are installed to a few

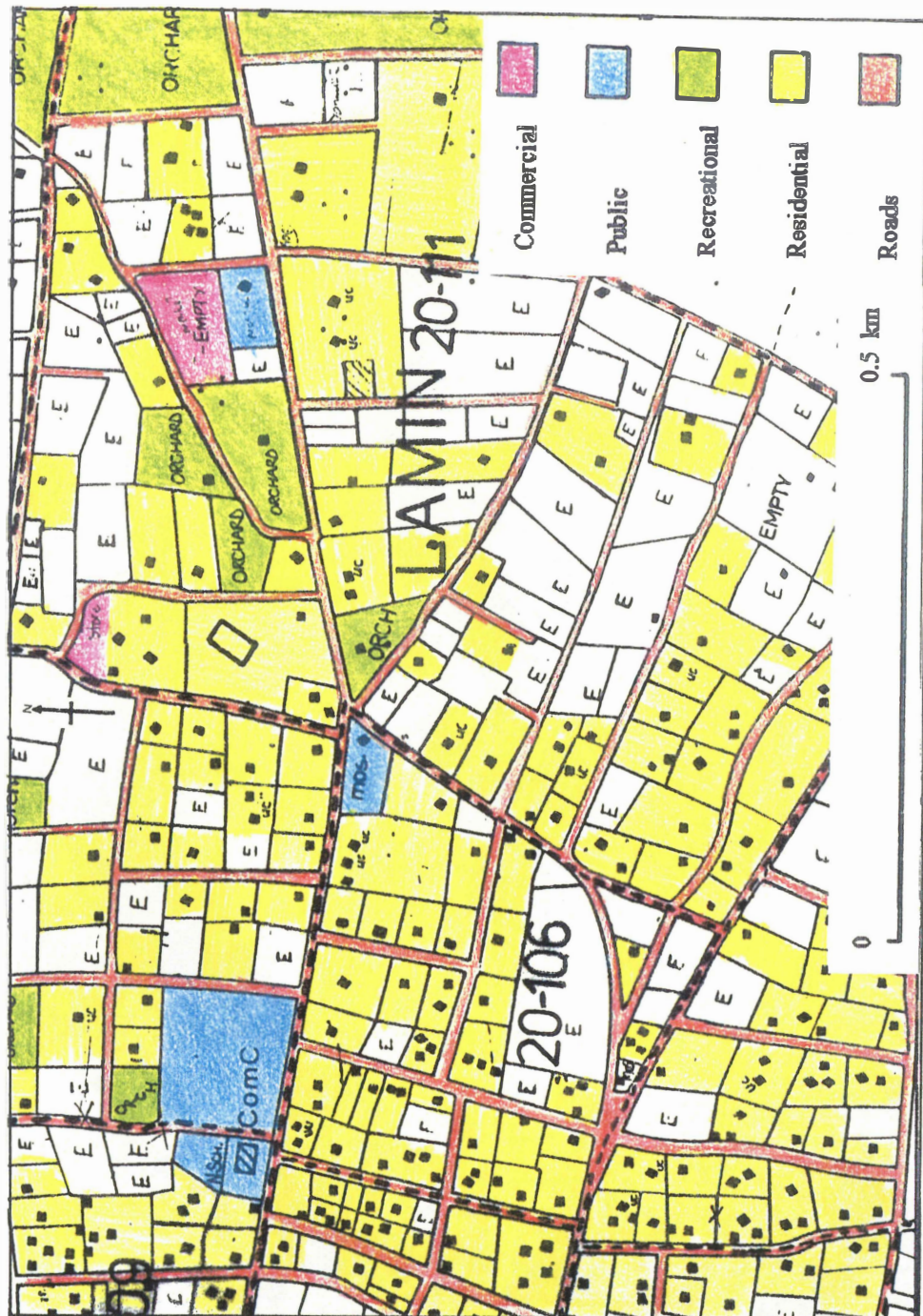


Figure 20: Land use map for study area in eastern part of Lamin. Vacant compound plots are indicated by the letter E.



Figure 21: A 1983 aerial photograph of study area in eastern part of Lamin shows fewer roads and houses.

plots. Sewage systems for the area consist of pit latrines, and septic tanks. This arrangement of systems will have to be upgraded as the population increases. Garbage collection is limited and dealt with on a local and individual compound basis usually by regularly burning weekly accumulations. For the health and benefit of the community as well as the rice cultivation, small scale agriculture and the tourist attraction , this service will have to be improved.

Number of Individuals: Most of the compounds have only one house (in some cases two houses) constructed on the plot. The number of people per house commonly ranges from 9 - 15 and the density for this area is 16 persons / acre (Master Plan, 1997 Draft). With the large number of vacant compound plots the area can absorb increases in density. The presence of plots that contain mosques, a nursery school and community center suggest a current demand for such facilities. This need will increase as the number of individuals rises in the area. The popularity of the tourist attraction at **Lamin Lodge** will continue to increase the volume of traffic and visitors passing through the neighbourhood. As well, its popularity may create and increase small business opportunities along the access road to the attraction..

Environment: Because of the number of vacant compounds and orchards in the area, this is still a fairly uncongested neighbourhood. The impact of new growth in this eastern part of Lamin will be minimal on the Abuko Nature Reserve, however the growing popularity of the reserve will bring more people and traffic to the main highway that passes through the center of Lamin. This increased

activity could result in densification of the study area as individuals chose to move away from the highway area and into the less congested area to the east. The rice fields are productive and considered as an integral part of this community. Their preservation and maintenance will be an asset for Lamin's future. Perhaps less directly affected by compound construction, are the Mangrove swamps. Special measures in order to be preserve Mangrove swamps will benefit the community and provide employment for community members and productive habitats for wildlife.

