PLANNING FOR UNCONTROLLED SETTLEMENTS IN MBABANE: WITH SPECIAL REFERENCE TO SIDWASHINI

by

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THIS THESIS IS MY ORIGINAL WORK AND HAS NOT BEEN PRESENTED FOR A DEGREE IN ANY OTHER UNIVERSITY

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ABSTRACT

The development and spread of uncontrolled settlements is part and parcel of the unprecedented rate of urbanization currently sweeping across all developing countries. The growth of urban population, in turn, is tied to the phenomenon of rural-urban migration which many nations have accepted as an irreversible process.

The kingdom of Swaziland is caught up in the same situation. Its rural population is flocking to the main towns, especially to Mbabane at rates unprecedented in the short history of urbanization in the country. Almost without exception these rural migrants find their way to uncontrolled settlements.

The government has recognised the need to solve the problems of uncontrolled development and has in the past taken some measures to curb further squatting and bring improvements to these areas. However, the problems have been viewed as being of a technical nature and efforts to resolve them have been concentrated on finding new methods of reducing the cost of housing without lowering established standards. The problem is seen as the lack of sufficient quantities of standard modern housing units and lack of financial resources to provide them. This approach has obviously shortcomings and has met with limited success.

This study, thus addresses itself to the question of what the country's objectives should be with regard to the improvement of uncontrolled settlements and what approaches should be taken to realise those objectives.

The study holds the view that if measures for the improvement of uncontrolled settlements are to be successful, they must be based on a comprehensive view of the factors responsible for uncontrolled development, the constraints to improvement and the opportunities available for bringing about positive change.

The study has thus taken into account these factors and has made modest and hopefully, realistic recommendations regarding the approach that should be adopted toward uncontrolled development.

The study basically recommends the adoption of policies at the national level aimed at (i) arresting the problem at its source, (ii) guiding the efforts of those already in town and (iii) providing a framework within which all squatter improvement projects should be formulated. It also recommends a shift from the approach of providing finished units to that of providing infrastrural services to the settlements and the letting the people improve their housing gradually as their incomes increase. The role of government is recommended to be that of providing

the people with what they cannot provide for themselves - and assisting them in helping themselves.

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1.0 CHAPTER I - INTRODUCTION

1.1 THE PROBLEM AND ITS SIGNIFICANCE

Mbabane the capital town of the Kingdom of Swaziland has over 15,000 or over 50% of its total population in squatter settlements which are characterised by uncontrolled development, lack of urban services and substandard housing. If the present rate of growth (7.0% per annum) continues, the population of squatters will be 29,500 by 1988 representing a solid 60% of the total for Mbabane in the same year.

The task of housing the present population and even more the generations to follow, presents a monumental challenge. In Swaziland scarcely a beginning has been made in meeting this challenge. In the meantime the areas over which physical planners have no control continue to expand, insanitary dwellings continue to be built, the areas of town lacking in basic urban services such as portable water, facilities for the disposal of human and solid waste, and access roads expand at an alarming rate.

The absence of facilities for the disposal of excreta and solid wastes, the lack of potable water supply and the prevalence of poor housing as measured by overcrowding and lack of basic sanitation all pose serious health hazards both for the squatter population and the rest of the town population. The particular health hazards associated with each one of these are

well documented (Novick, 1976).

In addition to the health problems that squatter settlement cause there are some they are likely to cause if concrete steps are not taken to improve their condition and curb further squatting. The seizure of private property challenges the status of government as an agent for maintining law and order. This will in the long run decrease the confidence of land owners in the government's ability to protect their property. The value of the public and individual's confidence in their government cannot be over-emphasised.

The present wave of squatting on private property also disrupts the orderly development of the town. Land occupied by squatters may not be put to uses sanctioned by official plans on humanitarian considerations. This is a very significant aspect of the problem in Mbabane.

The existence of a large portion of the population in poor environmental conditions is socially undesirable and from a political point of view a potential source of instability.

The problem of squatter settlements thus deserves special attention which should be given at the earliest opportunity. However, the tackling of the problem on the basis of what it might lead into

without due consideration of its causes would turn out to be a futile exercise.

The main cause of squatting was identified more than a decade ago as the great increase in national population and the surge of people towards urban areas (Abrams, 1966). This phenomena lies at the core of the problem. The problem itself is aggravated by the country's incapacity to meet the needs of this unprecedented rate of urban growth by providing the land and housing needed to accommodate the rural - urban migrants (Abrams, 1966).

The Kingdom of Swaziland has a population of 492,559 growing at an average rate of 2.8% per annum. Its population at the turn of the century is expected to be just over a million (Rivkin Report, 1978).

The present urban population on the other hand is estimated to be 67,760 or 14% of the total population. In 1946 only 0.4% of the nation's population lived in urban centres and in the year 2,000 the proportion will have increased to 40% (Jones, 1966; UN, 1976).

A secondary cause of squatter settlements in Swaziland is the poor urban structure characterised by primacy. The largest town Mbabane has a population twice that of its nearest rival - Manzini. Manzini in turn has a population which is more than $1\frac{1}{2}$ times its nearest rival. The two towns account for 54% of

the country's urban population (Table 1.1). Whereas these two are growing at high rates the small towns are registering little if any growth. This tendency has led to a situation where the small centres are relatively free of squatters and the main towns are approaching the stage where squatter populations will outnumber those in the controlled areas of town. It is encouraging to note that the government has recognised the need to bring about a balanced growth of the urban centres. This recognition was expressed in the Second National Development Plan thus:-

> Government is aware of the need to guard against undue concentration of limited financial resources in the two urban centres of Mbabane and Manzini. It is important that the smaller towns in the districts should also be improved as urban centres (p.21).

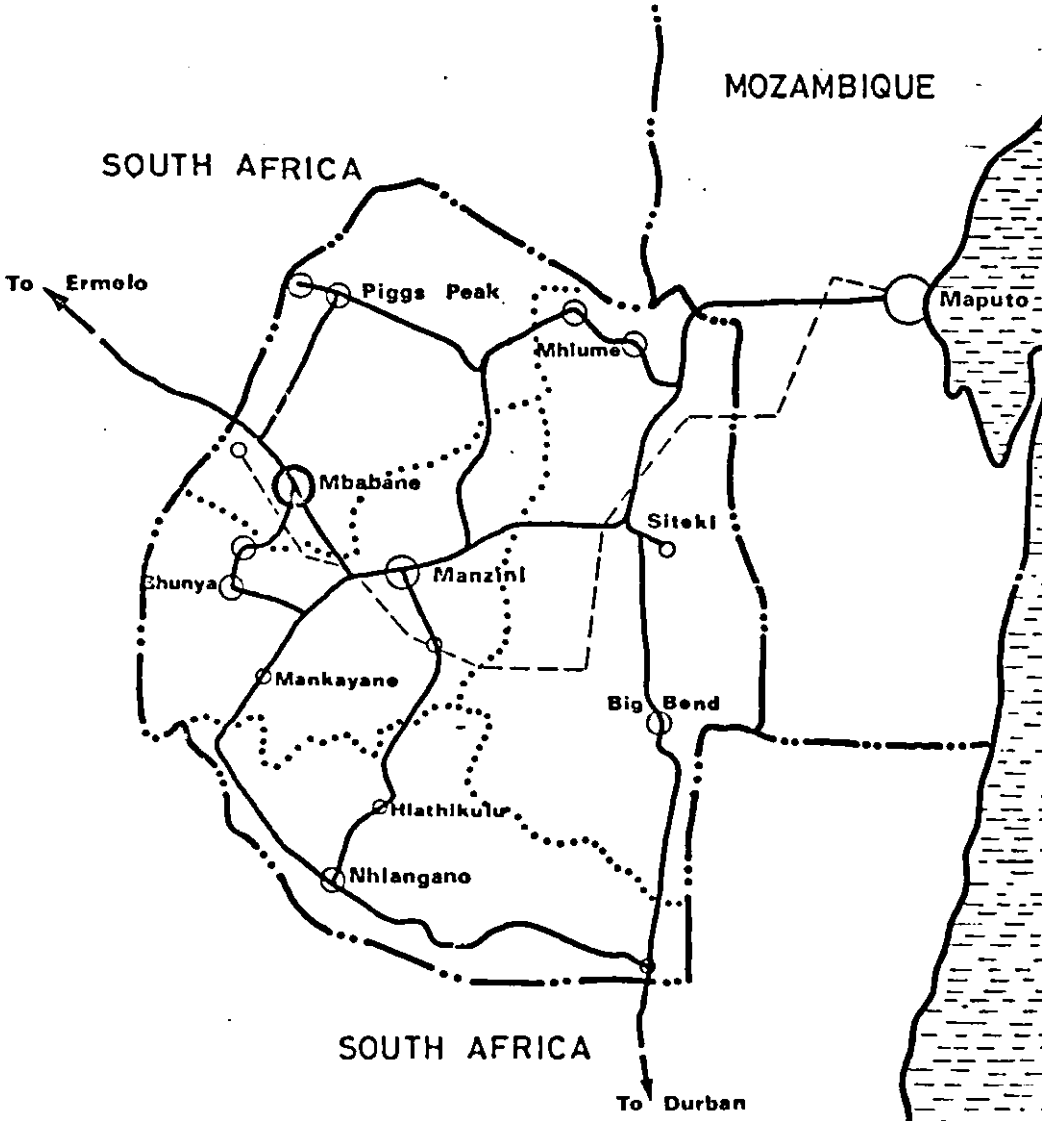
TABLE 1.1 A HIERARCHY OF URBAN CENTRES IN SWAZILAND IN RANK ORDER - 1978

TYPE OF SETTLEMENT	1978 POPULATION (Estimates)
TOWNS	
1 Mbabane	25,600
2 Manzini	11,100
3 Bhunya/Mhlambanyatsi	6,000
4 Havelock	4,900
5 Mhlume	4,400
6 Tshaneni	3,160
7 Piggs Peak	2,390
8 Nhalangano	2,230
9 Big Bend	2,080
URBAN VILLAGES[1]	
10 Sidvokodvo	1,710
11 Siteki	1,360
12 Hlathikhulu	1,220
13 Lavumisa	820
14 Mankayane	700
TOTAL URBAN POPULATION[2]	67,760

SOURCE: Swaziland Shelter Sector Assessment Study

NOTES: 1. Localities proclaimed urban

2. Does not include population of peri-urban settlements.



MBABANE UNCONTROLLED SETTLEMENTS STUDY

EXISTING URBAN STRUCTURE-1978

LEGEND

- INTERNATIONAL BOUNDARY
- DISTRIST BOUNDARY
- MAIN ROADS
- RAILWAY

- CAPITAL TOWN
- MAJOR TOWN
- MINOR TOWNS
- URBAN VILLAGES

SCALE 1:1000000

0 20 40 60 80km

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Map Nº 1

Since this awareness was reached and the commitment was made, little has been done in the form of improving the smaller towns.

While the government has not addressed itself to the question of whether the 2.8% annual rate of population growth constitutes a national problem, it has taken some action to stop further squatting and carried out some projects aimed at improving the conditions in established uncontrolled settlements.

1.2 PAST APPROACHES TO THE PROBLEM

The first major step taken to curb uncontrolled development in Mbabane was taken in 1964 when the Crown Lands (Temporary Occupation) Proclamation was enacted. This piece of legislation called for the registration of all squatters on government land. It further required registered squatters to seek the permission of the District Commissioner to either extend an existing building or construct a new one. Registered squatters were required to secure upon the payment of E2.00 a Temporary Occupation permit which would be renewable yearly upon the payment of the same amount. Replacement permits issued to those whose houses were dilapidated beyond repair would be issued free but with the understanding that "in the event of any development coming into force at any time requiring owners of homesteads to demolish, no compensation will be payable to the holder" (see Appendix I).

What this legislation did in essence was to stop further squatting on government land and introduce minimal control on development on already established settlements. It also effectively discouraged squatters from building permanent houses.

Although technically speaking the government had the right to evict squatters from public land when it became ripe for development, this has not been exercised.

For instance when the northward expansion of the town reached the Sidwashini South squatter settlement, the squatters were neither bulldozed nor asked to "go back to the land". Instead the land was subdivided and the registered homestead owners were given priority in buying the plots on which their homes were erected. Those who did not have, or could not raise enough money to buy the plots were given permits to squat in Sidwashini North (The Study Area). It is worthy of note that this otherwise commendable exercise did not take into account the tenants. These people who comprise a significant proportion, and in some cases the majority, of squatter settlements were completely ignored and they had to look for accommodation elsewhere. It is generally believed that these displaced people in desperation invaded the farm of an absentee landowner and started the Nkwalini squatter settlement.

Another attempt to improve the condition of squatters is currently being executed in Msunduza - the largest and oldest settlement in Mbabane. This project carried out as part of the Low Cost Housing Demonstration programme by the Housing Unit, envisaged the progressive reallocation of households such that when they move into newly completed units, the houses they evacuated would be demolished and new low cost units would be built on the site. The low cost prototypes ranging in size from an expandable sanitary

core to four bedroom units are built by the people themselves on an aided self-help basis. This process is expected to continue until all the developable land occupied by squatters in Msunduza is developed.

This exercise, commendable as it is as a first major attempt by the government to help squatters meet their housing needs, is not likely to make a significant impact on the problem. This is due to the fact that this exercise is not part of any strategy developed to deal with the problem of uncontrolled settlements in a comprehensive manner. For example, the exercise is not supported by any measures against squatting in other parts of town. In fact it is carried out at the same time that illegal construction of houses is being carried out in Nkwalini without any intervention. It is also being carried out without any supporting measures aimed at reducing the rate of rural-urban migration.

It is clear, therefore, that the government is committed to helping the squatters but it is just as apparent that the 'ad hoc' manner in which the problem has been approached is inappropriate and has little scope for success. This is not meant to be a critical analysis of the projects carried out or being executed - such an exercise is beyond the scope of this study - but rather an attempt to highlight the need for a more comprehensive approach to the problem.

1.3 STUDY OBJECTIVES

The main objectives of the study are basically (i) to reveal the present state of uncontrolled development in Mbabane and the level of environmental degradation in uncontrolled settlements, (ii) to make recommendations on what should be done in order to improve the present conditions and (iii) to prepare a development plan for one of the uncontrolled settlements - as an illustration of how the recommendations can be effectuated.

The study thus addresses itself to the question of what the country's objectives should be with regard to the improvement of uncontrolled settlements, what areas of investment should receive top priority and what strategies for accomplishing these objectives should be pursued.

Supplementary objectives of the study include the presentation of information on squatter settlements in Mbabane which will be useful both as raw data for current planning and eventually as bench marks against which subsequent change would be evaluated. It is also hoped that this study will raise the level of awareness of the problems of uncontrolled development on the part of policy makers to the point where it would spark a chain reaction of improvements th ughout the country.

1.4 STUDY SCOPE AND LIMITATIONS

Because of the complex nature of the problems associated with uncontrolled settlement, considerations underlying the formulation of policies relating to them are many and varied. They range from the causes behind the formulation of the settlements on one end to the consequences of pursuing a given set of policies on the other.

Much as it would be useful to take all considerations into full account, such an exercise would take quite a lot of time and other resources. This study does not go deeply into each one of the considerations but points out the significant aspects of the important ones and indicates the parts they play in the creation, perpetuation and/or their contribution to the elimination of the problem. Such significant aspects of the problem as land, its supply and ownership are covered, the housing finance institutions' eligibility requirements and mortgage loan conditions are reviewed and so are the present building regulations and standards.

The study covers the environmental and physical characteristics of all uncontrolled settlements. Its coverage of the socio-economic characteristics of the squatters is limited to Sidwashini only. Time and financial resources limitations did not allow the coverage of all settlements in this aspect.

Because of this lack of socio-economic data on all the uncontrolled settlements the recommendations relating to them are necessarily broad and general. However, with respect to Sidwashini for which both physical and socio-economic data is available, the recommendations are very specific.

The failure to contact some household heads especially tenants, in spite of repeated visits was a serious limitation during the interview stage of the study. The absence of up-dated maps of the uncontrolled settlements is another limitation of major significance. The available maps are based on 1971 aerial photographs and do not reflect the present level of development in these areas.

1.5 METHODOLOGY

The survey stage of the study was carried out in July, August and September 1978 in six uncontrolled settlements of Mbabane namely Fonteyn, Msunduza, Mangwaneni, Mvakwelitshe, Nkwalini and Sidwashini.

The first phase of the survey aimed at finding out the general characteristics of the settlements. The understanding of these characteristics was considered important in determining the policy and programme recommendations. Particular attention was given to those characteristics which determine each settlement's potential for upgrading.

The size and density of a settlement were considered as one such factor. It was recognised that all things being equal, the cost of upgrading increase with size and density of a settlement. Also high density settlements present problems of not only determining which structures to demolish to give way for public utilities and community facilities but also of deciding which household should be relocated.

Because of the absence of definite boundaries to settlements the values assigned to the area of each should be considered as estimates. The number of dwelling units in determining dwelling densities were supplied by the District Commissioner's office. They are likely to be underestimates because of dwellings put up without the approval or knowledge

of the D.C.

The population of each settlement is estimat
basis of the Study Area's (sidwashini) dwell
occupancy rate in the following manner:-

$$Pn = Dn \times DOR$$

where Pn = Population of settlement (n)

Dn = Number of dwelling units in settl

DOR = Dwelling occupancyrate in Sidwash

The settlements were then classified on the
their sizes and densities.

Location and access in another element of an
uncontrolled settlement which determines its
for upgrading. The location in absolute dist
and in terms of relative place is a very impo
consideration in so far as it determines the
access to work places, shopping facilities ar
public facilities. The availability of an ef
bus service determines the accessibility whil
absolute distance and fares determine the pro
of the squatters' meager income that will cov
transportation costs.

The settlements were classified as near, far
far on the basis of their distance from the t
centre and very accessible or poorly accessib
basis of the bus service in operation.

The availability of sources of potable water, facilities for human and solid waste disposal and access roads was considered essential for all settlements. The degree to which these basic services were lacking was given special attention. The ease or difficulty with which each settlement could be provided with these was noted since it would determine the potential for upgrading and improvement.

Settlements were classified as seriously inadequate, somewhat inadequate and somewhat adequate on the basis of the services found to be available.

The last major characteristic of the uncontrolled settlements given special attention in the surveys was housing conditions. With respect to this aspect, the main aim was to determine the degree to which the housing stock in the uncontrolled settlements is improvable to meet sanitation and safety requirements. As such the materials used for the walls, roofs and the floor were noted and on their basis the dwellings were classified as durable and non-durable.

