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Space, tradition and comprehensive health care:: Architecture of primary health care facilities in rural South Africa

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A sample of facilities from the informal sectors: pla: s, description, identification of functions.

4.2 How well does modern design meet the needs of users the Mhala context? A sampling of facilities from the formal sector (plans and description of facilities).

Chapter 5: Analysis

Having described the information collected on prevailing health care facilities, it is then interpreted in terms of space, function, cultural factors and PHC facilities design, after which a conclusion is drawn.

Chapter 6: Conclusion

6.1 Theoretical: What is the outcome of the comparison between the design guide presented by the Council for Scientific and Industrial Research (CSIR) and prevailing health care facilities?

6.2 Practical: How do primary health care facilities in Mhala fulfil formal requirements of primary health care design? To what extent are functional features of traditional medicine incorporated in primary health care facilities?

6.3 Which need is identified in the light of points 6.1 and 6.2?

Chapter 2: Literature review

To better understand the abovementioned questions, a literature review is undertaken on:

. architecture, social practice and behaviour

. differences and similarities between modern and traditional health care systems and their spatial implications

. African traditional medicine and associated design requirements

. primary health care and associated design requirements.

Chapter 3: The case study

Which context should health care facility design take into account? The case study area, the Mhala district of the former Gazankulu homeland, is developed in order to draw a conclusion:

. examination of social, political, geographical and cultural factors; presentation of results of enquiry into user needs and providers' perceptions of those needs; context suggests relationship between the two.

CONCLUSION:

Given the Mhala context, what are the design solutions from both the formal and the informal sectors? The traditional should be studied with a view to how some ideas may be incorporated into the modern.

Chapter 4: Physical survey (sampling of facilities)

4.1 How well does traditional design meet the needs of users in the Mhala context?

STRUCTURE OF THE STUDY

Chapter 1: Introduction

Background

This section entails an introduction to and outline of the study (motivation and objective). What is needed is the background to investigate social and cultural norms on the one hand and architectural practice on the other in primary health care facility design It has been argued that architectural design should be responsive to user needs. How does this apply to health care? The purpose of this study is to examine the relationship between the health needs of users and architectural design in a rural area. What specific questions arise from this?

First: What is the socio-cultural context which should be taken into account in PHC facility design?

Second: How has this context been accommodated in traditional design?

Third: To what extent has it been accommodated in modern design?

Overview of the research method

How should one proceed to answer the above questions?

CHAPTER 3: Mhala district (case study) : 60

3.1 Geography and political organisation : 61

3.2 Natural features : 63

3.3 Geomorphology : 65

3.4 Population : 67

3.5 Socio-economy : 70

3.6 Health environment : 78

3.7 Social enquiry : 78

CHAPTER 4: Physical survey (sampling of facilities) : 90

4.1 Sample of facilities from

the informal sector : 90

4.2 Summary of findings from

the informal sector : 92

4.3 Sample of facilities from

the formal sector : 95

4.4 Summary of findings from

the formal sector : 103

CHAPTER 5: Analysis : 107

CHAPTER 6: Conclusion and recommendations : 111

Postscript: : 115

Appendix A & B: : 117

BIBLIOGRAPHY : 120

TABLE OF CONTENTS

ABSTRACT

ACKNOWLEDGEMENT

LIST OF FIGURES

STRUCTURE OF THE STUDY : 9

CHAPTER 1: Introduction and background : 12

1.1 Problem statement : 12

1.2 Health care systems : 17

1.3 Traditional medicine : 21

1.4 Understanding of and approach to health care provision : 23

1.5 Concern of the study : 25

1.6 Overview of research design and method : 27

CHAPTER 2: Literature review : 29

2.1 Architecture, social and traditional practice : 30

2.2 Traditional medicine and Health care system : 39

2.3 Relationship between architecture and PHC provision : 43

LIST OF FIGURES

Figure 1.1	Cox's pyramid
Figure 1.2	Modified pyramid
Figure 1.3	Traditional healers in seminar on AIDS
Figure 2.1	Rural PHC facilities as seen by Cox
Figure 2.2	A traditional healer's home near Arcornhoek
Figure 4.1&2:	Traditional healer Gumede
Figure 4.3:	Traditional healer Matebula
Figure 4.4:	Traditional healer J. Sugar
Figure 4.5:	Cunningmoore Visiting point
Figure 4.6:	Xantia Clinic
Figure 4.7:	IDT Visiting point
Figure 4.8:	Contondale Clinic
Figure 4.9:	Hluvukani Clinic
Figure 4.10:	Tulamahashe Health Centre
Figure 4.11:	Agincourt Health Centre
Figure 4.12:	Tintswalo Hospital
Figure 4.13:	Matikwana Clinic
Figure 4.14:	Lilydale Clinic
Figure 4.15:	Cunning Moore Clinic
Figure 4.16:	Traditional healer near Acornhoek

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To my wife, I say, "Thank you for your encouragement and the sharing of difficult times during the period of this study".

The study finds that there are a number of traditional health care functions and associated spaces (such as patients'relatives accommodation, spaces for worship, rooms for "muti" (medicine) preparation and storage, space for ritual processions, casual healer's consulting room) that modern health care and architectural practice fail to take into account. As stressed by David: "...to produce better facilities, particularly for users, there is a need to develop more cross cultural awareness" (K. David: 1992, 149).

This study, therefore, argues that in a truly comprehensive health care system the architecture of PHC facilities should adopt a more holistic view of user needs, one way being to incorporate some traditional aspects into the design of modern facilities.

ABSTRACT

The theoretical case that architecture should be functionally responsive to user needs is examined with particular reference to the design of Primary Health Care (PHC) facilities in rural South Africa. In particular, the study investigates the effectiveness of architectural practice in meeting the spatial demands of health care facilities in a changing social and cultural environment.

The functional requirements of modern and traditional health care facilities are examined, the aim being to examine **to what extent important traditional requirements are taken into account in the modern sector.**

The research relies on:

1. A comparative literature review on the interaction between the social requirements, architectural practices, traditional and modern healing systems.
2. Data collection on the study case (Mhala).
3. In-depth interview with 'users' (patients, relatives and health professionals) from both formal and informal health sectors.
4. A physical survey of traditional healers stations and Primary Health Care (PHC) facilities.
5. Analysis.
6. Conclusions and recommendations

DEDICATION

To my son CORNEIL ALEX who died at Tintswalo Hospital

when I was there for this study's field work.

DECLARATION

I declare that this dissertation is my own work. It is being submitted in fulfilment of the degree of Master of Architecture to the University of the Witwatersrand, Johannesburg. It has not been submitted before for any other degree or examination presented by any other un.versity.

CHABIKULI

EUGENE N. CHABIKULI

20-05-1997

DATE

SPACE, TRADITION AND

COMPREHENSIVE HEALTH CARE:

ARCHITECTURE OF PRIMARY HEALTH CARE FACILITIES IN RURAL SOUTH AFRICA

EUGENE N. CHABIKULI

A dissertation submitted to the Faculty of Architecture, University of the Witwatersrand, Johannesburg in fulfilment of the requirements for the Degree of Master of Architecture.

JOHANNESBURG, 1997

should make possible an optimal use of primary health care facilities which accommodate traditional values. Eric Buch confirms:

> "In Mhala many patients choose to seek care from traditional healers only. Others consult both health service and traditional healers. However, in the Tintswalo health ward contact with traditional healers has never been allowed, since the time that Tintswalo was run as a mission hospital" (Buch 1986:22).

It can be argued in this case that working both ways against the historical antagonistic relationship between both modern and traditional health practices, can be to the people's benefit.

1.4 UNDERSTANDING OF, AND APPROACH TO, HEALTH CARE SYSTEM

A summary of identified problems in PHC systems

A description of health care systems shows that traditional healing practice is incontestably valid. In an article in *Metropolitan*, C. Pitse stressed that a seminar held at the University of South Africa (UNISA) revealed the following:

> "The WHO estimates that 80% of the world population rely on traditional medicine for health care. South African statistics available show 500 000 of traditional healers with an estimated clientele of between 12 and 15 million people" (Pitse 1994:2).

"Throughout Africa, traditional healers are held in high esteem and very extensively patronized. In South Africa the black population has been, for centuries, accustomed to seeking help from a variety of traditional healers; even in a settled urban way of life, it is still usual for the majority to seek these healers' guidance for a diversity of problems" (Walker 1989:190).

The practice of consulting traditional healers (Chapter 2 point 2.3.2), and the related custom of accompanying sick relatives to health services, are widespread in Mhala; traditional healing practices still appear to influence the understanding of and approach to health care of an important proportion of the population (see examples: social survey, Chapter 3). The situation analysis conducted by the HSDU/Wits Rural Facility (WRF) in Bushbuckridge area (where the Mhala district is situated) states:

"Of equal importance is the relationship between a *'Western'* understanding of health and a *'Traditional'* understanding of, and approach to, health. What, for example are the implications for health provision if 58% of the population expenditure on health goes to sangomas and herbalists and only 26% goes to hospital and clinic fees?" (HSDU/WRF 1992:2).

In an interview, the Coordinator of the primary health care nursing course run by the HSDU said that at Tintswalo hospital 90% of the patients visited a traditional healer before visiting the formal health sector. She estimates the number of traditional healers in Mhala at around 500 and confirms that most of them are prepared to collaborate with the hospital (pers. comm: Ogreyna Ngobeni, 20 April 1993) Fig:2.3. This collaboration, among other factors,

Previously, Christopher Fyfe had noted that:

> "...The World Health Organisation suggested in 1978 that African governments might make use of traditional practitioners in primary health care.... Such practitioners have over centuries, kept people alive and today millions still rely on them, for choice or lack of alternative" (Fyfe 1986:1).

He further stated that: "African healers were first professionalised in Ghana on Kwame Nkruma's initiative in 1969. Since then, professional associations have been formed in various other African states (Fyfe 1986:1).

It is clear, therefore, that a fourth tier should be added to Cox's pyramid:

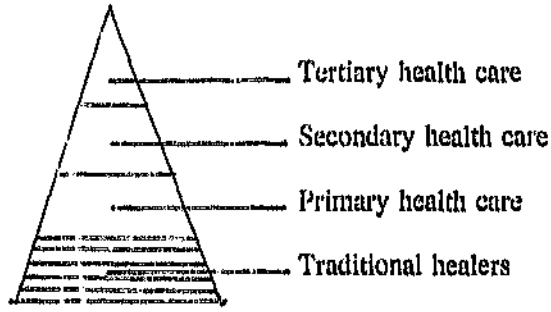


Fig:1.2

1.3 TRADITIONAL MEDICINE: CULTURAL FACTORS

This fourth tier appears to be of particular relevance in Africa, Asia and Latin America. According to Walker:

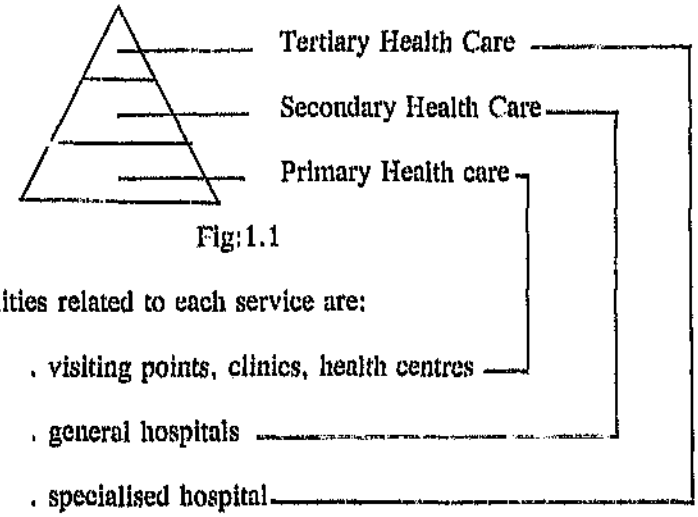


Fig:1.1

Facilities related to each service are:

. visiting points, clinics, health centres

. general hospitals

. specialised hospital

The architectural aspect of this first step (primary health care) will be examined according to literature, field work results, and a planning and design guide developed by the CSIR in 1992.

My view is that historically there is an antagonistic relationship between modern and traditional health practices. The western health care system fails to recognise that in many African rural areas formal primary health care rests on the base provided by the "informal sector" of traditional healing practice.

At a seminar held at the Centre of African Studies, University of Edinburgh, Robert Bannerman stressed that "traditional medicine remains the only source of care for many people ... it is their primary health care" (Bannermann 1983:23).

1.2.1 Peripheral facilities: Delivering primary health care in rural or urban areas. Buildings used are visiting points (served by mobile clinics), clinics and health centres.

1.2.2 Intermediate facilities: Providing complex medical care and used as referral centres. This is the secondary level of care where buildings are general hospitals.

1.2.3 Central facilities: Rendering highly specialised services. This is the tertiary health care which uses hospitals with highly sophisticated equipment (Kleczkowski 1977:45).

Note that this classification is the western health care system subdivision within which African traditional health practices are ignored.

Central facilities	Tertiary health care
Intermediate facilities	Secondary health care
Peripheral facilities	Primary health care

This typology is presented as a three-tiered pyramid (Fig:1.1) in which primary health care forms the broad base (Cox 1981:2) which constitutes the only point of contact with the formal health care system for the majority of rural populations in developing countries.

the informal health sector. The formal system is often in accordance with the norms of the United Nations, governed by its specialised health branch, which is the World Health Organisation (WHO).

A description made by Kleczkowski (1976:18) shows that the WHO describes the structure of health care delivery according to ownership and the functions of the establishment:

+ Ownership:

  - private sector (profit-making); e.g. Matikwana hospital and surgeries around Acornhoek.
  - charitable establishments (non-profit-making);e.g. missionaries hospitals
  - public sector (governmental establishments); e.g. Tintswalo and Mapulaneng hospitals in the Bushbuckridge area.

This type of facilities can be found at all levels of the health care systems as described below (points 1.2.1/2/3)

+ Functions:

  The distribution of health care facilities on a regional basis gives a hierarchy of establishments, ranging from village health posts (visiting points) to the large regional hospital.

Health care systems comprise at least three levels:

engineers, facility managers and others who provide buildings tend to think they have the answers about what people need in buildings" (David Kernohan 1992: XVI). In this case, the participants in design are: health workers, patients and the community on the one hand and architects, designers and health planners on the other. It is presented by Kernohan as a theory of "two different cultures: users and providers" (D. Kernohan 1992: XVII). Director of the WHO, Dr H. Nakajima, sees community participation regarding 'health for the year 2000' as essential:

> "Participation in planning and decision making is an important process enabling individuals and families to contribute to their own development and to that of the communities in which they live, work and socialize... they must be in charge, rather than being passive recipients of the consequences of other people's decisions and of their perceptions concerning the development of the health system, infrastructure and the planning and delivery of primary health care" (Nakajima 1991:4).

By describing health care systems and traditional medicine in functional and spatial terms we can better determine how health care provision can be brought into the community and how traditional customs can be incorporated into the design of health care facilities.

1.2 HEALTH CARE SYSTEMS: FUNCTIONAL CONTEXTS

Every country has its own formal organisations (governmental, private sector and non-governmental/NGO sector) which deal with its population's health care problems, as well as

In functional terms, this means that architectural space both enables and constrains social activities. Rapoport elaborated this point:

> "If architecture encloses behaviour tightly, then activities will tend to shape architecture. This is then important for architects regarding design since inappropriate decision may distort activities, may make them more difficult or in extreme cases, may make desired activities impossible" (Rapoport in Kent 1990:11).

When these designs are determined by the need to accommodate function, such as to deliver health care (consultation and diagnosis, treatment, health education and rehabilitation), then design must ensure that it enables more than it constrains. Therefore, the functional and cultural factors affecting architecture need to be identified and clarified.

The concern in this study is to investigate the interaction between social and cultural demands on the one hand and architectural practice on the other in the design of health care facilities. The aim is to test the following hypothesis:

> **Traditional customs related to the provision of health care are not recognised and accommodated in the design of modern health care facilities.**

Central to this hypothesis is, among other things, the whole question of absorbing users into the decision making process. Designers and planners tend to decide and deliver facilities according to their expertise without involving users. It seems "architects, developers,

Internationally it is recognised that there is no single model of health care facility which can be applied everywhere. In this regard Kleczkowski noted that:

> "Many of the mistakes made by planners and architects in developing countries stem from the belief that the problems of planning and construction of such facilities are the same in both developing and developed countries, differing only in detail" (Kleczkowski 1976:4).

The basic assumption made in this study is that buildings are not passive objects, but are active in the day-to-day reproduction and maintenance of cultural norms and social activities. "Culture, in that it is constituted by social behaviour, has a direct impact on the design and use of space in architecture" (Hillier & Hanson 1984).

Vale puts forward a similar point of view:

> "If architecture is to retain or regain a position as an integral part of culture rather than a detached club for aestheticians, both architects and architecture critics must probe the dynamics of the relationship between a building and its society" (Vale 1992:275).

It could therefore be argued that spatial layout, as defined in building plans, provides the fundamental indicator of social function and does so more than the technological and stylistic characteristics of architectural form.

My view is that a full complementarity and integration will be the result of a long-term process out of a culture of mutual learning, teaching and understanding from both modern and traditional healing sectors. In the mean time, a study such as this gives us certain options:

1. Whether to study how to accommodate the different spatial requirements of both modern and traditional medicine within a single health care facility.
2. To look at how to integrate some modern health care requirements in the traditional health care sector, or
3. (As suggested by this study) to see how important spatial requirements of traditional health care practices can be accommodated into the modern health care sector.

This issue is particularly important, given the debates in architectural circles and the need to accommodate prevailing yet changing cultural norms, and requires strong community participation in design.

"In South Africa the black population is in a state of continuing transition " (Walker 1989:190). Architects have to deal with the challenge of integrating the architecture of health care facilities with changing and prevailing social and cultural values. In one of its papers, the Health System Development Unit (HSDU) of the University of the Witwatersrand notes that:

> "Rural health in South Africa has never received the human, material and applied research investments necessary to assure a service that is equitable, accessible and affordable and which provides an acceptable level of care" (HSDU 1992:1).

call of the WHO for the year 2000, architecture has to facilitate a holistic response. This, I suggest, can be done through ar understanding of the dynamic between culture in general and traditional medicine in particular and the evolution of modern medicine. As Morojele has suggested: "...a multidisciplinary approach is needed in understanding the total process before one can isolate architecture" (M. Morojele 1990:9). Only then will Architects and health care facility designers be able to produce the spatial structures that facilitate the practice of medicine in such contexts.

The Mhala district of Gazankulu, an area situated in the North-Eastern Mpumalanga Province, is among those areas where traditional beliefs are still strongly adhered to. A description of the location (Mhala) and its socio-economic features can be found in Chapter 3.

In a case like this, the WHO recommends the incorporation of indigenous practitioners into the formal health care system. Such an incorporation is also in the health plan of the African National Congress (ANC) for the new South Africa, which states that:

> "Traditional healing will become an integral and recognised part of health care in South Africa. Consumers will be allowed to choose who to consult for their health care, and legislation will be changed to facilitate controlled use of traditional practitioners" (ANC 1994:55).

At a primary stage, the process starts with a recognition of traditional healers as medical professionals.

CHAPTER 1

INTRODUCTION AND BACKGROUND TO THE STUDY

It has been argued that architectural design should be responsive to user needs (physical and psychological). How does this apply to health care? The purpose of this study is to examine the relationship between user needs and architectural design ' .al area, i.e. a comparative study comparing modern and traditional health care facilities.

1.1 PROBLEM STATEMENT

The motivation for this study originates from personal, practical experiences of health care provision in a rural context, as well as literature on health behaviour worldwide, and in African rural areas in particular. The study is further motivated by the recommendations of the World Health Organisation (WHO) for "health for all by the year 2000". In this regard, the WHO recognizes the role of both modern and traditional medicine.

It has been recognised that health problems cannot be resolved in isolation from the structures that house health care delivery. Stephen Gage believes that "at best building itself should have some therapeutic quality" (M. Valins 1993: 24). Therefore to respond to the

"The health care planner needs help in deciding what kind of facility is needed, where it should be situated and what priority should be allocated to it; how to phase the erection of various facilities having regard to the availability of material and human resources; how to make use of material and human resources; how to make use of scarce and often unreliable statistics and recognise which statistics are indispensable and which merely helpful. For the architect, the intention is not to teach him his trade, but to bring to his attention the well identified pitfalls into which he may fall" (Kleczkowski 1976:6).

The use of cultural knowledge should, therefore, enable architects to deliver holistic design solutions. Sanders claims that: "Cultural conventions influence architectural form and use of space more than do economic and other factors" (Sanders in Kent 1990:4).