3.2 Planning options based on compounds

Availability of Land

There is a limited availability of land in Sukuta. One possible planning option that addresses this situation results from looking at the compounds that are presently vacant and which lie to the north of the football field (Figure 17). There is a shortage of public/recreational areas for this part of the community however if three vacant compounds could be converted to 'recreational land' this would introduce public space into the central area of the neighbourhood. Additionally a second planning option would include approaching owners of some of the larger compounds that have only single houses in place. If owners agree to the division and selling of half of their plots this would make available land to other individuals who want to move into the neighbourhood. Such divisions and settlement would not add significantly to congestion, but would make available small amounts of land and

would help to standardize the size of compounds which would in turn facilitate infrastructure layout decisions. Special compensation might be required unless the transactions were possibly between family members.

Lamin has even less underused available land than Sukuta because agricultural purposes are so important to this area. One planning option, based again on vacant compounds, would be to consider maintaining the larger vacant compounds for agricultural purposes. As well the compounds, containing orchards, along the eastern edge of the study area (Figure 20) might be retained as orchards and in this way serve as a commercial and an aesthetic zone which would serve as well as a protective edge to the rice fields which require limited intrusion from human activity. A number of orchards occur along the road that leads to **Lamin Lodge** and these, if maintained, would enhance the route and help limit the number of compounds and thus number of individuals that potentially could be exposed to the effects of increased traffic along the access road.

Infrastructure

Compounds observed in the Sukuta study area are generally oriented with their longest plot axes perpendicular to the road. In this area the larger compounds can be seen to occupy the entire width of blocks from one street to the other. This in itself is not a problem per se but the location of houses and garden plots within the compounds seems to be variable and in the event of installing water pipes, drainage ditches and power lines this lack of 'location consistency' would work

against planning decisions pertaining to routes chosen and cost. For example, water pipes up to a maximum distance of 65m from a water main will be installed at cost but beyond this the individual must pay for the additional footage. Owners and builders of future houses might be given recommendations as to the best house locations on plots with respect to planned and /or known infrastructure routes in order to help keep extra footage costs low.

The 'fabric' produced by the roads and compounds in the Lamin study area is less uniform. Infrastructure routes could follow roads and reach most compounds but some roads are incomplete ending at times against the corner or the side of a compound. Compounds that are in this situation might serve a more useful purpose if configured so as to be accessible from one of the main roads. The short incomplete roads could be assimilated into neighbouring compounds and thus slightly increase the size of the compound for the owners.

A few 'isolated' compound plots, although small, are completely surrounded by other compounds. They are isolated in that they do not have access to any road. These compounds might help planning decisions more if they can be combined with neighbouring compounds and thus gain access to the road and any other type of infrastructure.

Agricultural (i.e. orchards and rice fields) and tourist (i.e **Lamin Lodge**) components, in combination with existing limitations of available land and issues of waste collection and waste disposal, will all be of special importance to the community of Lamin. Recycling and composting would be two appropriate methods

that the community could initiate and successfully use to manage these potentially useful resources that are currently being produced. One of the large vacant compounds could be coordinated into serving as a site for the establishment of such collection facilities.

Number of Individuals

The study areas considered in Sukuta and Lamin have similar density levels (15 and 16 persons per acre, respectively) and many of the compounds still have sufficient land space on the plot to add another house. In this respect there is in both areas still sufficient land area for densification to occur. As well both study areas have a number of vacant compounds that can be developed to accommodate additional people. The idea of 'density per area' is replaced by 'density of people per utility' for example a water tap, where long lines can mean long periods of time waiting; per toilet where standards of health can be compromised if initial construction specifications are below the actual number of people using the system. Much of daily living in The Gambia is spent outdoors and in open spaces within a compound or within a community market place. The interior confines of buildings are not of great concern during much of the day. The number of individuals per type of infrastructure does become critical when it involves water, electricity, and road access. For both of the communities considered, these are areas of immediate concern with immediate needs but are dependent upon availability of foreign money to finance such large scale and extensive infrastructure projects.

Compounds, combined with the social and cultural way of life in The Gambia, allow densification to occur in a positive, self adjusting way. Within limits, the fluctuating population of a single compound exists without immediately requiring communities to construct additional housing structures.

Environment

A population living with inadequate services tends to take environmental problems for granted. This is seen to be true in The Gambia where individuals struggle to make daily ends meet and rarely have resources left over to wrestle with environmental problems that literally line their streets in the form of sporadically collected garbage and in the rainy season, over flowing drainage ditches and flooded streets. Both Sukuta and Lamin now require and will continue to require more areas that are left with vegetation cover. This will be a requirement that will run counter to the historical trends seen during the last ninety years where 90 % of the original 500,000km² of West African coastal rainforests have disappeared to make way for farms and other types of human activity (Pearce, 1997). Compound design can work well as a planning option to address this need, by including fencing that consists of trees and shrubs. What moisture does arrive each year can be harvested. House roofing can be aligned so that heavy down pours drain properly and are directed and collected for later use in gardens or for other purposes. Trees, if left in place along streets or if planted in combination with constructed exterior compound walls, will reduce intense heat that is reflected from wall surfaces, help

to reduce erosional effects of heavy rains and additionally will help to drain excess rain water from street surfaces. Tree choices should be chosen carefully with native, food producing types being preferred over exotic species, some of which are purely ornamental and require large amounts of moisture to live.