Other aspects of the uncontrolled settlements covered during this first stage of the survey were their potential for development on the basis of the topography of the land they occupy and the overall environmental condition of the communities, i.e., whether one was relatively well ordered or somewhat deteriorated.

This survey was carried out through field onservations with the help of topographic maps of the areas. In the case of Sidwashini the survey was even more detailed and included the updating of the existing maps of the area.

The second phase of the survey focused on Sidwashini - the Study Area where attention was now turned on the people themselves. Their demographic characteristics as well as their economic status were the objects of primary focus. Other aspects of the population which were considered were its stability and commitment to urban living and priorities.

This phase of the survey was carried out by an administered questionnaire. The interviews were carried out in the evenings and on weekends. A major problem was to find the heads of households at home, especially the one person households who generally do not come home immediately after work. Over the weekend, the problem persisted due mainly to the fact that many tenants went back home. However, successful contacts were made with 90% of the owner household heads (landlords) and 50% of the tenants.

The remainder of the data used in this report was gathered from secondary sources of data - mainly the Swaziland Shelter Sector Assessment (Rivkin,1978) and through interviews with government officials and officials of finance institutions. Valuable

information was also gathered from informal discussions with the inhabitants of the uncontrolled settlements during the first and second phase of the survey.

CHAPTER II - ENVIRONMENTAL SETTING

2.1. MBABANE - THE NATIONAL CAPITAL

The town of Mbabane lies at the top of the Malagwane hills at an altitude of 1,140 metres. It covers 92 square kilometres of rugged terrain only a small portion of which is developable. The town's 1978 population was estimated to be 25,600. If the population of squatters situated just outside the municipal boundaries is taken into account the figure goes up to 29,750 (Rivkin, 1978) for administrative and other purposes the lower figure is used but for planning purposes the higher one is more appropriate and is the one that shall be used throughout this report.

The town's population is growing at an annual rate of 7.0% which is slightly higher than the average for all urban centres (5.9%) and more than two times that of the national average (2.8%).

If the 1978 population of 29,750 is projected at the 7.0% growth rate it is found that the capital town will have a population of 58,500 in 1988 and that of 131,800 by the turn of the century. This indicates that within the next twenty years the town will have a population which is more than three times the present one. This implies the more than trebling of the needs for employment, housing, educational facilities, health facilities and other requirements for life and human

dignity which are at present not adequately met. What is even more important to realise is that the demand for these public services will be generated to a large extent by people who do not have the means to pay for them.

Because of the towns location on top of the hills, it has definite limits to growth. The town has a very limited supply of land available for accommodating the amount of development required to serve the projected population. According to the Rivkin Report Mbabane has only 422.25 hectares of developable land left within its present boundary. 119.25 hectares (28%) of this land is owned by the government which the remainder is held on freehold tenure by private developers (1978, p. iv.53) expanding the supply of land through boundary extensions is severely restricted by the topography (See Map 1).

Mbabane offers very few alternatives for shelter to its residents. Residential plots if and when they are offered for sale by private developers are very expensive (Plate 2).

The smallest plots ($\pm\frac{1}{4}$ acre) at Thembelihle Township cost E3,000 to those able to pay a deposit of E500 and E48.00 monthly instalments. These plots are well beyond the ability of the low income to afford. The lack of capital for servicing the existing parcels of land owned by the government is a limiting factor to

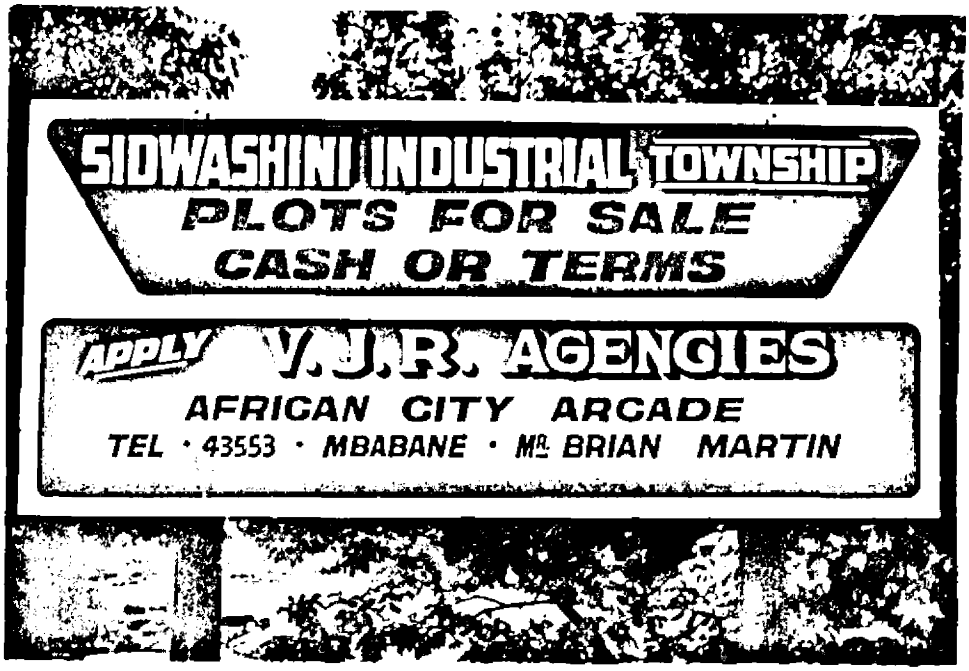


PLATE 1: INDUSTRIAL PLOTS FOR SALE - GOOD NEWS FOR THE UN-EMPLOYED

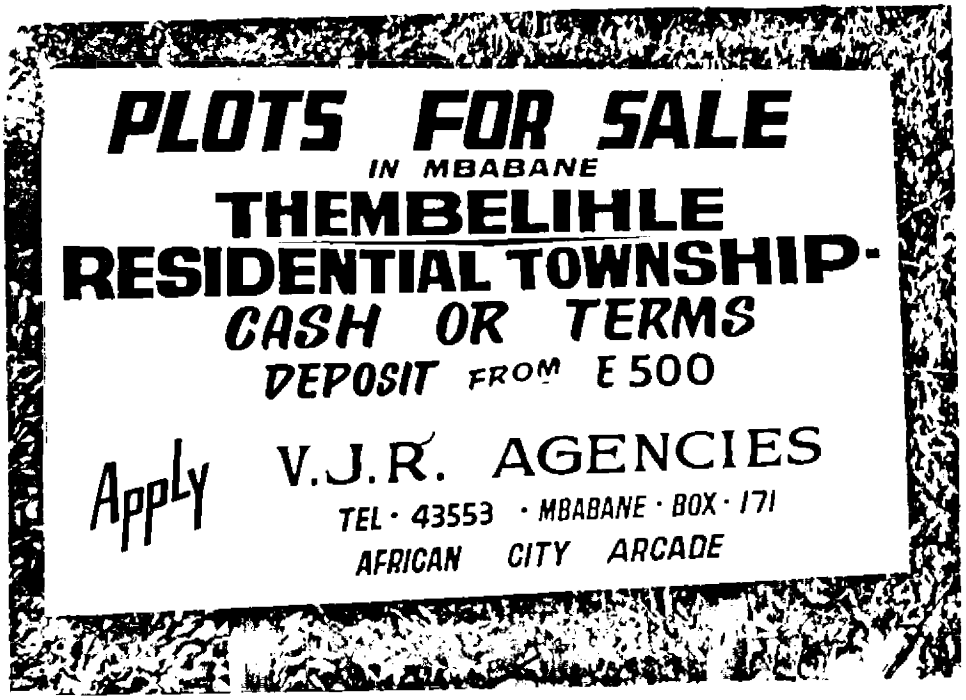


PLATE 2: RESIDENTIAL PLOTS FOR SALE - THEIR PRICES ARE TOO HIGH FOR THE POOR TO AFFORD

the supply of this land for housing.

Private sector rental is scarce even for those families that can afford the high rents. The government rents a significant portion of these units and sub-lets them to its employees at subsidized rates. The Industrial Housing Company was formed in 1973 and over the 5 years of its existence has built 208 flats in Mbabane for rent. In spite of the relatively high rents it charges (E35.00 and over). Its waiting list at the end of 1978 was reported to be 5,708 (Swaziland Today, 1978).

The private sector produces housing at an average rate (1972-1976) of 88 units per annum, a fairly low rate compared to that of household formation which is well over 500 per annum.

Mass housing production is presently done by the Housing Unit on an experimental basis. The unit formed in 1975 has produced less than 100 low-cost prototypes and has been given the green light to produce some more. It can be hoped that the rate of production can be speeded up as the Unit gains more experience.

In light of the above it can be seen that the housing situation in Mbabane is bad and is likely to get worse if the rate of population growth continues to outstrip that of housing production. It is also in appreciation of the above-mentioned housing alternatives.

that the plight of the low-income families should be seen. For these faimilies the only option open to them is to squat on private property or rent a room or two in already established squatter settlements. The latter option is increasingly being taken by middle income families and individuals who cannot secure accommodation in the formal housing sector.

This situation of limited housing options had contributed to the problem of overcrowding in already built up uncontrolled settlements.

2.2. HISTORICAL DEVELOPMENT OF UNCONTROLLED SETTLEMENTS

There is little evidence indicating that squatting in Mbabane became a problem until the early 60's. One reason for this is that before then only a small proportion of the urban population was African. The 1956 census returns indicated that only 1.4% of the country's African population lived in urban areas (Jones, 1966).

Secondly, the number of rural immigrants was so small that the government was unable to provide enough new plots to keep up with demand. It is important to note that these plots were not surveyed and thus had no definite boundaries. In most cases they were made available from marginal public land or on land adjacent to already established settlements.

Initially the rural people were attracted to Mbabane by the discovery and subsequent mining of tin. These immigrants formed the first generation of squatters who were to be followed later by others who came after the tin mines had closed. This latter group came in search of jobs in the modern sector of the growing town. They too were allocated plots on which they could build their homes, grow crops and keep their livestock. Given the low level of development in the town itself and the uncontrolled settlement, these plots were offered rather generously.

This pattern of uncontrolled settlements development continued until 1964 when the Crown Lands (Temporary Occupancy) Proclamation was enacted.

This Proclamation was enacted as a legal tool by which further squatting on government land and developments within existing squatter areas would be controlled. The implementating agency for this legislation was identified as the office of the District Commissioner.

Under the provisions of this legislation the number of homesteads (plots) on government land and the number of buildings on each were counted and registered. Each homestead was then assigned an identity number. Through this exercise the District Commissioner was able to establish the number of homesteads and the number

of houses in uncontrolled settlements.

The legislation provided that henceforth squatters would be required to secure the permission of the D.C. to build additional houses, to replace dilapidated ones or to extend already existing ones. They were further required to secure Temporary Occupancy Permits to remain on government land. These permits would be issued to bona fide owners of homesteads upon the payment of E2.00. These permits would be renewable yearly upon the payment of same amount.

This permit in essence gives each holder the right to remain on government land for one year and the right to use that land subject to the conditions specified on the permit (Appendix 2).

This piece of legislation represents the only legal instrument through which the D.C. controls development within squatters. Since the introduction of this legislation further growth can be accounted for in several ways.

Firstly, it can be accounted for by loopholes within the legislation. The legislation did not specify the criterion to be used in approving or rejecting application for the extension of existing houses or for building new ones. Homestead owners have learnt over the years to come up with the most justifiable ground for submitting applications. The most popular justification is that their children have

grown up and they need seprate rooms or houses. In this manner scores of houses have been built and extended to accommodate the evergrowing numbers of immigrants whose chances of building their homes on government land were effectively cut off by the 1964 Proclamation.

Secondly, the number of squatters has increased due to squatting on private property. Squatters on private property can be divided into two categories: the first one being that of people who settled on marginal land left over after the development of private townships. The owners of the land did not bother to evict the squatters because the land was not good for any type of development anyway. Fonteyn is an example of such a squatter area.

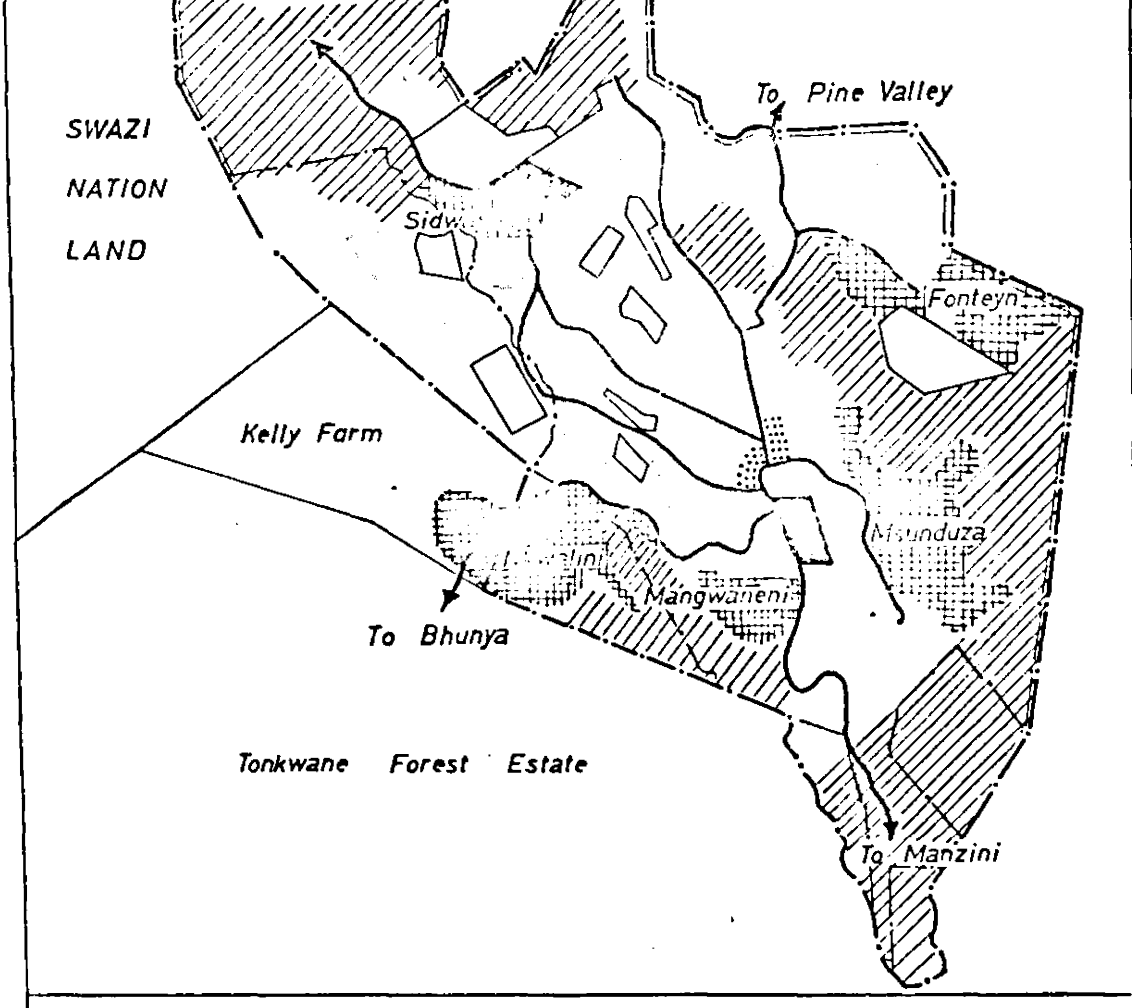
The second category of squatters on private land is that of people who settled on prime land which had been idle for a number of years.

Presently there is only one such squatter area in Mbabane - Nkwalini. This is one uncontrolled settlement which is inhabited by true 'squatters'. Although the date of its establishment is not clear, this settlement is the very latest in the town and the only one which is growing both in population and in area.

It is located on the western edge of the town on a

privately owned piece of land 900 hectares in size called Kelly's Farm. Although only a small portion of the farm is presently occupied by the squatters, the rate at which development is taking place is very high.

At the time of writing more and more houses were coming up with no intervention from either the government or the owners of the land.



MBABANE UNCONTROLLED SETTLEMENTS STUDY

MBABANE URBAN AREA

LEGEND

- Developed Area
- Present Industrial Area
- Future Industrial Area
- Commercial Centre
- Uncontrolled Settlements
- Undevelopable Land
- Open Developable Land
- Urban Planning Area Boundary
- Mbabane Town Boundary

Source: Rivkin Report

0 2 4 Km

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Map No 2

CHAPTER III - CHARACTERISTICS OF THE UNCONTROLLED SETTLEMENTS

3.1. MSUNDUZA

Msunduza is the largest and oldest uncontrolled settlement in Mbabane. It covers an area of about 60 hectares and has a population estimated to be 7,600.

The settlement is located near both the centre of town and the industrial area. The furthest point of the settlement lies about 3 kilometres from the town centre while some areas of it lie within 1 kilometre. The settlement is also quite accessible. It is served by a public transport service which operates between 5.30 a.m. to 10.00 p.m.

The housing conditions in the settlement are very poor. The houses are not only made of wattle and daub but are poorly maintained. In some areas the houses are clustered together almost wall to wall with little room for expansion (Map 3).

The entire settlement is served by four water standpipes. Many residents travel one Km. to reach one. Sanitation is minimal. There are only six public toilets in the settlement serving a small percentage of the population. The remainder is served by poorly contructed pit latrines which are not only a health hazard but are not safe for children to use. Shallow pits usually dug adjacent to the pit latrines are used for waste disposal. The overall condition of

the shelter and these facilities are so poor that Msunduza may be justifiably called a slum.

The settlement is, however, relatively well served with community facilities. It has convenience shops, bars, butcheries, a market, a community hall and a sports ground. Within walking distance are found primary schools (Map 3.).

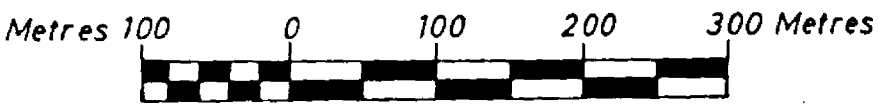
As can be seen from the map, much of the settlement is located on marginal land characterized by steep slopes and rock outcrops. This aspect of it plus the high density limits its potential for upgrading and will certainly raise the costs of improving the settlement.

Msunduza

LEGEND

SG	SPORTS GROUND
SH	SOCIAL HALL
PS	PRIMARY SCHOOL
	SELF - HELP HOUSING

SCALE 1:5000



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Map Nº
3

3.2. FONTEYN

Fonteyn is the second largest settlement. It has a population of 2,433 spread over a wide area. The extent of the settlement is difficult to establish because of its non-contiguous nature. Clusters of 'rural-type' homesteads are scattered over the rocky and hilly terrain of the settlement. Small clusters of dwellings are found on patches of land which were left over when the private township of Fonteyn was established. Some homes are set up behind huge boulders (Plate 3) while others are so detached from the others that providing them with services would present formidable problems.