If we are to accept this then the following could be seen as examples of cultural conventions which influence architecture:

2.1.2.1 Social boundaries and interrelationships within a given society: "We (human beings) define spaces, mark them for specific uses, create visible and invisible boundaries, establish cultural conventions of behaviour toward those boundaries and will defend the territory against unwanted intrusions" (Kent 1990:49).

2.1.2.2 Traditional practices, such as a mother nursing a sick child at a healer's place or patients' relatives being active participants in the healing procedure and being accommodated at the healer's station. Cox added in this regard that:

holistically to users' demands (psychological, cultural, technological, climatic). Cox sees this approach as "more relevant, sympathetic, and far simpler to implement than some of the sophisticated solutions, often entirely inappropriate, that are based on the experience of the western world and misapplied to totally different situations" (Cox 1981:30).

Buildings for health care provision should also remain near to the people and be developed with the involvement of the local community. Thus specific data, related to health care provision and tradition, may be needed. Cox says that:

> "....there is good reason to think that in much of the developing world the most effective results are obtained by building upwards from grass roots level with the involvement of the local community rather than by extending the existing and more sophisticated facilities in the urban centres outwards to the villages" (Cox 1981:5).

This would require in our situation a full exploration of the cultural and psychological dimensions of health management and to consult the community prior to any design guide suggestion or orientation.

2.1.2. Health care provision and tradition

Designers and architects involved in developing primary health care facilities should use information collected at grass roots level. This is stressed by Kleczkowski:

In Africa, as elsewhere in developing countries, traditional medicine persists. For example, "the medical cult of the Nyanga is in demand... and it will remain so... in Africa" (Chavunduka 1978:ix). Culture determines people's behaviour, which in turn determines people's use of space. Kent states that "architecture is a reflection of behaviour or the use of space which, in turn, is a reflection of culture. In other words, they are not one and the same" (Kent 1990:3). She goes on to say that "architecture creates boundaries" (Kent 1990:2), adding that therefore while it may not determine people's behaviour, it may limit their activities.

Architecture, among others, is a component of the environment in which health care is delivered. Cox notes that:

> "Buildings are not the main source of health care, for although shelter of various degrees of sophistication is generally necessary... the form of shelter can either help or hinder the tasks performed within" (1981:vi).

It can, therefore, be argued that a strange built environment can create anxiety prior to patients' consultation. This does not favour health care delivery.

Hence, success in architectural design may be achieved when the total needs of the users are met. To succeed, "...designers need to have detailed knowledge and understanding of the people for whom they are designing" (Kent 1990:151).

Taking the culture and social habits of people in developing situations into account will ultimately lead to more acceptable and appropriate building design: structures that respond

USA: "Far more attention and resources will be paid to creating environments for the needs of the patient, rather than just of the medical staff" (Valins 1993:173).

UK : "...there appears to be consensus that health services should respond more to patients' needs in terms of services and facilities" (Valins 1993:174).

In other parts of the world, like China, India and Africa in particular, the response to health care provision is a mixture of modern medicine and traditional medicine. A document from the HSDU's Resource Centre states:

> "Schools and colleges of Indian medicine were opened in various states to train competent practitioners of Indian medicine, so that they could provide the rural population with a comprehensive medical service" (WHO/UNICEF 1994).

The persistence of traditional medicine is not due to a lack of modern health services. In this regard, Giok Ling Ooi notes:

> "A belief held by health care planners that the lack of modern health services had contributed to the persistence of ethnic medicine is refuted by the organisational vigour of traditional Chinese medical practitioners who are concentrated in the urban centres where health services are relatively well developed.... Even in the newly industrialising countries of East Asia and the rapidly industrialising South-East Asian countries, ethnic medical practitioners provide medical care alongside doctors trained in modern medicine" (Ooi 1993:273).

It can be argued that a particular society should exhibit a specific building design to meet its own needs. According to Cox:

> "Health care presents a different problem in every country, for the way it is organised is a response to geography, climate, historical development, economic situation and social, cultural and political conditions" (Cox 1981:1).

There are differences in application from one country to another. In this regard, Valins presents health centres in different countries, taking examples from America, Europe and Asia. He shows how the contemporary answers to the same question (primary health care delivery) vary from one country to another:

Japan: "A physician's clinic typically comprises a single family doctor working with a nurse (often his wife) within a facility which would also accommodate up to 19 beds. The doctor and his family will have residence on site and will be on call 24 hours. ... the physician's clinic therefore plays a vital role within Japan's primary health care system" (Valins 1993:76).

Finland: "Today health care is split into two levels: primary health care and specialised medical treatment ... The commune, or communal federation, is responsible for the primary health care ... Regional and local hospitals are responsible for specialised medical treatment. ... health centre however does not mean a single building or a building complex, but refers to the organisation of supplying services" (Valins 1993:137).

2.1 ARCHITECTURE, SOCIAL AND TRADITIONAL PRACTICES

2.1.1 Relation between use of space and tradition

The following discussion focuses on the interrelationship between the use of space (in building for health care), architectural design, and tradition. All these elements are resources for comprehensive health care provision in a any society. Cox stresses that:

> "Buildings that provide for health care fulfill many different functions and accommodate the whole life span of man ... Although sharing similarities the buildings will reflect the nature of the organisation and culture, economy and geography in which they are situated" (Cox 1981:vi).

The problem with the South African situation is that this is not necessarily so, because of the historic conflict between modern and traditional medicines. This is described for Zimbabwe, a social case similar to that of South Africa, by Chavunduka: "Colonial government and early Christian missionaries despised, and therefore attempted for many years to discourage, the use of African traditional medicine" (Chavunduka 1994: 5).

Local health authorities have, therefore, inherited the western model. Consequently standard design for health care facilities were and still are referred exclusively to western health care spatial requirements. Local cultural dimensions are not reflected in health care facility structures.

CHAPTER 2

LITERATURE REVIEW

In order to better understand the problems identified above, a review of literature is undertaken.

"HEALTH CARE FOR ALL BY THE YEAR 2000"

This statement does not concern only the medical profession, but all sectors which directly or indirectly influence health care provision. Among them is architecture, which houses health care delivery. The dynamic of change which characterises medicine, constrains building design for health care to follow the same trend: health care "for" and "in" the community. Allan notes:

> "...the sceptical scrutiny by 'outsiders' of some form of the more deeply ingrained professional assumptions is forcing medical and architectural practitioners to dismantle many of the self-imposed barriers between themselves and those they purport to serve" (Allan in Valins 1993:viii).

1.6.3 Physical survey of each type of building:

1.6.3.1 informal sector:

- traditional healing stations

1.6.3.2 formal sector:

- visiting points
- clinics
- health centres

1.6.4 Analysis and conclusion:

A comparative study with the aim of assessing the performance of PHC facilities according to the following factors: spatial layout, medical practice requirements and the practice of traditional medicine.

1.5.2 To assess the design of existing health care facilities in terms of modern medical practice and beliefs, taking into account the conventional medical functions they were designed to accommodate;

1.5.3 To identify and interpret new architectural needs in the light of points 1.5.1 and 1.5.2 above, with respect to the spatial layout and built form of primary health care buildings.

1.6 OVERVIEW OF RESEARCH, DESIGN AND METHOD

1.6.1 A comparative literature review on:

1.6.1.1 the interaction between the social requirements and architectural practices with regard to modern health care facilities

1.6.1.2 traditional healing system and architecture practice

1.6.2 A social survey :

1.6.2.1 data-collection in Mhala district: clinical, population, climate, economy

1.6.2.2 observation of activities in and around facilities in order to clarify functions

1.6.2.3 interviewing patients, their relatives and health workers in order to define actual constraints and needs, and the people's understanding of, and approach to, health services

* broad principles as defined in Chapter 1

* local circumstances presented in Chapters 3 and 4 characterised by the use of both modern (official) and traditional (informal) health care practices. There appears to be a mismatch at this point which makes health care delivery uncomfortable. To harmonise the situation, all components of health care delivery should be taken into account, such as architecture. This should finally facilitate the incorporation of the informal sector into the official one.

The success of such a 'vision' for primary health care can be guaranteed if people's values are taken into account and users brought into the debate. This is stressed by Abbott of the CSIR in an article:

> "The development of primary health care services and facilities is the major health care priority in South Africa ... An important new trend is the recognition of community involvement in the planning process and in viewing broader community needs for education, health and welfare holistically rather than in isolation" (Abbott 1993:14).

This study joins the debate by examining local cultural practices related to health care and the demands they might make on the design of health care facilities in the Mhala health ward. The following are the objectives to be met:

1.5.1 To survey the spatial implications of traditional medicine and traditional beliefs on health, through describing related samples of traditional healers' buildings and their spatial layout;

These aspects will be those that can be expressed in physical architectural space. They would include for example:

. the spatial implications of the practice of accommodating a patient's relatives on site;

. the spatial and symbolic dimensions of consultancy, diagnosis, storage and maintenance of 'muti'; and

. space for conducting ritual cures (where several people might be involved).

Of further importance is how these spaces relate to other spaces conventionally associated with clinic design, with specific reference to the framework of the planning and designing of primary health care facilities elaborated upon by the CSIR in 1992.

1.5 CONCERN OF THE STUDY

> "Adaptation of broad principles to local circumstances and demands is the key to effective primary health care" (*Health Action* Jun[illegible]'91:5).

With the above statements in mind, and coupled with the argument that clinics in the Mhala health ward do not function adequately in terms of traditional beliefs and practice, an attempt is made to contribute to the prevailing debate on how health care programmes and projects can be more appropriate and successful in meeting health needs as defined by the health service. Two issues are taken into account:

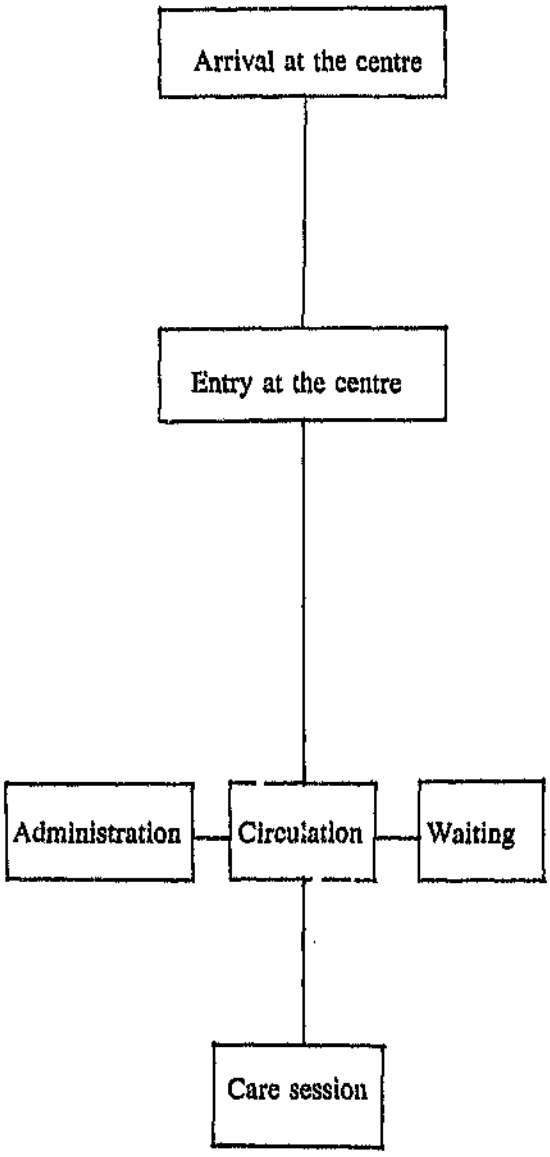
Given the fact that the form and function of a building appear to be closely related, it is important to examine whether or not the spatial requirements of traditional healing practices are integrated into the architecture of primary health care facilities. It is argued in this dissertation that existing facilities have not taken explicit cognisance of the cultural dimension, but have concentrated on formal medical requirements and as such do not fully reflect prevailing cultural and social norms.

There is currently much debate about the role of traditional healers in South Africa. One argument in favour of integrating traditional and formal health services, besides the fact that the formal sector cannot meet the needs for health care in rural areas, arises from the fact that traditional practices play a key role in the beliefs, customs and practices relating to health care. Therefore "neither the traditional nor the western approaches can or should ignore each other" (pers. comm: Stadler, March 1994).

It is estimated in the Mhala health ward, for example, that existing facilities meet less than 50% of the need (HSDU/WRF Report 1992:28). According to Walker: "...in the Republic of South Africa many black patients, perhaps three-quarters or more, will have tried home remedies or consulted diviners or herbalists before consulting a general practitioner" (Walker 1989: 191).

If the prevailing cultural and social norms, coupled with economic pressures on the health services, are considered important, and if it can be assumed that a supportive relationship between traditional and western practices can be fostered, then those aspects of traditional practices which can be absorbed into the design of health care facilities need to be identified.

These activities function as follows:



2.3.1.3 Health care facilities, functional and spatial factors

The main design criteria for building for health care is the users' circulation. It should allow users' movement around the building to proceed without anxiety of any kind. "Design must not contribute further to anxiety prior to or after consultation of patients" (Valins 1993:18). It can be argued that patient flow within a modern health care facility must be clear and simple and must not interfere with that of staff. Valins described patients' activities in the facility as follows:

- arrive at centre
- entry into the centre *(before session)*
- confirmation of arrival
- circulation within building
- time spent waiting for patient's session
- time spent taking patient's care session
- departure *(after patient's session)*

These activities lead to the following functions:

- reception
- waiting *(patients' session)*
- consultation
- examination
- treatment

of the health services" (Mazibuko 1993:266-279). An example of PHC implementation was given by Xuan, the Minister of Health of the Socialist Republic of Vietnam:

> "Primary health care has been one of the pivotal strategies for health services of Vietnam... It has adopted as a fundamental principle both preventive medicine and a combination of modern and traditional medicine" (Dang Hoi Xuan 1988:24).

2.3.1.2 PHC subdivision and related facilities:

Although women's groups and community health workers (CHWs) contribute to primary health care, services are rendered primarily at one of three community-based facilities which function in the hierarchical structure as follows:

- visiting points
- clinics
- health centres

When necessary, referrals are made to a district general hospital for more sophisticated intervention.

people enter the health care system. Abbott of the CSIR sees it as spanning, to a particular community, "a wide range of services ranging from informal home care through formal community-based care such as district midwifery and school health services to facility based services such as immunisation and child health, general consulting and maternity services (Abbott 1991:i).

According to the WHO, PHC is made up of eight elements:

> "Health education; provision of essential drugs; immunisation; maternal and child care; treatments of common diseases and injuries; adequate supply of water and basic sanitation; communicable disease control; and food supply and proper nutrition" (Martin 1991:4).

In addition to these eight elements, Martin argues that:

> "PHC also requires action on a wider range of factors including... the environment... occupational health... housing... the status of women and the public awareness of health" (*Martin* 1991:4).

Simon & Elahi also noted in an article that "the term PHC is used interchangeably with community-based care, preventive medicine, and even rural health care" (*Sunday Times* Supplement March 27 1994:1).

In South Africa, the policies of the former political structures opposed the implementation of PHC: "This has resulted in different messages about the same issue being given to clients

One can conclude that all human activity (including architecture) which aims to protect human well-being is a form of 'health care delivery', regardless of its origin (scientific or traditional) or of who is doing it (an individual, a family or an institution).

2.3 RELATIONSHIP BETWEEN ARCHITECTURAL FORM AND PHC PROVISION

Given that architecture is an essential component of the environment in which health care is delivered, it can be argued that it has an important role to play in health care delivery. Architecture is an essential discipline which partly determines and influences the nature of health care and the way in which health care is organised and delivered. Architects play a key role in the planning process, giving them a unique opportunity to influence the quality of health care facilities and the health care delivery process itself (Rosenfield 1947:5).

The aim of architecture is to facilitate people's activities. It contributes to the protection of human well-being and can therefore be considered as a crucial element in the provision of an appropriate and effective health care system.

2.3.1 Primary Health Care (PHC)

2.3.1.1 Primary health care and associated design requirements

Orthodox practitioners regard primary health care as the first point of contact with the health care system for the majority of the population. In other words, it is the door by which most

The South African Subcommittee for Primary Health Care refers to health as the optimal state of physical, mental and social well-being and includes the influence of the environment on health (Subcommittee PHC July 1992:2).

2.2.2.2 Health care

In the western system, human disorders of health are scientifically treated through biomedical intervention. The biomedical healers (nurses, medical doctors and allied practitioners) study illness using scientifically tested and approved techniques, and focusing on the treatment of conditions but, to some extent, also on prevention, promotion and rehabilitation. Hammond-Took states:

> "Science conceives of the world as a vast machine, in which the parts are nicely interlocked to form a system which can be understood if the laws governing it can be discerned" (1981:95).

Klezckowski attempted to define medical care in the following way:

> "The term 'health care' is used when the activity referred to has a certain significance for health in the broad sense, while 'medical care' is used to denote activities of a mainly medical character or when departure from common usage might create semantic difficulties. Neither term should be taken to denote exclusive or contrasting activities" (Klezckowski 1976:11).

It can, therefore be argued that traditional healing procedures and their related environmental components (such as architecture) are responsive to 'causal agents'.

2.2.1.2 Health care:

African traditional healing remains in the spiritual environment and context: 'treating the whole person'. Traditional healers pay attention to the family and social relationships. In a letter to a recent edition of *New Nation*, Professor Van der Merwe says:

> "Doctors can learn much from the hollstic approach of African traditional healers. They should deal with the patient as an integrated social entity and need to focus their communication on both biomedical and psychological information" (Jan van der Merwe 1994:1).

As it is assumed that illnesses are "sent", it follows that their cures depend on traditional rituals rather than on medicine.

2.2.2 The Western contexts of:

2.2.2.1 Health and disease

Under the western model, health is seen as biomedical. This means it concentrates on the treatment of the individual's organic disorder. More recently, with PHC, there has been a recognition of non-biomedical factors influencing health. Health has been described by the World Health Organisation as "not only the mere absence of disease and infirmity, but that which is a state of complete physical, mental and social well-being" (Rosenfield 1947:3).

2.2.1 The African contexts of:

2.2.1.1 Health and disease:

By tradition, "...the African context of health and disease is spiritual (supernatural) and social" (Fyfe 1976:11). Hammond-Took argues that, in the context of South Africa:

> "...indigenous medicine is in many respects 'better', more holistic, than its modern western counterpart, that it is congruent with indigenous world-views and that it is, therefore, more effective for black patients than the biomedical approach" (Hammond-Took 1989:15).

Indigenous medicine is concerned with 'HOW' rather than with 'WHY'. Thomas Kargbo learned from his experience in Sierra Leone that "healers function within a specific socio-cultural context" (Fyfe 1976:3).

In the late 70s, the WHO recognised that disease is not explained as purely biochemical, but rather as having micro-social (family, community) and/or supernatural explanations. Hammond-Took states that:

> " ...most illness of any severity is believed to be intentionally caused, and there are broadly four possible causal agents: God, ancestors, witches and pollution, which results from the victim being in a particular ritual state" (Hammond-Took 1989:57).

2.2 TRADITIONAL MEDICINE AND HEALTH CARE SYSTEMS

A brief description of differences and similarities

> "The work of the African healer complements that of the hospital. It is not a substitute for it. Each system functions side by side in its own distinct sphere" (Fyfe 1976:4).

Formal primary health care services and the informal healing sector are separately presented. The facilities and services which theoretically should be available in the formal as well as the informal sector, are described and the dichotomy between the "narrow focus" of the biomedical model (simply treating health conditions) and the "broader focus" of the traditional model (treating the whole person) is illustrated.

Data is used to highlight the different ways in which space is utilised in each of the two sectors. An attempt is made to show the constraints that the modern design of health care facilities imposes when it does not consider traditional values as related to healing.

Before describing the health care system and traditional medicine, it is important to consider definitions of health and health care in both the modern and the traditional context.

2.1.3.2 The more integrated approach of traditional healers is reflected in common, shared spaces between the healer and his family, patients and their relatives. Indeed, "patients are part of the community" (Hammond-Took 1989:148).

2.1.4. Desired activities should be facilitated

The provision of health care facilities is influenced by factors related to:

. political and economic development

. social structure and culture

. environment

A positive and constructive response to constraints emerging from these factors, should facilitate the provision and use of facilities. Valins notes that:

> "The basic design criteria of any primary health care centre will be its ability to facilitate the patient care session, that is, the coming together of patients (or groups of patients) and a health practitioner within an environment that is accessible and allows for privacy, confidentiality and dignity" (Valins 1993:9).

container of spaces to that of an active facilitator of the centre's activities. As such, architecture can at the best contribute to the creation of a therapeutic environment, from which an effective and efficient health care service can be delivered" (1993:24).