A special consideration for Lamin would be the size and number of compounds that border near the rice fields. Small compounds and / or ones that are used for special, low impact purposes (i.e. playing fields or un-sprayed plantations and orchards) are a planning option that would be of benefit to these valuable agricultural resources which require access to un-contaminated fresh water sources in order to produce edible crops. Proximity to chemical or human waste drainage areas may interfere with such a requirement.

3.3 Considerations

Two study areas were examined in an attempt to understand how the compound, as a unit of planning and human settlement, 'fits' or 'misfits' the urban setting within which it exists. The four variables selected --- availability of land, infrastructure, number of individuals, environment --- provided specific areas within which to observe how well the compounds 'fit' and to what degree they could adjust to their surrounding urban setting.

Within the variable of land availability the compound behaves as a form that adjusts quickly and well to limited space and ultimately fits the conditions presented. The compound is restricted when the plot size of the land is small (eg. less 250m²)

and thus the size of the compound becomes too small for human comfort and inadequate for inclusion of the necessary compound elements of dwelling, open yard communal space, food production/ waste area. When the availability of land is limited due to affordability by individuals, the compound and its associated network of the extended family, works well to enable individuals to obtain and occupy property together.

Of the four variables considered, infrastructure appears to be the one that impacts most strongly upon the compound. Although compounds can be established comfortably and successfully even when infrastructure is lacking, it is the late arrival of such systems that can cause problems so that compounds do not efficiently fit into the newly serviced surroundings. Added expense is required to match the compound building arrangements and orientations to infrastructure layouts. The sequencing of infrastructure implementation, preferably prior to compound house construction, would increase the percent of 'fit' of the compound to the urban setting.

The third variable, number of individuals, is an important component of the compound and was seen to be an area that allows the compound to 'fit' well into the urban setting. This is due in part to the fourth variable, environment, which actually encourages outdoor living and thus reduces the indoor congestion to some extent. The social and cultural values within the compound framework also encourage the acceptance of additional individuals. Increases in the number of people can be subtly absorbed by the compound while maintaining a uniform urban form.

The compound, when combined with the fourth variable, environment, can fit quickly into the urban setting when one considers the method of construction, which draws upon 'on hand' materials and if one considers methods used to respond to the intense heat of the climate (buildings with verandas oriented to face the east and benefit from the sun's daily path). The successful 'fit' of the compound is also seen in its ability to contribute to the overall quality of the urban environment by enlarging food production areas, increasing urban vegetation and by adding to the total area of community space.

4.0 Compound Qualities

One of the products that results from the process of 'fit' and 'misfit' of form to context, in this case, the compound to the **urban setting**, is a list of characteristics or qualities that describe the compound. These properties provide an understanding of the compound and provide some indication of its potential role in planning. Public and private space; specific and multi-purpose uses; food production and disposal areas are all important components of the compound and reflect the fact that individuals have complicated and differing daily relationships with the space that surrounds them. Within The Gambia specifically, and West Africa broadly, cultural and religious concepts include a framework that is structured around the extended family and this means that '*groups* of individuals' have complex and shared daily relationships with the space that surrounds them. 'Group sharing' of space is an important quality which underlies compound structure and function and should be included in urban planning practices. Compounds serve as 'collectors' of urban activities and in this way can be used as a form of urban organization.

Compound characteristics or qualities that result from the interaction between the compound and the urban setting in the study areas considered, include:

- i) flexibility;
- ii) communality;
- iii) independence;
- iv) adaptability;
- v) miscibility;
- vi) responsiveness and
- vii) enhancement.

Flexibility

The compound demonstrates a flexibility in terms of being a shape that does not necessarily have to be square or rectangle, although these are the shapes most often encountered. It has, as a form, the ability to fit into oddly shaped areas of land that might otherwise go un-inhabited. By 'filling-in' odd shaped lots it can still be a functioning unit (providing, as mentioned earlier, the size is not too small). Compound shape is not necessarily a limitation. This quality could be used by planning personnel more often to help decrease the number of unused vacant remnants of land and to also increase densification of 'un-developed' corners of neighbourhoods.

Compounds are also flexible in the type of construction material that is used for exterior walls as well as for the buildings within the wall boundaries. Exterior walls can consist of low foundations only or as complete seven foot high structures. An exterior fencing of some sort is usually required and preferred in order to limit free ranging animals whose movements become important if any crops have been planted within the compound property. At the same time, exterior walls, even when made of concrete, can relatively easily be partially removed to allow for the insertion of new doorways or the enlargement of a compound. There is a flexibility to expand a compound if required.

Inside the compound, there is a limited flexibility that is expressed in the placement of buildings (sun path does have some control to an extent) as well as a broader flexibility which is expressed in how each building can be sub-divided. The

subdivision of buildings provides a flexibility for the number of individuals that can be housed at any given time.

Along with housing flexibility a flexibility exists in compounds that allows cultivated, cooking and open areas, to be easily and quickly integrated into the remaining available space. This flexibility of 'land use' allows for periodic adjustments according to the needs and numbers of individuals living within the compound. Flexibility is dependent upon and varies with the size of the compound.

Communality

One of the outstanding characteristics of compounds is the aspect of shared space and shared activities. This is seen by the long porch areas that run the length of most houses and that pass each doorway to give easy access to all individuals. The open central yard area in front of houses is also easily accessible from the long front porch area. At the back of the house, more secluded open areas exist that can be used for cooking, outdoor sitting, or any variety of other purposes.

Included within this quality of communality is the idea that as a group, individuals have increased access to owning or at least a 'shared' owning of land and/or dwelling space. Family members may agree to purchase two small neighbouring compounds in order to develop the combined larger plot which is then shared by both groups. Members may also agree together to purchase and construct materials for a dwelling which is subsequently owned or rented by all or part of the group.