In terms of location and accessibility, the settlement is 4 kilometres from the town centre and is served by a half hourly public transport service which does not operate after 6.30 p.m. The area is thus not only far but poorly accessible.

The low density of development in the area gives Fonteyn an advantage over Maunduza in terms of the quality of the evironment. Although the houses are of temporary material, they are spaced well between each other and are well maintained.

Given the rural nature of the settlement, it is hardly surprising that it lacks all the basic urban services. The area is not served by any standpipes. The population depends on untreated streams and wells for

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In terms of location and accessibility, the settlement is 4 kilometres from the town centre and is served by a half hourly public transport service which does not operate after 6.00 p.m. The area is thus not only far but poorly accessible.

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Given the rural nature of the settlement, it is hardly surprising that it lacks all the basic urban services. The area is not served by any standpipes. The population depends on untreated streams and wells for

its water supply. For the disposal of human waste pit latrines are widely used though the possibilities of the open being used may not be ruled out. The pit latrine system of disposal in this settlement poses no immediate danger to the population and maybe considered adequate. Many households have garbage disposal pits but some pile their waste outside their yards and burn it.

Apart from one primary school and a bottle store, Fonteyn has no community facilities. The scattered nature of the settlement renders the provision of such facilities a special problem for this settlement.

Because of the hilly and rocky nature of this settlement the provision of access roads and other public utilities would be quite costly.

PLATE 3: HOME AMONG THE ROCKS MARGINAL LAND LEFT OVER WHEN TOWNSHIP IN BACKGROUND WAS ESTABLISHED.

PLATE 4: UNCONTROLLED DEVELOPMENT ON MARGINAL LAND

3.3 MANGWANENI

This settlement is unique in one respect. It is the only one on Swazi Nation Land. It has a population of 1,300 spread over an area of approximately 12 hectares. A large part of this settlement is taken up by steep slopes and valleys (Map 4). Although the density of development shown on the map is quite low, the present density is estimated to be 33 units per hectare (Rivkin Report, 1978).

Mangwaneni is located within 2 kilometres of the town centre and within walking distance of the industrial area. There are no buses serving the settlement directly but several buses passing to the east of the settlement give the population access to other parts of town.

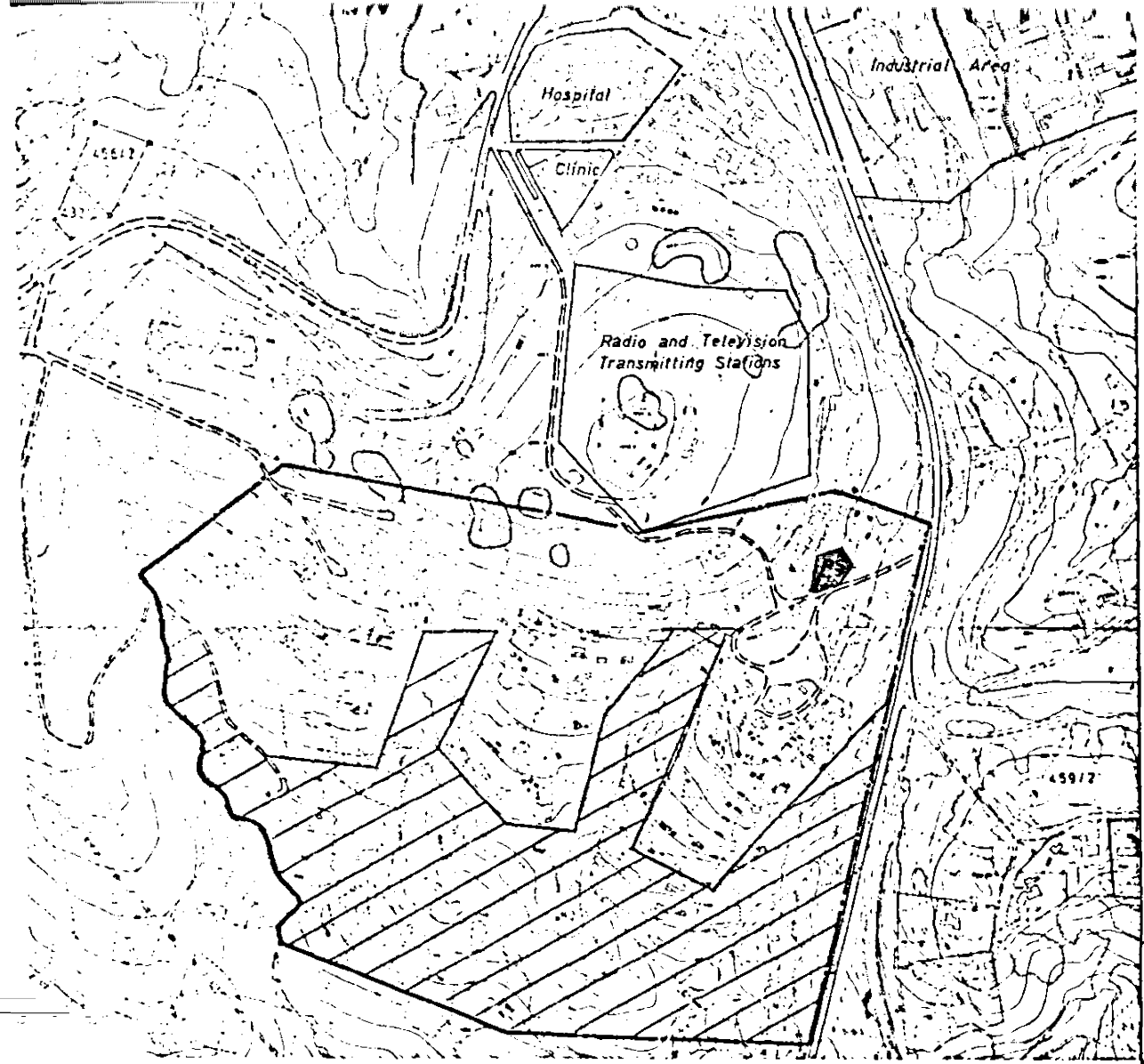
The community is provided with potable water supply but many families have to walk half a kilometre or more to fetch water. The population provides itself with facilities for the disposal of excreta and solid waste.

The housing conditions are generally very poor. The temporary building materials used have little room for improvement. They are structurally unstable and receive little maintenance.

Apart from a few convenience shops and a primary school, Mangwaneni has no community facilities, the

population has to rely on those located outside the community.

The settlement has considerable scope for improvement in spite of its terrain. Access roads and water supply can be introduced into the community at reasonable costs. However, the introduction of water-borne sewerage into this area would be quite expensive.



mangwaneni

LEGEND

- AREA BOUNDARY
- TARRED ROADS
- UNTARRED ROADS
- PS — PRIMARY SCHOOL
- DEVELOPABLE LAND
- MARGINAL LAND

SOURCE:
SURVEYOR GENERAL'S OFFICE

NOTE:
MAP IS BASED ON AERIAL PHOTOGRAPHY OF SEPT. 1971

Scale 1:5000

0 100 200 300 400 Metres

Ebabane Uncontrolled Settlements Study

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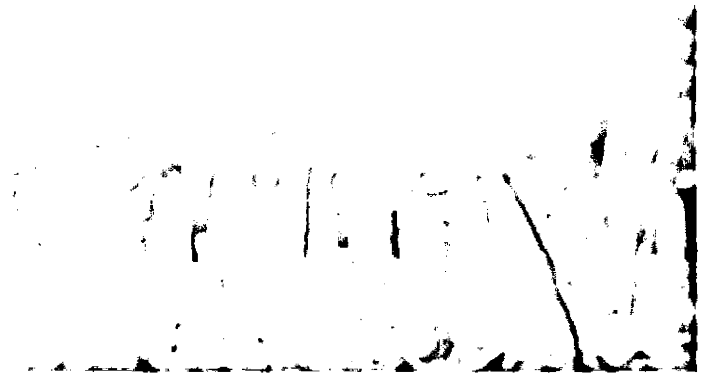
DEPARTMENT OF URBAN AND REGIONAL PLANNING
M.A. (PLANNING) 1978-79

Map NO 4

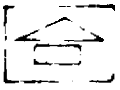
PLATE 5: MVAKWELITSHE; NOTE QUALITY OF HOUSING AND LOW DENSITY OF DEVELOPMENT



Nkwalini

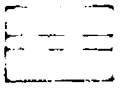
LEGEND

Developed Area

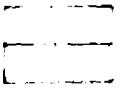


Direction of Squatting

Water Reservoir

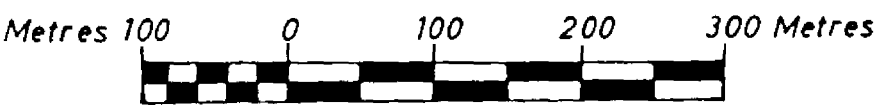


Gravel Roads



Town Boundary

SCALE 1:5000



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Map No
5

Other than a few convenience shops which sell a limited range of goods, Nkwalini in spite of its size, does not have community facilities. The uncertainty surrounding the future of this settlement is responsible to a large extent for this situation.

The topography on much of the land presently occupied especially the parts lying on the south side of the main road to Bhunya is difficult. It is both steep and rocky. Providing access and utilities to these areas is almost impossible (Plate 4). However, those areas lying to the north of the road are developable. Some developable land is in danger of being absorbed into the settlement unless some measures are taken to halt this invasion which has continued unabated for the last five or more years.

3.6 SUMMARY

On the basis of the above identified characteristics of Mbabane's uncontrolled settlements, one is left with the impression that in spite of their differences in size and distance from the centre of town, they share basically the same problems (FIGURE 1).

The settlements vary from small communities of 200 people covering less than 3 hectares to large ones with populations in excess of 7,000. In location they vary from those who lie within walking distance of employment areas to those who lie on the periphery of town who have poor access to employment centres.

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The problems they suffer from, however, are the same and vary only in degree.

With the possible exception of Sidwashini whose characteristics are described in the following chapter, all the settlements are located on marginal land. The degree of marginality varies only slightly. This aspect of the settlements has implications and puts limitations on the range of solutions that may be applied to these areas.

Secondly, all settlements are inadequately served with the basic services of potable water, waste di sposal facilities and access roads. Some are not served at all while others have levels of service which leave a lot to be desired.

The same or even a greater level of inadequacy is found in the provision of community facilities. The only facility the settlements enjoy the services of are convenience shops which the people provide themselves.

The housing conditions are generally poor but there are exceptional cases of good housing in spite of legal requirements that squatters build their shelter of temporary materials. The condition of housing may not be taken to be an indication of the people's inability to afford better housing. They are officially discouraged from putting up better structures by threats

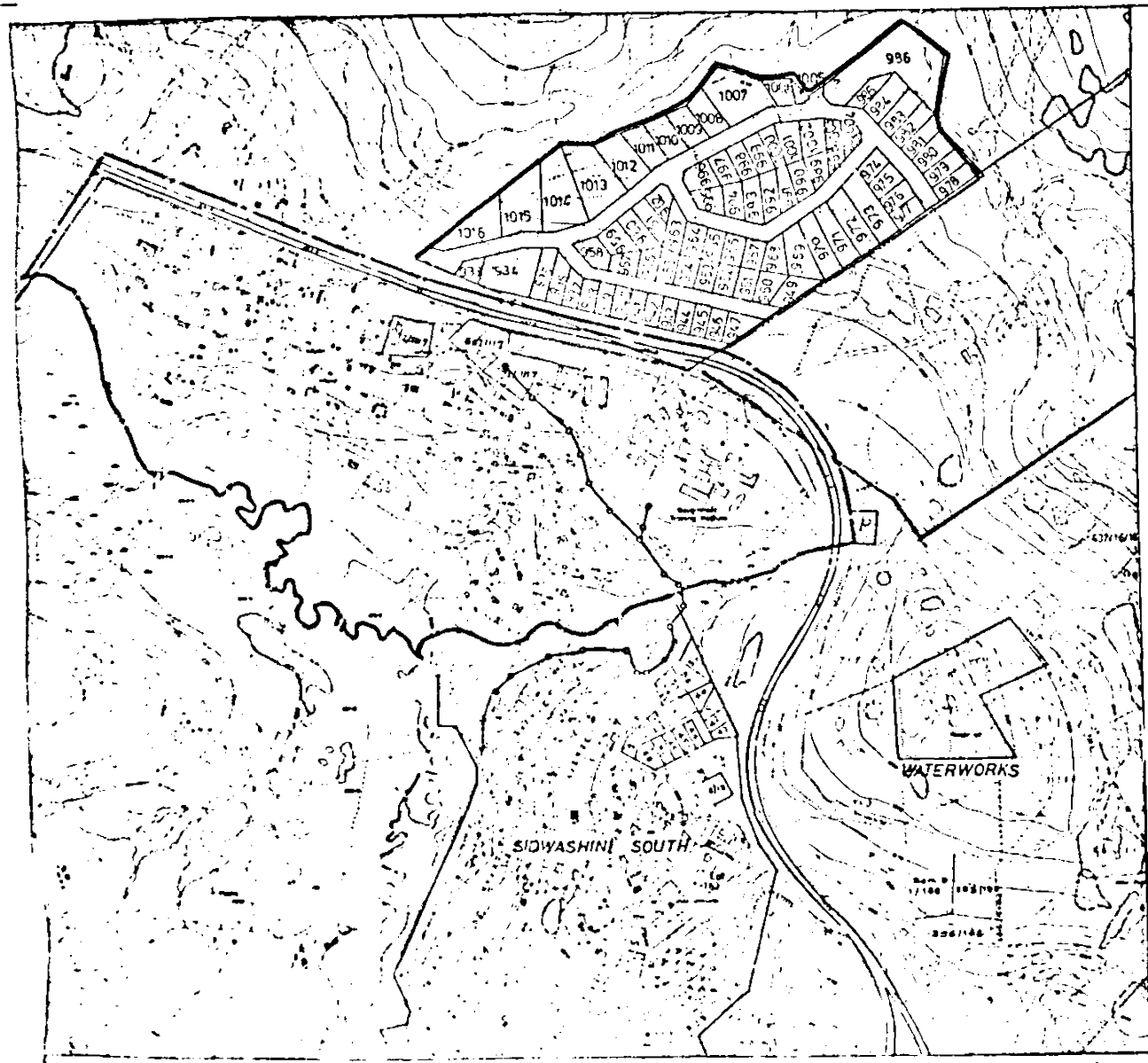
of demolition without compensation (see conditions on Replacement Permit in Appendix).

As will be seen in Chapter VI, given these circumstances, it is not possible to visualize a single programme for the improvement of these settlements but rather a wide range of specific actions taken on the basis of broad guidelines.

Fig. 1 CLASSIFICATION OF SETTLEMENTS

		MSUNDUZA	FONTEYN	MANGWANENI	MVAKWELITSHE	NKWALINI	SIDWASHINI
1. SIZE	HECTARES						
SMALL	LESS THAN 5				■		
MEDIUM	5 – 50		■				■
LARGE	MORE THAN 50	■				■	
2. DENSITY	D.U/Ha.						
LOW	LESS THAN 15		■				
MEDIUM	15 – 25				■		■
HIGH	MORE THAN 25	O		O			
3. LOCATION	Km from Town						
NEAR	LESS THAN 2	■		■			
FAR	2 – 4				■		
VERY FAR :	MORE THAN 4		■				■
4. ACCESSIBILITY	No. of buses per hour						
GOOD	MORE THAN 4	■			■		■
FAIR	2 – 4			■			
POOR	LESS THAN 2		■				
5. HOUSING	% D.U. improvable						
FAIR	MORE THAN 50		■		■		
POOR	25 – 50						■
VERY POOR :	LESS THAN 25	■		■			
6. SERVICES	Level of provision						
ADEQUATE							
INADEQUATE		■		■			■
VERY INADEQUATE			■			■	
7. POTENTIAL FOR UP-GRADING							
GOOD				■	■		■
FAIR		■		■		■	
POOR			■				

PLATE 8: SIDWASHINI - ITS VIEW FROM THE SOUTH LOOKING NORTH



Sidwashini and environs

LEGEND

- STUDY AREA BOUNDARY
- SIDWASHINI INDUSTRIAL ESTATE
- P PETROL STATION
- SEWERAGE LINE
- ELETRIC POWER LINE
- MBABANE - OSHOEK MAIN ROAD

SCALE 1:5,000

100 0 100 200 300 metres

MBABANE UNCONTROLLED SETTLEMENTS STUDY

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DEPARTMENT OF URBAN AND REGIONAL PLANNING
M.A. PLANNING 1978-79

Map Nº 6

CHAPTER IV

SIDWASHINI - THE STUDY AREA

4.1.1 LOCATION

Sidwashini, the Study Area, is located 5 kilometres on the north western edge of the built up area of town. It leas north of Sidwashini South Township west of the Mbabane-Oshock main road and east of the Mbabane river. The Study Area covers an area of about 35 hectares, 4 hectares of which are occupied by the Staff Training Institute. Map **6** . shows the Study Area's location with respect to its immediate environs.

4.1.2 TOPOGRAPHY

This aspect of the area has important bearing on the development of the site. The gradient of access roads, the flow of gradient powered utilities and the total area that can be developed are all affected by it.

The site has basically two types of slopes namely, gentle slopes and steep grades. The site is dominated by steep slopes (taken here to mean slopes above 10%). Cross slopes taken at 200 metre intervals from the northern boundary of the Study Area have the following values: 46%, 21%, 16% and 13%. The last figure represents the slope on the last ridge - taken between the Mbabane river and Somhlolo avenue.

By and large these slopes are suitable for development

even though they will determine the layout of circulation channels.

Gentle slopes (4 %) are found on the south side of the settlement along the Mbabane river. These unfortunately, are not suitable for development because of their location on the floodplain of the river.

The general direction of drainage is southwest. The Mbabane-Oshock main road runs on the main ridge. Drainage on the east side of the road is towards the east and southwest.

4.1.3 GEOLOGY AND SOILS

The rock and soil below ground level have practical relevance mainly for their characteristics for drainage and the manner in which they support structures.

Sidwashini has three types of soils as shown on Map7 . These soils have very good drainage characteristics and excellend stability when loaded. As a bearing for foundations or a road they are rated good for excellent. Their rating as material for light roads if stabilized is good (E.P.D. Consultants).

The above, certainly does not apply to the hydromophic soil found on the floodplain.