Although there is no literature describing a traditional healer's place of practice, it can be said that the informal sector is not characterised by hierarchical structures as is the case in the formal sector. As a result, the informal sector tends to avoid forms of segregation and integrates patients in their society by bringing in relatives and friends. The relatives and friends are active participants, who nurse and care for patients. This has the following implications:

2.1.3.1 The referral hierarchy, from one level to another in a western health care system, is reflected in primary health care architecture as follows:

- the smallest facility is the visiting point
- the medium-sized facility is the clinic
- the largest facility is the health centre

Cox describes primary health care facilities in rural areas as follows:

"In the first instance the accommodation may consist of little more than a room for examination and treatment, approached from an open waiting space in the form of a sheltered veranda ... An extension might add more space ... The nature of growth depends on local needs ..." (Cox 1981:26).

"In the wards, admission may mean that other members of the family will stay nearby and will play an important part in cooking for and generally looking after the patient. The admission of a small child will be likely to involve admitting the mother as well" (Cox 1981:28).

It can, therefore, be said that providing for relatives is part of taking care of the patient himself. As Deasy observes:

"A designer who could solve the problem of attracting visitors to the hospital would make a helpful contribution to the health care system" (Deasy 1980:118).

The traditional situation does this by giving accommodation to the patients' relatives at the healer's place without any form of segregation. The community also participates in the healing process when needed (ritual cure).

2.1.3. Health care provision and its relation to the utilisation of space.

Health care provision is directly influenced by the environment in which it is provided. The utilisation of architecture alters the environment, therefore it may influence health care provision and related activities. Valins observes:

"An activity-led design can elevate the role of the environment from that of a passive

coexistence of the first world medical system with traditional beliefs and practices" (Hammond-Took 1989:1). However, this 'coexistence' needs further clarification, particularly in the spatial, architectural sense.

The chapter which follows investigates health care facilities in the Mhala district in the Mpumalanga Province. Although no statistics are given, it is estimated that there are more than 500 traditional healers in the area. Approximately 90% of the population, including the majority of health workers, make use of their services.

TABLE 1

KEY ASPECTS OF HEALTH CARE	
Formal sector	Informal sector
Narrow focus: simply treating health conditions. Health and disease are biomedically comprehended. They are analyzed and treated only by scientifically tested and approved techniques.	Broader focus: treating the whole person. Health and disease are socially and spiritually explained. They are treated in a social (family or community) and spiritual dimension.

TABLE 2

ACCOMMODATION	
PHC facility	Traditional healer's homestead
Designed to accommodate: . staff (health workers) and . patients.	Designed to accommodate: . the healer's family . patients and . patients' relatives.

After clarification of questions raised in Chapter 1, an example is put forward. South Africa with its multicultural, heterogeneous society introduces a variety of solutions. One aspect of interest in the South African community which has a large potential, is the combination of traditional healing practices, with Western medicine. Hammond-Took adds: "There is a

* ACCOMMODATION OF RELATIVES:

Traditional healers accommodate patients' relatives and the community. The incorporation of these particular aspects of traditional medicine in modern health care facilities would naturally require additional space. Cox puts it this way:

> "There are examples, notably in Africa, where provision is made for this influx of patients' families by the construction nearby of a hospital village or of simple hostels. Besides sheltering the relatives of the sick this accommodation can be used by non-infectious patients who are capable of looking after themselves. Such self-care patients may constitute a residential proportion and deliberately organised residential shelter of this kind can considerably reduce the number who might otherwise be occupying hospital beds that require nursing attendance" (1981:28). Figure 2.2, Appendix B.

This shows that some aspects of tradition can gain a place in the modern sector if accepted and effective.

The following tables summarise the chapter above:

If a particular healing procedure requires the involvement of patients' relatives, this will necessarily impact on the utilisation of space. In the context of traditional and modern medicine operating side by side, architects who are involved in designing appropriate health facilities must therefore consider the requirements of both sectors. These are, briefly, as follows:

* RITUAL CURES

Size and functionality of architectural space depends, among other things, on the number of users and the interaction between them. As noted by Kent:

> "...interrelationship of culture, behaviour, and cultural material is the causal agent behind the frequency of functionally restricted segmentation... how a society organizes or segments its culture will influence how it organizes its behaviour or use of space and its cultural material or architecture, vis-à-vis segmentation" (1990:149).

An example of African traditional ritual cures presented by Hammond-Took shows that ancestor-caused illness is handled ritually, so that health is restored: "... The resulting ritual always has two parts, a public one as well as a private one in which the members of the agnatic cluster and their wives meet on their own... the public feast takes place in the morning, at any time before noon, and is attended by members of the local area and others from further afield" (Hammond-Took 1989:67)

group by the other, a therapeutic community where staff, patients and relatives share the same facilities" (Jan van der Merwe 1994:1).

The traditional healer's homestead is designed according to four major functions:

* shelter for the healer's family
* healing procedures
* shelter for patients and
* shelter for patients' relatives

The design space is composed as follows:

. healer's household (seating, bedrooms, storeroom)

. consulting room/s (ancestors' room)

. store room/s

. kitchen/s

. patients' room/s

. patients' relatives' room/s

. toilet (usually pit latrines used by both family and patients, divided according to gender)

. courtyard for waiting and rituals

The number of rooms and their sizes depend on the socio-economic situation of the healer and his/her family. See for example a traditional healer's home near Tintswalo Hospital/Acornhoek (Fig:2.1/Appendix B).

"Traditional healers treat the whole person as an integrated component of a family and of a community at large" (Jan van der Merwe 1994:1).

Freeman has the same argument: "Care is not only directed at the biological aspect of the person, but at the social, psychological and spiritual level as well" (Freeman 1992:186).

Traditional healers in South Africa are classified as follows:

2.3.2.1 The traditional doctor (herbalist) or Inyanga (Zulu): generally male, using herbal and other medical preparations to treat diseases.

2.3.2.2 The Diviner or Isangoma (Zulu), Dingaka (Sotho), Amggira (Xhosa): commonly female, practising divination and acting as intermediaries between the living and the dead (ancestors).

2.3.2.3 The faith healer, Umprofethi or Umthan[illegible] (Zulu): A combination of Christian and traditional rituals and practices are used.

Whereas the formal health facility is designed to cater for the individual patient only, South African traditional healers accommodate their patients within the day-to-day environment. Jan van der Merwe states it in this way:

"The African traditional healer's hospital is his/her home where the physical and mentally ill live together without semblance of separation or stigmatization of one

'Eurocentric' orientation. They should reflect the African context within which structures are developed, the availability of resources, and the desired levels of services.

Constraints and conflicts that result from the abovementioned factors, have to be harmoniously combined as best as possible by designers/architects if they are to produce structures which respond to the needs of those who are to used them. I believe that if these conflicts are managed successfully, design results that are more suited to specific needs can be produced. The need can be, as in this case, the provision of primary health care facilities.

2.3.2 TRADITIONAL MEDICINE

The informal sector (traditional medicine) can be seen as the entire social organisation around health care provision and disease prevention in a non-western model. It is not scientific, but culturally valid for a given society. Methods, practices and techniques are passed down through the generations. Fyfe notes that:

> "African medicine, then, is the medicine practised by Africans before the arrival of Europeans, and the brutal transformations associated with colonial rule" (Fyfe 1987:43).

The holistic approach of traditional medicine is one of the features which distinguishes it from western (modern) medicine, although some aspects of the comprehensive model at primary health care level tend towards holism. Jan van der Merwe states that:

From the description of the relationship between architecture and PHC facilities, it appears that architectural designs are made to satisfy user needs. To reach that objective, architects and designers have to challenge certain constraints previously described:

* User requirements:

"Users" could be seen to include:

. the client (government or private owner)

. staff

. patients

. community

Each relates to facility and has different and often conflicting perceptions of its own "requirements". To resolve this, architects should understand that building flexibility favours people's satisfaction in a well equipped facility. This is asserted by Martin: "...PHC centres are flexible places for people, not encasement for equipment" (Valins 1993:IX). All parties concerned should therefore find satisfaction.

* Socio-economic, cultural, physical and technological context: which includes the availability of money and peoples' building tradition and response to climatic constraints.

* Cost limitations: the monetary cost, the social cost (changing behaviour patterns) and the environmental cost (damage to natural environment).

* Building regulations and service provision: rural areas with lack of infrastructure require an appropriate method of servicing. Building regulations in our context often have a

. security procedures

. dispensing procedures

. linen handling

. sterile supplies

. disposal systems

To house the above functions, the CSIR suggests the following modules for large community health centres:

Module A - Admissions

Module B - General Consultation and Treatment

Module C - Maternal and Child Health

Module D - Maternity

Module E - Emergencies

Module F - X-ray

Module G - Dentistry

Module H - Physiotherapy

Module I - Community Services

Module J - Day Surgery

Module K - Dispensary

Module L - Administrative and Domestic Services

Module M - Building, Site and Security Services

Module N - Transport Services

- security procedures
- dispensing procedures
- linen handling
- sterile supplies and disposal systems

(Source: Abbott 1992:4.3)

If necessary, clinics can refer patients to a health centre or hospital.

2.3.1.3.3 Health centres

The largest facility at primary level is the health centre. It is defined as the last step on the primary level of care, before referral to the secondary level of health care takes place. The health centre "delivers routine clinic care and may provid more sophisticated care and have beds for short-stay patients" (Buch 1984b:1).

Its operating system is designed according to certain procedures, among them those presented by the CSIR in 'Design For Primary Health Care Facilities':

- admission
- patients' record system
- payment for services
- services procedures and patients' flow for each service
- service hours
- staff duties and responsibilities

. family planning services

. screening for disease/disability

. care of the aged

2.3.1.3.2 Clinics

Bigger in size than a visiting point, and working on a daily basis, clinics should demonstrate work on the basis of PHC criteria, in particular the six main points:

. provision of essential care

. services supported by a base hospital

. services accessible to the community

. health care team approach

. community participation

. more services than just medical care

To allow these activities to take place, buildings must cater for the following services (functions) as described by Abbott of the CSIR:

. admission

. patients' record system

. payment for services

. services procedures and patients' flow for each service

. service hours

. staff duties and responsibilities

To design buildings to house the above functions, Abbott suggested certain modules for large and small community health centres. According to him:

> "A module is any grouping of accommodation within a health facility from which a specific service or related group of services is provided" (Abbott 1992:xii).

Module for small community health centre (clinic):

Module A - basic clinic

Module B - maternity

Module C - staff housing

2.3.1.3.1 Visiting points

A visiting point is the smallest community health facility. It is also the nearest health care facility for the community. Services are rendered weekly or monthly, according to scheduled mobile clinics. "Mobile clinics are outreach services that require transport to reach villages (more than 5 km away from a fixed clinic) on a weekly or monthly schedule" (Buch 1984c:1).

Services that should be rendered at a visiting point are:

. caring for the acutely and chronically ill

. child health care

. antenatal care

3.6 HEALTH ENVIRONMENT

Culture, the socio-economy and a shortage of facilities (Tables 3,4,5) all have an important bearing on health, in that they create difficulties which constrain the development and expansion of the formal health care sector.

VISITING POINTS (One per 20,000 population.)

PROJECTIONS

POP.	253297			363931	431240
YEAR	1991			2001	2006
No	EXISTING	SHORTFAL L	DESIRED No		
23					
18					
13					
12					
1					

Table 3.

3.5 SOCIO-ECONOMIC PROFILE

3.5.1 "Most people who live in rural areas in developing countries are subsistence farmers" (*Star* 14 October 1994:14).

Contrary to this image of the rural areas, the Bushbuckridge area, and the Mhala district in particular, although rural in the sense that they are under-resourced and do not have urban standards of infrastructure (HSDU/WRF 1992:6), do not provide opportunities for subsistence farming.

The infrastructure problems coupled with climatic instability, frequent droughts and limited access to land, do not allow for subsistence farming in the region. Most people are fully integrated into and reliant on the cash economy, and only supplement their diets with home produced-crops to a limited extent. In 1980 unemployment was estimated at around 67% of total population, which was the equivalent of 79% of the potentially economically active population (15 - 64 years of age). Migrant remittances and pensions are two major sources of regular income.

3.5.2 The socio-economic profile described above is characterised by extensive poverty and must be understood in terms of history, the economy and political structures inherited from the old SA. Low incomes are a major factor deterring people from making use of the formal health care sector, which is expensive. This situation favours the persistence of traditional health practices and beliefs.

3.4.3 Population distribution

* Children of 0-14 years old comprise 44% of the population

* Women and men represent 56% of the population, excluding migrants. Women aged 20 and over represent 24,99% of the total population; men aged 20 and over represent 13,62% of the total population, excluding migrants.

3.4.4 Density of the population

. Mhala district: 146 people per square kilometre

. Growth rate: 2,8% per annum

The estimated population for the years to come can be projected approximately as follows for each tribal area:

	1991	1996	2001	2006
Jongilanga	38 982	47 018	56 009	66 368
Hoxani	45 007	54 285	64 665	76 624
Mnisi	67 801	81 778	97 416	11 432
Amashangana	101 507	122 433	145 841	172 816
Total	**253 297**	**305 514**	**363 931**	**431 240**

the Tsonga and Shangaan, migrated from Mozambique in 1835, when Soshangane with Zwanyendaba and Nxaba, two Nguni refugee-leaders, drove across the Zambezi river. Some-times the name "Shangaan" is used to refer to the whole group (BENBO 1976:13).

3.4.2 Demographic profile

The provision of facilities, services and infrastructure (in their various forms) is affected by the population size, which, in turn, is affected by many factors, such as natural (births, deaths) and other (cultural, social, economic, personal choice) factors.

The population of Mhala was estimated at around 200 000 people in 1990, plus an estimated 40 000 Mozambican refugees (Tintswalo/HSDU 1991:2).

The population pyramid has a broad base of children and a narrow tip of elderly residents. The low number of adult males is due to migrant labour. There is also a high proportion of female-headed households (Tintswalo/HSDU Hospital 1991:3).

Male absenteeism in the Mhala region is historical and has socio-political and economic causes as well as effects. In 1970, 27,7% of all the males in the Mhala were absent (BENBO 1976:23). In 1991, 40% of all the males in the Bushbuckridge area were absent (WRF 1992:4).

irregular. The above characteristics indicate the delicate situation of the hydrology in the region. It has to be addressed carefully in the long term" (INFRAPLAN 1989:16-17).

Given the low rainfall in the area, there is a need for dams, irrigation schemes and overall water supply development to be planned and realised in Mhala, in order to meet e· · domestic needs fully.

3.4 POPULATION

3.4.1 Population history

The history of Mhala's population summarised here, is taken from the BENBO report on the Gazankulu homeland.

The inhabitants of the area which used to be the Gazankulu homeland are called the Tsonga or the Shangaan as well as the Shangaan/Tsonga. Tsonga is the name of an ethnic group in Mozambique, while "shangaan" derives from Soshangane, a Zulu captain who fled to Mozambique in about 1820 to escape Shaka's tyranny. There, he organised the local people into one empire: the Gaza empire (BENBO 1976:13).

The name "Gazankulu" is a combination of "*gaza*" the name of the area of origin in Mozambique and "*-nkulu*", from the adjective '-khulu", meaning 'big'. These populations,

3.3.2 Geology

As all over the Lowveld region, the Mhala area is underlain by archaean granite, a complex of various granite-like material with dolomite intrusions, in the form of dykes. There are no mineral deposits of any economic significance within this region.

3.3.3 Soils and vegetation

The eastern part of Mhala has shallow soil which erodes easily. To the west, valley soils are clayey, with some alluvial soils at the lowest points. In general terms, the agricultural potential of the area is low.

The vegetation consists of combretum veld (bushwillow) and broad leaf bushveld. The veld types vary from east to west, because they are closely related to rainfall patterns. Hence, the quality of the grazing becomes worse from west to east.

3.3.4 Hydrology

"Main rivers which flow in Mhala have their sources in the Drakensberg range, where rainfall is high. They are perennial although irregular at times. Small rivers originate within the Mhala area itself. Given the seasonality of rainfall, the low rainfall and the high rates of vaporation, the flow within them are described as

3.3 GEOMORPHOLOGY

3.3.1 Topography

With a softly undulating landscape, the Mhala area is mainly characterised by an absence of hills. Its altitude varies from 702 metres above sea level at Acornhoek to 316 metres above sea level at Belfast, indicating a decrease in altitude from north to south.

Topographically, each of the four tribal areas is presented as follows:

TRIBAL AUTHORITY	ALTITUDE	TOPOGRAPHY
Mnisi	500-700	Fairly flat: no hill or mountains.
Amashangana	500-700	Gentle undulating flats: low foothills to the west.
Jongilanga	500-700	Undulating flats with some hills.
Hoxani	316-650	Gentle undulating flats: foothills to the west.

(INFRAPLAN)

3.2.3 Temperature

The general pattern of the climate is described as having very hot summers with an average maximum temperature of about 38,3 degrees Celsius in January with absolute maximums in excess of 40 degrees Celsius and an average minimum of below zero (Fig:3.2/Appendix B). Temperatures increase from the south-west to the north-east (Infraplan 1989:16-17).

3.2.4 Evaporation

The evaporation, which increases from west to east, is dependent upon air temperature, humidity and wind (Fig:3.3/Appendix B). Its result is a water shortage, which impacts on agricultural development and sanitation. The humidity decreases from west to east. The result is that the area is better suited to low density cattle-farming than to crop-farming.

From the architectural point of view, such a climate encourages a north-orientation of major open sides and an avoidance of west-facing main windows. Courtyards and open spaces (verandahs) are recommended to facilitate ventilation.

3.2 NATURAL FEATURES

3.2.1 Climate

The Bushbuckridge area is relatively dry. A report from the HSDU/WRF stressed that even when the rainfall is normal, it is insufficient to fulfill the water needs of the area in terms of either domestic consumption or irrigation (HSDU/WRF 1992:3).

3.2.2 Rainfall

The rainfall, which is irregular, is a risk factor for farming (Fig:3.1/Appendix B). The area suffers serious water shortages for at least one year in three (HSDU/WRF 1992:3). The Mhala area has an apparent annual rainfall ranging between 500 and 1000 mm, 80% of which occurs from November to March.

Statistics available at the Wits Rural Facility's resource centre show that drought periods occur on average every 7 to 8 years and that:

* for 52 years out of every 100 years the rainfall is higher than the mean
* 'good rains' occur in the area 78 years out of 100
* 'excessive rains' occur in the area 15 years out of 100 and the lowest rainfall ever recorded was some 57% of the mean while the highest was some 170% (INFRAPLAN 1989:15-16).

and 4 urban settlements which include: Dwarsloop, Tulamahashe, Mkulu and Acornhoek. It is divided also into four tribal authorities which in the past have been recognised as political sub-units.

The Bureau for Economic Research and Bantu Development (BENBO) describes it in this way:

> "As in other homelands, the political development of Gazankulu was influenced by the extension of its particular tribal organisation. Of all the black people of SA, each tribe is recognised as a political unit with its own population, land and central authority. Thus the autonomous authority and status of every chief as hereditary tribal ruler is fully recognised" (BENBO 1976:15).

The four tribal authorities in Mhala (still in place) are:

- Mnisi	:	33 142 ha
- Amashangana	:	50 373 ha
- Jongilanga	:	24 691 ha
- Hoxani	:	14 058 ha
Total	**:**	**122 264 ha**

3.1 GEOGRAPHICAL AND POLITICAL ORGANISATION

The Mhala district, formerly part of the Gazankulu Homeland at Bushbuckridge, is situated in the Lowveld of the Mpumalanga Province of the Republic of South Africa (Fig. 3.01/Appendix B)

The Mpumalanga Lowveld stretches roughly from Tzaneen in the north to Nelspruit/Witbank in the south. It includes parts of the former homelands of Gazankulu, Lebowa and Kangwane.

The Bushbuckridge area of this region used to be the intersection between the former homelands Lebowa and Gazankulu. It is bounded by the Drakensberg escarpments to the west, the Kruger National Park and Sabie Sand Nature Reserve to the east, the Sabie River and the towns of Nelspruit, White River and Hazyview to the south and the Hoedspruit farming area and game lodges to the north.

With a size of 2 309,5 square kilometres, this area contains two districts:

- **the Mhala district**, formerly part of the homeland of Gazankulu, and
- **the Mapulaneng district**, formerly part of the homeland of Lebowa.