Independence

Almost unfortunately, independence is a quality of compounds in the Greater Banjul Area, and possibly in similar Sub-Saharan climates and cities, that allows them to function independently of infrastructure i.e. sewer, electricity and telephone. This can be good on a small scale and for temporary periods of time when populations are low, but it can also be a source of problems when occurring as a prolonged situation with increasing populations. This quality of independence of compounds and the 'ease of their existence' can also contribute to how rapidly urban areas can be settled.

Adaptability/ Miscibility

Adaptability is closely related to the characteristic of flexibility, mentioned above, however it is thought of primarily as operating inside the compound. For example, as the number of individuals changes or as the age of the members changes, or as the day changes, the use of spaces can also quickly change and be adapted. The open front yard area can serve in the morning as a washing area or play area which will be transformed in the afternoon to meet the needs of a funeral service and which later may be used for the preparation of the evening meal. Adaptability is evident in sections of the yard during various seasons as different crops are planted throughout the year. Adaptability suggests some separation of the timing of uses, however, the quality of miscibility implies a 'mixing' of uses in an area at the same time as in the case of an open front yard area which can have

garden areas established , next to an area used regularly for daily prayers which is next to a brick mixing site, which in turn is beside a small pen used to contain livestock. The open front yard area contains 'mixed purposes' and yet can be adapted to a singular, large event, if required.

Responsive/Enhancement

The qualities of responsiveness and enhancement refer specifically to the compound's characteristic which allows it to work with the climatic and other environmental factors that surround it at any time. Within the framework of The Gambia, the climate changes during the year in predictable ways and therefore can to a certain extent be anticipated and planned for. A compound can be designed to collect moisture (with careful native tree and plant selections in combination with construction designs); to circulate air; to reflect intense heat; to create shade and to recycle waste products. Each of the preceding actions works towards improving the quality of the local neighbourhood and subsequently overall urban quality.

Compound wall construction style and the proximity to nearby compounds contribute to the environment which lines the streets of a residential neighbourhood. Compounds can be designed to improve a street's atmosphere. On the other hand undeveloped compound plots such as open fields containing foraging animals or refuse may contribute to noise and uncleanliness of the neighbourhood. The condition of the latter requires monitoring and maintenance measures.

4.1 Policy considerations

Physical Planning and Development Control Act, 1991 ,

Part II, Section 11, Sub-Section 2:

“ The divisional plans shall indicate policies, detailed and specific guidelines at the Divisional level for development of urban areas and shall reflect the problems, issues and prospects of such Division and the people living therein.”

Part III, Section 8, Sub-Section 1:

“ Draft Plans shall provide guidelines for the spatial development and effective use of the land to ensure a well balanced environment and good living conditions.”

Such statements clearly indicate that it is currently considered, at least on paper, that planning policy should try to consider the welfare of not only the people, but also the environment and the urban setting and that all three should be observed and included in planning decisions and any draft plan procedures or plan implementation. This bodes well for the future of The Gambia providing the will is strong enough to ensure regulation and consistency in the direction of such procedures.

Most planning policy attempts to show possible steps or measures to take in response to and in order to deal with the phenomenon of ‘urbanization’. Broadly speaking and perhaps traditionally, the term ‘urbanization’ can be thought of as a process that includes increasing density, size and heterogeneity of settlements.

Certainly, it can be seen as an important force that shapes social, economic and physical environments. And this is probably true (although no doubt debatable) for wherever urbanization happens to be occurring. Two points are important to note. Firstly, that within 'developing' settings the local socio-cultural, political and economic condition is very different from that found in the developed settings where much of planning policy and theory has evolved. Secondly, that 'developing' countries can become dependent upon and closely linked to, 'developed' countries that contain their own and by comparison, foreign socio-cultural, political and economic conditions. The combination of such local and foreign conditions can be sources of delay and misunderstanding in policy development.

Given the suggested definition of the term "urbanization" and the differing conditions that surround such a process, the results, consequences, problems and solutions will be very different for every location. Exchange of information and collaboration of planning methods that respond best will benefit developing and developed countries as they try to provide additional urban space where people can be supplied with basic shelter. Such sharing of information needs to be reinforced if, as a 'global community' we are to survive the challenges of rising world population. Partnerships must be established between developing and developed countries.

Urbanization can be thought of broadly, as a process involving "the desire for proximity among individuals, groups, institutions, private and public enterprises etc., whether for economic, social, military, political or other purposes."

Within the Gambian context, policy, planners and planning practices must encourage and coordinate all levels of government in order to deal directly with social, economic and physical phenomenon. Of special importance, planning should have a foundation that clearly states objectives that will support, work with and maintain cultural values and that at the same time will address the distribution of economic development (i.e. will try to reduce the gap between poor and rich as well as try to ensure ways and means whereby individuals can increase their independence by producing their own food or by building their own homes). Planning policy must also aim towards the preservation and overall improvement of environmental quality which in The Gambia is undergoing rapid and extreme degradation, due in part to a lack of local practices and education but also due in part to foreign disregard for the importance of sound environmental procedures that they perform within the country they are agreeing to assist. These areas can be improved by a change in foreign attitude and an increase in their awareness about the importance of local environmental issues. The philosophy of 'global responsibility' should underlie the approach that donating countries take when they agree to support and instal 'developing' country projects.