Lying at varying depths of these soils is a bedrock composed of various biotite and hornblende gneiss and

meta-sedimentary gneiss. This bedrock has a bearing capacity of 100 KN/m^2 a capacity in excess of the requirements of the light structures and street to be constructed in Sidwashini. (Murdoch, 1972).

4.1.4 CLIMATE

Mbabane is situated in the Highveld ecological region whose climate is classified as humid and near temperate. Mbabane has an average annual rainfall of 1,400 millimetres 48% of which is received during December, January and February. The lowest average precipitation is received in June (19mm) and the highest in January (250mm).

The long term data on temperature indicates that Mbabane's mean temperature ranges from 10.8°C to 22.6°C. The absolute minimum and absolute maximum temperatures ever recorded are -8.4°C (16.9°F) and 37.2°C (98.9°F) respectively (Figure 2)

Sidwashini thus receives a considerable amount of precipitation annually and experiences a relatively small range of temperatures.

4.2 DEMOGRAPHIC CHARACTERISTICS

4.2.1 POPULATION

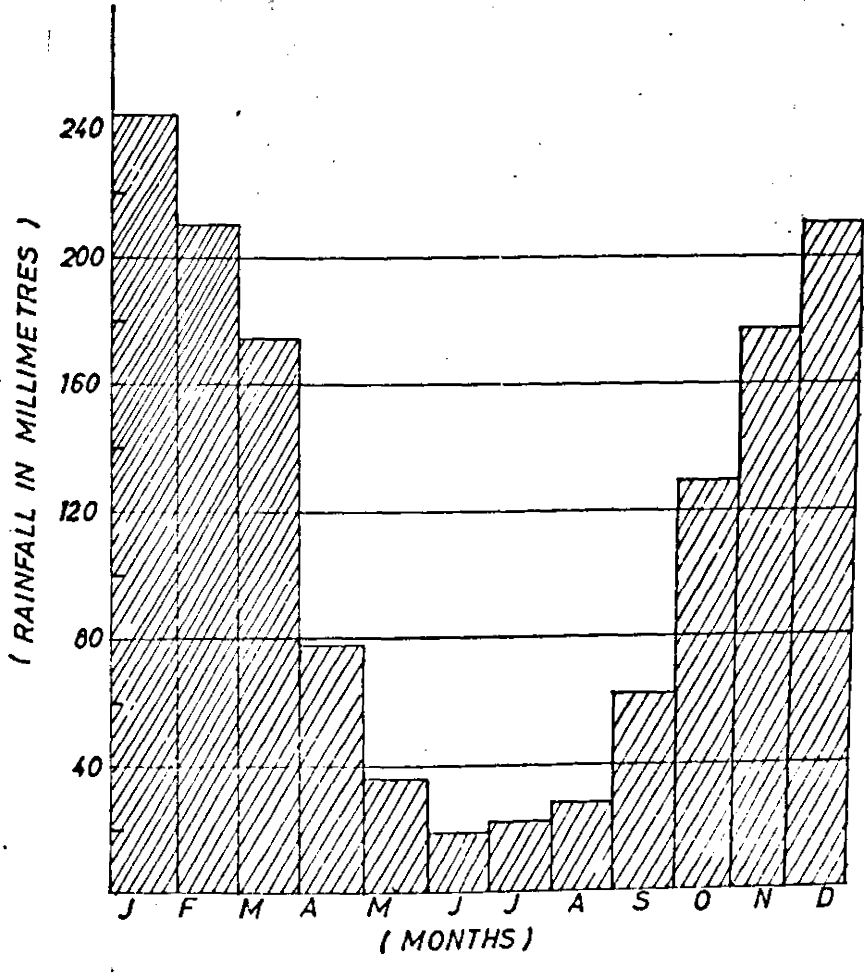
The population of Sidwashini is estimated to be 1,140. This population falls into two groups namely, the owner population and the tenant population. A distinction is made between these groups because of the differences

Fig. 2 LONG TERM DATA ON TEMPERATURE

ABSOLUTE MAXIMUM	MEAN MAXIMUM	MEAN MINIMUM	ABSOLUTE MINIMUM
37.2	26.5	12.3	-8.4°C
98.9	79.7	54.1	16.9°F

Source: Annual Statistical Bulletin - 1977

Fig. 3 LONG TERM MONTHLY AVERAGE RAINFALL



Source: Annual Statistical Bulletin - 1977

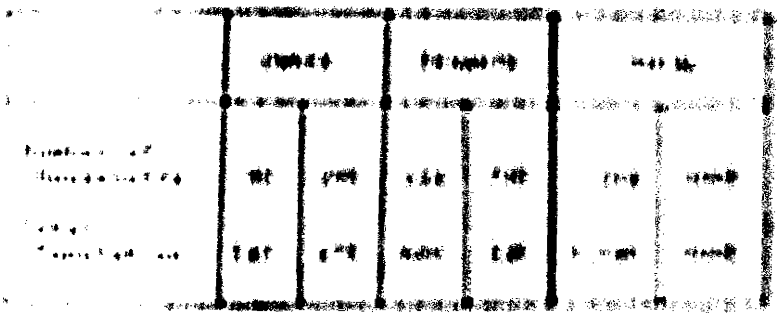


TABLE 4.2. AGE STRUCTURE

AGE GROUP	SWAZILAND[1]	SIDWASHINI[2]	
		OWNERS	TENANTS
5	17%	13%	17%
5-14	28%	32%	11%
15-19	11%	14%	5%
20-59	39%	39%	67%
60+	5%	2%	0

SOURCE:

1. Swaziland Annual Statistical Bulletin - 1977

NOTES:

1. National Average is based on 1976 population census.

2. Sidwashini's age structure is based on Author's 1978 survey.

The sex ratio (number of males per 100 female) is the same for both population groups - 92. The sex ratio in the 20-59 age group is however, 102:100.

The two population groups show great variation in length of residence in the settlement. Whereas 76% of the tenants have lived in the area for less than five years 50% of the owners have lived in the area for over 20 years.

The stability of the owner population and its commitment to living in the area is supported by their responses to the question of whether they consider Mbabane to be their home. 88% of the owner population heads consider Mbabane to be their home where they expect to settle permanently. Only 7% expressed the view that they have no intention of settling in Mbabane permanently.

The tenant population is not only unstable but also does not consider Mbabane to be their home where they expect to live permanently.

A majority (64%) expressed the view that they are in Mbabane for employment purposes and either already have permanent homes or intend to set them up somewhere else.

4.2.2 HOUSEHOLDS

The Study Area has a total of 314 households. They range in size from the one person household to extended family households in which the nuclear family is supplemented by other relatives. The distribution of household sizes is shown on Table 4.5. Sizes range from one to seven for tenant households and from one

TABLE 4.3 LENGTH OF STAY IN SIDWASHINI

	OWNERS		TENANTS	
	NO.	%	NO.	%
Less than 1 year	3	3	30	27
1-5 Years	8	10	56	49
5-10 Years	12	15	11	10
10-20 Years	18	22	9	8
More than 20 Years	41	50	7	6
	82	100	113	100

TABLE 4.4. AREA OF RESIDENCE BEFORE MOVING INTO SIDWASHINI

	OWNERS		TENANTS	
	NO.	%	NO.	%
Elsewhere in Mbabane	20	24	35	30
Hhohho District	43	52	39	36
Manzini District	12	15	30	26
Lubombo District	1	1	0	0
Shiselweni District	2	2	7	6
Outside Swaziland	4	6	2	2
	82	100%	113	100%

to fifteen for owner households. The average for the latter is 5.9 while it is 2.7 for tenant households.

4.2.2.1 TENANT HOUSEHOLDS

Almost a third (29%) of these households are one person households mostly single males. Another 29% of these households have two members who in most cases are man and wife or man and girlfriend. Cases of two brothers or two sisters living together were found. The elder of the two was in all cases identified as the head of the household.

A high proportion of tenant households did not have any children living with them. The low average household size of 2.7 is a true reflection of this fact.

It is worthy of note that although a great number of tenant households (76%) have been in Sidwashini for less than 5 years 30% of them have been living in Mbabane for a longer period. Without exception these households lived in other uncontrolled settlements - mainly Sidwashini South and Msunduza. This serves to indicate some element of migration between uncontrolled settlements. The rest of the tenant households come mainly from Hhohho (36%) and Manzini (26%) districts.

4.2.2.2 OWNER HOUSEHOLDS

Owner households differ significantly from tenant ones in most respects. The great majority of them (81%) are

complete nuclear family households consisting of a man, his wife and their unmarried children. The households are characterized by large family sizes whose distribution is shown on Table 4.5. The one or two person households which account for 13.6% are made up of elderly widows whose grown up children have moved out of the settlement and young couples without children. The very large families (10 or more persons) are basically extended families.

Most owner households are headed by males though women account for 28% of the heads. As pointed out above, owner households show greater stability in terms of maintaining residency and a higher committment to living in Sidwashini than tenant households.

Table 4.5 DISTRIBUTION OF HOUSEHOLD SIZES

SIZE	OWNERS		TENANTS		SIDWASHINI	
	NO.	%	NO.	%	NO.	%
1	3	4	34	31	37	19
2	8	10	31	27	39	20
3	9	11	16	14	25	13
4-5	18	22	26	23	44	22
6-7	17	21	6	5	23	12
8-10	22	27	-	-	22	11
10+	5	6	-	-	5	3
	82		113		195	

Table 4.5 - Notes:

Household size means are:-

Sidwashini	=	4.3
Owners	=	5.9
Tenants	=	2.7

4.3 ECONOMIC STATUS OF THE POPULATION

4.3.1 EMPLOYMENT

4.3.1.1 Wage Employment in the Formal Sector

A significantly high proportion of the adult population was found to be engaged in wage employment in the modern sector. 83% of the tenant household heads and 66% of the owner household heads were employed.

The types of occupations they were employed in vary considerably but may be classified on the skills they require into five categories. These are unskilled, semi-skilled, skilled, clerical and professional. Under the first category falls most labourers working for construction firms, domestic workers and factory workers. In the semi-skilled category are found such workers as drivers, painters and cooks. The skilled jobs category includes a wide range of occupations requiring special training. Under this category are found bricklayers, plumbers and electricians. The clerical jobs category included clerks of all kinds in both the public and private sector. The last category included occupations which require professional training. In this category were found surveyors,

accountants and nurses. The distribution of the employed population within these categories is shown on Table 4.6.

Table 4.6 LEVELS OF SKILL

	OWNERS		TENANTS	
Unskilled	39	42%	29	26%
Semi-skilled	22	23%	30	26%
Skilled	18	19%	31	27%
Clerical	10	11%	13	12%
Professional	5	5%	10	9%
	94	100%	113	100%

In 63% of the tenant households only one member was wage employed whereas in 28% of them two members, presumably the head and his wife, were found to be wage employed. In owner households 44% of the families had only one member wage employed, in 26% of the cases two members of the family were employed. In only 17% of the families did 3 or 4 members contribute to the family income.

4.3.1.2 SELF-EMPLOYMENT

Self-employment in Sidwashini contributes to the overall level of employment. 11% of the heads of tenant households get their income through self-employment. For the owner households the figure is 17%. In both

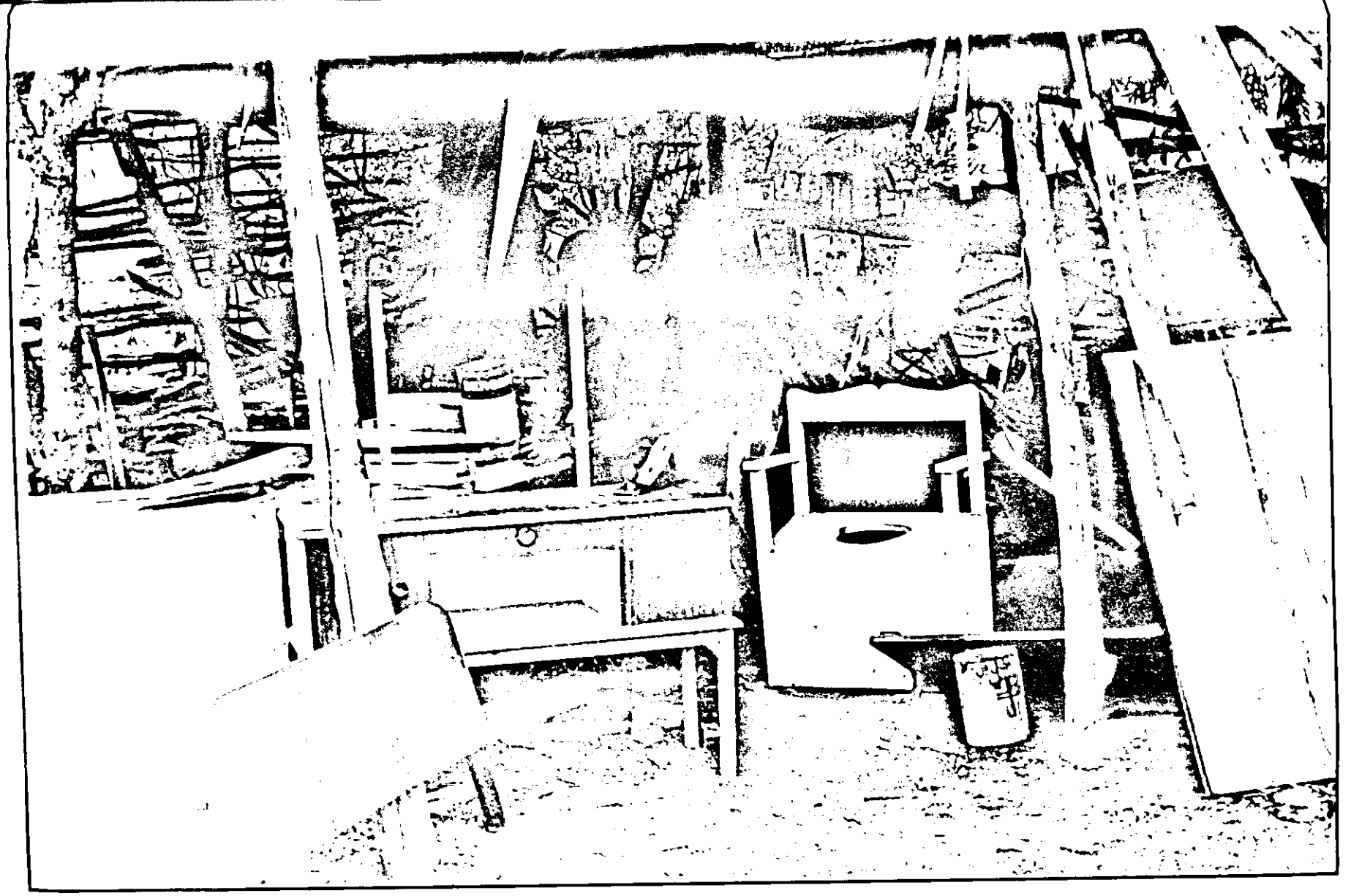


PLATE 9: COMMUNITY CARPENTER AT WORK - NOTE PIT LATRINE SEAT

cases the majority (70%) of the people involved are women engaged in such activities as brewing, selling fruits and vegetables, sewing, knitting, etc.

One woman worth mentioning derives her income from babysitting a daily average of 20 pre-school children in her home which she has converted into a creche.

Another woman has converted her home into a restaurant which serves not only lunch but the local brew also.

Three traditional doctors serve the community from their homes which offer both out-patient and in-patient treatment. The community's sole carpenter makes not only chairs, sideboards and dressing tables but also pit latrine seats. (See Plate 9).

4.3.1.3 UN-EMPLOYMENT

Figures on unemployment are fairly low for an uncontrolled settlement in the context of an underdeveloped economy. Only 5% of the working age (20-59 yrs) population of tenant households are unemployed. Unemployment among the working age owner population is 8%. The low level of unemployment among the tenant population can be appreciated in light of the reluctance of landlords to offer accommodation to unemployed youth and the tendency of tenants to move out when they loose their jobs.

Owner households have been in the area for a very long time and hence have had time to secure permanent jobs.

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Owner households have been in the area for a very long time and hence have had time to secure permanent jobs.

A breakdown of unemployment data reveals that 68% of tenant households have none of its adult members unemployed and 30% have only one member unemployed. Owner households on the other hand have up to three adult members unemployed. Only 49% have no adult member on the unemployment list. Without exception the unemployed have no job qualifications. Overall, unemployment is higher among females.

4.3.2 INCOMES

4.3.2.1 SOURCES

The major source of income was found to be wages and salaries. This accounted for 72% of the income received by owner households per month. Income from informal sector activities (self-employment) accounted for 16% and that from rent collections 12%. For tenant households the proportions are 83%, 17% and zero, respectively.

Another breakdown of the total monthly income of owner household indicates that 84% of it comes from the household heads. Other working members of the households contribute 16%. This heavy reliance is not experienced in tenant households where the heads' income accounts for 58% of the household income.

4.3.2.2 INCOME DISTRIBUTION

HOUSEHOLD HEADS

Table 4.8 shows the frequency of distribution of the

monthly incomes of the heads of households. The head's income has already been demonstrated above, especially that of the owner household.

The reader's attention is drawn to the fact that the income categories used here and their breakdown into very low, low, medium and high have been derived from the Swaziland Shelter Sector Study. Low, medium and high break points are related to some packages of housing options rather than some other considerations taken into account in breaking down incomes into categories.

With respect to these categories 70% of the heads of owner households earn very low incomes, 16% earn low incomes and 10% earn meduim incomes. Only 4% fall into the high income category. The same breakdown with respect to tenant heads can be extracted from Table 4.8.

The owner household head's mean and median monthly incomes are E85.00 and E70.00, respectively. The mean and median incomes for the tenant heads are E93.00 and E90.00, respectively. The overall range of incomes was from E30.00 to E46.00.

Table 4.8 DISTRIBUTION OF HOUSEHOLD HEADS MONTHLY INCOMES

	OWNERS		TENANTS	
	NO.	%	NO.	%
Less than E45.00	21	31	12	12
E45 - 74	12	18	31	31
E75 - 99	6	9	12	12
E100 - 134	8	12	21	20
E135 - 159	11	16	3	3
E160 - 349	7	10	21	20
E350 and above	3	4	2	2
MEAN	E85.00		E93.00	
MEDIAN	E70.00		E90.00	

NOTE: E1.00 = $1.18

TOTAL HOUSEHOLD INCOME

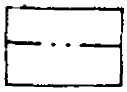
The distribution of total household incomes is shown on Table 4.9. Most households still fall under the low and very low income categories but the contribution of rents and income from other working members of the households are evident.