The Mhala district lies approximately 500 kms north-east of Johannesburg. It is roughly 1 204 square kilometres in size. It is bordered to the west by the Mapulaneng district, to the south by the Sabie River, to the east by the Sabie Sand Nature Reserve and the Kruger National Park and to the north by the Hoedspruit farming area. It is divided into 74 villages

CHAPTER 3

CASE STUDY

MHALA DISTRICT, BUSHBUCKRIDGE IN THE MPUMALANGA PROVINCE

Having clarified health care provision, an example (the Mhala district of the Bushbuckridge in the Mpumalanga region) is cited in order to look into people's understanding of and approach to health care worldwide, in Africa and in South Africa in particular. In order to see which context health care facility design should take into account, two aspects are developed:

* examination of geographic constraints, social, political and cultural factors; and
* presentation of the results of the inquiry into users' and providers' perceptions of needs from both traditional and modern health sectors.

The Mhala district has the advantage of being representative of rural South Africa and has infrastructure for research which facilitates studies: the Wits Rural Facility (WRF) and the Health System Development Unit (HSDU). The figures presented are drawn mainly from reports produced by the HSDU/WRF and the Tintswalo Hospital.

security, expectant mothers are required to bring their own 'body guards' who are accommodated overnight.

At the Tintswalo Hospital, mothers of paediatric patients, particularly those requiring breast-feeding, lodge in the ward. Lodger mothers also assist with general ward duties in response to the shortage of nurses.

At the traditional healer clinics, on the other hand, relatives are actively involved in caring for patients. They are accommodated at the facility and assist with cooking, washing and patient care.
Until 1976 care givers participated in the same way at Tintswalo Hospital. Relatives were accommodated near the hospital and had their own kitchen.

3.7.1.2 Questions to formal sector only

4. Estimate how many of your patients have been treated by a traditional healer before consulting someone at the formal health facility?

A. *All clinics as well as the hospital estimated that the majority of patients consulted traditional healers before attending the formal health facility. It was also stated that patients often returned to traditional healers after conventional western treatment.*

Two respondents estimated that 75% of patients are first treated by traditional healers. Although patients are afraid to report this, body scars and other signs are

Due to the recently introduced provision of free health services for children under six, the number of patients seen in clinics, health centres and the hospital is steadily increasing. For the two weeks after month's end, patient numbers at the Tintswalo Hospital may reach 400 per day.

Traditional healers treat an average of 2 to 10 patients per day, as follows:

. Mr Gumede : 2 to 10 patients per day

. Ms Godi Grace :2 to 3 patients per day

. Mr Matebula : 3 to 5 patients per day

. Mr Sugar : 2 to 5 patients per day

In actual fact there are many more traditional healers in every single village than there are health care facilities and workers. The healer J. Sugar estimates that there are about 100 traditional healers in Hluvukani.

2. Are your patients accompanied by someone when they come to you?

A. Without exception, in both formal and informal sectors, all nurses and traditional healers confirmed that the majority of patients are accompanied by someone when they go for treatment.

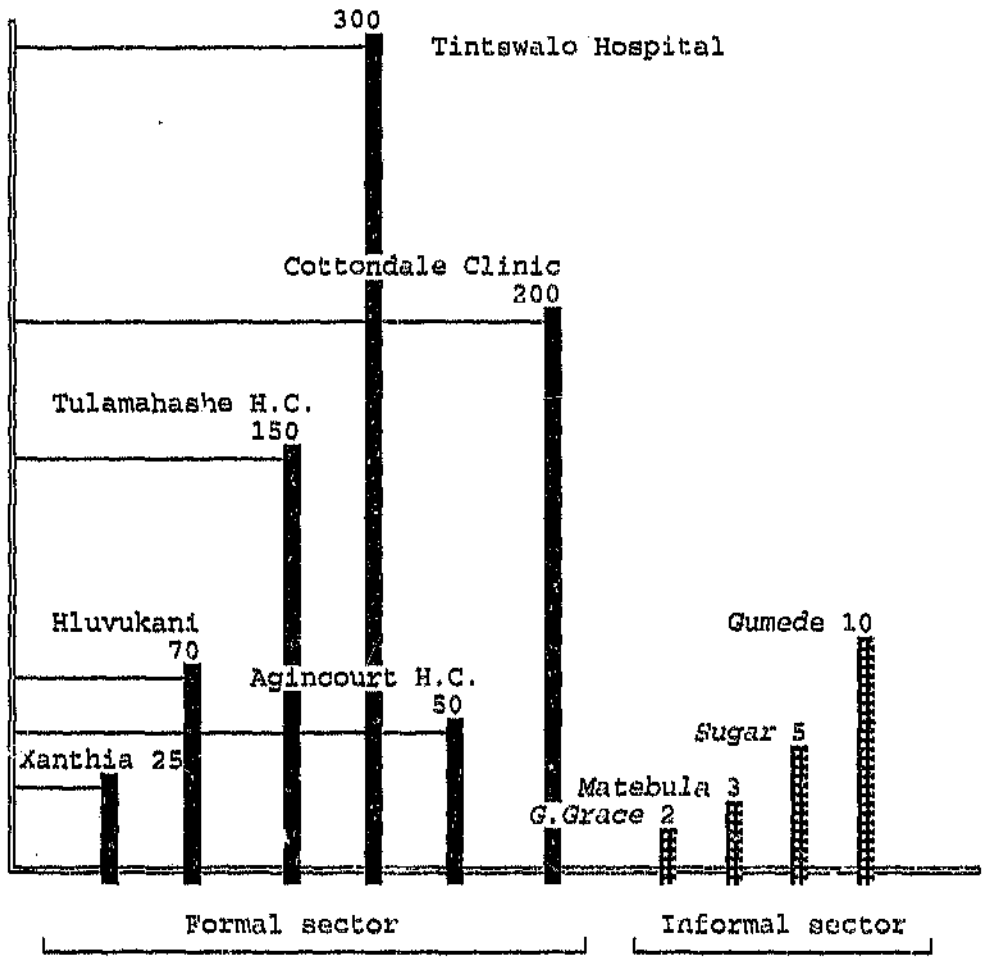
Mr Gumede stated that each of his patients is escorted by no less than 2 people.

3. If yes, do the people who accompany patients stay with them in case of admission?

A. *With the exception of the Xanthia Clinic, there are no facilities for the accommodation of relatives at community clinics and health centres. At Xanthia, due to a lack of*

3.7.1.1 QUESTIONS TO BOTH SECTORS

1. How many patients do you consult per day?



Formal sector:

Professional nurses representing 3 clinics, 2 health centres and the Tintswalo Hospital participated in the study. One doctor from the hospital also took part. The facilities visited for interviews were: Cottondale Clinic, Hluvukani Clinic, Xanthia Clinic, the Tulamahashe and Agincourt Health Centres and the Tintswalo Hospital.

Informal sector:

Four traditional healers were also interviewed for the purposes of this study: Mr Mathebula from Cottondale village, Mr Sugar J. Gumede from Hluvukani village, Mr Gumede from Gumede village (near the Tulamahashe Health Centre) and Ms Godi Grace from the Agincourt Health Centre area.

3.7.1. SUMMARY OF INTERVIEWS

For the sake of comparison, participants from both sectors responded to the first 3 questions. In addition, questions 4 to 6 were added for the formal sector only, and questions 8 to 16 for the informal sector only.

to be of two sorts: the harmful or neutral and the helpful ones. Health services must account for and deal with this issue. They should encourage helpful beliefs and practices and discourage harmful ones. Traditional healers are readily available in Mhala. Consequently, their relationship with the health care services is very important, for the health benefit of the people. Many patients seek care from traditional healers only. Others choose to consult both the health services and traditional healers. (At the Tintswalo Health Ward there is no official contact with traditional healers. This policy dates from the time that Tintswalo was run as a mission hospital, in the early 1930s.)

3.6.2.6 Conclusion

The problems of poverty, distance, time, cost and alienation mean that the health services meet the health needs of only a small proportion of the people. There is a systematic exclusion of the poor. Integration of traditional medicine into the system may, however, distribute health care services more evenly into the community. Instead of building new visiting points, the government may up-grade traditional healers' stations yet closer to the communities.

3.7 SOCIAL INQUIRY

This inquiry was carried out by interviewing the people concerned in both the formal and the informal healing sectors:

health care.

3.6.2.1 Distance:

About half of the people live more than 5 kms from their nearest health care facility, and transport is inadequate and expensive.

3.6.2.2 Cost:

The average income does not enable people to afford health care costs. A fee increase is followed by an attendance decrease during the month. Hospital attendance is higher in the first week of the month than in the following three; 1983 data from the HSDU shows that 65,8% of all patients seen at Tintswalo Hospital were present during the first week of each month, presumably because people still had money from being paid at month's end.

3.6.2.3 Time:

Few patients seek medical care at night. This is due to the high cost of night transport, a lack of safety and the fact that the clinic closes at 17:00.

3.6.2.4 Alienation:

Health workers' negative behaviour tends to alienate people from the health service. Consequently the relationship with patients is not good (Buch 1984a:11).

3.6.2.5 Traditional beliefs:

One of the major challenges facing modern health care delivery in rural South Africa is the role of traditional beliefs and practices in health care. These practices can be considered

- Alcohol abuse
- Cigarettes
- Skin lighteners

3.6.1.4 Psychiatric diseases:

- Schizophrenia
- Toxic psychosis
- Re-active depression
- Senile dementia
- Epilepsy and psychosis
- Organic psychosis
- Hysteria
- Anxiety

What all these diseases have in common, is their relation to poverty. The communication, time and money required to reach and use health services are simply not adequate; this results in a major proportion of the population being excluded from formal health care services.

3.6.2 Health services

The scarcity of health care resources impacts on both the accessibility and the quality of

of space, cultural practices and beliefs of traditional medicine - all issues addressed by this thesis.

3.6.1 Disease patterns (Source: Buch & De Beer 1991):

The following is a description of the Bushbuckridge region:

3.6.1.1 Diseases associated with poverty

- Malnutrition: An estimated 26,3% of 1 to 3 year olds are malnourished.
- Tuberculosis: 4-8% of TB patients have AIDS.
- Typhoid: Endemic in the area.

3.6.1.2 Children's health problems:

- Gastroenteritis and dehydration
- Pneumonia
- Skin infections
- Paraffin ingestion
- Burns

3.6.1.3 Harmful health behaviour

- Changing dietary patterns
- Infant formula foods used, not with boiled water and overdiluted

Rural people's understanding of and approach to health care services are paraphrased by Jacob in these terms:

> "Traditional practitioners constitute the most abundant and, in many cases valuable, resources present in the community. And traditional medicine, like orthodox medicine, aims at healing or preventing disease. In South Africa the provision of medical care (especially of drugs) is scarce, and traditional beliefs and the practice of medicine are still deeply rooted in black communities" (Jacobs 1993:73).

It has been estimated at the Centre for Health Policy that up to 80% of the African population make use of traditional healers under particular circumstances.

In the Tintswalo Health Ward not only do patients choose traditional healers for their health problems in one way or another, but it is estimated that 90% of nurses also rely on them.

The strength of cultural beliefs, combined with the Mhala population's state of poverty and the lack of infrastructure as described by Buch, are factors which explain the people's reliance on traditional medicine as an effective choice. One can, therefore, say that traditional medicine has the support of the population and that this fact justifies its incorporation into the health care system at primary level.

If this is to be done successfully, interdisciplinary consultation and research are required. This will include a critical analysis of health care facility design, focusing on the utilisation

HEALTH CENTRES (One per 50,000 population)

PROJECTIONS

POP.	253297			363931	431240
YEAR	1991			2001	2006
No	EXISTING	SHORTFAL L	DESIRED No		
9					
7					
4					
2					

Table 5.

HEALTH CENTRES (One per 50,000 population)

PROJECTIONS

POP	253297			363931	431240
YEAR	1991			2001	2006
No	EXISTING	SHORTFAL L	DESIRED No		
9					
7					
4					
2					

Table 5.

CLINICS (One per 10,000 population)

PROJECTIONS

POP.	253297			363931	431240
YEAR	1991			2001	2006
No	EXISTING	SHORTFAL L	DESIRED No		
46					
36					
25					
18					
7					

Table 4.

four patients' rooms, two storerooms, a training room for novices[1], three kitchens with an outside built dining table decorated in a special shape (Fig:4.2/Appendix B), toilets divided according to gender, and showers. One feature is especially worth highlighting: Gumede used to have white patients in the past. He consulted the ancestors, who told him not to mix them with Africans. He then built an upstairs room for that purpose, at the entrance of the ordinary consulting room, a traditional round hut. The additional consulting room is a wooden construction, on wooden pillars (Fig:4.2/Appendix B).

4.1.2 **Traditional Healer Matebula** (Fig:4.3/Appendix B)

Working hand in hand with the formal healing sector, Mr Mathebula's household is divided into 20 rooms:

- a six-roomed house for the family
- a three-roomed house and two separate rooms for patients
- three consulting and teaching rooms
- two kitchens (one room and one open space)
- one storeroom and one spare bedroom
- one tuckshop
- toilets.

The courtyard is used as a place where both the family and the patients can sit.

---

1 It must be noted that every traditional healer's place is also a 'teaching clinic'. Candidates may be former patients or any other individual chosen by the ancestors in a dream.

CHAPTER 4

PHYSICAL SURVEY

4.1. SAMPLE OF FACILITIES FROM THE INFORMAL SECTOR

How well does traditional design meet the needs of the Mhala context? In this section, a sample of facilities from the informal sector is developed: plans' description, photographs and identification of functions.

4.1.1 Traditional Healer Gumede (Fig:4.1/Appendix B)

His home and clinic has 20 rooms which accommodate his family, patients and their relatives. He erected a special sign on the main road which leads to the township, in order to advertise his services to passers-by (Fig:4.2/Appendix B). His family and patients who are very sick occupy the main house. Besides the main house he has two consulting rooms,

THE SOCIAL INQUIRY SHOWS THE FOLLOWING:

* People in the community involve relatives and friends in the process of healing. In architectural terms there is a need of additional space to ccommodate these visitors:

. relatives escort patients to health services

. in case of admission, relatives wish to stay with patients and do stay if the patient is a child, or a mother who is to deliver a baby at the clinic.

. nurses gather with patients for prayer every morning

. people do combine modern and traditional medicine.

* Aspects of difference

. Traditional healers send, and in some cases accompany, their patients to PHC health services when needed.

They do not organise an administration system to record patients and business management (there is no room for that purpose). They accommodate patients' relatives and involve the community at a certain stage of the healing procedure.

. PHC care facilities do not accommodate patients' relatives. They fail also to provide enough room for public gatherings and officially they do not cooperate with traditional healers. They manage and organise their patients well.

3.7.1.4 QUESTIONS DIRECTED TO PATIENTS AS WELL AS THEIR RELATIVES

17. Do you like your clinic?

A. *Most patients answered positively. Some like their clinic because they are helped there. Those who had reservations said that some clinics are poor and in some cases patients have to wait for a long time before they can be helped. Another person was unhappy with the attitude of the nurses.*

18. What do you do for treatment when you fall sick?

A. *Some respondents said that they go directly to the clinic; others start self-medication and consult the clinic if they do not get well. One respondent mentioned that she prays before she goes to the clinic; others stressed that if the clinic failed to cure them, they went to the traditional healer. Some make use of both traditional and modern medicine; others specify certain diseases for healers and "modern" diseases for the clinic or hospital.*

19. Do your relatives accompany you for health visits?

A. *The majority of respondents said yes. Some said that it depended on the patient's state of health.*

20. Do your relatives stay to look after you in case of admission?

A. *Most of the respondents said no, but most of them were prepared to see their relatives stay if there was room for them to do so.*

12. Do you have separate rooms for *muti* (medicine) preparation and *muti* storage?

A. *The separation of muti storage and preparation depends on space availability. Two of the traditional healers have only one room for both preparation and storage, while the others have separate preparation and storage rooms, as well as an additional outside space where herbs are pounded before preparation.*

13. How many people are supposed to be involved in ritual cures?

A. *At least 2 people are involved in a ritual cure. It depends on the ceremony. There can be as many as 10 people.*

14. How long does a ritual cure take?

A. *This varies from one healer to another and from one disease to the next. It could take a few days, or it could take up to six months (or longer).*

15. If it takes more than one day, do all the participants stay at your place during that period?

A. *Some have to stay; some do not. In general, those who do not stay must return regularly for ceremonies.*

16. If yes, do they bring their own meals and do they have a separate kitchen?

A. *This depends on the healer's financial position and organisation. For example, one healer has only one kitchen for both patients and her own family, while another has three separate kitchens: one for the family, one for patients and one for communal use during cold weather.*

3.7.1.3 QUESTIONS DIRECTED ONLY TO TRADITIONAL HEALERS

8. How long have you been practising as a traditional healer?

A. *The details of the different healers interviewed for the purposes of this research, vary: one started his work in 1956, another in 1971 and the third one only five years before (i.e. in 1988).*

9. When patients' relatives stay at your place, do they bring their own food?

A. *One healer simply provides food for patients. The second includes the cost of food in the treatment fee. The last requests patients to bring food along or pay separately for meals provided.*

10. Do you have enough room for all your treatment activities?

A. *Respondents agreed that a traditional healer must have enough room to accommodate his/her family and as well as patients, both male and female (Mr Gumede and Ms Godi Grace). The total number of rooms depended on the healer's financial position.*

11. Do you have any contact with clinics or hospitals?

A. *All traditional healers interviewed made use of modern health services when they felt it necessary, by referring patients to hospital or to a clinic. One such a patient was interviewed at Agincourt Health Centre, where she often goes for treatment.*

7. Are you for or against the integration of traditional healers into the South African health care system? Why?

A. *Most participants are in favour of the integration of traditional healers into the South African national health system. Those against stated that traditional healers should be taught how to determine medicine and dosages and make use of hygienic methods before they qualify for integration.*

Those in favour stated that traditional healers help both the formal sector and the people. They know and cure certain diseases and are prepared to collaborate with the formal sector. They help reduce the death rate, by giving people the necessary psychological support and clinical assistance in some cases. Collaboration with them will encourage them to refer patients to a health facility in time. One respondent added that some years ago Africans used to be helped only by traditional healers. However, in general, people mix both modern and traditional medicine.

At the Tintswalo Hospital, some nurses are strongly against traditional healers. Others favour integration for the reasons stated above. One doctor agreed that traditional healers should not be "totally rejected". He said that modern medicine alone could not deal with community health appropriately and added that all health workers should therefore cooperate for shared learning and teaching.

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Another respondent both receives patients from traditional healers and refers some cases to them, because there are diseases which are believed to be only traditional.

The hospital does not have any contact with healers, but at the Outpatients Department. nurses said that most of their patients come from traditional healers. One respondent added that most of their patients know how to distinguish between modern and traditional diseases. A doctor said that some healers accompanying patients to hospital were active participants in the consultation, in that they gave the patient's full story.

6. Do patients consulting the staff at formal sector facilities partake in religious practices?

A. *Almost all patients express (in different ways) spiritual beliefs and the fact is that they participate in religious practices for psychological and moral support. One respondent said: "Our people go to church and still consult traditional healers, because they can cure some diseases". All nurses pray daily with patients. Community nurses would be happy to have a space to accommodate prayer. One of them said that after prayer, both patients and nurses felt refreshed. However, th e some patients who strongly believed in witchcraft and did not pray.*

At the Tintswalo Hospital, nurses pray in the wards on a daily basis. The doctor interviewed added that in some cases patients are averse to blood samples being taken for laboratory testing as well as to blood transfusions, injections and operations, as these are against their religious or other spiritual beliefs.

evidence of this. One respondent added that 80% of patients do not tell one the truth (i.e. whether or not they have been consulting a traditional healer). An exception at one clinic, the sister in charge, estimated that 60% of her patients openly declared visits to traditional healers. Another respondent said that even health workers make use of the services of traditional healers.

5. What kind of contact do you have with traditional healers?

A. *This varies from one clinic to another, but it must be noted that there is no official policy regarding such collaboration. Traditional healers send their patients to formal sector facilities if they do not succeed in curing them.*

One formal sector respondent reported that the healer usually paid the hospital fee and then took patients back when they were discharged. The traditional healer, Gumede, who serves the area around Tulamahashe, said that he works hand in hand with the hospital. He refers patients to the clinic or the hospital when necessary.

Another formal sector respondent said that her contact with traditional healers is through patients who are also treated by them. Community-based nurses said that in some cases patients are followed up by the traditional healer. One of the respondents has no particular collaboration with traditional healers, while another is consulted by traditional healers in some cases before they start the healing process. She added that she had a lot of contact with them for her personal research in their field of healing and that she taught them hygiene, the use of condoms and the danger of AIDS.

4.4 SUMMARY OF FINDINGS (formal sector)

Health care facilities in the Mhala district

(VISITING POINTS, CLINICS, HEALTH CENTRES)

From the above presentation of existing facilities, the following function/accommodations can be lden. ·ed:

1. Waiting area:

   a. In some cases we have a waiting hall which requires benches and direct patients access to reception through window.

   b. In other cases there are covered verandahs and/or trees to extend or replace the waiting room. There are benches enabling patients to queue and get access to reception through a door or a window.