Planning policy also needs to recognize and promote the treatment of issues in 'coordinated frameworks'. Various levels of government (national, divisional, local), and related government ministries and departments need to be in communication and aware of each group's goals and areas of jurisdiction. Urban containment, population distribution, economic development and traditional values

cannot be dealt with in isolation. The Gambia, because of its compact size, variety of challenges and growing resource of concerned people, could serve as a model for other countries and at the same time benefit from such a shift to a global and coordinated framework approach.

4.2 Incorporation of the compound into planning

The compound and its qualities of flexibility, communality, independence, adaptability, miscibility, responsiveness and enhancement can be incorporated with in the planning process in the following ways. Firstly, and importantly for The Gambia, the compound can work with planning in promoting indigenous methods. Lusugga-Kironde (1992) argues that development concepts need to be redefined to reflect local circumstances. Foreign standards are not always attainable nor appropriate in 'developing' country settings according to Simon (1992). Planning that promotes the use of local materials and methods or a combination of local and foreign, rather than a complete replacement by foreign materials, will not only work well with the compound which uses many indigenous materials in its construction, but will assist the local economy and increase the self-sufficiency of an area.

At the same time that the use of indigenous materials is advocated, measures should also be taken to plan for growth and replacement of any resources or materials that may be threatened by overuse (e.g. Rhun Palm). Compounds that are

already established as orchards should be zoned or encouraged to remain agricultural in order for future materials and supplies to be available.

In the Sukuta study area several large empty compounds are in close proximity to existing orchards and could with appropriate land use designation extend not only currently active agricultural areas, but also create a band along the northern edge of the study area that could serve as a buffer zone between encroaching neighbourhoods.

The situation in the Lamin study area shows numerous but small empty compounds. Many do border on orchards but their impact would be minor in terms of increased areas of indigenous materials producing land.

The opportunity does exist in both study areas for a planning policy that incorporates and transfers compound vacancy in carefully chosen ways---- either agriculturally or recreationally , both would benefit the community.

Secondly, compounds have the ability to exist, at least for temporary periods, independently of sewage infrastructure and can in this way provide 'extra' time for planning authorities to establish and have installed such required systems. As well, the fact that compounds can accommodate many individuals within their wall boundaries means that temporarily and initially, water services can be shared, water pipe networks kept to a minimum and excessive water use may be more easily monitored if necessary.

Many compounds in Sukuta have houses that are located close to the roadway which is a feature that provides a consistent pattern and proximity to water

or other utility services that are or will be installed along the path of the street. Such choices of house placement and compound configuration help when planning infrastructure networks.

The community of Lamin has less consistent compound patterns and some compounds do not front on streets. Future planning policy might include preferred locations for houses within compounds as well as certain street access limits for the compounds themselves.

In a similar way that compounds concentrate users of water the generation of refuse can also be focused if planning includes the compound distribution throughout a neighbourhood. Planning can confine and locate the points of waste collection to be strategically placed, easily accessible to members of a neighbourhood and logically placed for the collection vehicles. Formerly, waste collection was privately managed. Now area Councils are in charge and provide a 'Cleansing Service' which follows specified routes. Planning a higher concentration of compounds along identified routes would also help to reduce the total length of the collection routes. Any large, isolated compounds that are proven unsuitable for agriculture may be candidates for refuse sites that recycle materials. Proximity and disturbance to neighbouring compounds would of course need to be carefully managed but the opportunity for employment would be a benefit.

Thirdly, because compounds already are, for the most part, active in containing urban gardens, they can work well with planning that introduces by-laws to stipulate tree planting and crop production. Urban gardening is a traditional

phenomenon and according to Aipira (1995) and Lee-Smith and Lamba (1991) an important potential for creating sustainable cities. It is an important source of income and employment, a form of land management and also a form of environmental management. In both study areas it would be beneficial for planning the water infrastructure to co-ordinate decisions with the location of compounds already zoned or potentially suitable for agricultural purposes.

Fourthly, compounds that contain trades and employment facilities permit individuals to either live on the work site or to walk to the work site. The organization of certain types of trades, e.g. those that produce excessive amounts of noise (metal shops, tire repair, carpentry), would require careful placement within a residential neighbourhood. Zoning along with land use and pollution restrictions would be required. Compounds that contain such employment opportunities work with planning to reduce not only the demands on transportation systems but also work to reduce the extra expense for many people who would not readily have the additional income to pay for transportation to work.

The distribution of compounds that contain such employment often occurs along roads that are frequently travelled by a community's membership. These established patterns can be good indicators for planning main thoroughfares and intersections to manage traffic in an area. If however, most people can walk to work or the local market the noise and air pollution will be reduced for the local community and ultimately will be of benefit to the environment as a whole.

Fifthly, planning objectives that are directed towards containing urban growth can benefit from the compound's ability to absorb increasing number of individuals while at the same time not requiring immediate or physical alteration of its form or that of the neighbourhood. Planning can work with existing large compounds in built up areas by subdividing the plots and thus providing additional space for an increase in the population.

Sukuta is a good example of this potential for densification within an already established large size compound pattern. Compensation procedures will be required to encourage present owners to consider reducing their own compounds. The limits of urban growth in certain parts of Lamin are more obvious due to the smaller compound size, however room still is available around the edges where compound size is slightly larger.

Planning can also propose smaller sized compounds, for any newly developed areas, which would help provide for higher compound densities and increased number of available compounds for new residents. Compounds, because of their defined boundaries, can help to plan, regularize and organize densification throughout an urban area.

Sixthly, compounds support space sharing, family relationships and communal living and as a result have in place the foundation required for an effective and strong level of public participation. Village leaders, who formerly allocated much of the land, are good resources to include in the process of community development and to take an active role in planning. Compounds assist

planning by housing, at times, generations of families that are interested in their community and have a connection with the place.