For example the percentage of families in the medium income group has increased by 32% while that of those in the high income category has gone up by 160%.

Owner households had a mean monthly income of E147.00 and a median income of E140. Tenant households had

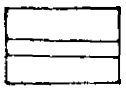
Sidwashini
-soils-

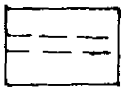
LEGEND

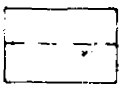

STUDY AREA BOUNDARY

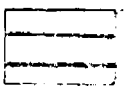

SEWER LINE 150mm

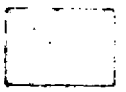

WATER SUPPLY MAINS

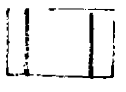

TARMAC ROADS


GRAVEL ROADS


FOOTPATHS


Grey Loam


Pale Red Sandy Loam


Marsh Soil, mottled sand to clay

Source: Soils Map of Swaziland

SCALE 1:2500

50 0 50 100 150 metres

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Map Nº
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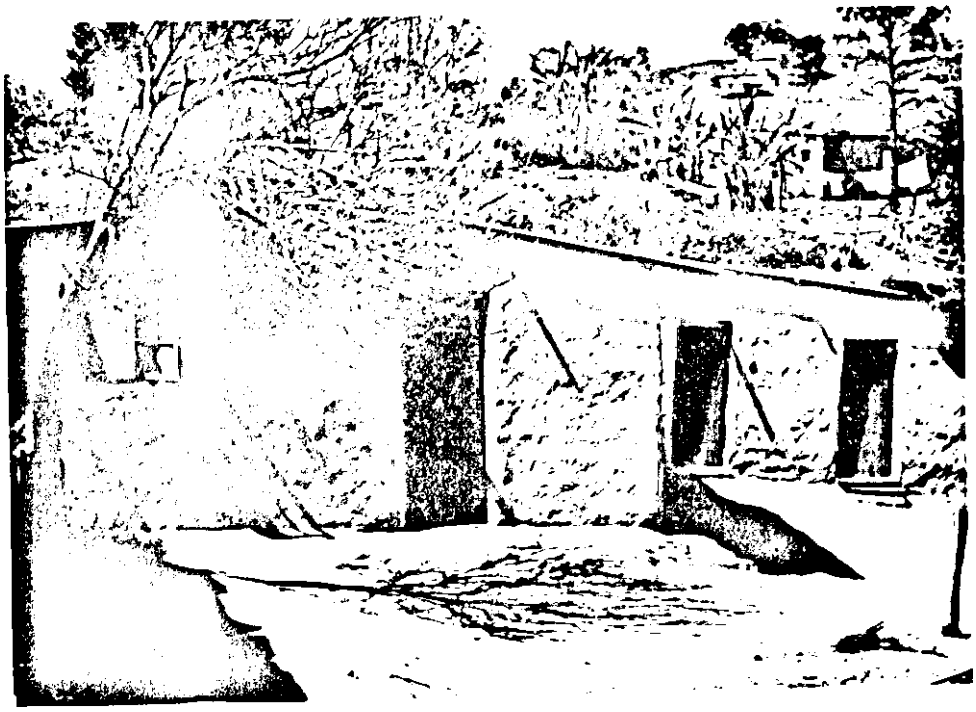


PLATE 18: AN EXTRA LARGE HOUSE- A RESULT OF SEVERAL EXTENSIONS

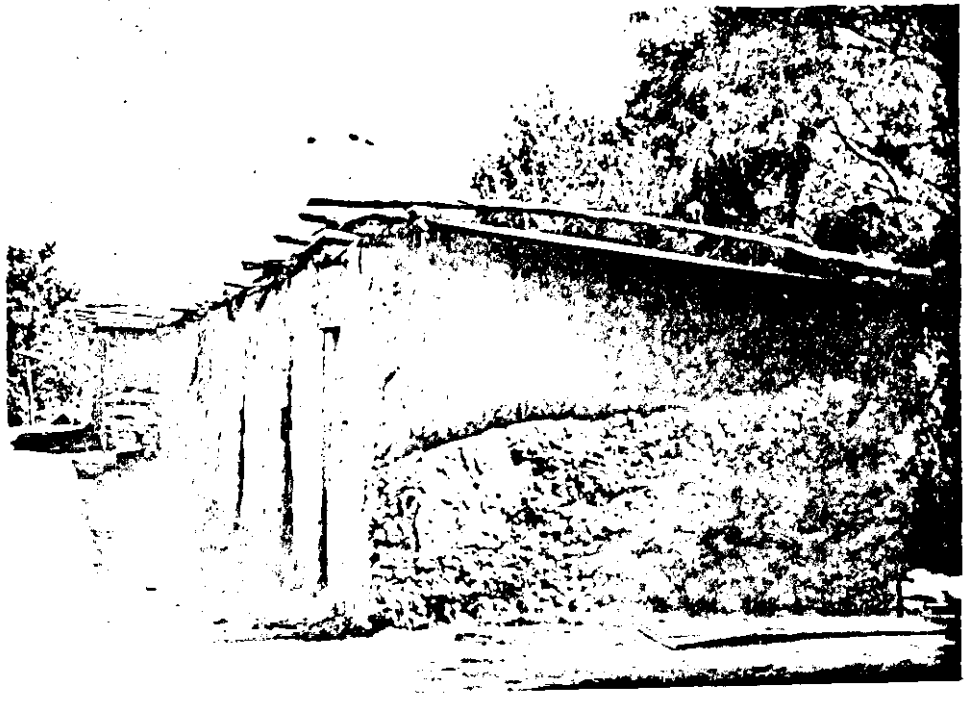


PLATE 19: FLATS TO LET - A RESPONSE TO DEMAND FOR RENTAL HOUSING.

CHAPTER V - HOUSING & RELATED FACILITIES

5.1.0 QUANTITY & QUALITY OF EXISTING HOUSING STOCK

The Study Area has a limited variety of buildings. A great majority of them (90%) are used for residential purposes. The remainder is used for commercial, educational and religious purposes. Focus on this chapter will be on the buildings intended and used for residential purposes.

The number of residential buildings in August 1978 was 193. Of these 13% were not occupied. The Study area has thus a housing stock of 167 dwellings providing shelter to 314 households.

The existing stock is composed of dwellings of different sizes ranging from 9 m^2 one roomed units to 220 m^2 multi-roomed 'flats' (Plate 19). A 30% random sample of the dwellings yielded a mean size of dwelling of 75 m^2 and a median size of 64 m^2.

The number of rooms per dwelling unit ranged from one to ten with one roomed dwellings comprising 24% of the sample total. 25% of the dwellings have 2 rooms, 33% have three or four rooms, 14% have five or six rooms and only 4% have more than six rooms. The mean number of rooms was found to be 2.97.

The sizes of rooms ranged from 8m^2 to 75 m^2 with a mean size of 30 m^2 and a mode of 20 m^2. The size of room indicated here should be viewed with caution since

the size of each was found by dividing the total floor area of the house by the number of rooms. The figure thus calculated implies that the rooms in each dwelling are equal in size.

5.1.1 OCCUPANCY RATES

The percentage of dwellings with more than three persons per room is generally taken to be an indicator of the level of overcrowding. Because of the great variation in room sizes two levels of crowding were calculated one at 2 or more persons per room and the other at 3 or more persons per room.

If three or more persons per room is taken to represent overcrowding, 19% of the dwellings are overcrowded. If 2 or more people per room is considered to represent crowding, 51% of the dwellings are crowded. A substantial number of dwellings (49%) have less than 2 persons per room. Overall, the settlement does not suffer from the problem of overcrowding generally found in uncontrolled settlements.

5.1.2 TENURE AND RENTS

Tenure is taken here to refer to the arrangement under which households occupy all the rooms or some rooms of dwellings. With respect of this aspect of the housing stock 70 dwellings (36%) are owner occupied - none of the rooms in these dwellings are rented. 53 dwellings (27%) are rented - all the

rooms in these dwellings are rented. The remaining 44 dwellings have mixed tenure - in each dwelling some rooms are used by the owner and some are rented to one or more tenant households.

Rents varied with size of room rented and number of rooms rented by each tenant. The range was from E4.00 to E15.00 per room. The majority (70%) of tenants payed a rent or E4-E6 per month per room. 21% payed between E7-E9 and 4% payed E10-E15 per month. Rent on 5% of the rented units could not be established.

5.1.3. BUILDING MATERIALS AND MAINTENANCE

The quality of a dwelling unit is a function of several aspects the most important of which are building materials used in construction and the maintenance given the structure after completion.

The structures in the study area were classified into temporary and permanent on the basis of the building materials used for the walls, floors and roof. The materials used for the walls were basically of two types - the conventional cement blocks and the traditional wattle and daub. Roofs are of corrugated iron in the great majority of cases. Thatched roofs formed an unsignificant proportion. Three types of floors predominate. They are:- (i) earth without a foundation, (ii) cement without a concrete foundation and (iii) cement with concrete foundation.

For classification purposes the settlement thus has basically three types of buildings. One, those with concrete block walls, cement with concret floors and corrugated iron sheet roofs. Two, those with wattle and daub walls cement without concrete floors, and corrugated iron sheets roofs. Three, those with wattle and daub walls, earth floors and corrugated or thatched roofs.

The first group of dwellings were classified as permanent whereas the last two groups were classified as temporary. It is important to note that this classification took into account only the building materials used in construction. On the basis of this classification only 3% of the present housing stock qualifies as permanent. These are the only structures which may be expected to maintain their stability for more than 10 years with little or no maintenance at all.

The remainder or a certain proportion of them may maintain their stability for ten years or more but only when they are well maintained. They also suffer from weak foundations and water seepage up the walls during the rainy seasons.

The type of finishing applied to the walls of a structure and the level of maintenance given these effect the life expectancy of a structure. As such the level of maintenance of the existing stock was determined. The range of wall finishes, in order of quality

was found to be (i) plastered with cement and painted, (ii) plastered with cement but not painted (iii) plastered with mud and painted (iv) plastered with mud and not painted and (v) unplastered.

Dwellings found plastered with cement both painted and unpainted ones were considered to be well maintained, those plastered with mud both painted and umpainted ones were classified under fair maintenance. Those with unplastered walls or those whose plaster had falled off were classified under poor maintenance. On the basis of this classification 11% of the dwellings received good maintenance, 37% fair maintenance and 52% poor maintenance.

5.1.4. DWELLING FACILITIES

There are certain facilities whose presence in a dwelling are used as indicators of housing condition. These are facilities like toilets, kitchens, and bathrooms, and utilities like water and electricity. The presence of all these in each dwelling indicates very good housing condition while the absence of all these indicates poor housing condition. With respect to this criteria, the overall housing condition in the study area is very poor.

There are only two dwellings which are provided with piped water within them. 55% of the dwellings are within 100 metres of a piped water supply source

(standpipe), 90% are within 150 metres and all dwellings are within 220 metres.

KITCHENS

Although all households have some area within their living quarters in which they prepare their food, a small proportion of households have proper kitchens. Most tenants for example rent one room a certain corner of which of which serves as a kitchen. Only 30% of the dwellings have separate rooms which are used exclusively for the preparation of food. Only one of these, however, has running waster and 13 or 20% of them are detached from the main dwelling unit. No cases of households sharing kitchens were recorded.

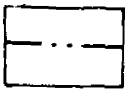
TOILETS AND BATHROOMS

Only two dwellings are provided with water closets and the same two are the only ones with baths. Pit latrines serve the rest of the population with each homestead having at least one. Some pit latrines have wattle and daub or timber walls, and corrugated iron sheets roofs. These receive good maintenance. A siginificant proportion, however, has cardboard plastic and other scrap material walls with no roofs. These are poorly maintained and present both safety and health hazards.

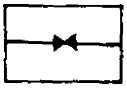
None of the dwellings other than the two already identified above, are provided with fixed baths or

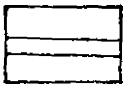
Sidwashini
-- Infrastructure --

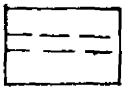
LEGEND

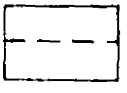

STUDY AREA BOUNDARY


SEWER LINE 150mm

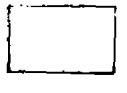

WATER SUPPLY MAINS


TARMAC ROADS


GRAVEL ROADS


FOOTPATHS


STANDPIPES



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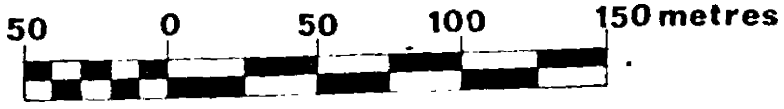

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Map Nº

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5.3.3 PUBLIC TRANSPORT

Relative to other uncontrolled settlements, Sidwashini is well served with public transport. Presently nine mini-buses and one bus are licensed to serve the area between the hours 5.30a.m. and 7.0^ p.m. Unfortunately these buses are not scheduled. Their frequency is determined by the volume of passengers expected. The frequency of service is thus highest during the morning rush hours (6.00-8.00) and evening rush hour (5.00-6.00 p.m.). During these hours a 70-seater bus is brought into operation. The seating capacity of the regular mini-buses ranges from 10 to 25 passengers. Three mini-buses have a seating capacity of 25, four have a copacity of 20 and one is certified to carry 10. These have no room for standing passengers because of strict enforcement of traffic laws on overloading.

During the peak hours when buses travel non-stop to the bus terminus they take as little time as 5 minutes. However, at the bus terminus during the evening peak it takes quite a considerable amount of pushing and shoving for one to get a seat. During the off-peak hours the buses make up to 13 stops along the routes and take as long as 20 minutes to reach the terminus.

5.3.4. OTHERS

The settlement lies 6 kilometres from the hospital, 5 kilometres from the fire station and 7 kilometres from the police station. Although these facilities are

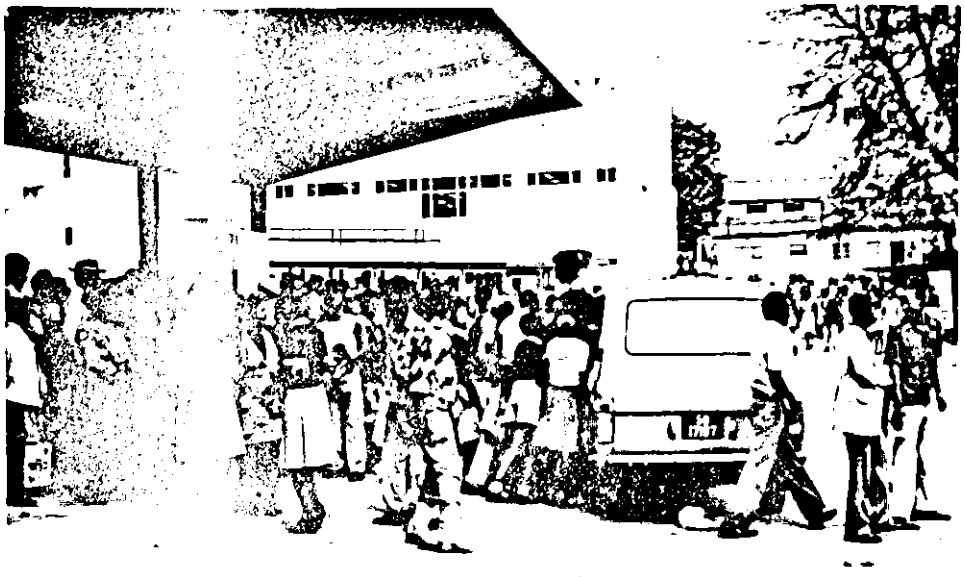

PLATE 20: A TYPICAL SCENE AT THE BUS STATION DURING THE EVENING RUSH HOUR.

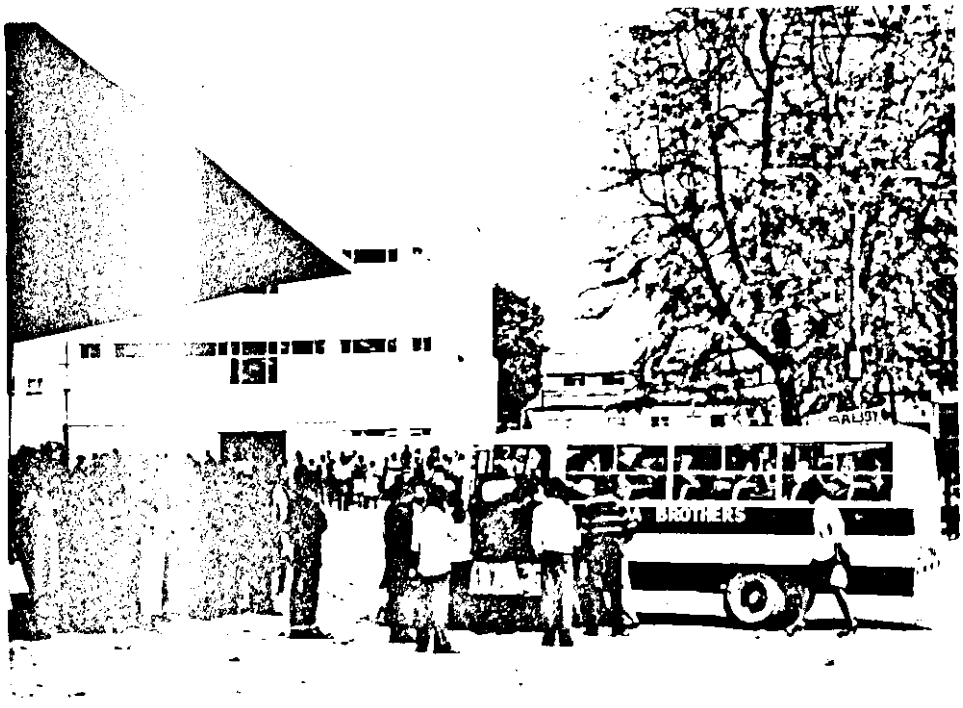

PLATE 21: ONE OF THE MINI-BUSES SERVING SIDWASHINI.

CHAPTER VI - ANALYSIS AND INFERENCES

6.1 LAND

6.1.1 LAND SUPPLY

The high rate of population growth in Mbabane is resulting in a very rapid increase in the demand for urban land. While the 7.0% annual rate of growth is a problem in itself, an even more crucial one for the future development of the town is the topographical restraint on the extension of its boundaries.

If the population continues to rise at the present rate the population of Mbabane will be 58,520 in 1988 and 131,800 in the year 2000. The amount of developable land left in Mbabane, however, is estimated to be 422.25 hectares (Rivkin Report, 1978). This amount of land is sufficient for the short-term needs of the town but is certainly not enough for the long-term development needs of the projected population. The recommendation made by the Mbabane-Manzini Regional Planning Study regarding the possibility of transferring central administration to Lobamba should be given serious consideration (M-M Study, 1974). There seems to be a lot of wisdom in the recommendation made by the same study that the size of Mbabane be kept within a limit of 50,000 inhabitants (p.13).

