



**UNIVERSITY
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OUTDOOR RECREATION IN PIETERMARITZBURG

Patterns, Needs, and an Assessment of Standards for the Provision of Outdoor Recreational Space

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UNIVERSITY OF NATAL
DURBAN
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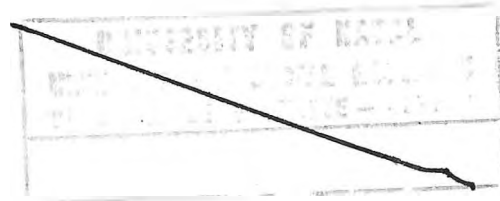
PATTERNS, NEEDS, AND AN
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	2.		PERCENTAGE DISTRIBUTION OF MEANS USED TO VISIT OPEN-AIR RECREATIONAL FACILITIES FOR EACH VISIT ACCORDING TO DISTANCE TRAVELLED AMONG DIFFERENT RACES AND SOCIO-ECONOMIC STATUS GROUPS.
	3.		PERCENTAGE DISTRIBUTION OF RESPONDENTS' MAJOR REASONS FOR VISITING OPEN-AIR RECREATIONAL FACILITIES IN GENERAL, ACCORDING TO RACE AND SOCIO-ECONOMIC STATUS.
	4	(a)	PERCENTAGE DISTRIBUTION OF <u>WHITE</u> RESPONDENTS' REASONS FOR VISITING DIFFERENT TYPES OF OPEN-AIR RECREATIONAL FACILITIES ACCORDING TO SOCIO-ECONOMIC STATUS.
		(b)	PERCENTAGE DISTRIBUTION OF <u>COLOURED</u> , AND <u>INDIAN</u> RESPONDENTS' REASONS FOR VISITING DIFFERENT TYPES OF OPEN-AIR RECREATIONAL FACILITIES ACCORDING TO SOCIO-ECONOMIC STATUS.
	5		PERCENTAGE DISTRIBUTIONS OF ADDITIONAL FACILITIES REQUIRING OPEN-AIR RECREATIONAL SPACE WHICH RESPONDENTS IN DIFFERENT AREAS OF PIETERMARITZBURG CONSIDER AS BEING NEEDED IN THEIR AREAS OR IN PROXIMITY TO THEIR AREAS.
	6		PERCENTAGE DISTRIBUTIONS ACCORDING TO SEX AMONG RESPONDENTS' WHO CONSIDER VARIOUS TYPES OF ADDITIONAL ACTIVITIES REGARDING OPEN-AIR RECREATIONAL SPACE NECESSARY IN THEIR AREAS OR IN PROXIMITY TO THEIR AREAS, ACCORDING TO TYPE OF ADDITIONAL FACILITY REQUIRED AND RACE.
	7		PERCENTAGE DISTRIBUTION OF ADDITIONAL FACILITIES REQUIRING OPEN-AIR RECREATIONAL SPACE WHICH RESPONDENTS IN DIFFERENT AGE GROUPS CONSIDER AS BEING NEEDED IN THEIR AREAS OR IN PROXIMITY TO THEIR AREAS, ACCORDING TO RACE.

INTRODUCTIONBROAD AIMS OF THE PROJECT:

In 1965 the *Town and Regional Planning Commission of the Natal Provincial Administration* commenced planning a survey of public open air recreational needs in Pietermaritzburg. The broad aims of the project were:

- a) To examine the open-air facilities available to meet existing and future demands for public open air recreation in the city.
- b) To study the extent of existing demands for the various kinds of public open air recreation, and to assess the extent to which existing facilities meet these demands.
- c) To assess the probable future demands for various types of recreation in the city.
- d) To analyse the survey material with a view to establishing desirable standards for the provision of open air recreational facilities, taking into account the differing needs of the various social groupings within the White, Indian and Coloured communities in Pietermaritzburg.
- e) To consider the existing and possible future roles of various state departments, other public authorities, semi-public bodies, voluntary associations and organisations and other private bodies and persons in the provision of open air recreational facilities.

These aims and objects were formulated with a view to arriving eventually at a comprehensive plan for the provision of public open air recreational facilities in Pietermaritzburg and for providing guide-lines as to how such a plan could be implemented. In particular, such a plan would provide guide-lines for the setting aside of land within and outside of the city for the purpose of meeting the outdoor recreational needs of the population.

It was decided that the study should be concentrated on the White, Indian and Coloured population groups in Pietermaritzburg, and should exclude Africans for the time being. The reason for this was the fact that the African population was and is still very much in the process of being resettled and rehoused and for this reason any study of the recreational facilities and recreational needs would have been premature. However, it was fully intended that the needs of the African population should not be overlooked and that these would be considered in a follow-up investigation at a later stage.

At present open air recreational facilities are generally provided for in the planning of local authorities on the basis of fairly crude assumptions in regard to the amount of space which should be set aside for any given population. No systematic standards exist for the provision of open space facilities to meet the specific and often unique needs of different social or socio-economic groups, of populations settled in different parts of a city, town, or of populations residing in different types of dwelling units. The Town and Regional Planning Commission of Natal has long recognised the need for a more systematic approach to the provision of open air recreational facilities in cities and towns in Natal. As the body which is largely responsible for the assessment and approval of the specific town planning schemes formulated by local authorities in the province, the Commission has been made very aware of the complexity of the issues involved in arriving at any fixed and systematic approach to the problem. This body has also been well placed to recognise the need for a considerable amount of research in order to provide the necessary insights on which systematic procedures could be based. For these reasons members of the Town and Regional Planning Commission have long felt the need for thorough and extensive surveys to be conducted in order to provide the necessary insights.

As far as is known, this type of research has not been conducted before within South Africa, and for this reason the planning of the project presented considerable challenges. In particular, the need to arrive at adequate standards for the provision of open air recreational space, specific to the needs of different groups within the community, was seen in advance to be an extremely complicated issue.

The survey was inaugurated in January 1966 as a project being undertaken solely by the members of staff of the Town and Regional Planning Commission. Shortly after the commencement of the survey the Town and Regional Planning Commission approached the *Institute for Social Research* at the University of Natal for advice and guidance in regard to the sample design. Formal machinery

III.

was set up, for consultation in regard to the sample, and the senior author of this report assisted in the design of the sample, in the planning of the fieldwork, in the training and briefing of interviewers, and in the overall guidance of the fieldwork.

Considerable difficulty was experienced by the Town and Regional Planning Commission in the tabulation of the results. Initially it was intended that computer facilities of the Natal Provincial Administration should be used for the purpose. For various reasons it proved impossible to use these facilities, however, and an initial series of tabulations of the results was eventually produced by a private firm, Delca Data Processing (Pty) Ltd. After the initial series of tabulations had been completed, the research officer employed by the Town and Regional Planning Commission on the project, and junior author to this report, Miss Jill Craven, left the service of the Commission to work abroad. Since the Institute for Social Research had been closely associated with the project from its inception, it was decided that the Institute should be approached with a view to completing the project. This was duly agreed, and a formal undertaking was entered into by the Institute to see the project through to finality.