The above ways have shown how the compound combines with planning choices and issues to produce benefits to a community. Co-ordination of different issues (infrastructure, agriculture, environment) at any one time give a broader picture of what results might be. The compound assists in combining many issues in a small focused area and yet at the same time is closely connected to other compounds both physically and socially. In this way the compound benefits planning by coordinating many layers of information.

The compound is the basic housing unit in The Gambia. Housing has an important role to play in the development of West African countries and the compound can be included in this development. Given that within the Greater Banjul Area i) settlement has been sporadic; ii) land use has been wasteful, (partly the result of traditional allocation methods and a lacking of widespread commitment to planning); iii) the environment has undergone degradation, in part due to traditional land clearing methods of burning and in part due to uncontrolled industrial development; and iv) congested and uncongested areas have patchy infrastructure, there is a need to find solutions that will address the variety of immediate problems. These same solutions must also provide some sense of direction for the future path of socio-economic, political and physical development.

Considering housing i.e. the compound as an investment, may be a way to plan improvement strategies for the overall economy of the Greater Banjul urban

area as well as individual communities. Compounds are present and increasing in number throughout the urban area. They are a needed commodity. If the compound is to be effective in influencing the urban economy it must be able to support activities that improve the urban economy by way of supporting community-based housing production. Compounds can achieve this first activity because they are the direct result of community / family support systems which allow energy and knowledge to be kept near and re-invested into the community. Compounds must also be able to facilitate access to employment, training or education and they do this when owners share construction techniques and /or provide employment through a trade. Additionally compounds must be capable of safe guarding the surrounding environment. This can be done by planting native over exotic species or by leaving plants in place rather than removing them. In this area compounds have responded to, adapted to and enhanced the environment. The compound is an important component when considering housing as an investment in the economy of The Gambia. Long range planning should include the establishment of urban 'partnerships' with rural regions which are one of the sources for the 'urban-drift' of people and can be seen as one of the solutions that urban planning can use. Providing reasons for people to remain in their rural communities (i.e. provision of educational, medical and employment opportunities) will assist in reducing some of the need to migrate to the city.

4.3 Considerations

Sukuta and Lamin represent two locations within the Greater Banjul Area. They have some characteristics in common, both are divided by major roads, both are close to an active tourist area which brings both benefits and detractions, and both are experiencing agricultural land loss. These communities also have influences that are different, Sukuta is near an active quarry and Lamin is neighbour to a protected forest.

The problems found in each of these communities seem typical of the Greater Banjul Area and can be assisted by compound information (distribution, land use, densities, size etc.) Four areas of concern for the Greater Banjul Area are settlement of land disputes; reassigning property so that it fits in with good planning and roadways; installation of infrastructure; and reducing the loss of agriculture land.

Compounds can work with planning when in the case of the loss of agricultural land due to compound construction, the size of the plot is restricted and if in the case of proximity to watershed areas, agreements are held that ensure additional trees will be planted or replaced within the plot boundaries. Planning that ensures compound location and soil types are matched carefully will provide and maintain agricultural areas within the urban setting.

Compound distribution and density can be used to design efficient utility, infrastructure and public transportation routes. The transportation planning may overlap with concerns regarding agriculture where livestock are regularly moving throughout a community. Large empty compounds may require new land use designations and that certain roadways be specified as livestock routes.

The compound is an integral part of the urban and social fabric and as such needs to be included in the process of planning for short and long term time frames.

5.0 Conclusion

This thesis has examined the compound as a unit of settlement within the urban setting. The importance of traditional, cultural and social practices has been considered throughout the study. Three important considerations that are fundamental in any discussion of planning for the future in the The Gambia are the inevitability of urban growth, increasing urban population and decreasing natural resources.

Historically, within the Greater Banjul Area, urban growth is a recent phenomenon. As recently as 1972 development tended to follow the major road which passes in a north-south direction from Serrekunda to the coastal areas near Bakau. By 1986, however, extensive settlement areas had developed to the east and west along the length of the main road. In filling had occurred between villages formerly isolated from one another. By 1992, further growth continued in which undeveloped areas were obvious as narrow strips and isolated patches. The Atlantic Ocean and The Gambia River estuary restrict growth on two sides of the Greater Banjul Area. As a result urban expansion has again followed the main road to the interior moving the core of settlement inland and further away from the social and commercial heart of the region.

Undoubtedly, with continued increases in the urban population, existing small centers will enlarge, and urban areas will continue to attract individuals from the rural communities either for short term visits (journeys for health appointments,

licenses/deeds, employment/scholarship interviews) or for long term visits (medical treatment, job opportunity). Existing infrastructure will need some replacement and new infrastructure will need to be built. For The Gambia, attention needs to be placed on the hinterlands and the specific problems of drought related crop failures, lack of education and health services, and limited employment opportunities. Addressing the reasons that underlie why people migrate from rural to urban areas will provide a basis for the management of impacts and consequences in the urban areas that will experience the urban population increases.

Within the Greater Banjul Area the urban population increases have been rapid, reflecting the country's high annual growth rate (4.1% in 1993). The increase has not only been fast but it has also been uneven due to spatial constraints. Areas of the region have filled in and densification has been and still remains possible due to large compounds and a cultural system that promotes reliance on the extended family. The challenge will be to provide and maintain a healthy environment as the demand for essential resources such as clean water increases.