Much as the land in which Mbabane's uncontrolled settlements are located is marginal, the land supply situation would indicate that a policy geared towards

bringing services to these areas would be more realistic than one which places emphasis on site and services.

In view of the limited availability of land, the need to manage it properly cannot be overemphasized.

6.1.2 LAND TENURE

Mbabane's uncontrolled settlements are locate on provate property held on freehold tenure, on government land also on freehold and on Swazi Nation land held in trust for the nation by His Majesty the King.

Mangwaneni is the only settlement on Swazi Nation land. Its inhabitants enjoy traditional tenure rights to use the land while its ownership remains with the Swazi Nation.

Inhabitants of Msunduza, Mvakwelitshe and Sidwashini are "temporary occupants" on government land whose lawful claim to the use of the land expires at the end of each year and has to be secured by buying a Temporary Occupation Permit annually.

The inhabitants of Nkwalini and Tenteyn have not lawful claim on the land they occupy and represent true squatters.

The tenure system largely determines the ease or difficulty of land acquisition, the cost and time required (World Bank, 1978). Indeed the acquisition of Swazi Nation Land for urban development is a long

and tedious exercise which may delay the improvement of the Mangwaneni settlement. The idea of private ownership of Swazi Nation land is traditionally unacceptable and officially discouraged. Such attitudes toward the freehold tenure system are understandable in light of the amount of land the Swazi Nation lost through concessions to foreigners during the colonial period. Efforts to recover this land are continuing even today.

Negotiations to purchase the land occupied by the Nkwalini settlement are reportedly under way (Rivkin Report, 1978). The purchasing of the land occupied by the Fonteyn settlement is not likely to present any problems since the land is largely marginal.

Assuming that the government acquires ownership of all the land presently occupied by uncontrolled settlements, the important question now would be under what tenure system would the households hold the land such that they would feel secure wnough to invest their efforts in building or improving their housing conditions. It has been argued quite convincingly elsewhere that security of land tenure is more important to the squatter than land ownership per se (Abrams, 1966; Turner, 1969; Laquian, 1976; Dwyer, 1975).

The form of tenure also determines the collateral available for raising loans in conditions where financial institutions like the Swaziland Building Society and the

Swaziland Development and Savings Bank are reluctant to accept forms of collateral other than land.

In view of these factors the need to develop land tenure arrangements which are suitable for dealing with the needs of squatters to gain security without necessarily having to purchase the land is great. Efforts should be given to finding methods of separating land ownership rights from development ones.

6.1.3 LAND USE CONTROLS

Another aspect of land worthy of consideration in Mbabane is that of land use controls. The criticism often levelled at developing countries for applying standards of developed countries applies to Swaziland. In spite of the fact that Mbabane has limited scope for growth imposes by topography, residential densities range from 32 units per hectare in central Mbabane to 6 units per hectare in the suburbs. The average residential density is about twenty units per hectare. (For standard currently in force see Appendix 3). This low level of developmentis an unfortunate situation which may not be undone. Such trends, however, may not be allowed to continue and the need to economize land by adopting appropriate densities cannot be overemphasized.

6.2 FINANCING

The present population of uncontrolled settlements is estimated to be 15,700. If its present rate of growth is held constant the population in these areas in 1983 and 1988 shall be 21,000 and 29,500 respectively.

Housing the present population and the future population presents a monumental task. An indication of this task in monetary terms is shown in Table 6.1.

Table 6.1.

DERIVATIVES OF POPULATION PROJECTIONS

YEAR	NO OF HOUSEHOLDS*	COST OF SHELTER****	
		2 BEDROOM UNIT**	3 BEDROOM UNIT***
		E'000	E'000
1978	2,900	7,250	8,120
1983	3,600	9,000	10,000
1988	5,000	12,500	14,000

NOTES:
* Based on an average household size of 5.4
** Valued at E2,500 in 1976
*** Valued at E2,800 in 1976
**** Does not include cost of land

The dwelling units used in making these estimates are produced by the Housing Unit using Aided Self-Help methods of construction. They represent the cheapest units meeting building standards.

In view of competing demands for limited financial resources, it is practically impossible for the government to finance the production of so many units. In essence then, the people will have to finance it themselves using domestic savings or mortgage loans from local financial institutions.

Swaziland has two financial institutions from which families may apply for housing mortgage loans. These are the Swaziland Development and Savings Bank and the Swaziland Building Society. The degree to which these institutions can help the low-income group of households is limited.

Both institutions have high eligibility requirements and restrictive loan terms. They both require that the applicant have a title deed to develop. They require that a qualified architect supervise the building of the house and they require that the applicant show proof of regular and dependable employment.

Some of the restrictive loan terms are a 25% downpayment (Swaziland Building Society), an 11-12% interest rate (Swaziland Development and Savings Bank) and a 15 year repayment period (Swaziland Building Society)- see also Appendix 4.

These requirements and terms obviously are beyond the means of the poor to meet or accept. The need to reduce them to levels where a higher proportion of the population can meet them is evident. If this is not possible, the need to establish new sources of finance which are geared to the special needs of the low-income population cannot be overlooked. The possibilities of accepting cattle as collateral for mortgage loans for instance could be pursued in Swaziland where urban households have a tendency to immobilize their savings by putting them in the form of livestock.

Most low-income families have one form of domestic saving or the other. These can be mobilized to finance the improvement and/or building of new houses once the security of tenure has been granted. Many household heads in Sidwashini indicated that they would secure funds for buying land from relatives, neighbours, friends and employers. Others indicated that they would sell their cattle, goats and other livestock.

The role of these non-institutional sources of funds should be taken seriously. The government, however, should consider housing finance for low-income groups as part of its housing policy. Such a policy should emphasize the role of government in developing financing schemes that would supplement the people's own efforts to secure finance.

Having done that, the government could then concentrate its limited funds to the provision of infrastructure which requires large capital outlays. Although domestic sources of finance may not be adequate to issue loans big enough to cover the cost of laying the essential utilities required in the uncontrolled settlements, several international lending institutions and organisations can be relied upon to offer such loans. The government can recover the money for repaying the loans through the levying user charges which closely match the actual services. The provision of services at subsidized rates should be limited to the very poor.

6.3 BUILDING STANDARDS

The relationship between building standards and the cost of housing is very strong. Standards usually specify or imply the type of building materials to be used to construct safe, sanitary and comfortable dwelling for human habitation. They type of materials in turn determine the sort of the house which disctates who can afford to build or buy it.

There is almost unversal agreement that building standards in developing countries are too high and that they need to be revised so as to make them more realistic (U.N., 1971; Jorgensen, 1977).

The Swaziland Building Act of 1968 is modelled on British building regulations and incorporates specifications of the South African Bureau of Standards and

the South Africa Standard Building Regulations.

The regulation contained in the Act are based on performance standards and contain space standards for various types of buildings, material specifications for each element and standards related to all services including fire protection, lighting and ventilation.

The regulations, among other things, call for every dwelling to be connected to a public water supply and be provided with plumbing system which discharges into a public sewer. Each dwelling is expected to have at least one water closet, one bath or shower and one kitchen. The regulations require that the smallest habitable room in a dwelling which has more than one be at least 7.5 square metres, and if it has only one habitable room, the size of the room be no less than 11.5 square metres (Swaziland Government, 1968).

On the basis of these regulations alone, it is clear that bringing the dwellings in uncontrolled settlements into conformity with standards would amount to tearing each one of them down and starting all over again. Such and exercise, however, is hard to conceive and need not be carried out. The plumbing of every unit, and connecting it to a public sewer system is practically impossible and a goal we need not pursue. A more realistic goal to work toward would be a state where every household would be within easy access of a potable supply of water, has access to facilities for

waste disposal and lives in a sanitary'safe and comfortable dwelling unit.

Fortunately, the planning regulations are flexible in some respects. For example they allow experimentation in both materials and construction techniques. With respect to materials the primary requirement is that the builder satisfies a local authority that the materials to be used in construction are as suitable as those described in the regulations. In the case of roofs this means they should be of materials which can withstand climatic conditions such as wind pressure, wind suction and changes in temperature, and be fire-resistant. Walls should be shown to resist moisture and have sufficient durability to offset the possibility of structural failure. Foundations should demonstrate enough strength to adequately sustain and transmit to the groud the combines load of the building.

On new methods of design and construction the regulations require that the new method produce a building which will not be unhealthy or dangerous by reason of its construction.

We need to take advantage of these opportunities and develop new methods of constructions which take into account the methods which the majority of the people are familiar with. Also there is a need of improving the durability and stability of local building materials. Finally, the local authorities need to

readjust their attitudes towards shelter put up by the people themselves - in the final analysis, it is these people who determine what is standard and acceptable.

Hanging on to standards developed in developed countries in conditions which bear little resemblance to the realities of the housing situation in Swaziland will only complicate the task of providing the people with decent shelter at costs they can afford. Swaziland should direct her efforts to developing standards of shelter and the provision of infrastructure consistent with her needs rather than attempt to produce shelter which conforms to existing standards.

6.4 ADMINISTRATION

Measures for improving the conditions of uncontrolled settlements in Mbabane to succeed need to overcome some administrative obstacles. First, they will run into the obstacle of who has jurisdiction over which settlement. Settlements on government land and on Swazi Nation land are all within the Mbabane Municipality and yet the Mbabane Town Council has no jurisdiction over them, the D.C. has jurisdiction over them. The Nkwalini settlement lies partly within and partly outside the town boundary. Neither the D.C. nor the Town Council has jurisdiction over it. Officially it is recognised as an illegal settlement and denied all basic urban services. From an

administrative point of view the first task then is to bring all settlements under the jusrisdiction of one entity irrespective of their legal status.

The second obstacle to get over will be which agency of the government should be given the main responsibility for improvement programmes. The identification of such an agency is essential given the growing seriousness of the problems associated with uncontrolled development. The powers vested in the D.C. by the Crown Lands (Temporary Occupation) Proclamation to control developments in uncontrolled settlements, are limited and he may not be expected to cope with the new challenges. His role in the execution of improvement programmes need to be redefined.

The number of other agencies involved in the improvement programmes should be kept down and their roles well defined. This will enhance co-ordination and reduce overlaps.

An even more serious problem to be encountered in carrying out of an improvement programme will be lack of technical and management expertise in the country.

A 1977 Manpower Survey revealed that by 1983 the country will need 153 engineers, 78 architects and surveyors, 124 draftsmen and 1,136 bricklayers, carpenters and related technicians to meet the needs of the construction sector. In addition, it was

estimated that to meet these quotas the country would, annually, have to train 19 enginees, architects and surveyors; 14 draftsmen and 200 bricklayers, carpenters and other technicians (Colcolough, 1977).

These shortages in technical expertise serve to underline the need to place emphasis on the people's housing delivery system. The public and private sector cannot deliver the shelter the population of uncontrolled settlements will need on the basis of personnel and financial constraints.

Similar shortages of trained personnel are found in such related fields as community development, housing project management, and even urban planning. Attempts to launch a major housing production programme in the face of these shortages would inevitably meet with failure.

The training of Swazi personnel in the various fields of housing and urban development is a prerequisite of bringing the country closer to the national objective of providing evey Swazi with decent housing.

CHAPTER VII - RECOMMENDATIONS

1. A human settlements policy should be adopted

A comprehensive approach to the solution of the uncontrolled settlements problem requires a progressive elimination of its causes. One of the causes is the phenomenon of rural-urban migration especially to the country's main towns. As long as rural migrants continue to pour into Mbabane at the current rate, it is virtually impossible for the Swaziland government to meet their housing needs.

The causes of rural-urban migration are many but the main one has been identified time add again as the disparity that exist between urban and rural areas in standards of living, employment opportunities, levels of service and overall quality of life. This situation is true in Swaziland.

The focus of the migration on the major towns and to Mbabane in particular is a reflection of the lack of comprehensive policies on urban growth in the country. In the absence of these policies Mbabane and Manzini have continue to grow at high rates while the smaller towns have seen little or no growth over the last ten years.

It is thus recommended that the government adopt policies which aim at decreasing the defferences in the living standards and employment opportunities in urban and rural areas. The development of a healthy urban

resources should be taken into account. Some criteria will have to be devised for establishing the recipients of subsidies and the size of the subsidy itself. Size of subsidy in general should vary inversely with the amount of resources a given population of recipients has.

(2c) Land plays such a central role in housing that a housing policy that does not address itself to it cannot be considered comprehensive. Land is such a scarce and expensive resource in Mbabane that its proper management should be given special consideration. Special attention should also be paid to the possibilities of extending the traditional communal land tenure system to the urban areas, or some form of leasehold system. These system of land tenure would benefit the low-income families whose concern is not so much land ownership but security of tenure. As the supply of land in Mbabane continues to diminish its price will rise to levels well above the ability of the poor to afford it.

To encourage squatters to improve their housing conditions it is recommended that they be given a chance to buy or lease the land they presently occupy.

(2d) Housing finance for low-income groups should be an intergral part of a housing policy. The existing financial institutions should be encouraged to relax their high eligibility requirements and their restrictive

loan terms. New financing institutions should be established with government support. These should have eligibility requirements and loan terms which are based on an assessment of the nature of the low-income population and their expressed preference regarding such loan parameters as maturity of loan, size and spacing of repayments and grace period before first repayment is due.

3. An uncontrolled settlements policy should be formulated

The comprehensive solution of the problem of uncontrolled settlements not only in Mbabane but in all urban areas required the adoption of policies at the national level. The policy vacuum in this field is to some extent responsible for the little work that has been done with regards to the improvement of uncontrolled settlements, the ineffectiveness of the little that has been done, and more seriously the invasion of private property by squatters.

It is recommended that prevention of squatting be a primary aspect of the policy. The rigid enforcement of this aspect is considered to be of vital importance in the prevention of a repeat performance of the Nkwalini episode where the violation of property rights was allowed to continue to a level where the eviction of squatters is not recommended. It is suggested that Nkwalini be treated as part of the overall uncontrolled settlements improvement programme. The policy on

uncontrolled settlements should be based on the recognition and acceptance of the fact that the rural urban migration process is not reversible and is likely to increase in pace. It should, therefore, consider the idea of planned squatter settlements and/or reception centres as a realistic approach along with others which recognize the futility of "go-back-to-the-land" approach.

4. The upgrading of uncontrolled settlements should be given top priority in the overall improvement programme

In view of the constraints of limited developable land, and limited sources and the opportunity offered by low densities of development in most settlements, it is recommended that top priority be given to the improvement of squatter areas by bringing utilities, services and other essential facilities to these areas. This approach if given political financial and popular support can yield the greatest benefits to the highest number of low-income families at the lowest social and economic cost.

This recommendation is based on the conviction that housing in its simple function as shelter should not occupy first priority, that given security of tenure, financial assistance and technical guidance the people, over time, can improve their housing conditions. The view that the provision of public sanitation services such as potable water and human waste disposal should receive top priority adds weight to the recommendation.

The slum clearance approach is costly both economically and socially and is recommendation as a tool of last resort which should be considered in very special circumstances where every other approach has failed.

Site and Service schemes should be initiated to supplement the upgrading programme and to cater for its spill-over population

Given the marginality of the land occupied by uncontrolled settlements, the high density in Msunduza and the haphazard nature of development in the other settlements, the upgrading programme cannot be expected to cater for all the squatters. It is thus recommended that some parcels of land preferably those adjacent to developed areas and work areas e.g. Extension 4, be subdivided and be provided with minimum services. Additional services should be added later on the basis of the residents' demand and demonstrated ability to pay for them.

Site and services schemes should be designed such that costs match the target population's ability to cover those costs. Where such a match is difficult to attain, subsidies should be introduced in line with recommendation (2b) above.

6. Programmes which assist people in providing better housing for themselves either individually or collectively should be introduced

In view of the fact that as much as half the cost of a house goes for labour, it is recommended that much of the labour for house construction be provided by the people themselves.

This approach requires a lot of inducements, supervision and entails administrative costs in addition to resulting in a lower quality of construction and taking a longer time in yielding results. These limitations nothwithstanding, the advantages it offers in overall savings outweigh the disadvantages.

For the purpose of strengthening a community spirit it is suggested that large segments of the community be involved in self-help projects. However, in offering technical assistance discrimination should not be exercised against those families who would rather, and can afford, to go it alone. It is not recommended that sole reliance be placed on aided self-help methods. Others should be encouranged and given just as much support.

The supply of information on construction, maintenance labour and materials is essential to a family's ability to organise its resources. Systematic collection and dissemination of such information should be given top priority and be made part of the programme.

With due respect to the right of people to participate in programmes affecting their lives and realising the important role such participation plays in the successful implementation of these programmes, it is recommended that the people be given a chance to participate in programme formulation and execution.

7. A set of building bye-laws should be adopted to cover housing in uncontrolled settlements

Given the present cost of a standard dwelling unit in Mbabane which to a great extent is a function of the building standard, the full implementation of the proposed upgrading programme would take a very long time to be realised. It is recommended that the housing units in uncontrolled settlements be exempted from the existing building standards and instead be made subject to a new set of regulations. These new standards would be designed not to exceed minimum requirements for sanitation, safety and comfort. Their enforcement could be phased such that by a given date, all dwelling units could be expected to have met sanitation standards, safety requirements and comfort requirements in that order.

Funding of research geared toward developing local building materials and improving traditional contruction methods should be considered an essential element of the programme. Academic institutions such as the Swaziland College of Technology and the University College of Swaziland should be encouraged to

contribute to the development of indigenous house construction technology.

8. A monitoring and evaluating system of the uncontrolled settlements improvement programme should be established

This is perhaps the most important element of the programme. It implies the collection of base data on the settlements and their inhabitants, the setting of goals, objectives and targets the programme is supposed to achieve. Without these its degree of failure or success would be hard to determine and the introduction of improvements hard to rationalise. This study provides some of the base data which may be used as bench marks against which some changes may be checked.

CHAPTER VIII

SIDWASHINI ACTION PLAN

8.1. INTRODUCTION

This chapter is concieved as an implementation arm of the recommendations made in the preceding chapter regarding the upgrading of uncontrolled settlements.

The proposals made in this chapter assume that the government has agreed, at least in principle, to the general framework within which the problem of uncontrolled development should be solved. It is also assumed that security of tenure has been granted by offering the residents a chance to buy the land they occupy.