After the project had been taken over by the Institute, it became apparent that a considerable number of problems existed, mainly relating to the tabulation of the survey results. The way in which the results had been tabulated was by no means sufficiently flexible to allow for the type of analysis required to meet the aims and objects of the survey. Furthermore, the computer programming instructions contained certain errors which led to incorrect results. As a result of this, a considerable amount of additional processing of the results had to be performed by the Institute for Social Research.

Since the problems resulted in a lengthy delay in the production of this report, it is perhaps necessary to detail some of the problems encountered. Firstly, it soon appeared that roughly two-thirds of the tables produced initially contained errors which arose in the transcription of data from the computer print-out sheets onto the tables to be used in the analysis. This necessitated that all the tables had to be checked thoroughly before the analysis could commence. Secondly, in many of the tables, the percentages which had previously been calculated by the computer had to be recalculated. This was mainly due to the fact that the percentages calculated by the computer did not allow comparisons between males and females. A further problem in regard to the percentages was the fact that in many of the tables percentages were calculated to a base of the number of answers and not to the base of the

number of people giving answers. This applied in regard to questions where more than one answer to a question could be given and the way in which percentages were calculated was not appropriate for the analysis of the material in the present study. Thirdly, it was necessary for additional tabulations to be carried out, since the initial tabulations did not enable any distinction to be made between those people visiting outdoor facilities in order to participate in the activity for which the facility is intended, and those visiting for other reasons. Fourthly, additional tabulations were required in order to indicate which people who desired additional facilities in their areas made use of inadequate facilities, or made use of facilities elsewhere in the city. These additional tabulations were made by hand off the interview schedules, since the data in the form required had not been included in the initial processing of the data. As can readily be understood, this operation was extremely time-consuming. Fifthly, a further series of hand tabulations had to be made of information culled from the entire schedule in order to enable an assessment to be made of the realistic needs for facilities in particular areas. In order to arrive at broadly reliable standards for the provision of facilities in various areas, it was necessary to make a very careful appraisal of each respondent's real needs and requirements, as opposed to the needs and requirements loosely expressed by respondents, (which were in some cases extremely unrealistic). This operation required a careful inspection of each schedule as a whole, since this seemed the only way in which many of the contradictions and vagueness in the answers to specific questions could be adequately dealt with. This is not to suggest that the quality of the interviewing had been inadequate. This is a difficulty encountered in most surveys; a difficulty which is often glossed-over in the presentation of results. In the case of the present survey however, it was utterly essential to make a sensitive analysis of the total picture presented by all answers of each respondent in order to assess the adequacies and inadequacies in his or her recreational life.

Lastly, and most importantly, it was discovered that the most important unit of analysis in the study, the "recreational visit", had been incorrectly defined in the initial computer processing of the data. What had been taken for visits to recreational sites were in reality activities engaged in during single visits to sites. This resulted in the estimates of numbers of visits to sites being artificially high. Unfortunately, this error was discovered only after the first draft of the report had been written. It was necessary to re-code the information in regard to visits and process the material anew on the University of Natal Computer. This error alone resulted in a delay of several months.

The need for the additional work outlined above, caused considerable delays, and additional expenditure, in the completion of the final report. Without these delays, however, the results would not have justified the considerable cost of the project. In its final form, the research data is accurate and reliable and is an entirely adequate basis for assessing open-air recreational needs in Pietermaritzburg.

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administrative problems connected with the project, and would like to thank her and Mrs. Patsy Wickham for their work in typing the drafts and the final report. Numerous other members of the Staff of the Institute for Social Research deserve thanks, but since some of the problems encountered meant emergency work for everyone in the Institute, they are too numerous to mention. Therefore, we simply thank the entire staff of the Institute, without whose assistance, the study would have foundered.

CHAPTER I

THE APPROACH, SCOPE AND METHODS OF THE STUDY

1.1 BACKGROUND

Urban planning occurs in response to community needs. An extremely wide variety of needs impinge on the decisions of planners in modern cities. Some of these needs are easily quantifiable, like, for example, the need for parking space, or the need for additional or wider roads to cope with increased traffic flow. Other needs are less quantifiable, like, for example, the need to avoid high levels of noise, or air pollution in residential areas, or the need to control population densities in apartment house residential areas, and the needs for recreational facilities. It is probably an ever present temptation for planners, in making their decisions, to take relatively greater account of those needs which can be easily expressed in quantitative terms.

Then again, certain needs existing in a community are immediately evident to members of the public and to officials alike. The immediate and direct problems associated with high traffic densities, the existence of chronic parking problems, or, say, the existence of visible over-crowding in certain residential areas, are likely to be given high priority among the criteria used in planning decisions, simply because they constitute needs of which everyone is to some extent aware. Other needs are less evident, even though they might be equally pressing or crucial for the well-being of a community. This might be because the absence of the opportunity to satisfy certain needs does not always cause immediate physical discomfort or inconvenience. One such need is the need to avoid high noise levels, or levels of air pollution in cities. People are often able to become gradually accustomed to noise and pollution, and although these problems may not cause immediate inconvenience or consciously irritate members of the public, they can nevertheless sap the vitality and adversely effect the physical and mental health of a community. In this latter category of less evident needs, we also find the need for the provision of adequate recreational facilities. Problems associated with inadequate facilities are often not consciously experienced by members of the public, and do not directly cause disruption of daily living. The effects of inadequate recreation can, as we shall discuss in due course, have a profound effect on the well being of large numbers of people in a community, but they usually require the observations of experts in order to have their importance established.

It is also a fact that certain community needs tend to be expressed by well-organised and articulate interest groups. Commerce and industry, for example, do not hesitate to make their requirements known to officials in a variety of ways, and in so doing can readily influence planning decisions. Things which influence the material circumstances of members of the voting public, or the interests of ratepayers associations, are also likely to be given high priority in planning decisions. The need for adequate recreational facilities is often not voiced by bodies and organisations whose major interests are material in nature.

Despite the professional expertise and objectivity of town planners, the temptation to take relatively greater account of the obvious needs and the needs expressed by powerful interest groups must be very great. It is for these reasons that it is so utterly necessary that research be conducted in order to bring to light the less obvious needs of communities, so that they can be taken into account by planners as easily as the more obvious factors. Among the wide range of research priorities in this regard, the need for research into the recreational needs of communities must surely rank very highly indeed.

With adequate research, it is a relatively easy task to establish in broad terms what the recreational needs of a population are, if one is only concerned with those needs which are obvious to members of the population themselves. However, if the results of studies of recreational needs are going to be really useful to planners, then it is necessary to go beyond mere broad description of the more obvious recreational needs. Therefore, superficial descriptive studies of opinion are inadequate for the purpose of establishing community needs in regard to recreation. A more thorough and somewhat more intensive approach is essential in studies of this nature.