2. Reception:

   For registration, payment and enquiries through window. It is equipped with cupboards table and chairs.

3. Consultation and examination:

   Privacy is guaranteed during the one to one interview around a table. Then a body scrutiny follows, performed over a consulting bed. In some cases this is done within one room divided in two by a screen. In other cases there are two separated rooms.

4.3.3.3 Outpatients session:

. waiting and sub-waiting areas

. consulting, dispensary and treatment

. registration and records rooms

. office, staf. and storerooms

. change rooms and toilets

4.3.3.4 Maternity and inpatients:

. office and nurses' station

. labour and postnatal rooms

. male, female and children's wards

. storeroom, linen store and toilets

4.3.3.5 Community hall:

. public hall, offices, storeroom and toilet

4.3.4 OTHER FACILITIES VISITED

. The Tintswalo Hospital (Fig:4.12/Appendix B)

. The Matikwana Clinic and Hospital (Fig:4.13/Appendix B)

. The Lilydale Clinic (Fig:4.14/Appendix B)

- Health needs

  . health education on sexuality, chronic disease, STDs, alcohol and drug abuse, teenage pregnancy, use of pit latrines

  . more clinics and mobile services

  . more community health workers

- Sources of income

  . civil servants, business people, domestic workers, seasonal farm labourers, street hawkers, pension grants, remittances from migrant workers.

  . average income of low income group: R80 per month

- Distances from heal ' centres to clinic

Each health centre services 10 clinics.

	NUMBER OF CLINICS REACHED	
DISTANCES / kms	TULAMAHASHE	AGINCOURT
0 - 5	1	1
6 - 10	3	6
11 - 15	6	3

SOURCE: Tulamahashe & Agincourt Health Centres (21/08/1994)

4.3.3.2 Description of the centres

Each of the centres is divided into two blocks for two distinct functions: 'IN' and 'OUT' patients. The Tulamahashe Health Centre has an additional block for community sessions.

- Excreta disposal in villages:

  . pit privy and the veld

- Vector[2] control:

  . malaria spraying team

- Nutrition

  . staple food: porridge, vegetables, meat

  . three meals per day

- Nutritional health problems

  . pellagra and underweight

  . age groups affected: under fives and the aged

  . causes and contributory factors: lack of care groups; distance from health points; socio-economic factors; ignorance

- Cultural patterns

  . main religious practices: Christianity and ancestor worship

  . family organisation: single parent, nuclear family, extended family

  . taboos: abstinence from sex after abortion or miscarriage and after death of family member

  . utilisation of traditional medicine: very strong belief

- Resources

  . agricultural officer, social workers, women's league and society

---

[2] Vector home diseases are those that are carried into the house by rodents, insects and animals.

4.3.3 Health centres

There are two health centres in the Tintswalo Health Ward. Of similar structures, they differ with regard to areas of implementation: one is in a township (Tulamahashe, Fig.4.10/Appendix B) and the other in a more remote area (Agincourt, Fig:4.11/Appendix B).

There are some similarities between these two areas. The following are characteristics of the 20 villages which constitute the areas serviced by both health centres: 10 villages per centre.

4.3.3.1 Similarities of the two health centres:

- Average people per house hold: six
- Communication with Tintswalo Hospital:
    - . telephone
    - . ambulance
- Houses in villages:
    - . majority thatched huts
    - . some modern houses
- Water supply:
    - . tap water in the street
    - . water storage in 25 litre plastic containers
    - . water treatment: chlorination

4.3.2.2 The Cottondale Clinic (Fig:4.8/Appendix B)

This is an old clinic. Additional buildings have been erected since 1993, but the new structures are too small for the community, which state of affairs prevents old buildings from being demolished. A master plan shows the clinic layout: Blocks B and C represent old buildings, while Blocks A and D are new ones.

This clinic finds it difficult to accommodate people in the waiting area for waiting as well as for various other activities (for example health education, mothers, gatherings, prayer). With an average of 200 patients a day, the verandah of the building is inadequate.

4.3.2.3 The Hluvukani Clinic (Fig:4.9/Appendix B)

This clinic serves a community consisting of local people and Mozambican refugees. Among the refugees, one finds a high number of traditional healers and midwives.

Three separate buildings constitute the whole clinic: one nurses' house, an outside room and the clinic itself. The clinic is subdivided into two main sections: a maternity ward and an outpatients section. The waiting area is very small (16 sq.m for an average of 150 patients a day). There are benches for waiting outside under a tree. This space is also used for health education. There are pit latrines for public use in the backyard.

4.3.1.2 IDT visiting point (Fig:4.6/Appendix B)

This visiting point is new one among those implemented in the Tintswalo Health Ward recently. The plans are IDT-approved. Similar structures based on these plans are to be erected in several other villages in future.

4.3.2. CLINICS

There are two kinds of clinics:

. Old ones: which are ready for replacement or rehabilitati n. Samples described below are the Xanthia Clinic, the Cottondale Clinic and the Hluvukani Clinic; and

. New ones: structures delivered according to IDT plans. Described below are the Cottondale and Cunningmoor Clinics.

4.3.2.1 The Xanthia Clinic (Fig:4.7/Appendix B)

The Xanthia Clinic has a very low patient flow. Services face several problems: a shortage of staff, a lack of space for community activities such as child welfare and community health education as well as other clinic activities. There is no kitchen, no laundry. These activities are performed outside and the shade of a tree serves as dining space when children are fed at the clinic.

A lack of security in the area makes it impossible for the nurses to live in the houses built for them.

The chapter concludes with specific examples drawn from the Mpumalanga Province, of social and cultural demands and practices on the one hand and the prevailing architecture on the other.

4.3.1 Visiting points

In the Tintswalo Health Ward, there are three kinds of visiting points:

. the shadow of a tree where nurses assemble patients for treatment;

. buildings donated by the community to house casual health services, for example a private house or building (like the Cunningmoor visiting point described below) or a private store, or a school; and

. formally designed structures erected by the Independent Development Trust (IDT) in different villages (description below).

4.3.1.1 The Cunningmoor visiting point (Fig:4.5/Appendix B)

This small facility has only three rooms. It is situated on the main road to Cunningmoor and works on the schedule of the mobile clinic organised by the hospital. A new clinic was under construction at the time of the visit. The building of the new clinic is being sponsored by IDT.

4.2.4. Patients and relatives: Relatives are needed to nurse and care for patients. Their presence has a therapeutic influence; patients feel stronger living among the healthy. Poor transport infrastructure and long distances do not allow some outpatient to go back home. Therefore patients and their relatives have to spend a minimum of one day at the healer's station (duration of stay depends on the disease and needs).

4.2.5. The climate is characterised by very hot summers. The courtyard is therefore often used as a waiting and gathering area. The spaces between buildings is often as important as the buildings themselves.

4.2.6. Kitchens and toilets (pit latrines): These are mainly outside rooms separate from others. Their size and quality depend on the healer's financial status. Kitchens are usually equipped with traditional/modern wood stoves, tables and chairs. Often zincs are not supplied for lack of running water.

4.3 SAMPLE FROM THE FORMAL SECTOR

This section contains a sample of primary health care facilities in the district of Mhala from the formal sector as well as a description of visiting points, clinics, health centres. It also describes people's understanding of, and approach to, health care facilities in both sectors.

. preparation room

. storeroom/s

. patients' rooms

. relatives' rooms

. courtyard for waiting and rituals

. kitchens and toilets

These functions are responsive to the environment in which traditional healers practise. They can be summarised as follows:

4.2.1. Family room/s can be a separate house (lounge, bedrooms, kitchen, pantry) or different rooms (mainly separate rondavels).

4.2.2. Consulting/ancestors' room/s have a spiritual value, because healing power is believed to come from the ancestors. In architecture, this is manifested by symbolic features on the finishing of the structure, small window size for lighting control, the use of structures built of traditional materials etc.

4.2.3. Preparation room/s where medicines are selected and mixed. Bottles and pots of different sizes are used and kept on the floor and/or shelf. The preparation can also be done in some (cases) in the consulting room.

There is no specific literature on traditional healers' stations (households), therefore the logic of these structures is extrapolated in this section according to:

- ideas summarised in the literature review in Chapter 2,
- the above description of healers' stations, and
- the results of the social enquiry made in the district of Mhala (Chapter 3).

The literature and the description of facilities show that the healers' clinic is his/her home. Essential for healing and reintegrating patients into society the healer's household must be big enough to accommodate his/her own family, patients and their relatives, and ritual processions. This is because of the role of relatives in the healing process:

- group therapy with patient and relatives
- nursing patients (24 hours)
- feeding and cooking for patients
- washing, cleaning, collecting water

There is also a need for overnight shelter for outpatients who cannot reach their homes the same day.

In the case of Mhala, all traditional healers in this study respect this principle.

Having described traditional healers' stations, heard their responses to the social inquiry, and identified functions which characterise traditional healer's use of space, the following accommodation was then identified for each function:

. family room/s

. consulting room/s (ancestors' room/s)

4.1.3 **Traditional Healer J. Sugar** (Fig:4.4/Appendix B)

Originally from Mozambique, he shares his place with patients: A five-roomed house for the family, three rooms for patients, two consulting rooms, a kitchen and a dining room. Finally a block of latrines, divided according to gender. The courtyard is dominated by a vegetable garden.

4.1.4 **Identification of functions**

Structures are designed and erected for domestic needs combined with health care activities. Thus the following are functions identified within a traditional healer's place:

* family dwelling
* patients'session
* patients' relatives' accommodation
* ritual procession

4.2 SUMMARY OF FINDINGS (informal sector)

An examination of traditional practices and cultural conventions provides some indications as to how facility design in the modern sector could allow for a more holistic response to local needs.

"Traditional healers, also known as sangomas or inyangas, are practitioners found on the continent of Africa...In fact, the Rand Afrikaans University will be conducting a three year traditional health care diploma tailored for sangomas and inyangas from January next year[2]" (*Business Report* 30 November 1995:4).

He added that they should start paying tax:

"Traditional doctors use the resources of the country and they too must contribute to the cost of running the state. Like other traders, traditional healers must register for VAT if their turnover is more than R150000 a year" (*Business Report* 30 November 1995:4).

* Murray Tonathy stressed in an article that:

'Patients who make regular use of the services of traditional healers, will in future be able to claim from a participating medical aid... This system will provide income to the controlling body of traditional healers to enable them to operate autonomously (*City Vision* 16 November 1995:1).

These statements as well as the results of this dissertation suggest that architects and designers involved in planning for health care facilities should participate fully in this new process. Potential contribution by architects, in spatialising otherwise purely cultural and functional concerns, should not be underestimated.

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[2] 'next year' refers to 1996.

POSTSCRIP

The field of traditional medicine is attracting sincere interest in important South African educational and research institutions:

* The University of Pretoria is opening a Department of Traditional Medicine. In a recent article *City Vision* stressed that:

> "The University of Pretoria offers a course in primary health care for traditional healers, starting next year[1]" (*City Vision* 30 November 1995, 5).

Dr Schalk Loots, the Director of the School added:

> "We cannot ignore the traditional healer as primary health worker any longer. They should rather be trained and used as first contacts with patients in the community" (*City Vision* 30 November 1995: 5).

* The Rand Afrikaans University in Johannesburg is engaged in a similar venture. As stressed by Matsheru in his recent article:

[1] Next year refers to 1996

* Practical primary health care in Mhala neither complies with the requirements of the modern sector, nor incorporates many of the features of traditional healing. This reduces the utilisation of modern primary health care facilities.

* There is a need for flexibility in accommodating (if possible) a mixture of modern and traditional medical practices in the design of primary health care facilities. Two ways can be suggested and need to be researched:

1. whether to bring traditional healers into modern facilities, or

2. to incorporate some aspects of the traditional healing practices into the modern sector.

How to bring together these two systems and avoid conflict?

1. In the long term, more research still has to be done. At this stage of the study, there is a need to identify in detail those aspects of traditional medicine which would boost the South African health care system. Careful study with a view to a new health care vision which integrates additional traditional functions related to health care delivery and associated spaces, has to be carried out.

The provision of appropriate spaces which allow for the integration of such traditional functions will be an important step in fulfilling a new vision of health care for all.

2. In the short term, the use of new designs, which incorporate traditional customs, will be difficult to implement. Upgrading existing "traditional facilities" can facilitate a delivery of more holistic visiting points. Simultaneously, designers will better understand the logic of the use of space within a traditional health care facility. This can be viewed as a preliminary step prior to a detailed research into a design guide which should accommodate spaces more related to traditional health care customs.

The above deductions lead to a conclusion which highlights three main points:

* Theoretical design principles should take into account traditional customs if they are to be more holistically oriented and therefore able to respond better to local needs.

1. On the one hand architecture can facilitate activities when producing structures that respond fully to the needs of users and building providers.

2. On the other hand, it can restrict people's activities when erecting constructions that do not favour users needs.

RECOMMENDATIONS

The community at large, and the people interviewed for the purpose of this research in particular (see Chapter 4), are already willing to be more involved in social activities which directly or indirectly affect healing procedures. For example:

. nurses pray every morning to solicit God's help

. relatives are willing to stay with patients when they are admitted to hospital.

Traditional healers, though not necessarily the most effective in clinical terms, are well appreciated when it comes to psychological support. They integrate the community in the healing procedure by treating patients over and above the clinical dimension. This implies that their facilities are designed to accommodate patients in a social context as well. At the same time, it is also a response to logistic constraints: the problem of the distances between villages and the time spent to undergo a cure, as well as the need for assistance in nursing patients, are the major reasons for accommodating patients' relatives at the healers' stations.

CHAPTER [illegible]

CONCLUSION AND RECOMMENDATIONS

HOW DOES THIS STUDY SATISFY INITIAL OBJECTIVES AND ASSUMPTIONS?

The results obtained support the hypothesis of this study:

> **Traditional customs related to the provision of health care are not recognised and accommodated in the design of health care facilities.**

This demonstrates that to be truly active in the delivery of holistic health care, PHC facilities design should take into account spaces related to the abovementioned traditional customs. This would facilitate the incorporation of traditional healing method into the modern health care system.

However, the study highlights the need for a change in modern health care practice first in order that the architecture can be made more appropriate.

The issues highlighted here raise the questions of both the possibilities and the limitations of architecture as an agent of change:

SUMMARY OF DIFFERENT FUNCTIONS AND SPACES

Whereas a modern health care system presents the following:

- waiting room/s for the general public
- reception for queries and registration
- consultation room/s for private consultation
- treatment rooms - private
- patients' accommodation (different wards)

traditional spaces are:

- family room/s (healer's household)
- courtyard/spaces between rooms (multifunctional purpose such as waiting, reception, ritual of celebration and libations)
- ancestors' room/s (consultation and diagnosis)
- preparation and storage of medicine ('muti')
- patients' and/or relatives' room/s
- service rooms (kitchen, toilets etc).

It is recognised that more research would be needed to better understand the different psychological and symbolic aspects of the spaces required by the different health care systems.

- Traditional healers are helped by patients' relatives in both the diagnostic and the healing process.
- Healers conduct ritual consultations and cures, where many people can be involved (members of the families or the community when needed) in family therapy.

In terms of the above findings, it can be argued that traditional health care involves a number of functions and associated spaces not catered for in modern PHC facility designs:

1. Patients relatives are not included in the treatment procedure and therefore no accommodation is provided for them.
2. There is no provision for group or community participation (through rituals, prayers etc).
3. There is no attempt to incorporate the use of traditional medicines and methods of administration that would have spatial implications for:
   - preparation
   - storage
   - maintenance
   - treatment and therapy.

Traditional health care is not incorporated into the modern health sector. The arrogant attitude of modern health workers, who do not see the necessity to study and incorporate traditional (cultural) world views in their own practice, favours such exclusion.

5.1 DIFFERENCES

The main difference derives from the distinction between the philosophies of the practices. This can be presented as follows:

*** 'Modern' medicine**

Its basic principle is biomedical. That means that it treats only the organic disorders of the individual. This implies that facilities which accon modate clinical services must be designed to facilitate diagnostic and therapeutic activities related to the individual only. Modern medicine concentrates primarily on the scientific and clinical aspects of illness and neglects its psychosomatic dimensions. Such dimensions would rely on taking into account a patient's family and socio-cultural background as being the possible source of illness.

Furthermore, the existing facilities in Mhala do not comply with the theoretical design procedures (see descriptions of clinics and health centres) as prescribed by the CSIR (Abbott 1991).

*** 'Traditional' medicine**

Traditional medicine's holistic approach is similar to homeopathy, as a patient's illness may be attributed to a whole range of physiological, mental and social factors. It highlights and makes use of the supernatural (spiritual) and social aspects of the human health situation. This occurs in the following ways:

CHAPTER 5

ANALYSIS

> "An analysis of any completed building can only be undertaken with due regard to a whole range of factors, from conceptual to detail, which have played a part in determining the built solution" (Valins 1995:9)

This chapter entails an interpretation of the collected information in terms of space, function and cultural factors in the design of existing PHC and traditional facilities. Based on this the functional and cultural factors which should affect the future design of primary health care facilities in South African rural areas are discussed. The focus of this chapter is to determine to what extent traditional, social and cultural factors are accommodated in PHC facilities and to what extent designs could be altered to accommodate them more fully.

Having described medical practice in the formal sector as well as related functions and having explored functions in the informal sector, what are the differences?

	HC1	HC2	CL1	CL2	CL3	CL4	VP
Admissions	*	*	*	*	*	*	*
Consult/treatment	*	*	*	*	*	*	*
Maternal and child health	*	*	*	*	*	*	
Maternity	*	*	*	*	*	*	
Emergencies	*	*					
X-ray							
Dentistry							
Physiotherapy							*
Community service	*	*	*	*	*	*	
Day surgery							
Dispensary	*	*	*	*	*	*	*
Admin / domestic	*	*	*	*	*	*	*
Bldg site/security	*	*					
Transport	*	*					

HC: health centre C: clinic Vp: visiting point

The above table shows that, in the case of Mhala, there are functions which are not currently accommodated in health care facilities.

4. Treatment:

Room for medical procedures: injections, medication where a bed is provided, a table and chair. In some cases it is used also as a storeroom for medicir :s. It is equipped with cupboard and/or fridge.

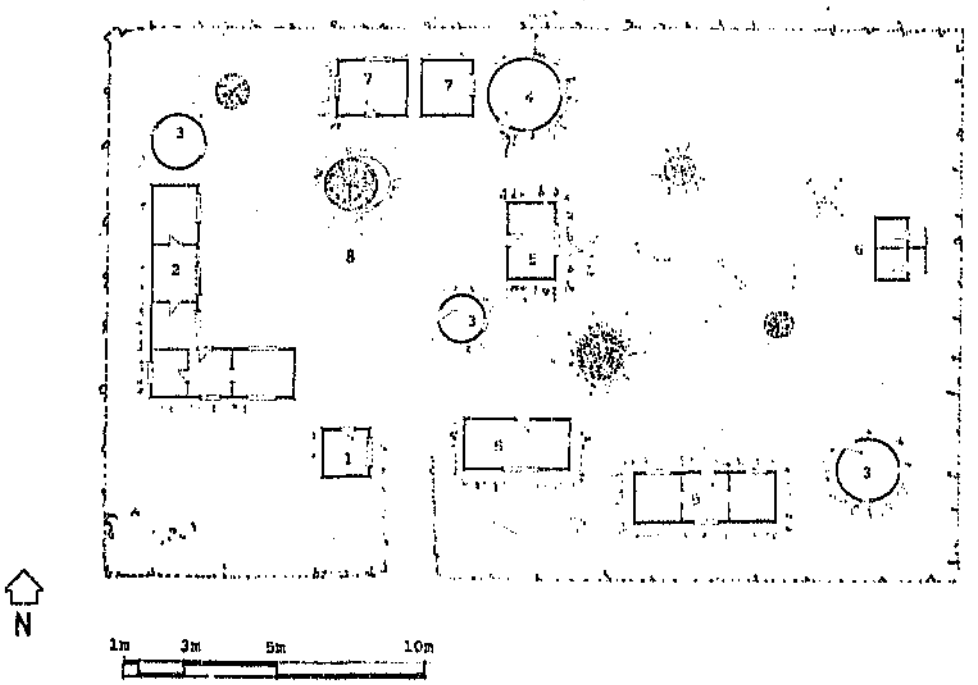
5. Patients' accommodation:

Provided in some cases for a short stay and/or waiting for referral to the general hospital after treatment or delivery of a baby.

To what extent do the above described functions respond to "modern" design guidelines?