In preparing the plan the expressed opinion of the people on priority areas have been taken into account. Other factors taken into account include the terrain of the site, committed developments (plots and structures) and the need for the plan to conform to the Mbabane Master Plan. For example the space standards set for Sidwashini are :- (I) a minimum plot size of 200m^2, (II) a maximum dwelling density of 50 units per hectare and 300 habitable rooms per hectare. Maximum plot coverage is set at 30%. The plan aims at meeting all these standards.

Sidwashini Development Plan

LEGEND

- RESIDENTIAL
- COMMERCIAL
- LIGHT INDUSTRIAL
- PUBLIC PURPOSE
- PUBLIC OPEN SPACE
- DEFFERED
- UNITS TO BE DEMOLISHED

SCALE 1:2500

50 0 50 100 150 metres

MBUSO C. DLAMINI
UNIVERSITY OF NAIROBI
DEPARTMENT OF URBAN AND REGIONAL PLANNING

8.2 THE SUBDIVISION PLAN

The plan defines a totoal of 270 residential plots. 50% of these are on vacant land. They range in size from 200 square metres to over 400 square metres. An attempt has been made to include all the dwelling units of each homestead in one plot. Because of this reason the sizes of plots are not uniform. However, more than 70% of them fall within the 200 - 300m^2 size range. On the basis of responses to questions 14 and 15, 83% of the households can afford to pay for these plots if the land is valued at E1.00 per square metre (The privately owned plots in Sidwashini were sold to their present owners at Eo.90 per square metre). It is recommended that the price of land in the area be kept at this level to enable a large proportion of the households to afford to pay for the plots.

To render each plot accessible, the road layout shown on Map 10 has been proposed. The layout has been influenced by the topography of the area, existing developments and the need to retain as much of the present housing stock as possible. However, 15 housing units will, in the long run, have to be demolished to

provide access. In the short run the streets may be aligned so as to avoid these structures. It is not envisaged that the streets will be graded within the near future. However, if funds are available to provide graded streets immediately, the households whose homes lie on the right of way might have to be helped to settle in the vacant plots before their homes are demolished.

8.3 UTILITIES

WATER SUPPLY

The provision of water was ranked as the number one priority by the community. It is thus recommended that the area be connected to the main water reticulation system as soon as the surveying and subdivision of the area has been completed.

The number of standpipe should be increased and individual connection made on request. The connection of the area to the main system should not present any serious problems, since the main line has already reached the Staff Training Institute (see Map 8).

SEWERAGE

It is assumed that the community will not be connected to the public sewer system for some time. But given the concern that the residents expressed over the condition of some

pit latrines and the high priority that they gave to the provision of better toilet facilities, the following proposals are made

(i) That pit latrines which are poorly constructed and/or maintained(see plate10). be demolished and filled up,

(ii) That properly constructed ones be retained till the public sewer system has been extended to cover all parts of the settlement.

(iii) That the construction of new pit latrines be controlled and be subject to existing standards of location and construction.

(iv) That the septic tank system be introduced to those plots which have connections to the public water supply.

(v) That the public sewer system be introduced in the second phase of the plan when most households are in a position to pay the E300.00 connection fee (See Appendix 5).

SOLID WATER DISPOSAL

It is proposed that communal solid waste receptacles be provided in the area and that the Mbabane Town Council take responsibility

for collection. Introduction of individual dust bins should be differed to a time when most residents can afford to pay for such a service. The indiscriminal disposal of solid waste as shown on plate 11 should be discouraged and the burning of garbage prohibited.

PLATE 10: A NEW PIT LATRINE UNDER CONSTRUCTION - NOTE POOR CONDITION OF OLD ONE.

PLATE 11: JUNK PILING UP ON SIDE OF THE ROAD

8.4 COMMUNITY FACILITIES

SCHOOLS

The settlement is already served by one primary school. However, enough land has been reserved for its expansion and the development of play grounds which are presently absent.

The community however, does not have a creshe to serve the pre-school age population. It is proposed that one be built and equiped with facilities for playing. The school should be located in the area reserved for community facilities.

SHOPPING FACILITIES

It is proposed that the already existing shopping facilities be strengthened by the addition of more shops. The Mbabane Master Plan envisages Sidwashini as a commercial sub-centre. As such enough land has been reserved for the development of a shopping centre which will serve the entire northern part of town. Convenience shops might also be established in the areas reserved for public purpose on the southern and northern ends of the settlement.

WORK AREAS

The development of Sidwashini Industrial Township will increase the job opportunities for the adult population of the community. However, to provide self-employment opportunities it is proposed that a parcel of land be reserved for the construction of workshops. The Small Enterprises Development Company (SEDCO) should take responsibility for developing these. Handicraft, Ceramics and ready - made clothing workshops could be established to offer employment opportunities to women whose unemployment rate is higher. Light-metal or wood working shops could also be established.however.

The carpet factory has been allocated additional land to cater for possible expansion. Should the factory close down the building should be used for some other industrial enterprise.

RECREATION

The area adjacent to the primary school has been reserved for recreational facilities. It is the only flat piece of land large enough to accommodate a variety of playgrounds. It is proposed that this area be developed into play fields which may be used by both the school children and the community at large.

A more accessible piece of land lying across from the community centre has been reserved for the construction of tennis courts. These could also be used as basketball courts with minor modifications.

Several plots have been reserved as public open space. These could be equipped with sandboxes and other apparatus for children to serve as playlots.

OTHERS

In the long run Sidwashini will need cultural health, communication and other facilities. These will be needed to serve not only the needs of the community but that of a wider area. In recognition of this fact a parcel of land is reserved for these facilities. In general, particular facilities should be established through the will of the people to be served in the order in which they want them.

The area reserved for community facilities enjoys a central location, good accessibility, and does not conflict with adjacent land uses.

8.5 SHELTER

Given the attempt that has been made to retain much of the dwelling units in drawing plot boundaries and in aligning the streets, it is proposed that the dwelling units be retained as part of the settlement until such time that owners are able to replace them with permanent units or in the case of improvable units (See plates 12 and 13) they are brought up to acceptable standards. Units such as those shown on plates 14 and 15 are certainly not improvable. Their owners should be assisted in their efforts to provide themselves with better housing units.

It is assumed that the recommendation to establish new bye-laws and standards for uncontrolled settlements was accepted and that the new units would abide by these.

If the new standards are not deemed necessary, it is recommended that households be given access to credit and be given a grace period of at least

5 years within which to construct standard units. This proposal is made with reservation given the author's bias in favour of lower standards. However, given the time it takes to formulate revised standards, the proposal is considered realistic.

Whatever, the case turns out to be, it is recommended that progressive improvement of housing units be encouraged. It should be possible for families to improve their houses gradually as their incomes increase - (See plate 16).

As pointed out in Chapter 6, the government cannot afford to provide housing to the people; the responsibility for such lies with the people themselves either individually or collectively. It is recommended then that several self-help methods be tried out in this settlement with the objective of finding out which ones are acceptable to the people. Questions of the optimum size of working group, the best combination of working hours and the construction methods best suited to self-help efforts could be answered through trials in Sidwashini. These would be of help in the improvement of the other settlements.

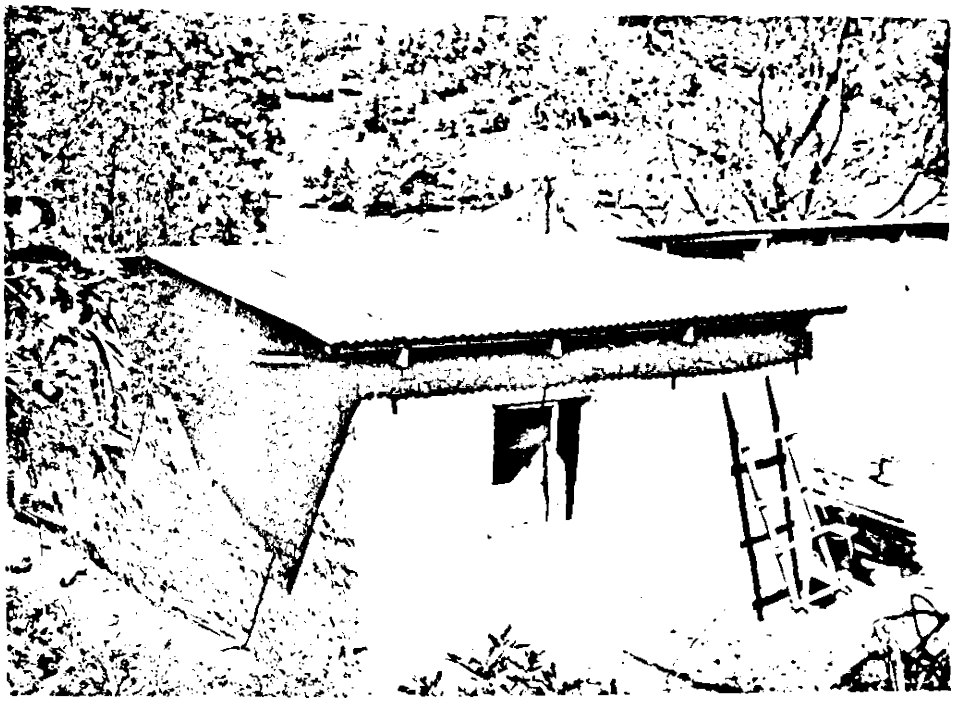

PLATE 12: AN IMPROVABLE DWELLING UNIT; NOTE THE USE OF STEEL WINDOW FRAMES.

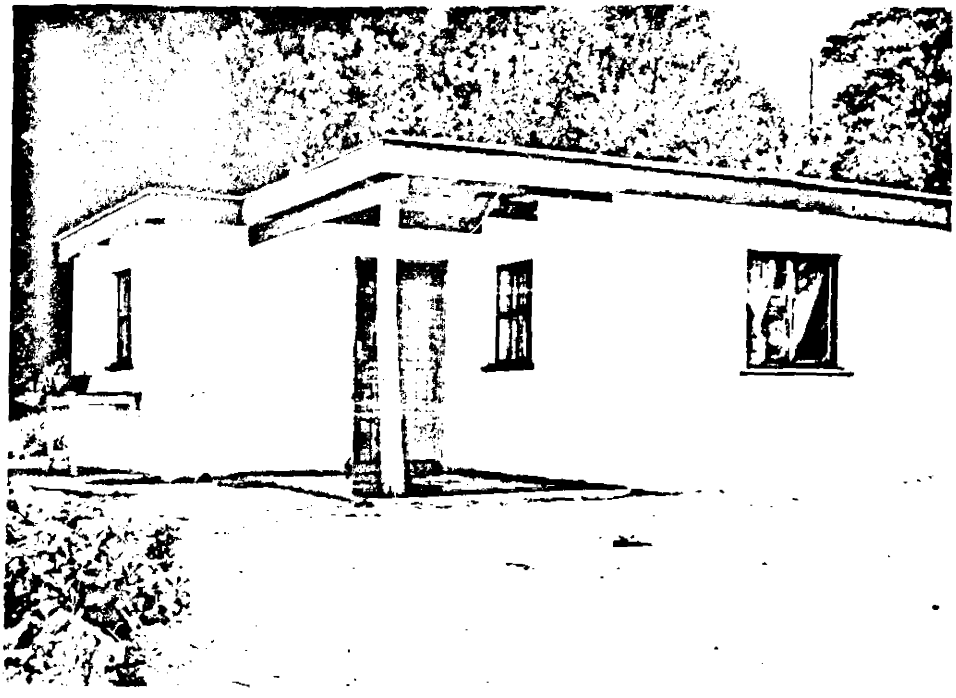

PLATE 13: ANOTHER IMPROVABLE UNIT - WOODEN POLE BETRAYS ITS 'STANDARD' APPEARANCE.

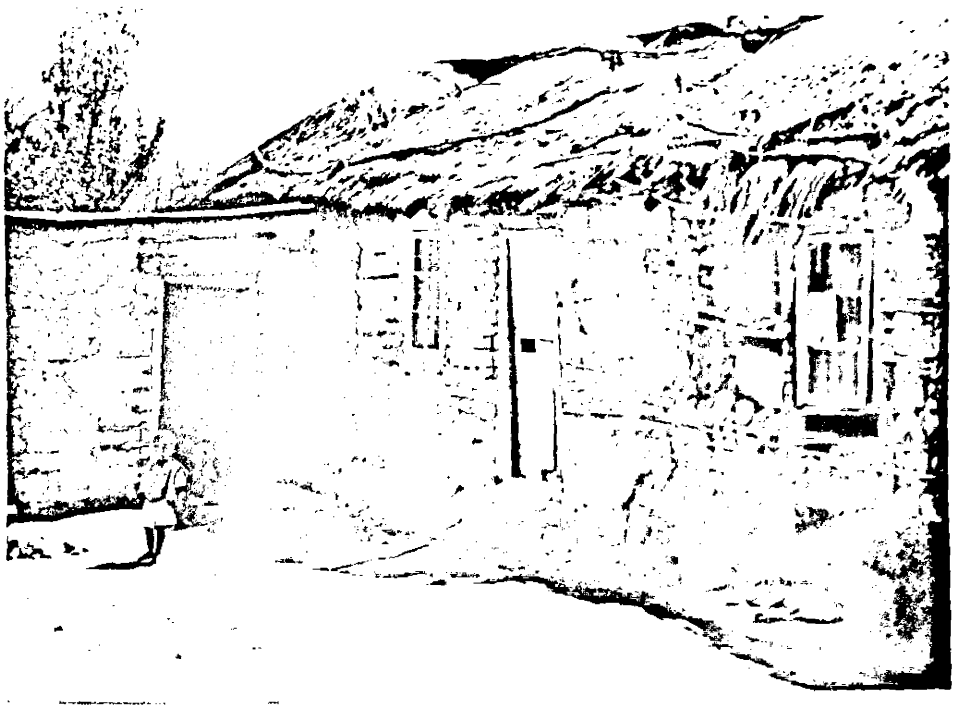

PLATE 14: A NON-IMPROVABLE UNIT - A VICTIM OF HEAVY RAINS AND POOR MAINTENANCE

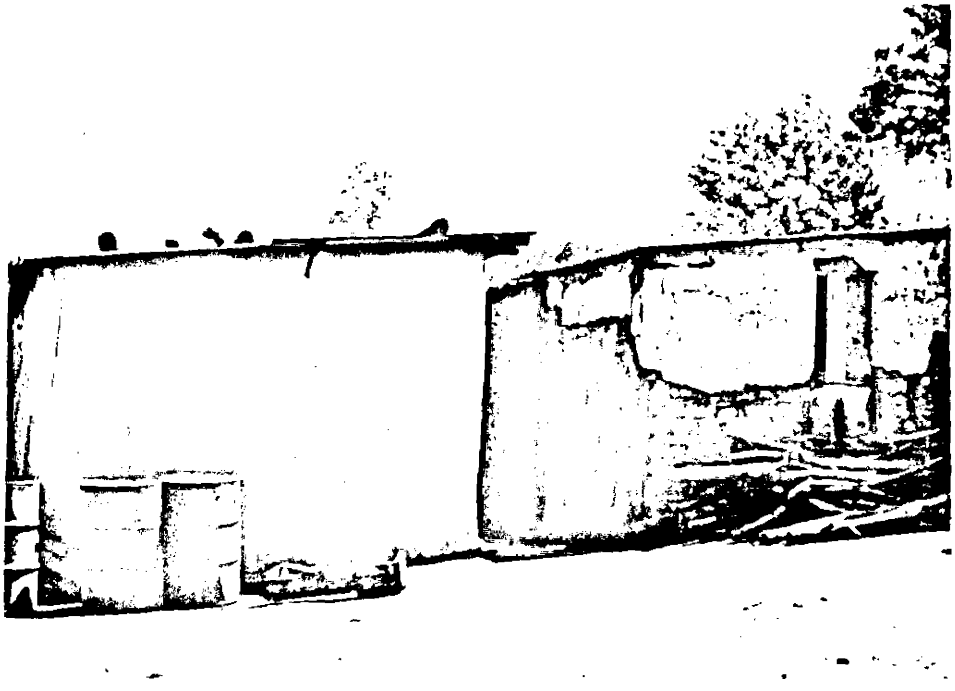

PLATE 15: NON-IMPROVABLE UNITS

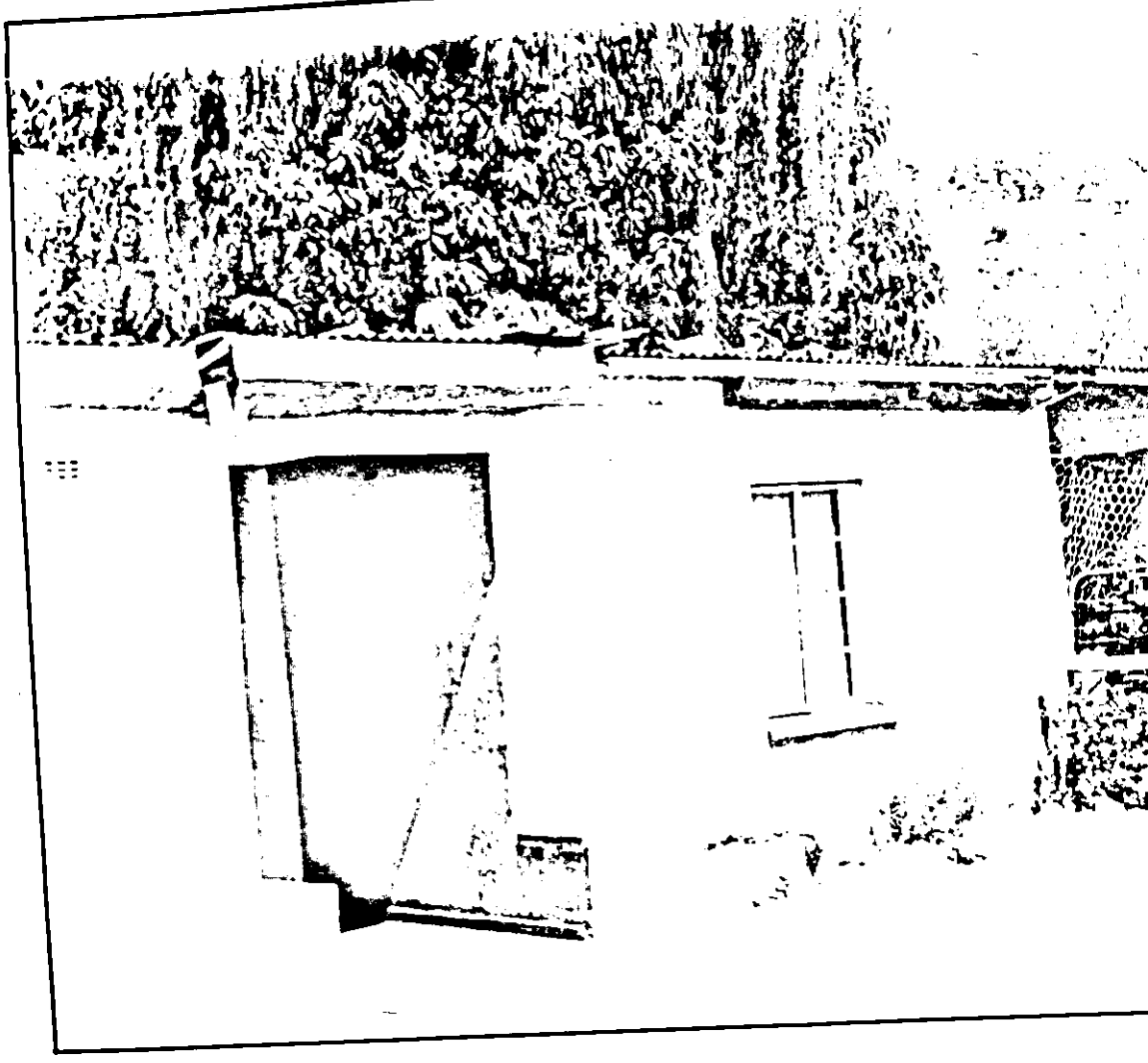

PLATE 16: AN EXAMPLE OF PROGRESSIVE IMPROVEMENTS.