Where people in a population are subject to certain restrictions in regard to any aspect of their activity, and where these limitations are of a long-standing and permanent nature, people generally are not aware of alternatives to the sort of life they lead. People are not able to take into account the possibility of living without the limitations imposed on them by restrictions in the environment. This general principle applies very strongly in regard to recreation. Where people are subject to limitations which arise from inadequate recreational facilities or opportunities for leisure-time activity, they may not necessarily be fully and consciously aware of the extent to which their lives are affected. It is probable that many are

not aware of alternatives to a restricted recreational life. This is not to say that they do not suffer the disadvantages any less acutely; aspects of their health and emotional well-being may very well be undermined by such restrictions. The inability of people living in restricted circumstances to recognise creative alternatives to their situation is one of the lessons of Social Science that has to be brought to bear on the planning of research to discover the recreational needs of people. The researcher in this area has to attempt to get beneath the obvious; he or she has to be aware of the alternatives himself and his research has to be sufficiently sensitive to record the indications of needs which the people themselves may not be aware of and which planners may not take account of.

Once research along these lines has been conducted a further set of problems arises. The findings of such research have to be "sold" not only to the planners who have to implement such findings, officials who have to make decisions, but also to citizens who, unaccustomed to facilities they have no knowledge of, initially may be unenthusiastic about the possibilities which planners might accept. The Social Scientist therefore, has a responsibility to present his or her findings and discuss them in such a way as to make them appear to be vital to the decisions of planners. He also has to suggest ways and means in which the public can be educated to respond to new facilities which they may need but which they do not necessarily appreciate when first exposed to them. It is against this general background of thinking that the present study was undertaken and which has guided the analysis and the design of the report.

1.2 BRIEF OBSERVATIONS ON THE IMPORTANCE OF RECREATION IN A COMMUNITY:

Up to now the phrase 'recreational needs' has been used very freely. It is entirely appropriate to talk of community needs in this sense, because adequate opportunities for recreation are vital for people in a community. Firstly, there are the obvious physical needs; needs for exercise in order to maintain health, vigour and vitality. Opportunities for playing sport, walking and running can make exercising pleasant and enjoyable. Exercise and sport allow people to shake off the fatigue of work and routine daily activity.

Psychological and social needs for recreation are of equal importance. Some forms of outdoor recreation, mainly organised sport, are competitive, some more obviously so than others. It is often observed that such sports offer healthy and non-destructive outlets for aggression or for the expression of frustration, which develop in the course of other aspects of day-to-day living. People also have 'ego needs'; needs to achieve a favourable image of themselves in relation to others. The opportunities for personal achievement which sport offers are often very important in building positive self-concepts and feelings of adequacy, particularly where humdrum, boring occupations deny people this reward.

Many forms of sport and recreation are 'social' in the sense that they involve numbers of people doing the same thing together. In modern society, with its absence of face-to-face community living, forms of organised recreation are an important means of meeting friends, enjoying companionship, and even of meeting prospective marriage partners. For strangers moving into a new community, for example, it is very often among people they meet in pursuing recreational interests that they meet their first friends.

Organised recreation has another function in modern society. Communities are usually 'stratified' into different groupings of people of lesser or greater wealth, occupational status and prestige. Very often, the work and neighbourhood environment is stratified along these lines, with people of closely similar status working or living in close proximity to one another. Even churches and other community institutions are stratified along these lines. Although one does find that many kinds of sport and recreation tend to be preferred by one 'class' of person more than by another, generally the preferences are not rigid, and sport does very often bring many people of differing backgrounds together, thus promoting 'cross-cutting links' between 'classes' in society and helping to promote a sense of overall unity in the community. Hence, in South Africa, various kinds of sport (rugby, for example) have helped to bring English and Afrikaans speaking Whites closer to one another. This might be one of the reasons why certain political leaders are opposed to racially mixed sport, fearing that the contacts and mutual admiration which it allows will undermine support for policies of race separation. This is given merely as an example of the social relevance of sport.

Perhaps the most important role of organised recreation in society is the way in which it improves the morale of communities, by offering people interesting diversions in their leisure-time. Leisure enables people to

transcend to some degree what might otherwise be a boring humdrum and tiring existence. Our culture differs from many others in that it does not have many institutionalised ritual gatherings of people. The amount of leisure-time in our society is increasing and very little attention is paid to instructing people in the use of leisure. Mass boredom might become a dominant problem were it not for the attractions of various kinds of sport and outdoor recreation. The importance of outdoor recreation will become even greater once South Africa has television. Without the attractions of active outdoor pursuits, far too many people will be tempted to spend most of their leisure-time in inactive, vicarious enjoyment in front of the television set. The dangers to the physical health of the nation are obvious.

Perhaps one of the most important aspects to recreation is that it is one area of peoples' lives where they can enjoy most freedom. At work and in the family institution, people are to a great extent constrained and bound by the expectations of others and of organisations. The freedom offered by leisure is a relatively recent development in Western history. In previous centuries, poverty and long working hours, and earlier still, the rigid demands of medieval church ritual made this freedom the prerogative of the aristocracy and the wealthy. Today, ordinary men and women can enjoy relative freedom, at least in their leisure-time, and this is the most valuable benefit brought by our past economic development. It is up to public authorities to realise that their planning can profoundly affect the quality of this freedom.

For this and many other reasons it is important that authorities realise that opportunities for sport and outdoor recreation are vital in the life of the community, and that they make the fullest opportunities available to everyone. It is necessary, perhaps, for the authorities to play more than an enabling role, and to actively stimulate an interest in sport and outdoor recreation. This will be achieved in part, if the facilities offered by public authorities are attractive and well-planned.

In order to offer creative opportunities, the authorities require to know what the preferences and needs of people in different communities are. Even though most types of sport may attract a wide range of supporters, communities of different races, language groups, social status and cultural origin do reveal fairly distinctive preferences for certain types of sport and open-air recreation. The typical rugby enthusiast, for example, tends to have a somewhat different background from the typical soccer enthusiast. Also people of

different ages and sexes obviously have different needs and preferences. The differences can be guessed at in a vague sort of way, but for the exact information required for planning, research is required.

1.3 THE LOCATION OF THE STUDY - PIETERMARITZBURG:

Pietermaritzburg is the capital of Natal and the second-largest town in the province. In 1970 the population of the area of greater Pietermaritzburg was constituted as follows¹⁾:

Bantu:	78 700
Whites:	47 200
Asians:	37 300
Coloureds:	8 800

At the time of the study in 1966 the population of greater Pietermaritzburg is estimated to have been, very roughly, as follows:

Bantu:	73 100
Whites:	44 800
Indians:	33 100
Coloureds:	7 400

The population of the Pietermaritzburg Municipal area contains the bulk of the White, Indian and Coloured population of the metropolitan area. In 1970, the population of the municipal area was²⁾:

Bantu:	29 500
Whites:	42 500
Indians:	32 500
Coloureds:	8 100

In 1966, at the time of the survey, the population of the municipal area is estimated to have been roughly³⁾:

Bantu:	28 800
Whites:	41 000
Indians:	27 000
Coloureds:	6 000

Thus Pietermaritzburg, by South African standards, is a relatively small city, but it is a city nonetheless, with the great diversity of activities which characterise a city.

1) Department of Statistics, *Statistical News Release*, No. 30, Government Printer, Pretoria, 1971.

2) *Ibid.*

3) Estimated by the method of interpolation, using 1960 and 1970 census results.