A comparison is made at this stage between the theory of functions which should be accommodated in primary health care facilities design and existing structures. Broadly, theory suggests five functional requirements which are subdivided into 14 modules (Abbott 1992:xii).

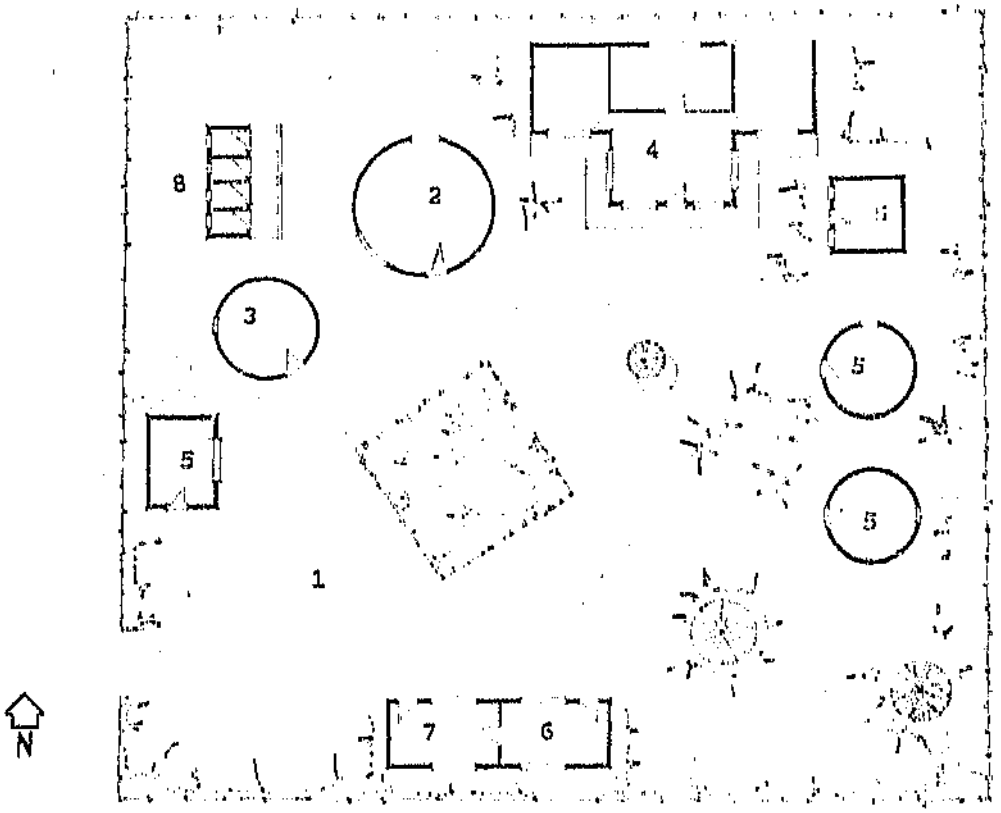
The following table contains results from a sample of two health centres, four clinics and one model plan for a visiting point:



1 Tuck shop; 2 Family house; 3 Consulting, preparation, store for medicine; 4 bedroom:
5 Patients'rooms; 6 Toilets; 7 Kitchen; 8 courtyard



Figure 4.3: TRADITIONAL HEALER MATEBULA (Cottondale village)



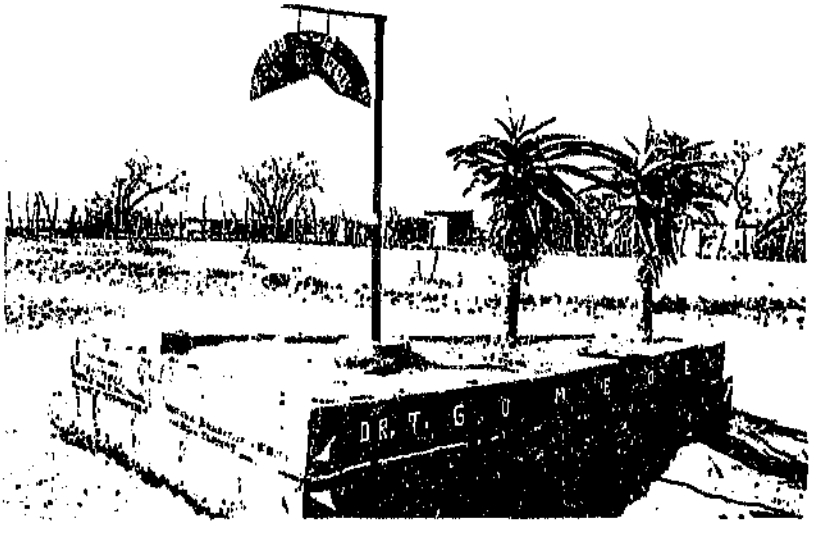
1 Courtyard; 2 Consulting and preparation;
3 Consulting and ancestors; 4 Family house
5 Patients'room; 6 Kitchen; 7 Dining; 8 Toilets



Figure 4.4: TRADITIONAL HEALER J. SUGAR (HLUVUKANI VILLAGE)

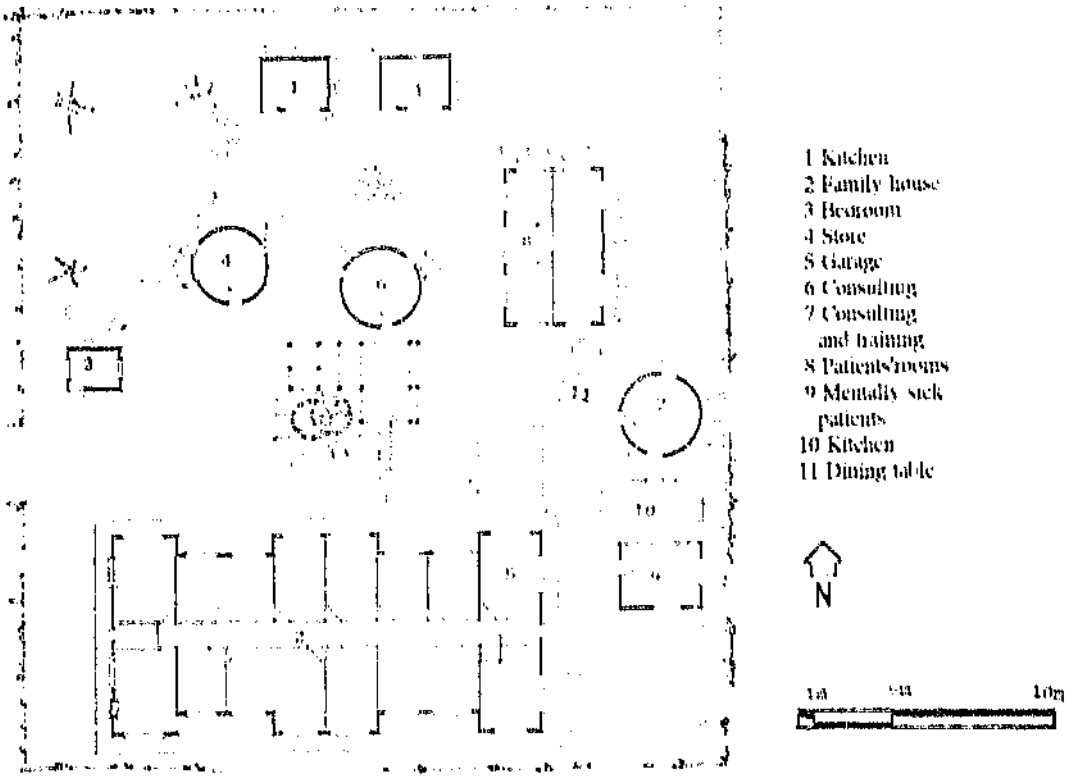


Consulting room for white patients



Sign on the road

Figure 4.2





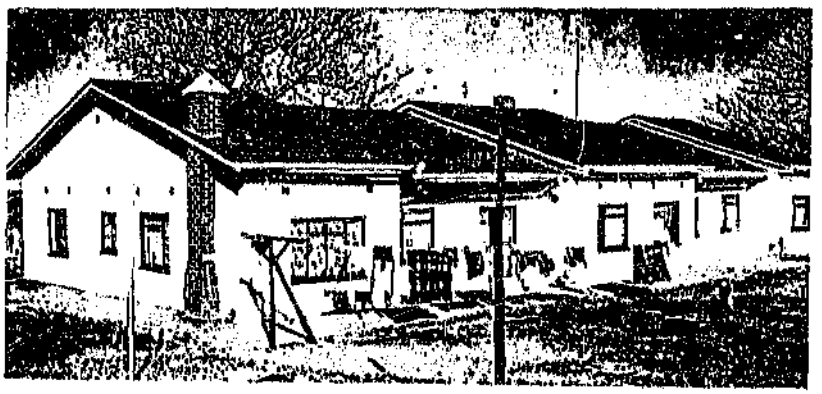
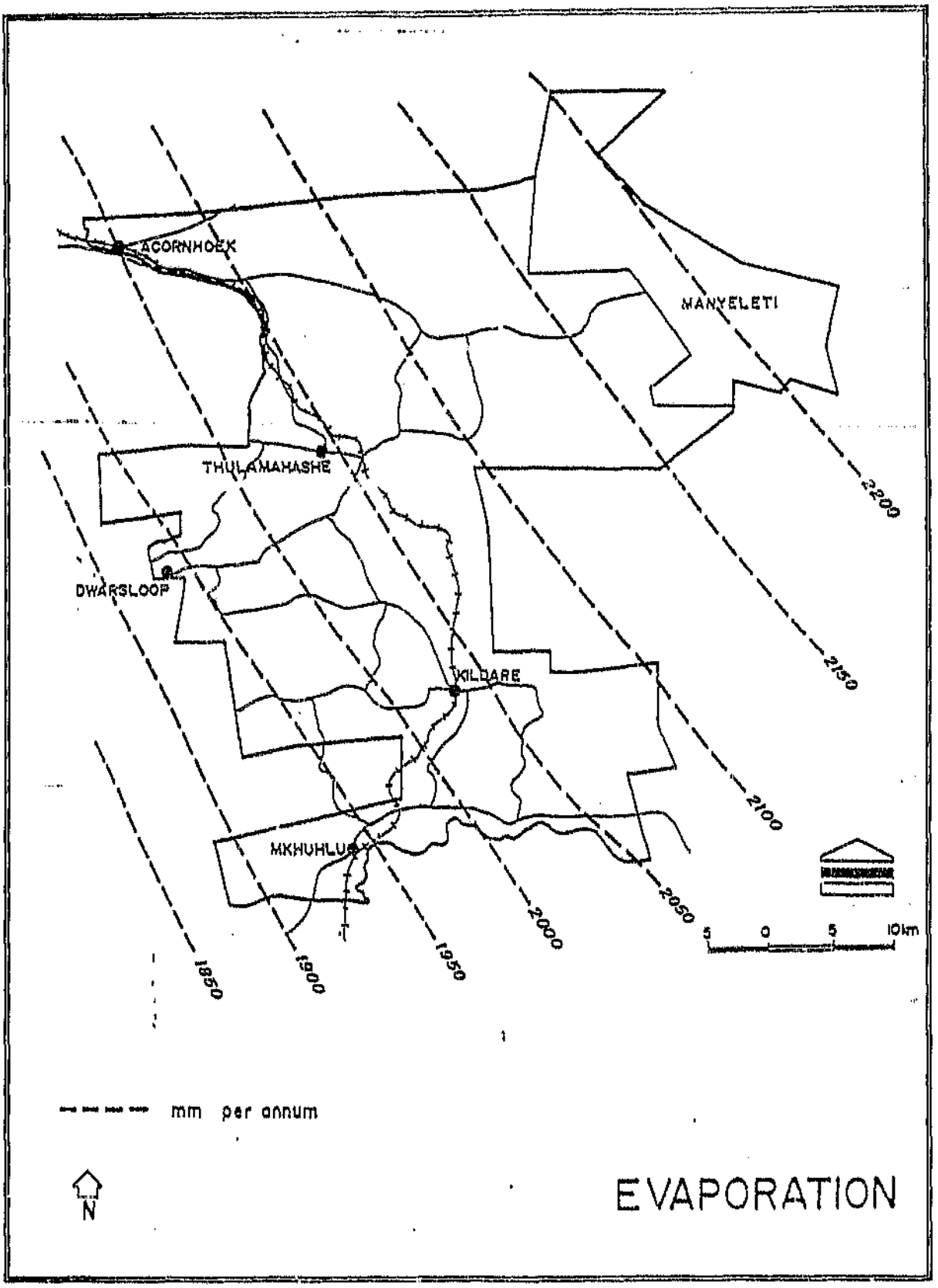
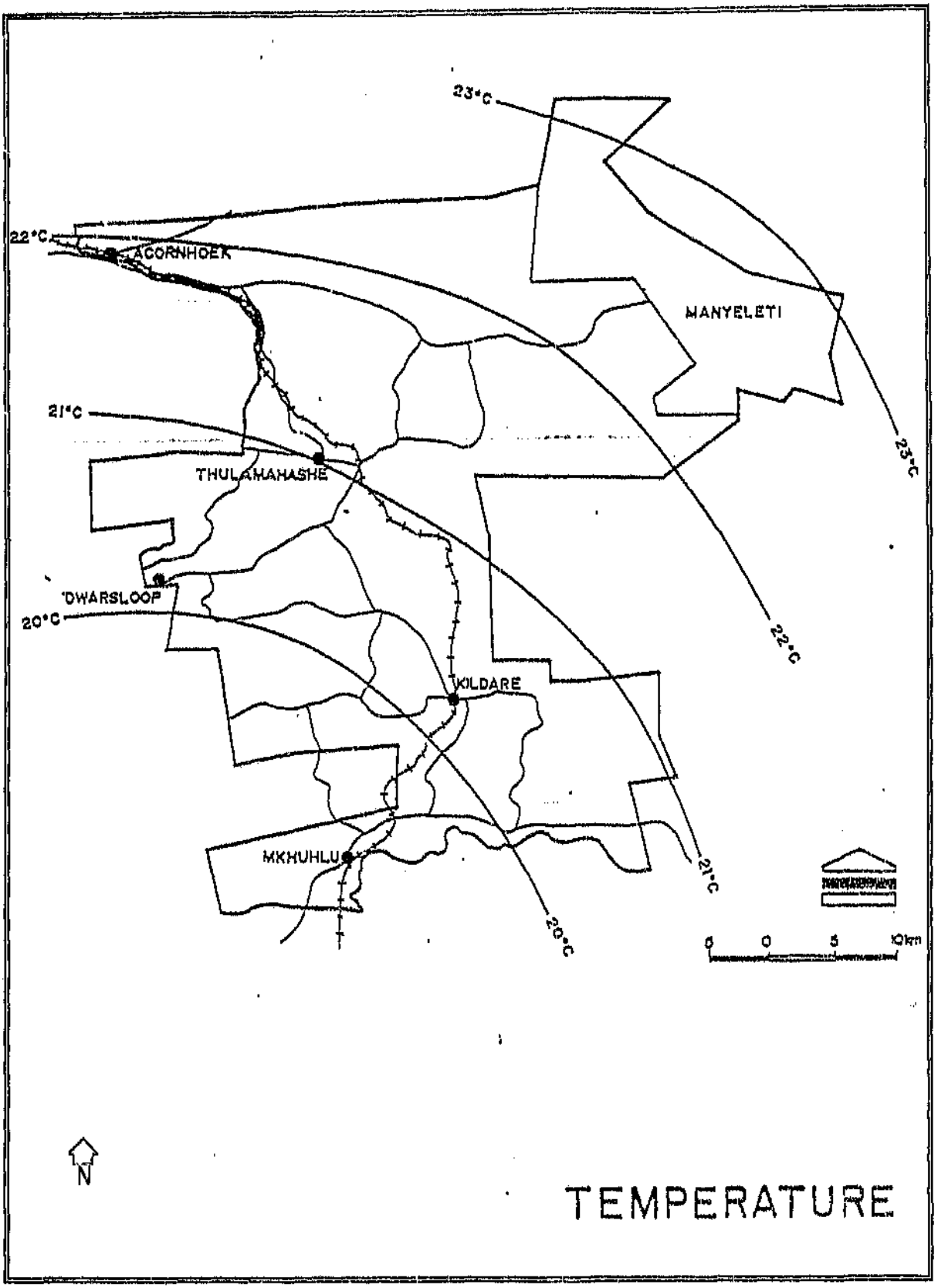


Figure 4.1: TRADITIONAL HEALER GUMEDE



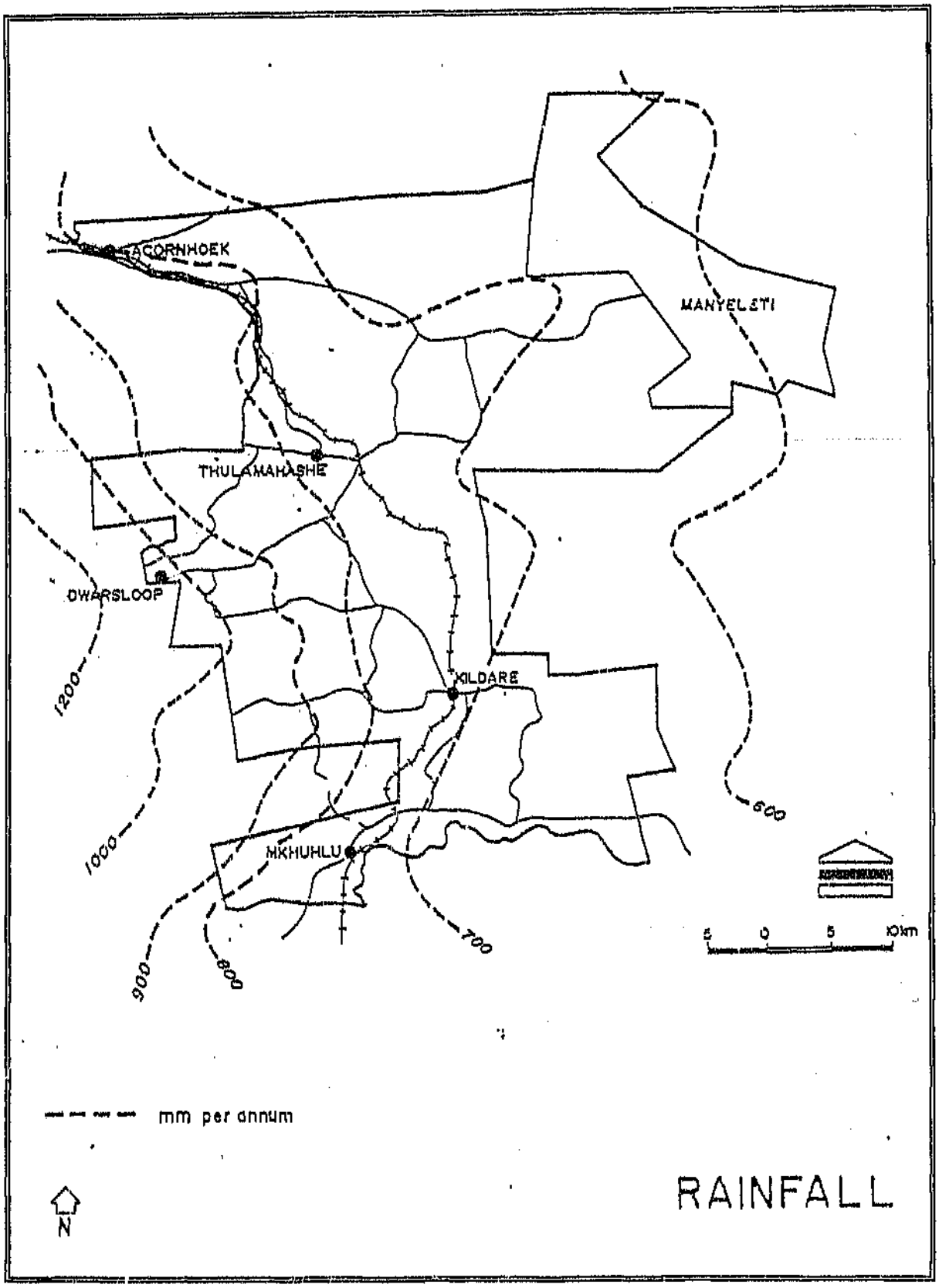
Source: INFRAPLAN (February 1989)

FIGURE :3.3



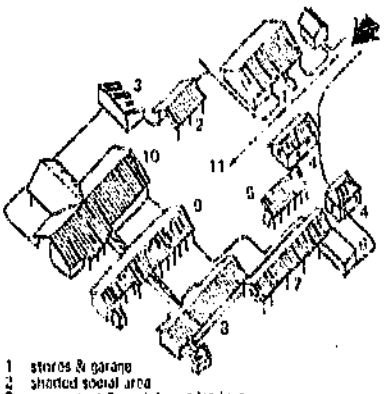
Source: INFRAPLAN (February 1989)