The Gambia is particularly vulnerable as its natural resources are modest to begin with (no significant local mineral or energy resources, soils that are nutrient poor) and rapidly depleting (deforestation). Finding ways to work efficiently with the small amounts of resources that are available, is one immediate course of action that urban dwellers can initiate and practice. Recycling products, water conservation, use of solar power rather than combustion fuels, all affect daily life and can be planned for and incorporated into urban living.

The compound is considered to be a settlement unit that through planning can be used in working toward managing urban growth. The compound has functional and geographic dimensions which permit it to assist planners in the area of documentation. In The Gambia and many developing countries the lack of baseline data delays effective and efficient planning decisions. Mapping compounds would obtain inventories of what services are present and / or needed , land ownership, etc.; would establish working relationships with members of the community and would begin to reduce the distance between the public and government bureaucracy.

Compounds that are involved with businesses, promote entrepreneurship, improve access to employment and thereby work with planning to diffuse commercial centers within the urban area. Management of the growth of a single commercial center should reduce the need for extended commuting and provide more efficient transportation planning decisions. Within the Greater Banjul Area, existing compound distribution can be used by planners to indicate where roadways are needed as well as to suggest changes within the urban capital. The relocation of some government Departments and Services out of Banjul and into the Serrekunda / Kanifing area has been suggested and is justified by compound densities and the spatial constraints now facing in the capital. Thus advanced planning for such a relocation could begin.

Management of urban growth requires shared and coordinated planning and the compound permits an action-oriented approach. Compounds can 'minimize'

the planning process by taking it from the 'large-scale', often found in Master Plan Documents, to the 'small scale' level found in the reality of a community's planning needs. Compounds 'disperse' part of the responsibility of planning to the citizen. The compound form and in particular the individuals within, can articulate and translate their ideas and needs into urban terms. Local urban responsibility will also communicate well to the rural setting which has an integral part to play in managing urban growth. Planning solutions can be formulated locally by local people on the basis of local experience and information. For The Gambian context this is vital where adult illiteracy is high (80% in 1990). Participation and visual demonstration of planning concepts will instruct and inform the public quickly and effectively.

Part of the challenge of planning is to better prepare the urban area for various types of changes and increases. Statistics (Figure 22: Land Area and Use for the World, Africa and The Gambia, 1981-1993.; Figure 23: Access to drinking water and sanitation in The Gambia, 1980-1995.; and Figure 24: Urban Indicators, 1975-2025 for the World, Africa and The Gambia.) emphasize the urgency and importance of planning policies for The Gambia. Policies should try to : 1) involve the groups of individuals who will be most affected by future urban areas and incorporate their knowledge and experience into policy development; 2) design plans for sustainable 'neighbourhoods' which will serve, when grouped together, as strong foundations for sustainable urban settings; 3) realize that the successful future of urban areas ultimately depends on the well being of the rural surroundings and therefore recognize that planning should be from the 'outside in' at the same time as

strengthening rural-urban partnerships; 4) establish land use patterns that work towards reducing transportation demands and in turn reduce environmental degradation .

It should be noted that this study examined a group of compounds that is widespread but is not the only type of compound present in the Greater Banjul Area. Conditions such as an overall increase in population, an increase in the demand on infrastructure, a shift in the involvement of tourism, an increase in the rate of rural migration, and a decrease in people's connection to the land will and are expected to change the compound and its relationship to a given urban setting. For this reason the observations reflect conditions that are different from those pertaining to large, single family compounds or overcrowded, city center compounds. The qualities and functions of compounds resulting from this study should therefore not be thought of as definitive lists, but rather as lists that were identified from a specific setting which in this case involved urban/peri-urban locations.

The group of compounds observed in Sukuta and Lamin represent a significant group. It is possibly the largest and most rapidly growing group at present, and is typical of peri-urban areas under going rapid urbanization. The compounds possess living space available for development, which smaller compounds do not often have and have yet to accumulate the social and physical consequences associated with congested living conditions. They still represent an early phase of the urbanization process. They also may prove to represent an

historical and disappearing place of importance for the compound in Gambian society, as urbanization impacts on the traditional role of the compound.

This study also offered an interpretation based upon peri-urban compounds and its observations and suggestions are the result of that framework. The role, significance and influence of compounds for planning varies depending upon the type of compound considered. The social dynamics and pressures would be different from those of a crowded urban setting such as Banjul or certain parts of Serrekunda. There compounds lack space for urban agriculture or individual privacy. In such situations the compound could be seen as a dwelling unit that does not meet the variety of needs of individuals. Lack of space contributes to a lack of adaptability, flexibility and enhancement, all potential qualities readily identified and present in the compounds in Sukuta and Lamin. Congestion within compounds leads to reduced privacy and interferes with social interactions of compound members. Some individuals may chose to spend more time away from such crowded environments and thus not take an active part in or be concerned about the well being of such neighbourhoods. This may be the direction that compound development takes in poorly planned developments that do not take into consideration some of the functions and qualities of the compound form.

In as much as this thesis argues that the compound system works well from a planning perspective and recognizes that as a settlement form, the compound has benefits, it also must be emphasized that the compound can, under certain conditions, weaken the level of individual involvement and increase the degree of

isolation within a neighbourhood. Compound walls, when high and constructed of solid concrete or cement blocks, isolate people from one another and from the surrounding street areas. It becomes easy to leave the street environment, enter a compound and close the door in the wall. Extending individual responsibilities to specific zones outside compound walls might be one policy recommendation that would reduce this tendency to neglect the street, public land and 'unclaimed' land.