Traditionally, the administrative centre of Natal, with a large number of central, provincial and local government organisations, it is also a rapidly growing industrial centre, with well over 3 000 acres of existing and planned industrial estates. Until recently, the city has enjoyed the advantages offered by the 'border area' concessions to industrialists which are part of the government's industrial decentralisation programme. These concessions, plus a favourable location on one of the country's major growth axes, the Durban-Witwatersrand axis, have ushered in a recent period of rapid industrial growth which has quickened the tempo of life in the city and started to transform the image of the city. Pietermaritzburg is also a communications and trading centre for the prosperous agriculture of the Natal midlands.

In early 1964, the pattern of employment in the Pietermaritzburg municipal area was roughly as follows¹⁾:

Agriculture:	460
Manufacturing:	10 200
Building Construction:	2 300
Commerce:	6 700
Transport and Communications:	6 000
Services - (excluding domestics):	11 400
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Total:	37 000
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These figures show that even in 1964, at a time when the period of rapid industrial growth in Pietermaritzburg was in its early stages, industrial employment was almost up to the level of employment in the public service and other services. It has been estimated that in future years Pietermaritzburg will become a predominantly industrial town²⁾.

It is necessary to give a brief picture of the characteristics of the population of Pietermaritzburg in order to provide a background to the results presented later in this report. Unfortunately, some of the information available is for Whites only.

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- 1) Information based on a survey conducted for the Town and Regional Planning Commission, Natal, 1964.
 - 2) Based on estimates of future employment in Pietermaritzburg, by the Institute for Social Research, University of Natal, 1968.

Among Whites, average family income in 1966 was slightly lower than that in the larger urban centres, but it compared favourably with smaller cities like East London and Kimberley. The Whites of Pietermaritzburg appeared to spend R107 per annum (or roughly 2.8% of annual expenditure) on recreation, amusement and sport¹⁾. This expenditure, relative to total expenditure, appeared to be higher than similar expenditure in all other towns and cities except Johannesburg and possibly Durban. This comparison suggests a possibility that the Whites in Pietermaritzburg are more active in leisure pursuits than is the case among Whites in other cities generally.

One of the possible reasons for this is that Pietermaritzburg has a higher proportion of White people in the age-group 15 - 24 years than is the case in most other urban areas in South Africa, due to the large number of university students and scholars from elsewhere residing in the city. In 1960 the proportion of people in the age-group 15 - 24 years in Pietermaritzburg was 19%, compared with 15% in urban areas in the province as a whole²⁾.

Another insight into the nature of a population is obtained from knowledge of the distributions of occupational status in the city. Education, income, life-style, tastes and recreational behaviour are influenced very markedly by occupational position. If we compare Pietermaritzburg with urban areas in the province as a whole at 1960, we note, among Whites, that 51% of employed men in Pietermaritzburg were in white collar occupations (as opposed to blue collar and service occupations), compared with 48% in urban areas in the province as a whole³⁾. Thus it would appear that the White group in Pietermaritzburg had slightly higher occupational status, on average, than was the case with urban Whites in the province as a whole.

This is not so among Indians, because in 1960, 28% of Indian men in Pietermaritzburg had white collar status compared with 31% in the urban areas in Natal as a whole. Nor was it the case among Coloureds, since 7% of Coloured working men in Pietermaritzburg had white collar occupations compared with 12%

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- 1) See: Bureau of Statistics, *Survey of Family Expenditure*, November 1966, Report No. 11-06-02, Government Printer, Pretoria, 1968.
 - 2) See: Bureau of Statistics, *Sample Tabulation*, 1960 Census, Report No. 1, Government Printer, Pretoria 1962.
 - 3) Bureau of Statistics, 1960 Census, *Sample Tabulation, Main Occupational Groups*, Report No. 3, Government Printer, Pretoria, 1962. (Agriculture, unemployed and non-workers excluded from the results).

in the province as a whole. Therefore, the Indians and Coloureds in Pietermaritzburg in 1960, did not enjoy quite the same occupational status on average, as was the case with people elsewhere. These proportions might have changed since 1960, but perhaps not so much as to have changed the character of the city.

The proportion of working men in white collar positions in Pietermaritzburg according to race as quoted above, also gives some indication of the relative socio-economic position of the different ethnic groups in the city:

Whites:	51%
Indians:	28%
Coloureds:	7%
Bantu:	5%.

(Metropolitan area of Pietermaritzburg).

This comparison suggests a more favourable occupational position for Indians than they really have, since a large proportion of white collar workers among Indians are very routine sales workers and counter assistants.

A comparison between the different ethnic groups which is more meaningful, since it relates to their ability to pay for recreation, is on relative levels of household income. Unfortunately, no up-to-date data is available for Pietermaritzburg, but it is unlikely to be very different from other urban centres, where generally average household income among Whites is roughly six times that among Africans, roughly five times that among Indians, and roughly three-and-a-half times that among Coloured people. These comparisons must also be related to the fact that a typical non-White household is two to three times the size of a typical White household.

Some reflection of the character of residential areas in Pietermaritzburg can be given if we describe briefly each of the residential areas which are referred to frequently in the text. An important aspect of the results is the analysis of recreational patterns according to area of the city, and it is appropriate to describe these areas at this stage. The most convenient information on these residential areas are some of the results of the present study itself. In the following discussion, the socio-economic status of areas is discussed, and in this regard it is important to bear in mind that the terms upper, middle, and lower status do not have the same meaning for the different race groups. Throughout the report, these terms are used to denote relative differences within race groups. As will become apparent in the following section, the White middle class for example, is more affluent than the Indian or

Coloured middle class. The Indian or Coloured upper status groups would correspond roughly to the White middle status group, and the non-White middle status group is roughly equivalent to the White lower-middle to lower class group.

In appendix Table I we note that the lower Central area, an old residential area close to the central business district, is a predominantly Indian and Coloured residential area, and is overwhelmingly of middle socio-economic level with rather more of the remainder of people in the lower status group than in the upper status group. The rest of the Central area, which is predominantly White, is mainly lower-middle to lower in socio-economic status. The area of Scottsville, one of the older garden suburban areas fairly near the centre of the city, seems to have a wide distribution of people in terms of socio-economic status. The major proportion fall between lower-middle and upper-middle with only a minority in the lower and upper categories. The racially mixed area of Pentridge, a newer area (for Whites), near the outskirts of the municipal area has a wide dispersal of socio-economic levels among both White and non-White; although the distribution is limited to the middle status group and below in both cases. The White area of Mayor's Walk, an old area near the centre of town, is quite clearly a lower to lower-middle status suburb, as are Hay Paddock and Oribi Village, two White areas on the outskirts of Pietermaritzburg. Blackridge and Prestbury have a wide distribution of social status, with the median approximately in the centre of the distribution - in the middle status group. These two White areas are garden residential areas on the outskirts of Pietermaritzburg. Wembley and Clarendon, on the other hand, are quite clearly upper-middle to upper status White areas, situated on a hill overlooking the central area. Northern Park is fairly new White lower-middle to middle status area with a fair representation of upper-middle status families. Raisethorpe and Northdale, two predominantly Indian areas are mainly of lower status but with substantial representation of the middle status group. The Northdale area is mainly a council housing area. The Coloured area of Woodlands, is also mainly a council housing area and is overwhelmingly of middle status. The Indian area of Mountain Rise is also predominantly middle status, but there is fairly substantial representation of lower and upper status groups. There are Whites residing in the Mountain Rise area, who are mainly of low socio-economic status.