FIGURE :3.2



Source: INFRAPLAN (February 1989)

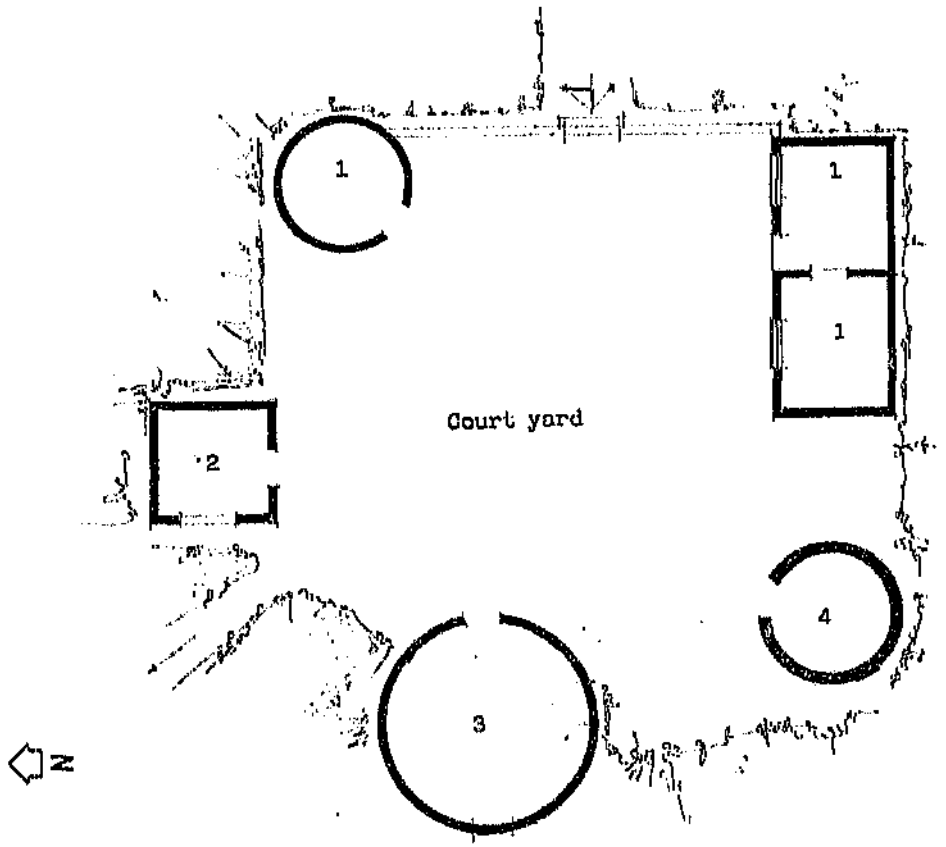
FIGURE :3.1



1 stores & garage
2 shaded social area
3 outpatient & social area latrines
4 hostel
5 hostel & social area latrines/washing
6 women's & hostel latrines
7 inpatients kitchens & washing
8 ward
9 reception/information & central facilities
10 outpatients
11 tree shaded central area

A theoretical model designed by Mark Wells showing a health centre which provides hostels or dormitories for relatives (Cox 1981:29).

Figure:2.2



1 Family house; 2 Kitchen; 3 Patients/relatives' room;
4 Ancestors' room

Figure 2.1: TRADITIONAL HEALER NEAR ACORNHOEK

APPENDIX B

FIGURES

occupational health, the improvement of maternal and child health, and the improvement of environmental hygiene.

CULTURE:

The concept of culture can be taken in many ways, said Robert Thornton of the Wits Department of Social Anthropology. He sees culture as a resource and as "...information which humans are not born with, but which they need in order to interact with each other in social life" (Pers.comm. Thorton 1993).

HEALTH SERVICE:

This is the organized system which cares about people's health.
It is subdivided as follows:

. primary health care

. secondary health care

. tertiary health care

Facilities related to each service are :

. visiting points, clinics, and health centres

. general hospital

. specialized hospitals

APPENDIX A

DEFINITION OF TERMS AND ABBREVIATIONS

HSDU: Health Services Development Unit

WRF : Wits Rural Facility

The HSDU and WRF are units of the University of the Witwatersrand, working primarily in the Mhala and Mapulaneng districts of the Eastern Transvaal Lowveld. Both units engage in a combination of teaching, research and community outreach.

WHO : World Health Organisation

Merle de Haan (1993:22-25) presents the WHO as follows:

- it is a specialised agency of the United Nations
- it consists of the World Health Assembly, which determines the health policy of the WHO, the executive board which is responsible for carrying out the policies of the Health Assembly, and the Secretariat, which comprises the staff of the WHO
- the functions of the WHO include the control and prevention of communicable diseases, the control and prevention of non-communicable diseases, assistance to the governments of member states, the promotion of

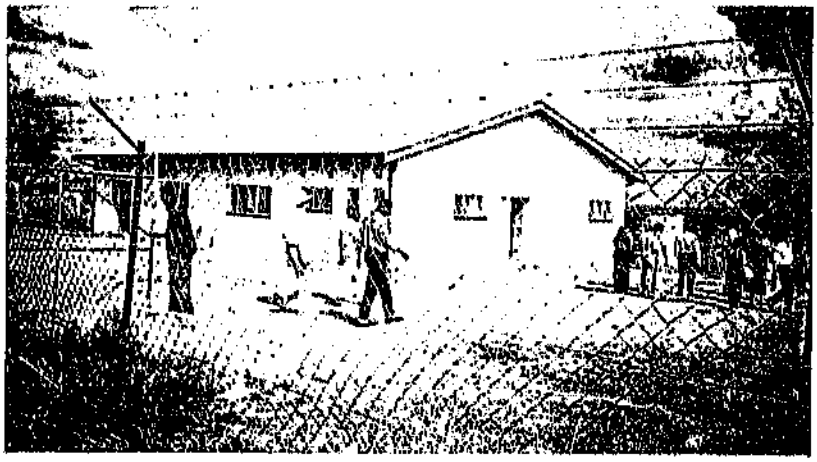


The clinic



Nurses' houses

Figure 4.15: Cunningmoor Clinic



The clinic



The clinic and nurses'houses

Figure 4.14: LILYDALE CLINIC

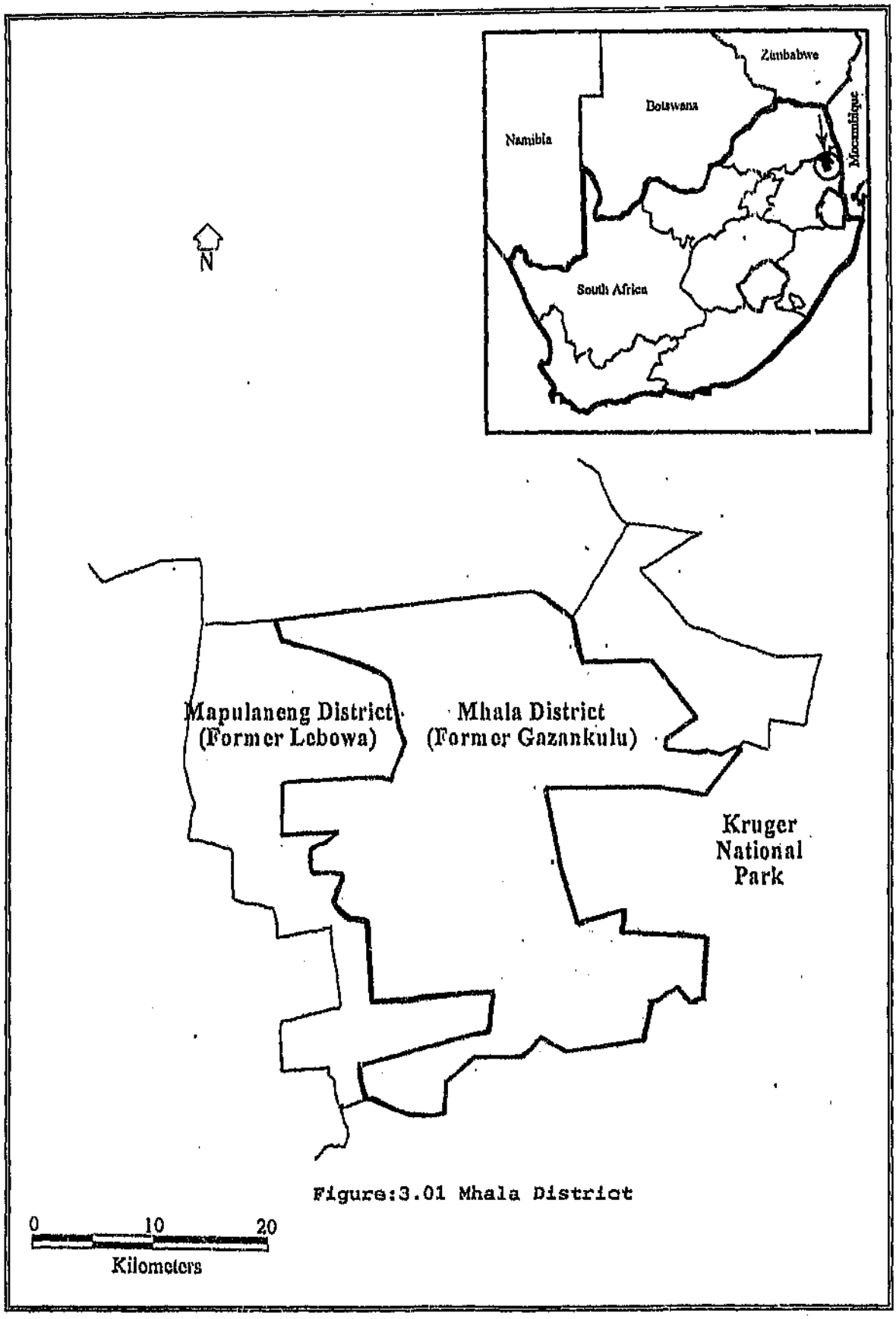
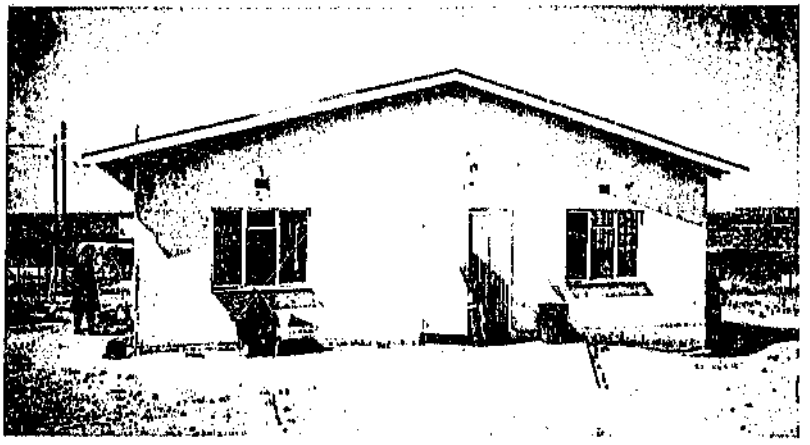
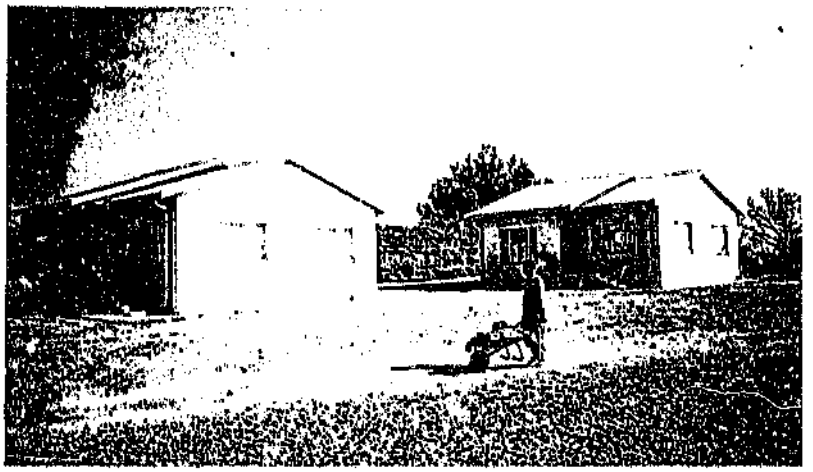


Figure:3.01 Mhala District



Matikwana Clinic



Nurses' houses at the clinic

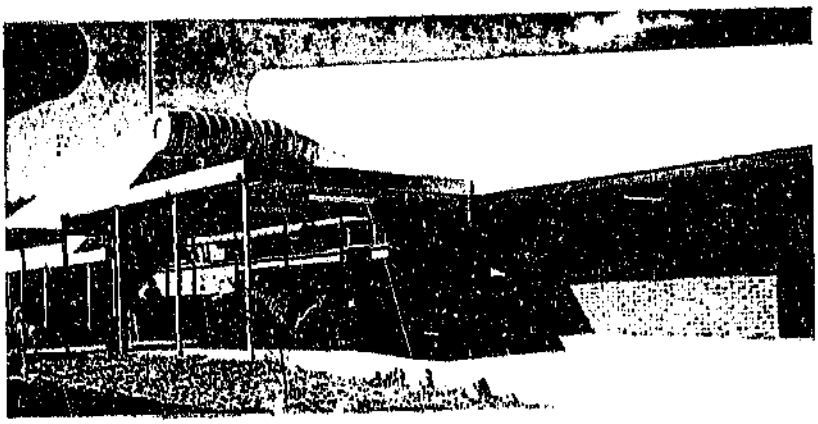


Matikwana hospital

Figure 4.13: MATIKWANA CLINIC AND THE HOSPITAL



Old building



New building

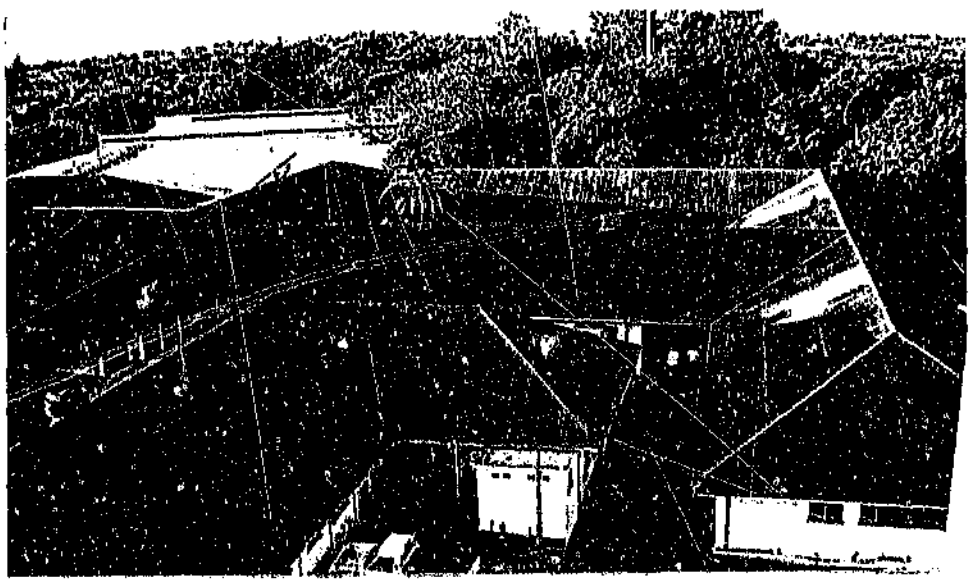
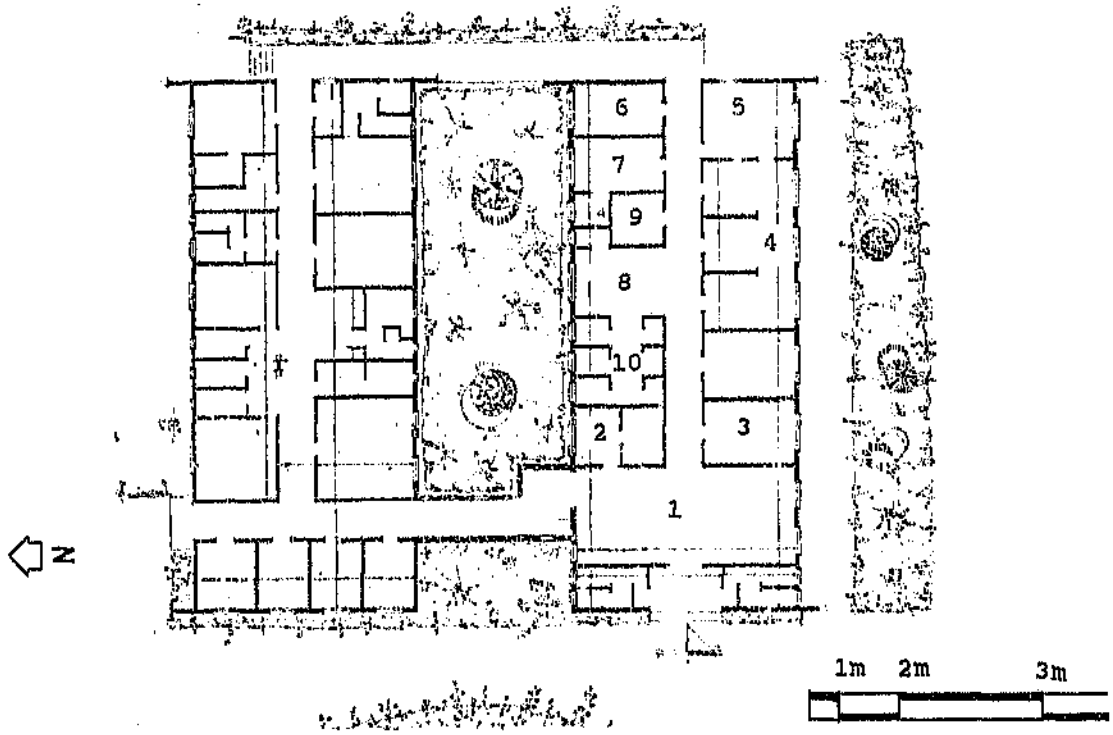


Figure 4.12: TINTSWALO HOSPITAL





Section

1 Waiting
2 Registration
3 Dispensary
4 Consulting
5 Treatment
6 Office
7 Staff room
8 Sub-waiting
9 Store
10 Change
11 Kitchen
12 Labour room
13 Postnatal
14 First stage ward
13 Postnatal
14 First stage ward
15 Female
16 Male ward
17 Children ward
18 Linen