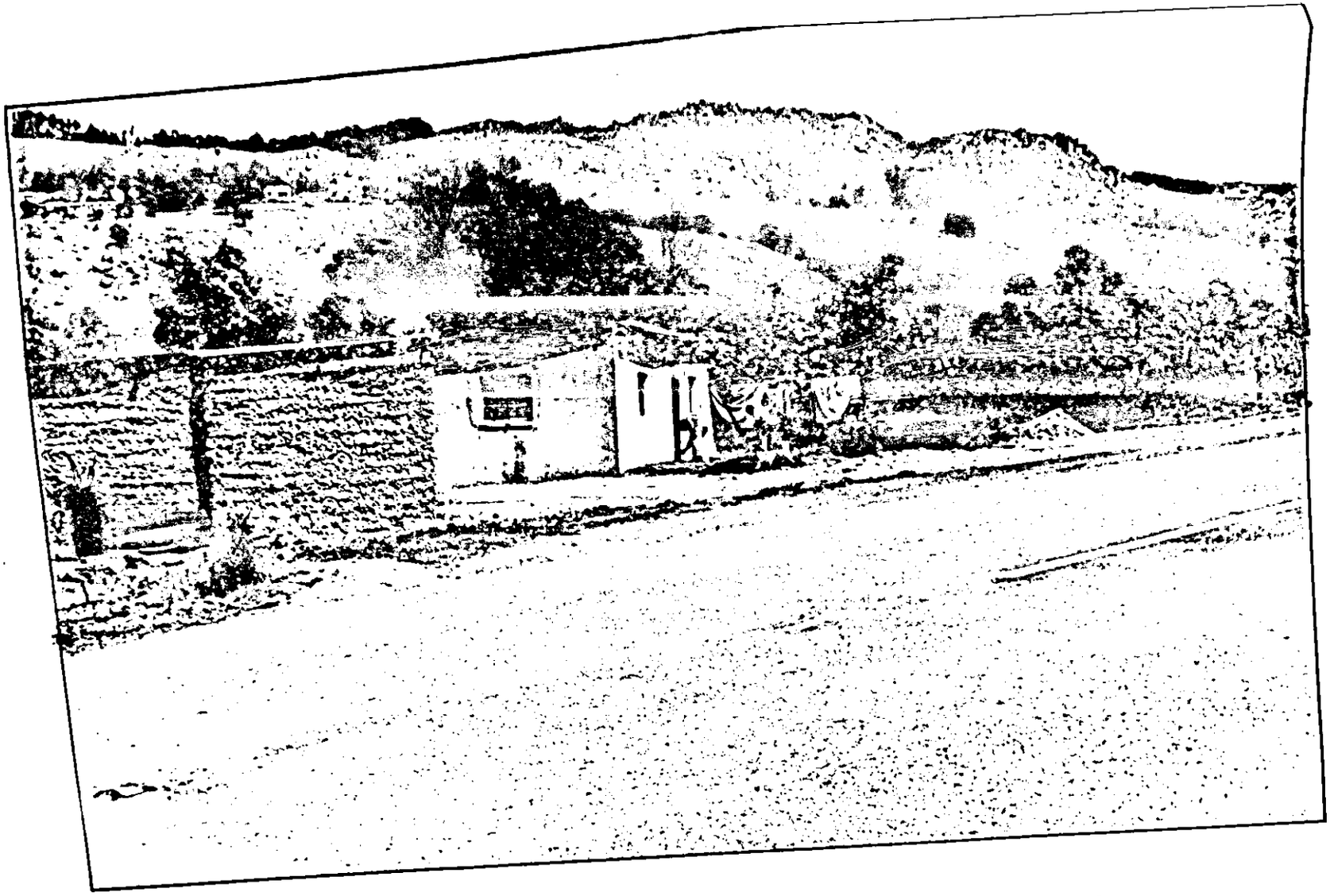

PLATE 17: AN EXAMPLE OF A GOOD HOUSE BEING BUILT AT THE WRONG PLACE - THIS HOUSE LIE WITHIN THE MBABANE - OSHOEK MAIN ROAD'S RIGHT OF WAY.

In recognition of the fact that more than half of the population of Sidwashini is composed of tenants, the plan reserved some land for rental housing. This land could be developed by the Town Council, the Government or the Industrial Housing Company.

It is recommended that the flats developed in this area be geared to the low-income group and give first preferance to the displaced tenants of Sidwashini who will be forced to move when landlords replace their units with permanent ones.

Given the significant contribution to owner household incomes made by rent collections, it is assumed that some landlords would like to continue renting. This should be allowed and technical advice should be given on house designs which enable some rooms to be rented.

The development of the reserved for rental housing and community facilities will result in the relocation of 25 households. These households should be given financial and technical assistance in moving into the vacant

plots. It is recommended that their units be retained until such time that they have moved into their new homes.

8.6 CONCLUDING REMARKS

It is the author's conviction that the plan outlined above is not only practical but also economically feasible. The resources of the population and the government can finance the plan within the 10 year planning period.

The plan not only conforms to the Mbabane Master Plan but also incorporates a balanced community concept. It makes provisions for shopping areas, employment areas, educational and recreational areas. This is all done with due consideration of existing developments and the people's expressed priorities.

Although all uncontrolled settlements are different in many ways, this plan of Sidwashini should serve as a model for their upgrading and eventual intergration into the urban system.

Mbabane is fortunate in that its uncontrolled settlements are not yet slums, with the possible exception of Msunduza. However, if suggestions and recommendations such as those contained in this report are ignored, in the very near future these will turn into 'slums of despair'. This will come about because of the simple fact that was recognised more than a decade ago by Charles Abrams, i.e.

"Squatters will built anywhere if they are not told where to build and build what they can if they are not helped to build what they should".

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APPENDIX 1

Ref: LAH.14/1

REPLACEMENT PERMIT

chority is granted to.....

estead No.....of.....to replace his/he

lapidated wattle and daub house.

the event of any development plan coming into force at any time, quiring owners of homesteads to demolish, no compensation will payable to the holder.

e replacement house shall measure.....feet lon

d .....feet wide and not more.

is permit shall be produced on demand by any administration officer police officer.

e permit is valid for 30 days from date hereon and does not include tting of poles.

e contents of this permit have been fully explained to the holder ose ~~signature or thum is affixed below~~

is permit should be returned to this office.

SIGNATURE OR THUMB PRINT.....

DISTRICT COMMISSIONER: HHOHHO

APPENDIX 2

THE CROWN LANDS (TEMPORARY OCCUPATION) PROCLAMATION 1964 (NO.22 OF 1964

No. 19.....

Name.....is hereby permited to occupy the portion of Crown Land described below for the period of.....19.....19..... at a fee of E2-00

This permit is issued on behalf of His Majesty's Commissioner for Swaziland and is subject to the provisions of the Crown Lands (Temporary Occupation) Proclamation, 1964 and to the following conditions and any conditions endorsed on the permit.

(a) Building shall not be constructed on the land without the written permission of the District Commissioner endorsed on the permit.

(b) Fruit trees shall not be planted on the land without the written permission of the District Commissioner endorsed on the permit.

(c) Soil shall not be removed from the land.

(d) Trees shall not be cut down from the land.

(e) This permit shall be produced on demand by an administrative officer or police officer.

(f) Buildings shall not be replaced nor extended without the District Commissioner's written permission.

District Office

MBABANE URBAN
for: HIS MAJESTYS COMMISSIONER

.....19.....

DISTRICT COMMISSIONER

Description:
Area:

.....Building.....

Less than 4500'

Receipt No.....

Township.....

.....

Primary Use (See Drwg.No.1876)	Dwellings per hectare	Habitable rooms per hectare	Minimum lot size (sq.m.)	Maximum Coverage	Maximum Plot Ratio
1,37.40	5	35	6000	10%	0,2:1
(6,7,6) Join	5	30	4000	10%	0,2:1
5,38,42	8	48	4000	15%	0,3:1
(11,36	12	72	1600	20%	0,4:1
14,22,44	16	90	1200	20%	0,4:1
20	20	100	1600	25%	0,6:1
(12,23,28,45	20	100	1000	20%	0,4:1
15,18	25	120	1600	25%	0,6:1
24	25	120	1200	20%	0,6:1
19,21	25	120	1000	25%	0,6:1
31,33	30	150	400	30%	0,6:1
26	32	160	1200	25%	0,8:1
25,34	32	160	1000	25%	0,8:1
29	40	200	500	25%	0,5:1
13,39,43	40	240	1000	20%	0,8:1
16	50	250	2000	30%	1,2:1
30	50	250	1000	25%	1,0:1
2	50	250	200	20%	1,0:1
3,4	50	300	200	20%	1,0:1
27,32,35,41	50	300	200	50%	1,0:1
17	60	300	2000	30%	1,5:1
Town Centre	50	250	-	-	0,8:1
Institutions9	30	150	-	-	0,4:1
Agricultural zone	1	6	10 ha.	1%	0,02:1

APPENDIX 4: SWAZILAND BUILDING SOCIETY LOAN TERMS

CONSTRUCTION OF HOUSES

What do I need to do?

1) Complete an application form (these are available at our offices).

2) Submit a set of plans which have been approved by the Town Council.

3) Pay a small valuation fee.

2. **How much deposit do I need to pay?**

At present 25% of the value of the land and the buildings.

EXAMPLE

Applicant has purchased plot for	E 3,500
The tender to build the house is for	E18,500
TOTAL	E22,000
25% of E22,000 is	E 5,500
The Building Society will give a loan of	E16,500
	E22,000

Therefore the applicant will have to pay E2,000 towards the Building costs himself.

3. **How much will I need to pay each month?**

The Society cannot take more than a quarter (25%) of the applicants income.

EXAMPLE:

Repayments of a loan of E10,000 will be E120 per month for 15 years. The applicant must therefore have a monthly income of not less than E480.

4. **Will my wife's earnings count?**

Yes, provided that no more children are planned.

2/.....

Is it necessary for a qualified Architect to supervise my building?	Yes. This is a safeguard to protect the Society and you. Payments are only made to the Builder against Architects Certificates.
Do I need to own the land where the Building is to be erected?	Yes or to have entered into a legal Deed of Sale to purchase the land.
Is there any restriction as to where I may build my house?	Yes. The Society may not give a loan where the land is in excess of ten hectares. In addition, the property must be in a residential area where there is a demand for housing.
What is the repayment period?	Normally, 15 years.
What is the interest rate?	Please enquire at our offices for the current rate and how the interest is applied.
Will the Society grant loans for the erection of pre-fabricated dwellings?	Yes, if they are approved by the local authority and meet our building requirements.

EXISTING HOUSES AND VACANT PLOTS

What do I need to do?	1) Complete an application form (these are available at our offices) 2) Submit a set of plans of the property, if available. 3) Pay a small valuation fee. 4) Bring the Deed of Sale with you.
How much deposit do I have to pay?	25% of the cost of the property or the estimated value assessed by us whichever is the lower.
How much will I need to pay each month?	The Society cannot take more than a quarter (25%) of the applicants income. Vacant plots must be repaid within three years.

3/.....

Will my wife's earnings count?	Yes, provided no more children are planned.
Is there any restriction concerning the location of the property?	Yes.The Society may not give a loan where the land is in excess of ten hectares. In addition, the property must be in a residential area where there is a demand for housing.
What is the repayment period?	Normally 15 years.
What is the interest rate?	Please enquire at our offices for the current rate and how the interest is applied.

APPENDIX 5

KINGDOM OF SWAZILAND

WATER AND SEWERAGE BOARD

TEL: 43161/3
Cables: WATERBOARD
Telex: 2141 WD

Head Office: MILLERS MANSIONS, P.O. BOX 20, MBABANE

WATER IS LIFE

REVISED RATES AND TARIFFS JULY 1978

ar Consumer,

e to the severe increases in wages and salaries, and in the cost of all our main materials such as pipes, chemicals d electricity etc., we regret to inform you that we have been forced to increase our rates and tariffs as from y 1978.

e new rates and tariffs are:

/ATER

SIDENTIAL CONSUMERS

0–20 cubic metres (cu.m.)	17c. per cu. m.
over 20 cu.m.	28c. per cu. m.
minimum charge	E1.70 per month

ON RESIDENTIAL (INDUSTRIAL & COMMERCIAL) CONSUMERS

All units	28c. per cu. m.
minimum charge	E6.00 per month

EW CONNECTIONS — All consumers

or providing and laying a connection water supply pipe 18 mm (¾") in diameter ra distance not exceeding 30.5 metres (100 feet)	E90.00

Above this diameter and/or distance at cost to be fixed by the Board.

ECONNECTIONS

(a) After disconnection at the request of the consumer (b) After change of tenancy (c) Transfer of connection	E5.00

ECONNECTION AFTER NON-PAYMENT OF ACCOUNT

Residential	E15.00
Non-Residential	E50.00

ECONNECTION AFTER AN ILLEGAL CONNECTION HAS BEEN MADE

Residential	E150.00
Non-Residential	E500.00

DEPOSIT — Payable by new consumer in addition to the connection fee. The deposit is refundable when the consumer requests disconnection and is not a debtor of the Board. (The Deposit receipt must be produced to obtain the refund)

Residential	E20.00 *Two months estimate consumption*
Non-Residential	E50.00
Minimum	E6.00

METER TESTING FEE — Refundable in full if meter shown to be more than 2½% in error either way.

CHARGES PAYABLE BY OWNERS OF URBAN PROPERTIES

Every developed or undeveloped erf or lot capable of being provided with a water supply and if not connected to the water system shall be charged at the rate of . . E2.50 per month

p.t.o.

SEWERAGE

ALL CONSUMERS	17c per cu.m. of water consumed
MINIMUM CHARGE — Residential	E1.70 per month
Non-Residential	E6.00 per month
C.O.D. above 500 mg/l charged according to the formulae	$\frac{\text{COD}-500 \times 20\text{c/cu.m.}}{500}$

NEW CONNECTIONS

For providing and laying a connection sewerage supply pipe up to 150 mm (6 inches) in diameter for a distance not exceeding 30.5m (100 feet) E300.00
Above this diameter and/or distance at cost to be fixed by the Board.

CHARGES PAYABLE BY OWNERS OF URBAN PROPERTY

Every developed or undeveloped erf or lot capable of being provided with a sewer system and not connected to the sewer system shall be charged at the rate of . . . . . E2.50 per month

THE DIRECTOR

SPC GR415

HOUSEHOLD SURVEY

AUGUST 1978

Name of interviewer .....

Date of interview 1978

1.Homestead Number .....

2.Household Number .....

(3)	(4)		(5)					(6)		
RELATIONSHIP TO H/H HEAD	SEX		AGE GROUP					EMPLOYMENT		
	M	F	CHILDREN			ADULTS		EMPL.	SELF EMPL	UN-EMPL.
			Under 5	5-14	15-19	20-59	60+			
1.										
2.										
3.										
4.										
5.										
6.										
7.										
TOTALS:										

(9) How long have you lived in this area

Less than one year.....0

1 - 5 years 1

5 - 10 " 2

10 - 20 " 3

20 -
More than 20 years 4

(10) Where didi you live before

Elsewhere in Mbabane (Specify).0

In Hhohho District 1

In Manzini " 2

In Lubombo " 3

In Shiselweni" 4

Outside Swaziland 5

(11)Do you now consider Mbabane to be your home

Yes 0

No 1

Not Sure...2

(12) Do you own a plot in town

Yes, already bought one 0

Yes, I am paying for one.....1

No, do I do not won plot 2

(13) Have you tried to buy one

No, have not tried 0

Yes, I am on Town Council list.1

Yes, but have failed 2

(Specify reasons)

(14) What is the highest amount you would afford and be willing to pay for a plot

E100 - 149 0

E150 - 199 1

E200 - 249 2

E250 - 299 3

E300 - 399 4

E400 - 599 5

E600 - 799 6

E800 - 999 7
E1,000-1,499 8
E1,500 + ...9

(15) What would be the highest monthly payment you would be willing and able to pay for the plot

Less than E10 0

E10 - 14 1

E15 - 19 2
E20 - 24 3

E25 - 29 4

E30 - 39 5

E40 - 49 6

E50 + ...7

(16) The maximum deposit you would afford to pay now would be

Less than E25 0

E25 - 39 1

E40 - 69 2

E70 - 99 3

E100 + ...4

(17) What is the most you would be able to spend on building a permanet house (one that meets Council standards)

Less than E500 0

E500 - 599 1

E600 - 699 2
E700 - 799 3
E800 - 999 4
E1,000 - 1,499 5
E1,500 - 1,999.....6
E2,000 + ...7

(22)			(23)		(24)		
[illegible]			LEVEL OF CROWDING		SIZE OF HOUSE		
[illegible]	Bath	Toilet	Habitable Rooms	Persons Sleeping in Rooms	Length	Width	Area

U T I L I T I E S

D E S C R I P T I O N.

(25) Water Source
- Own Inside House 1
- Own Outside 2
- Stand Pipe 3
- Other 4

(26) Waste Disposal
- Own Pit.....1
- Communal pit.....2
- Unfit time 3
- Other.....4

(27) Water
- Electric
- Electricity
- Kerosene Bottle
- Fuel
- Others