As would be expected, among flats in the city there is a wide dispersal of status groups among Whites although among non-Whites the dominant pattern is for the inhabitants of flats to be in the middle group. Hotels,

which are virtually all White, appear to be of lower-middle to middle status.

As is the case in most South African cities, the emerging pattern of official group areas for the different races, is for the newer non-White areas to be on the outskirts of the municipal area, far from the centre of the city.

If one assigns a score to the categories of socio-economic status then one can compare the various areas quantitatively. The scoring assigned was as follows:

Whites: Lower 1; lower-middle 1.5; middle 2; upper-middle 2.5 and upper 3.

Non-Whites: Lower 1; middle 2; upper 3.

In terms of this rough scoring the following rank ordering of areas emerges: White areas - Wembley and Clarendon 2.6 (highest status); Scottsville 2.1; Blackridge, Prestbury 2.0; Northern Park 1.9; Flats throughout the city 1.8; Hotels throughout the city 1.8; Central 1.5; Pentridge 1.5 Mayor's Walk 1.4; Hay Paddock/Oribi 1.3

Non-Whites: Flats throughout the non-White areas 2.1; Mountain Rise 2.1; Woodlands 1.9; lower central 1.8; Raisethorpe/Northdale 1.5; Pentridge 1.5.

This broad picture of the socio-economic characteristics of the various areas should be referred to when recreational patterns in various dwelling areas are discussed in the ensuing analysis.

1.4 BRIEF METHODOLOGICAL OUTLINE:

Detailed notes on aspects of the methodology appear in appendix II of this report.

What follows is a very brief sketch of the methods used in the study, and of the major definitions adopted.

1.4.1 Scope and Coverage:

This study is limited to the White, Coloured and Indian residents of the Pietermaritzburg municipal area. Bantu residents were excluded because at the time of the investigation the Bantu community was in the process of being resettled in the new Imbali residential complex. The rapid changes and state

of flux in the ecological patterns of the Bantu group made it inappropriate, indeed impossible, to study this community at that stage. It was and still is intended to conduct a study among Bantu residents of the Pietermaritzburg metropolitan area at a later stage. One further consideration in regard to the Bantu community is that planning (including recreational planning) of Bantu areas around Pietermaritzburg is undertaken by the Department of Bantu Administration and Development, and such planning is distinct from the planning machinery for the Coloured, Indian and White groups. For this reason there was no pressing need for the Bantu community to be included in the present study.

The study was confined to the municipal area of Pietermaritzburg mainly because this area includes 90% of the non-Bantu population of the city and because many of the areas outside the municipal boundary are peri-urban and not characteristic of residential areas in a city.

Attention in the study was confined to public open-air recreational activity. This was taken to mean active or passive enjoyment of facilities, planned or unplanned, in the open air, on land or water, accessible within a day's drive to the public of Pietermaritzburg. It includes organised open-air sport, picnicking, driving on scenic roads, walking in parks, and similar activities. It excludes private open-air recreational activity like gardening or a domestic tennis party, but includes recreational activity at private clubs since these clubs are generally open to public membership. Also excluded of course are indoor games, mainly because such activities are not directly affected by public open-space and recreational planning of public authorities.

The coverage of the study was limited to activities taking up no more than one day of time, and excluded holidays or weekend-long activities, mainly because these activities are engaged in further away from Pietermaritzburg. The whole idea was to concentrate on the day-to-day recreational needs of the population of Pietermaritzburg.

1.4.2 The Sample:

The sample drawn was a non-proportionate stratified systematic sample. The following were the steps in the sampling procedure:

A complete listing of addresses in Pietermaritzburg (excluding Bantu) was obtained and checked for accuracy in the field. Some addresses were separated into two or more where more than one dwelling unit existed. Each

dwelling unit in Pietermaritzburg therefore, was given a separate address, including hotel rooms and rooms in hostels, etc. In all, 16 760 dwelling units were listed in July 1966, ready for sampling. Of these, 12 990 were White, 2 672 were Indian and 730 were Coloured.

The area was divided into 14 sampling areas so as to obtain sampling areas which were fairly homogeneous in ethnic, socio-economic and ecological characteristics. Sample sizes for each area were determined on the basis of the variability in the population, the size of the population, and the need to obtain minimum numbers of respondents in particular categories. Flats and hotels were each sampled separately. A sampling interval was calculated to give the required sample size and the sampling proceeded by selecting at intervals with a random starting point, along streets in alphabetical order. A total of 1 452 addresses were sampled.

At each address one person of any age and sex was selected randomly from within the household, using a modified version of the technique developed by Leslie Kish. (See detail in appendix II). This method ensured that every person in the house had an equal chance of being selected. From the total sample of 1 452 addresses, 1 386 interviews were obtained. The sample losses consisted on 15 refusals (1.0%), 17 respondents who were unavailable, too sick, or too old to be properly interviewed (1.2%), and 34 untraceable addresses (2.3%). Hence, the non-response rate is exceptionally low for a survey of this nature. An additional 10 interviews were, however, not sufficiently full to be used.

In the processing of the data, data on respondents in each sub-sample were raised by the sampling interval corrected for non-response and by the number of people in each household in order to obtain estimates of the universe of the total population. The results were checked against up to date estimates of total population as well as against the distribution of population according to race, sex and age as given by the 1960 census. In a few categories the raising factors had to be revised in order to produce more accurate estimates of the true distributions of recreational activity in the population. Generally speaking, however, the results matched the distribution of age and sex characteristics in the population at 1960 fairly well. (See details in appendix II).

1.4.3 The Fieldwork:

Fieldwork was preceded by a great deal of advance publicity which included newspaper articles, radio broadcasts, press interviews, and a hand-signed letter sent to each address with a card enclosed to be returned stating

the language in which residents wished to be interviewed. The low refusal rate attests to the effectiveness of the advance publicity.

Roughly 60 interviewers were employed to gather data. They were composed mainly of senior students, school teachers and well-educated housewives. They conducted interviews on the basis of a pre-prepared interview schedule; a copy of which is presented in appendix II.

This schedule was drawn up in draft form, on the basis of an extensive preliminary study of recreational facilities in the area and wide background reading. The draft schedule was pre-tested and refined in 40 preliminary interviews.

The interviews were so selected that each respondent could be interviewed by someone of his or her own race. Interviewers were given a talk on the relevance and importance of the study; they were carefully instructed about research interviewing in general; they were briefed in detail about the schedule and given printed instructions after hearing them explained verbally, and they were also taken on a tour of recreational sites. Thereafter they were given two trial interviews which they had to conduct satisfactorily before interviewing proper commenced. Throughout the fieldwork the interviewing quality was carefully controlled and interviewers were given refresher briefings. The fieldwork was generally of a high quality, with adequate probing of respondents answers. The fieldwork commenced in August 1966 and continued until the end of 1966. (For additional details, see appendix II).