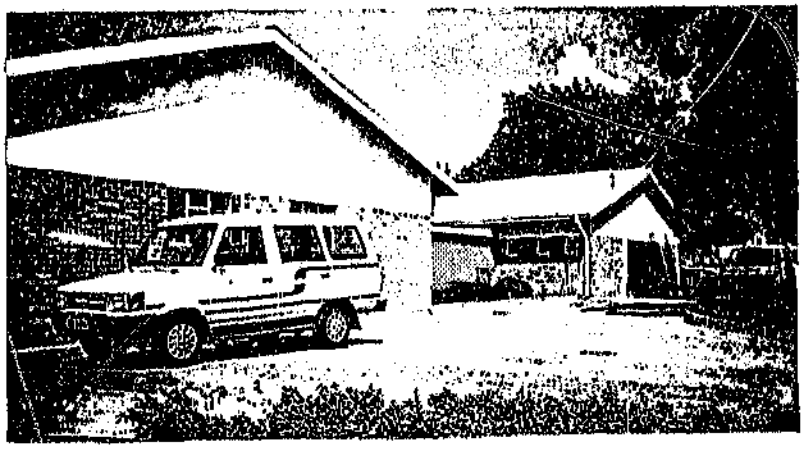
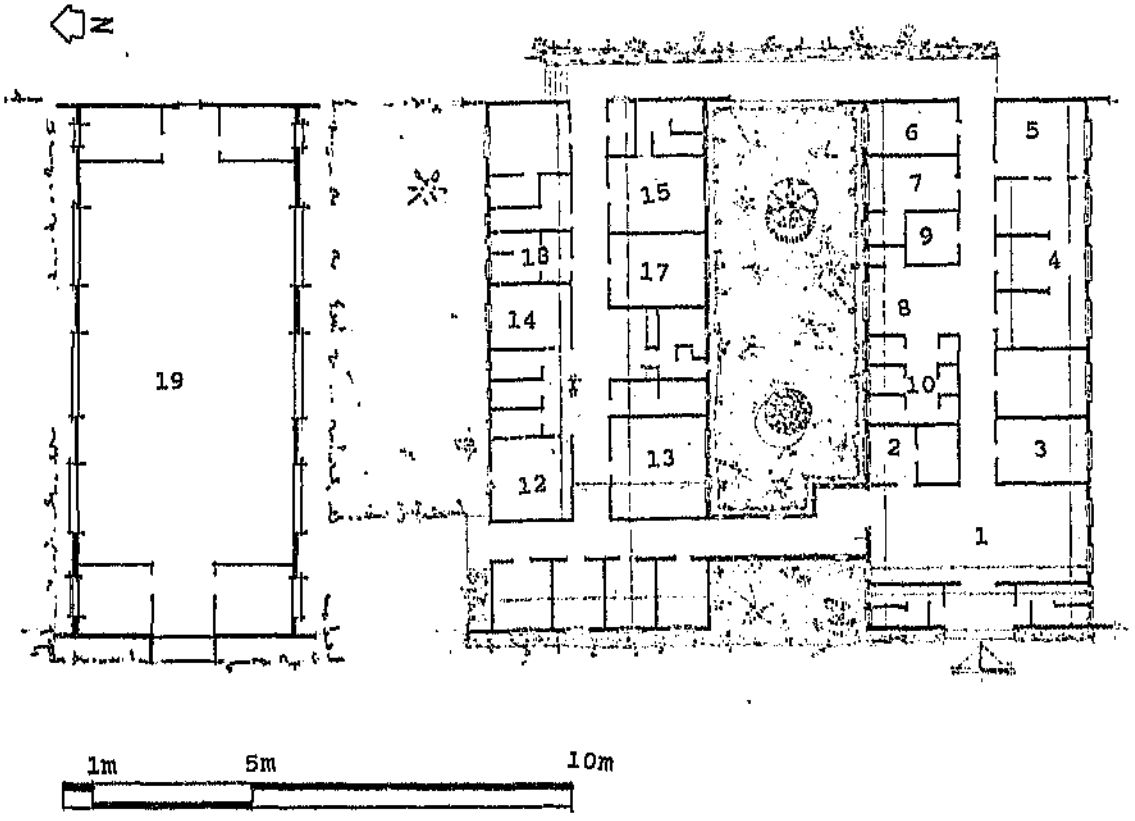


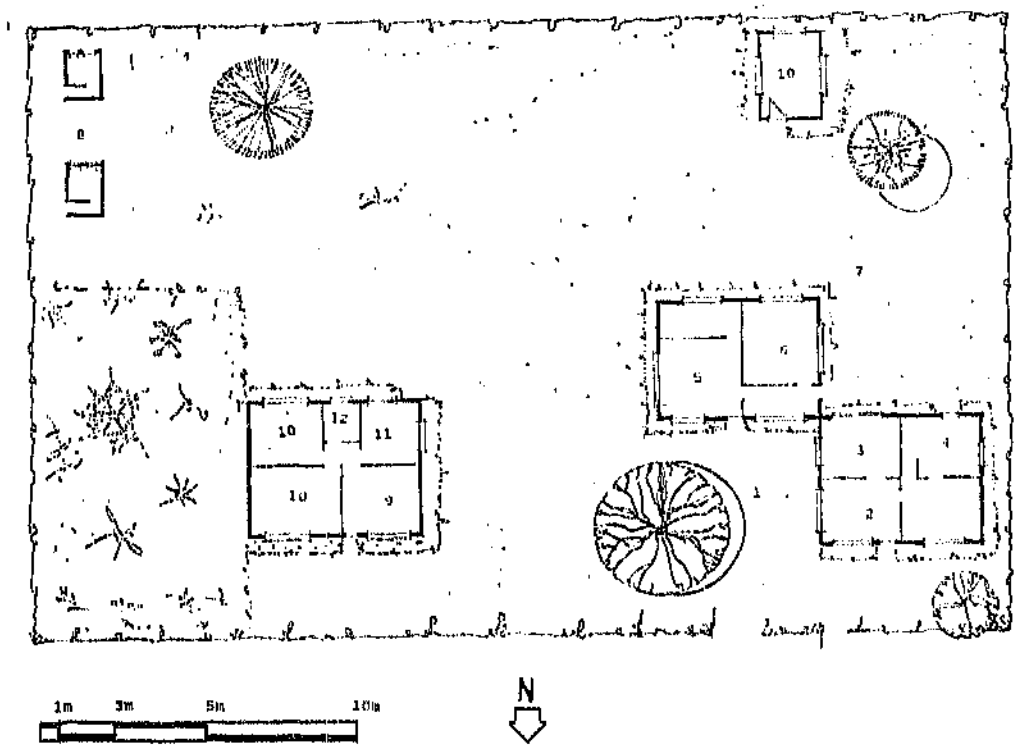
Figure 4.11: AGINCOURT HEALTH CENTRE



1 Waiting; 2 Registration; 3 Dispensary; 4 Consulting; 5 Treatment; 6 Office; 7 Staff; 8 Subwaiting; 9 Store; 10 Change and toilets; 11 Kitchen; 12 Labour room; 13 Postnatal; 14 First stage ward; 15 Female Ward; 16 Male ward; 17 Children ward; 18 Linen; 19 Community hall



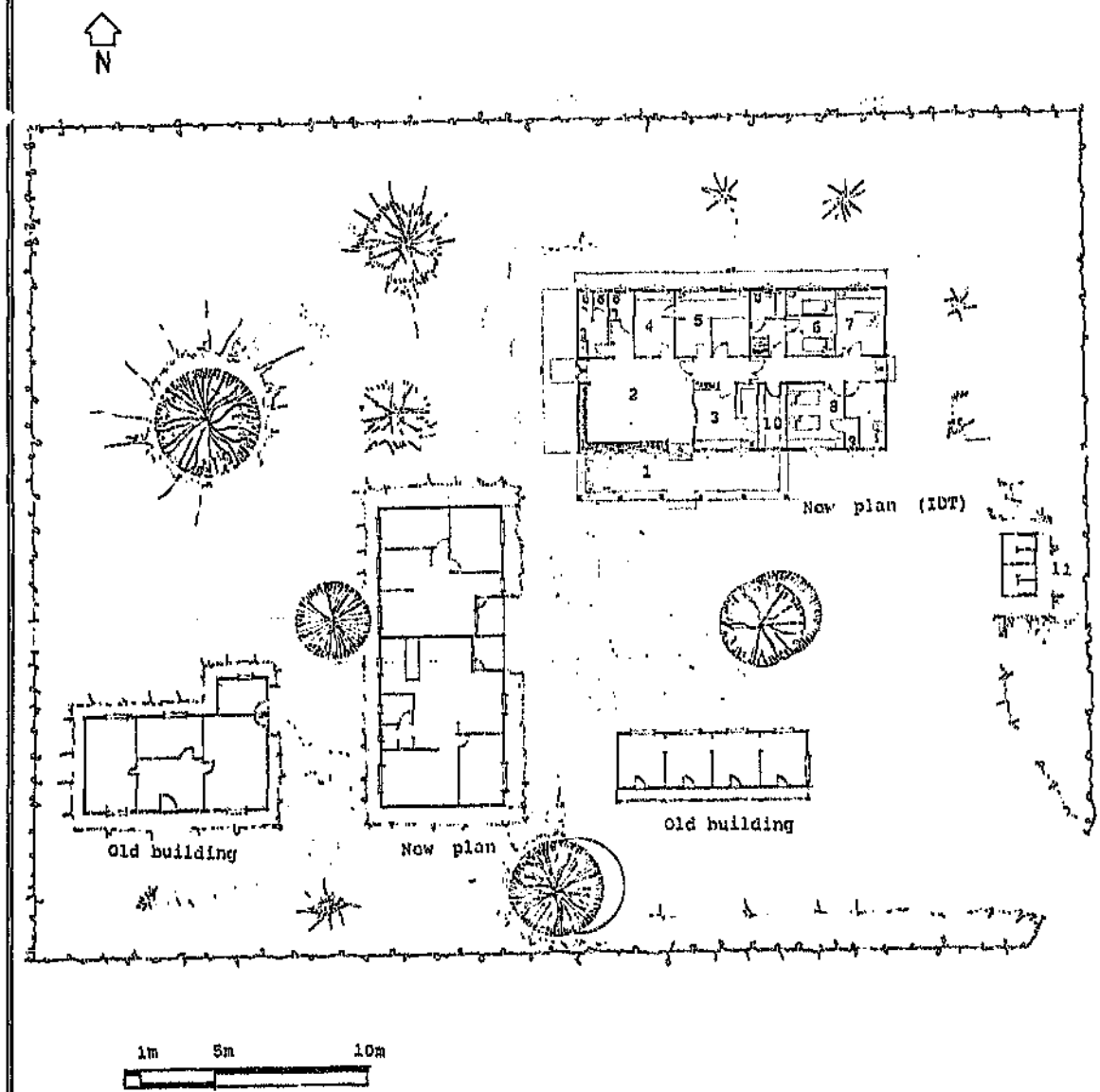
Figure 4.10: TULAMAHASHE HEALTH CENTRE



1 Waiting and gathering area; 2 waiting; 3 Consultation; 4 Store and observation; 5 Postnatal; 6 Labour ward; 7 Water tank; 8 Toilets; 9 Lounge; 10 Bedroom; 11 Kitchen; 12 Bathroom

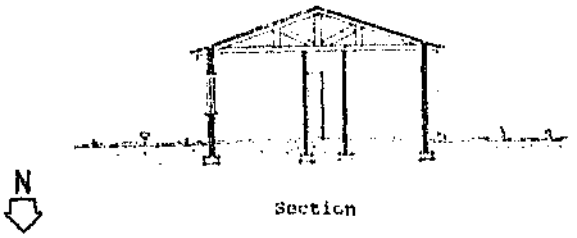


Figure 4.9: HLUVUKANI CLINIC

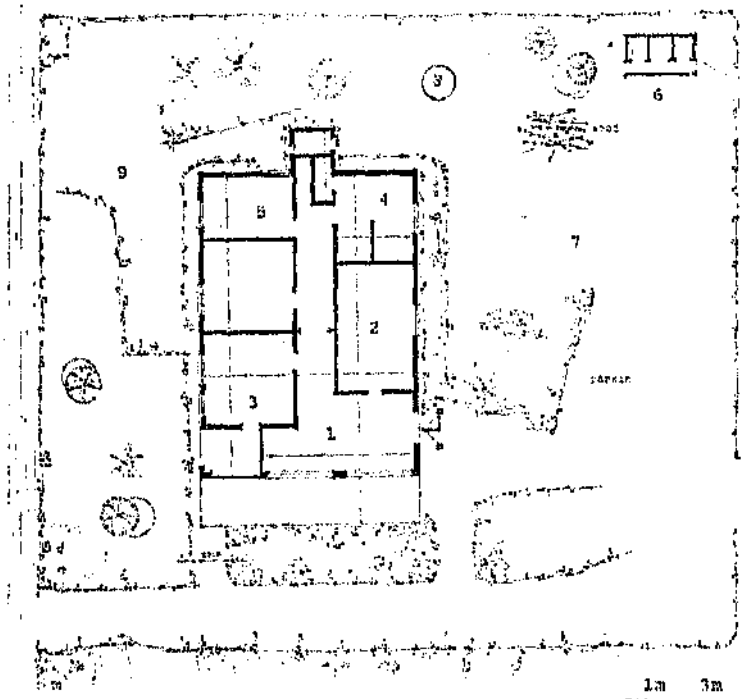


1 Veranda; 2 Primary waiting; 3 Nurses'office & reception;4 Treatment and dressing; 5 Consulting room; 6 Delivery waiting and preparation; 7 Delivery; 8 Postnatal; 9 Sluice/laundry; 10 store; 11 Toilets

Figure 4.8: COTTONDALE CLINIC



Section



1 Waiting
2 Consultation & reception
3 treatment
4 labour room
5 ward
6 toilet
7 Kitchen, courtyard
8 Water tank
9 laundry, backyard

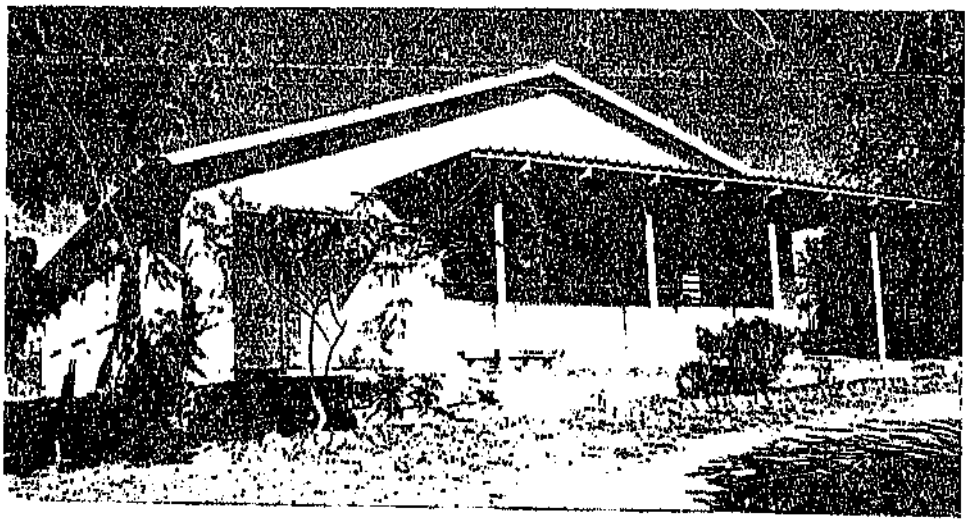


Figure 4.7: XANTIA CLINIC

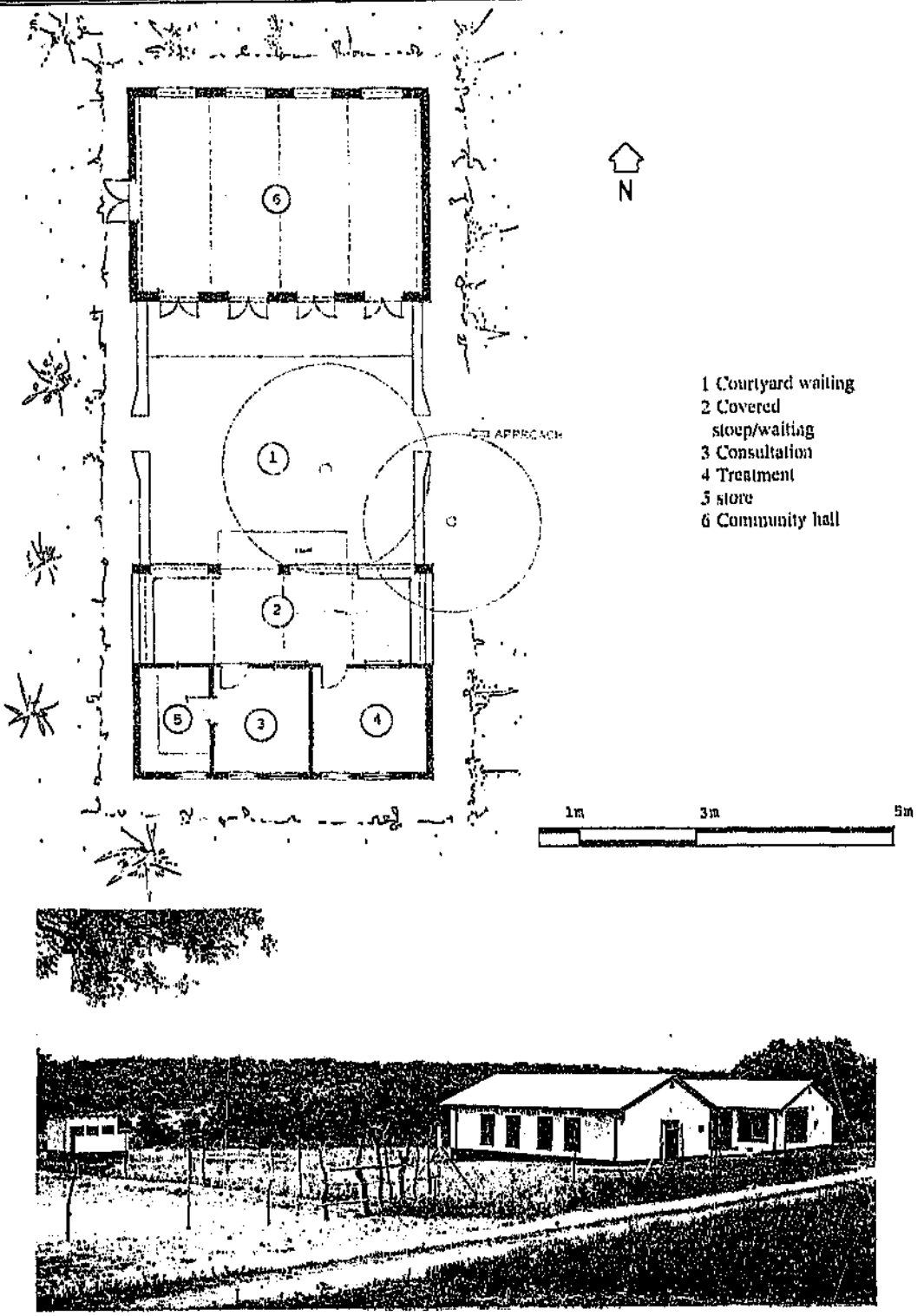
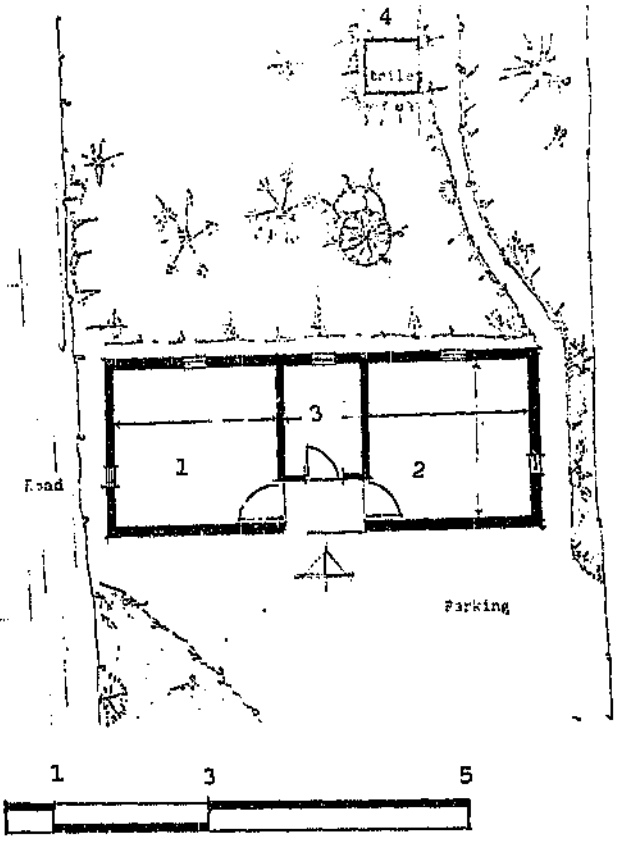


Figure 4.6: IDT VISITING POINT



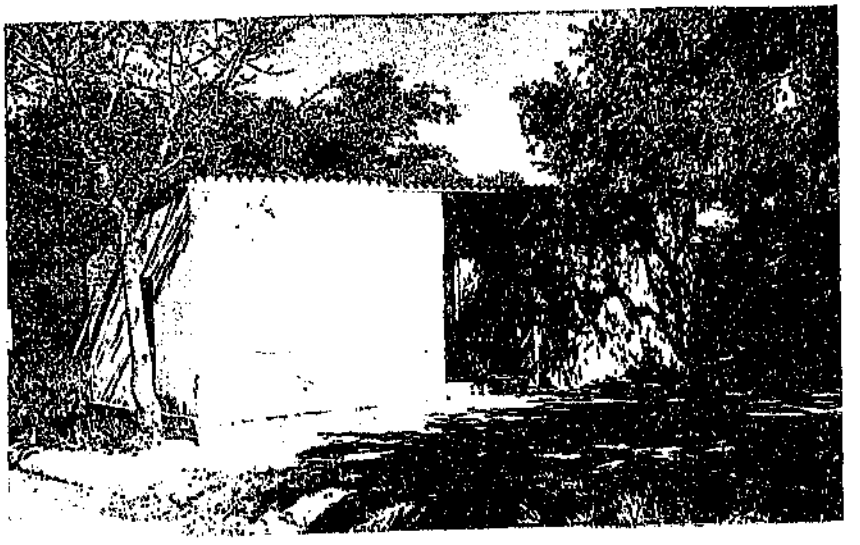


Figure 4.5: Cunningmoor Visiting Point

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