Members of compounds must be convinced of the benefits of being concerned about and involved with processes that increase the well being of their compound surroundings and their neighbourhood as a whole. The commitment to 'stewardship' will have long lasting effects if it can be combined with and applied to the compound form and its various functions. For example, joint maintenance of walls, planting vegetation along streets, community composting projects and compound member involvement in monitoring road conditions are small ways that the compound can assist in preventing progressive deterioration of and isolation within neighbourhoods.

This study considered the compound in relation to availability of land. The future impact of the compound system in terms of land accessibility may have the potential to impact negatively on communities. Prior to recent legislative changes, families were able to participate collectively in ownership of land and be involved with the establishment of sometimes very extensive family compounds. The continuity of land possession was present within many communities. Today (1997), formal title and land leasing is poised to replace family and community leader

allocation. The transition of land ownership from a family / community-base to one of 'unrelated' individuals who can afford the price of one or more compounds, may contribute to shifting the 'connection to' and 'concern for' the land away from close knit community groups and towards financially endowed but emotionally unconcerned owners. Such a shift would be more strongly apparent in the peri-urban areas than in the city center regions found in Banjul where rural 'land' vistas have been absent for many years and throughout many generations. Compounds and associated land that are seen as an economic opportunity, either through selling or renting, rather than as long term family investments may actually work against community integrity. The compound as a commodity has the potential to weaken the 'sense of community' component vital to strong neighbourhoods.

Qualities and functions of compounds are found to be wide ranging and are expected to vary depending upon the type of compound and its location within the urban setting. With time, the compound along with its functions, qualities and role will undoubtedly undergo change as infrastructure arrives, modernization of basic amenities occurs or as for some areas densification continues and impoverished conditions intensify. As roads improve and individuals acquire cars, space within many compounds will have to be assigned for vehicle storage. With increased installations of televisions the importance and use of the central court yard area may diminish and compound and interior building space may under go design changes. The compound will be forced to adjust to the changing needs of people and their lifestyles.

The future of the compound is in question and will depend upon the African elite, foreigners, recently installed democratic government, municipal authorities and local communities. The rate of urban migration, degree of rural development, policies and practices will have an active part in determining the style of urban growth and development that takes place in The Gambia. Planning and planners will be challenged to be effective within this milieu. Part of the foreign trained planner's role in The Gambia will be to provide a portfolio of effective and ineffective planning experiences from around the world. Such experience documentation can serve as a guide to avoid or at least reduce repetition of 'mistakes'. Another part of their role will be to familiarize themselves with successful indigenous forms of development, particularly compounds and to integrate them into planning decisions. Planners trained in The Gambia will be able to combine their local knowledge with foreign data and arrive at appropriate planning decisions that will modify and modernize the compound form. Compounds are traditional, pervasive, and widely preferred as settlement forms. They do not have to remain static nor should they. Viewing them as a valuable resource, which is in place and available for planning to adapt and meaningfully integrate in new and creative ways, is the proposal of this thesis and the challenge offered to planning in The Gambia.

Figure 22: Land Area and Use for the World, Africa and The Gambia, 1981-1993.

LAND AREA AND USE, 1981-1993						
	LAND AREA	POP.DENSITY '95	CROPLAND	PERMANENT PASTURE	FOREST/WOODS	OTHER
	(000 hectares)	(per 1000)	(000 hectares)			
WORLD	13,098,404	436	1,450,834	3,364,537	4,168,956	4,114,077
AFRICA	2,963,611	246	187,357	853,049	760,576	1,162,630
GAMBIA	1,000	1,118	180	90	280	450

(Adapted from World Resources, 1996-1997. Oxford University Press. New York. 1996)

Figure 23: Access to drinking water and sanitation in The Gambia, 1980-1995.

ACCESS TO SAFE DRINKING H ₂ O & SANITATION, 1980-1995											
	ACCESS SAFE DRINKING %		ACCESS SANITATION %		URBAN HOUSEHOLD ACCESS SAFE DRINKING H ₂ O			URBAN HOUSEHOLD ACCESS SANITATION SERVICES			
	Urban	Rural	Urban	Rural	Yard Pipe	Standing Pipe (Public)	Borehole & Pump	House to Sewer	Septic System	Wet Latrine	Other
GAMBIA	91.6	50.8	50.0	29.0	42.0	50.0	0.0	11.0	17.0	0.0	23.0

(Adapted from World Resources, 1996-1997. Oxford University Press. New York. 1996)

+ Access to safe drinking water: This definition is based upon the WHO definition which in an urban area is access to piped water or public standpipe within 200 meters of a dwelling or housing unit. For rural areas, reasonable access implies that a family member need not spend a 'disproportionate' part of the day fetching water.

++ Access sanitation: This definition is based upon the WHO definition which in urban areas is defined as urban populations served by connections to public sewers or household systems such as pit latrines, pour-flush latrines, septic tanks, and communal toilets. For rural areas access to sanitation is defined as those with adequate disposal such as pit privies and pour-flush latrines.

Figure 24: Urban Indicators, 1975-2025 for the World, Africa and The Gambia.

URBAN INDICATORS, 1975-2025										
	URBAN POPULATION (000)			PERCENT URBAN			URBAN GROWTH RATE	RURAL GROWTH RATE	DEPENDENCY RATIO (age <15yr & > 65yr)	
	'75	'95	2025	'75	'95	2025	'90-'95	'90-'95	URBAN	RURAL
WORLD	1,538,346	2,584,454	5,065,334	38	45	61	2.5	0.8	X	X
AFRICA	104, 123	250,276	804,239	25	34	54	4.4	2.0	X	X
GAMBIA	91	286	1,022	17	26	49	6.2	3.1	47	47

(Adapted from World Resources, 1996-1997. Oxford University Press. New York. 1996)

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