1.4.4 Classification Analysis, and Processing of Material:

After the fieldwork, a system of classifying and grouping the diverse range of responses was formulated, in order that the material could be coded for computer analysis. A few of the classifications used are of particular importance in the analysis.

1.4.5 Socio-Economic Status:

A very basic variable affecting patterns of leisure-time behaviour is that of socio-economic status. We have referred to this classification on previous pages, but did not specify how this was arrived at. Since socio-economic status is discussed time and again in the following analysis, the method of classification used is worth outlining. Socio-economic status is what people refer to colloqually as social class, and is a composite status

embracing economic status, education, social prestige, status of dwelling area, and occupational status. Since the latter in itself embraces income, education and social prestige, occupation tends to have a greater effect in determining socio-economic status than the other single factors mentioned. A combined index of socio-economic status was devised for the present analysis. Respondents educational attainment was assigned a score, their areas of residence were graded by an expert in urban ecology and assigned scores, their household income was classified into intervals and given scores, and the status of each respondents occupation (or in the case of females and children, husbands or fathers occupation), was assessed on the basis of a classification devised in the Institute for Social Research. In each case the scores were sample ordinal ratings except in the case of education, where the educational attainment of respondents were fitted to the normal curve and standard scores were assigned to various levels of education.

These scores were then summed, with the score for occupational status counting twice. Each summed score represented a composite index of socio-economic status for a respondent. The range of scores among Whites was sufficiently large to allow the range of composite scores to be divided into upper, upper-middle, middle, lower middle, and lower. Among non-Whites, dwelling area status had to be omitted since the range of different alternative suburbs for non-Whites is too limited to allow for any marked residential status differentiation. The range of composite scores for non-Whites was based on basic scores which were different from those of Whites. The small proportion of non-Whites with high income, educational and occupational status meant that different scoring categories had to be used, having the effect of producing relatively higher scores for relatively lower status among non-Whites. In both Whites and non-Whites, the 'cutting points' (boundaries of categories) imposed on the final range of composite scores were so selected as to coincide roughly with commonly recognised status divisions in the communities. (For further details see appendix II).

1.4.6 Dwelling Areas:

The dwelling area classification has already been presented in an earlier section. Suffice to say here that these areas which were combined together in the classification were areas of similar character, social level and geographic location. One exception is the linking of Raisethorpe and Northdale; while these are both Indian, the latter is a planned housing

estate and the former is a far less uniform, generally unplanned area. However, due to small sample numbers, they had to be combined. The socio-economic status of people in the two areas is very similar, however.

1.4.7 The Classification of Outdoor Recreation:
Types of Outdoor Recreation as used in the Analysis:

Tennis
 Soccer
 Bowls
 Golf
 Jukskei/Croquet
 Athletics
 Beaches
 Hockey
 Basketball
 Rugby
 Swimming
 Motorsport
 Cycling
 Cricket
 Horseriding/horse racing
 Netball
 Childrens playground
 Flying activity
 Small scenic (parks)
 Medium scenic (parks)
 Large scenic (picnic, camping, watersport and nature-reserve areas).

The classification of types of outdoor recreation is fairly standard and follows conventional distinctions between different types of sport. Some forms of sport had to be combined, but these were usually of a similar type. The category of 'athletics' includes a good deal of activity which in strict terms is not athletics but embraces a range of diverse activities on school sports grounds. The major types of school sports, like cricket, hockey, etc., were however classified in the appropriate specific categories. In some analyses, however, school activities are classified separately and not included under athletics. The category 'flying activity' refers not only to flying, but to other activities engaged in at the airport, like model aeroplane flying, gliding, watching flights, and shows, etc. 'Small scenic areas' refer to neighbourhood parks. 'Medium scenic' areas refer to larger suburban parks, as well as to a very few small scenic areas outside the city. The category of large scenic areas refers to places like Midmar Dam, Henly Dam, Peatties Lake and other picnicking and excursion areas outside the city.

1.4.8 Units of Study - Recreational Activity:

Recreational activity is studied in three ways in this analysis. Firstly, particular activities are simply recorded as being engaged in or not

without reference to frequency. More commonly, however, recreational activity is recorded in terms of the number of visits per annum to venues catering for the activity. Respondents' answers in regard to the frequency of their activities were converted into annual rates for this purpose. Thirdly, recreational activity has been recorded in the form of a composite index of visits plus number of differing activities engaged in on a single visit to a particular sports ground or recreational site. This is an index of the extent and variety of activity, and although none of the quantitative conclusions and recommendations towards the end of the report are based on this index, it has been used frequently as the basis for the comparisons between the recreational activity of different groups. As a basis for the conclusions and recommendations in this report, the simple index of number of visits has been used since this is a readily grasped and practical way of recording recreational activity, with an obvious utility in the planning of open-air facilities.

1.4.9 The Processing of the Data:

In the introduction to this report, fairly full mention was made of the difficult history of data processing on this project. Suffice to say here, that the data were coded, punched on computer cards, and cross-tabulations were produced which initially were considered to be an adequate basis for the analysis. This proved not to be the case and extensive supplementary data-processing had to be undertaken. Hand tabulations were made, existing tabulations had to be corrected, and a recoding of some of the data was undertaken in order to produce new tabulations to replace incorrect tables, to mention only some of the operations.

Possibly the most important additional processing was the separate 'gestalt' analysis, or 'complete content analysis' of every interview schedule. As mentioned in a later section, respondents often gave loose or unrealistic answers when questioned about their needs for additional facilities. In a (largely successful) attempt to overcome this every single schedule was studied in detail, with all answers and characteristics of the respondent taken into account in order to arrive at the most valid assessment possible of his or her authentic needs. These content analyses were hand-tabulated, a laborious procedure which proved to be well worth the trouble and expense. We can give the assurance that conclusions reached in regard to needs for additional facilities are not, as in so many other surveys, based on uncritical acceptance of responses to single questions. All responses in regard to unmet needs for additional facilities were checked against all other answers to see

if they were realistic, plausible, and consistent with the overall life-style of the respondent.

1.4.10 The Reliability of the Findings:

In the analysis, no results of tests of statistical significance are presented. This is because, in a multi-stage stratified sample, tests of significance are enormously time-consuming to calculate. In a survey of the size of the present study, the task of calculating tests of significance for all differences between groups would have been insurmountable. However, the conclusions reached in the analysis were arrived at with due regard to the effects of sampling error. The sampling error in key variables was calculated in order to guide the analysis. Therefore, although no tests of the significance of findings are discussed in the results, all conclusions have been based on a cautious appraisal of the reliability of statistics presented in the study.

CHAPTER IITHE PATTERN OF OUTDOOR RECREATIONAL ACTIVITIES
AMONG THE PEOPLES OF PIETERMARITZBURG2.1 THE SCHEME OF ANALYSIS:

In the analysis of findings in planning research, such as the present project, it is necessary to proceed in such a way as to enable readers to relate the material presented to planning areas within the region under consideration. Hence in a city it is necessary to present material in such a way that it can be related to clearly defined suburbs, ecological zones, sectors of the city, or areas of a particular type of housing or of a particular distance from the centre of the city. For this reason a major thrust in the present analysis is a comparison of different areas in Pietermaritzburg. As outlined previously, areas were demarcated on the basis of the quality of dwellings, the predominant type of dwelling, the predominant race group occupying the area, and on the basis of spatial location within greater Pietermaritzburg. An attempt was made to define areas which were homogeneous as far as possible and which would serve as 'ideal type' examples for the purposes of interpretation.

To limit the analysis mainly to a comparison of different geographical areas within the city as they exist at any particular time, would, however, limit the generality of the findings. It is obvious that suburbs and zones within a city always possess certain unique aspects which are not likely to be reproduced in any future residential development. For this reason it is necessary to supplement an analysis based on geographical areas as they exist at any particular time with an analysis based on more general characteristics of urban residence patterns. This is the only way of providing insights which might be relevant to future urban development. The variables which are of most general significance are those of the socio-economic status of people within areas and the type of dwelling unit.

Accordingly, the major elements in the descriptive analysis offered in this chapter have been the analysis of patterns of open air recreation according to present ecological zones within the city as well as the socio-economic status of people within the city and type of dwelling. It is obvious that, since Pietermaritzburg is a rapidly growing city, new areas will

constantly be added to the existing residential pattern of the city. These areas might be very similar to existing areas, but they will never be exactly the same. If this study is to be significant for future planning as well as the planning of presently existing areas, then a more general form of analysis such as that suggested, is absolutely essential. The analysis according to socio-economic status and dwelling type will allow new areas to be related to the findings of the present study and in this way the present study will be able to offer insights which are relevant not only to the planning of recreational facilities within the city as it exists at present, but also to the planning of recreational facilities in new areas which will develop in time to come.

The relationship between socio-economic status, dwelling type and existing residential areas within the city as reflected in the previous chapter, is of obvious importance in enabling the link to be established between what exists at present and what might be generally applicable in the future.

The major part of the analysis will be based either on the number of visits to particular facilities, the number of people attending various types of recreational venues, or on the composite index of 'activity' referred to in Chapter I. In the description of the material and in the tabulations the types of recreational facilities will be referred to by the type of activity for which the particular facility exists. Hence tennis clubs or any other places where tennis is played are referred to as 'tennis' in the tabulations. It is important to note that the material presented in this type of analysis refers to all forms of activity at such facilities; it does not refer to actual participation in the sport concerned. Hence, on an athletics field, for example, people may attend for formal athletic meetings in order to participate, but people may also visit such facilities in order to train, in order to walk their pets and animals, or in order to sit on the grass. This analysis usually refers to total usage of such facilities, although certain tables do isolate patterns of active participation in various forms of recreational activity.

Town planners require some indication of total demand for a particular type of open space facility. A demand emanating solely from a desire to participate actively in a specific sport is in most instances only a proportion of the total demand for a facility of a type catering for that particular sport.

Not only are there people who wish to watch participants, but a variety of facilities have additional informal uses which are tremendously valuable and which cannot be overlooked by Town Planners. Total usage of facilities is a far more adequate reflection of community needs than is a demand for active participation in a particular sport or activity, although the relationship between total demand and the demand for opportunities to participate actively will be analysed in considerable detail.

NOTE: The appendix tables referred to in the ensuing analysis are presented in appendix III of this report.

2.2 RECREATIONAL PATTERNS OF PEOPLE IN DIFFERENT AREAS OF THE CITY:

In appendix Table II we present the estimated annual numbers of all visits to outdoor facilities of different types, by people living in different areas and living in flats and hotels. The estimated numbers are estimates of the total usage of outdoor recreational facilities in Pietermaritzburg. This has been achieved, as indicated in Chapter I, by raising the sample results by the sample ratio in order to arrive at estimates for the total Coloured, Indian and White population of Pietermaritzburg. At this stage it is unnecessary to comment on the results in appendix Table II. The numbers speak for themselves and the patterns emerging from these results become apparent in the subsequent discussion.

It is perhaps necessary at this point, to give estimates of the intensity of all types of outdoor recreational activity taken together, for the different areas of the city. In order to achieve this we have taken the total number of visits to all types of facilities in one year and divided this by the estimated total number of people living in each particular area. In Table I we present the average number of visits per person per annum to all facilities for each of the different areas. (See Table I overleaf).

Looking at these results and bearing in mind the results in appendix Table I where area has been related to the socio-economic status of people living in each area, it appears quite clearly that there is a definite tendency for the amount of open air recreational activity to vary to some extent according to socio-economic status. Excluding flats and hotels a rank order correlation co-efficient was calculated for the relationship between the average number of visits per person per annum in each area and the socio-economic status of areas. A correlation of .59 was obtained. This suggests strongly that the differential activity in areas is due in part to the socio-economic

status of people living in the area. However, the correlation although reasonably high, certainly does not show a one to one relationship, and therefore other characteristics of areas influence the level of recreational activity. These intervening variables become quite apparent in the results for the areas of Hay Paddock and Oribi. Here we have areas of lower socio-economic status but with an extremely high level of recreational activity. Obviously this is in some way due to characteristics of the people living in these areas, which are independent of their socio-economic status; possibly this is due to the particular location of Hay Paddock and Oribi village within the ecological structure of the city. The same deviation from the general pattern is apparent in the Central area, where the level of activity is extremely high despite a relatively low socio-economic level.

TABLE I

A R E A	Average number of Visits per person to all facilities in preceding twelve months
Lower Central (non-White)	109
Central	152
Scottsville	207
Pentridge	97
Mayor's Walk	132
Blackridge/Prestbury	145
Wembley/Clarendon	202
Northern Park	164
Raisethorpe/Northdale	79
Hay Paddock/Oribi	169
Woodlands	121
Mountain Rise	196
Flats	157
Hotels	128
Pietermaritzburg	138

There is also a clear distinction between the results for Whites and the results for non-Whites. It is apparent from scanning the level of activity for the different areas that, in general, the number of visits per person per annum tends to be higher in White areas than it does in non-White areas. An average has been calculated separately and the results are as follows: Excluding flats and hotels, i.e. the average for houses in different areas only, the average number of visits per annum per person in White areas is 166 and that for non-White areas is 95. Obviously, in view of our previous discussion, this difference must in part be due to the differing levels of socio-economic status among the two groups. However, it is impossible to control for this variable since socio-economic status was calculated on a separate basis for the two major colour groups. The relative availability of facilities for Whites and non-Whites is another possible factor. Although the reasons for the difference cannot be stated with any clarity at this stage, it is apparent that there is a significantly higher level of recreational activity in White areas than there is in non-White areas.

Turning from an overall index of outdoor recreational activity to specific types of outdoor recreational activity, in appendix Table III the percentages distribution of visits by people in each of the different areas of Pietermaritzburg to various types of outdoor recreational facilities is presented. The percentages are based on the number of visits of each respondent during the preceeding year. Therefore, the percentages do not reflect mere attendance but the intensity of attendance at the various types of facilities. Firstly, taking the city as a whole, we note from the total column in appendix Table III that, overwhelmingly, scenic areas combined, are more popular than any other types of open air facilities; they account for roughly 40% of the total number of visits to outdoor recreational facilities in Pietermaritzburg. Even taking the various scenic areas individually, we still find that the popularity even of large scenic areas, which are further away from the city than the medium or the small scenic areas, with a proportion of roughly 5% exceeds that of any other specific non-scenic facility except school playing fields and swimming baths. Following scenic areas in popularity are school sports grounds (roughly 19% of visits), swimming baths (roughly 12%), childrens playgrounds (roughly 7%), soccer fields, beaches, bowling greens and tennis courts. Obviously if beaches were to be included with places offering swimming facilities, then the popularity of all places offering swimming facilities would be close to the popularity of small scenic areas. It would appear, therefore, that soccer fields, tennis courts, school playing fields, beaches and swimming baths, bowling greens, childrens playgrounds and scenic

areas account for over 90% of outdoor recreational activity among the people of Pietermaritzburg.

Appendix Table III and appendix Table IV provide us with an opportunity of looking at the extent to which specific facilities are used by people in the different areas of town. In appendix Table III the percentage distributions for each type of outdoor facility are given within areas, whereas in appendix Table IV the percentage distribution of areas is given within different categories of facilities. This offers us two different ways of assessing the same results. In commenting on the Tables we shall be concerned only with isolating those activities or those areas where the level of activity appears to be significantly greater than that which is typical generally. In other words, we will be concerned with isolating areas and facilities of high demand.

In appendix Table III we look at the distribution of visits to types of facilities for each area in turn. In Lower Central, the non-White central area of town, we find that the most popular type of facility is scenic area, (the three sizes taken together), followed by school playing fields, places which offer swimming facilities, and soccer fields. Other types of facilities attracted less than 5% of visits in the preceeding 12 months. In the White Central area, once again we find large, medium and small scenic areas drawing most visits followed by swimming baths, school playing fields, childrens playgrounds, beaches and bowling greens; the rest attracting less than 5% of visits. In Scottsville we find that scenic areas attract most visits followed by places offering swimming facilities, school playing fields, childrens playgrounds, golf, beaches, and bowling facilities. Pentridge has a similar picture, with scenic areas overwhelmingly important, attracting over 70% of the visits, followed by swimming baths, school playing fields, with other facilities drawing less than 5% of visits. In Mayor's Walk, scenic areas are once again the major attraction followed by school playing fields, childrens playgrounds, swimming baths, and possibly soccer fields, with the rest attracting less than 5% of visits. The position seems similar in Blackridge/Prestbury where we have scenic areas followed by school playing fields, childrens playgrounds and swimming baths. In Wembley/Clarendon, once again it is scenic areas which attract most visits, followed by schools, swimming baths, and tennis courts. In Northern Park it is scenic areas followed by school playing fields, swimming baths, and childrens playgrounds. In the Indian area of Raisethorpe/Northdale we have scenic areas followed by school

playing fields, soccer fields and probably swimming baths, the rest attract less than 5% of visits. In the Hay Paddock/Oribi area, unlike the others, it is swimming baths which attract most visits, followed by scenic areas, school playing fields and childrens playgrounds with no other facility attracting over 5% of visits. In Woodlands, the Coloured housing area, it is scenic areas, followed by an exceptionally large number of visits to childrens playgrounds, followed by soccer fields, with the rest less than 5% . Strangely enough, school sports fields attract only a very small percentage of visits. In the Indian area of Mountain Rise school sports fields attract the bulk of the facilities, followed by scenic areas and soccer fields. In Flats we have scenic areas followed by school playing fields, swimming baths and childrens playgrounds. Among Hotels it is scenic areas, followed by swimming baths, school playing fields, beaches, rugby grounds and tennis courts; other facilities drawing less than 5% of visits.

When one distinguishes between large, medium and small scenic areas, we find that in Lower Central, Pentridge, Northern Park, Raisethorpe/Northdale and Woodlands, small scenic areas are exceptionally popular. Medium scenic areas seem to attract relatively more people in Wembley/Clarendon than is the case in other areas. Large scenic areas attract relatively large numbers from Northern Park.

We note therefore, that although there is a broad similarity in as much as in most areas, scenic facilities attract most of the visits, there are slight but significant differences in regard to the relative popularity of other facilities.

In appendix Table IV we look at the same results from a different point of view. Here we take each particular type of facility and consider the distribution of number of visits according to area for each type of activity. This means that we will be taking each particular type of facility in turn, and estimating which areas contribute most to it in terms of visits.

The total column at the end of the table gives us an idea of the relative contribution of different areas to visits to all types of facilities in or near the city of Pietermaritzburg. From this column we notice that the White Central area, the area of Scottsville, and Indian areas of Raisethorpe/Northdale and Flats, individually contribute well above the average number of visits for all areas. Other areas contributing more than 5% of visits to all facilities are: Lower Central, Wembley/Clarendon, and Mayor's Walk.

Turning to individual types of facilities, the areas contributing a large proportion of the demand, calculated in terms of number of visits will be mentioned in order of importance below, while those areas which contribute less than 5% of total demand will be omitted.

- Tennis:* Flats, Wembley/Clarendon, Central, Hotels, Scottsville, Mayor's Walk, Woodlands, Blackridge/Prestbury, Hay Paddock/Oribi.
- Soccer:* Over two-fifths of the visits come from Raisethorpe/Northdale, followed by the White Central area, Lower Central, Flats, Scottsville, and Mayor's Walk.
- Bowls:* Roughly one-third of the demand emanates from Scottsville, just under one-third of the demand from White Central, followed by Wembley/Clarendon, and Flats.
- Golf:* Roughly three-quarters of the participation come from Scottsville, followed by Wembley/Clarendon and by Hotels.
- Jukskei and Croquet:* Over 50% of the demand is generated by Wembley/Clarendon, followed by Flats, Hay Paddock/Oribi, Mayor's Walk and Blackridge/Prestbury. (The upper status areas produce the demand for croquet, while the lower status areas generate the demand for jukskei).
- Athletics:* Over 40% of the demand emanates from Central, followed by Raisethorpe/Northdale, Lower Central, Scottsville and Mayor's Walk.
- Beaches:* The Central area contributes almost a quarter of usage, followed by Scottsville contributing over a fifth of the demand, followed by Flats, Hotels and Raisethorpe/Northdale.
- Hockey:* Almost one-fifth of the demand comes from Scottsville, followed by Hotels, Lower Central, Flats, Raisethorpe/Northdale, Central, Woodlands, Blackridge/Prestbury and Wembley/Clarendon.
- Basketball:* Roughly 70% of the participation comes from the Central area, followed by Blackridge/Prestbury with a much lower level of demand, and Northern Park.
- Rugby:* Roughly one-fifth of the demand comes from the Central area, followed by Flats, Hotels, Scottsville, Wembley/Clarendon, Mayor's Walk, and Hay Paddock/Oribi.
- Swimming:* Over one-quarter of the visits come from the White Central area, just one-fifth of the demand emanates from Scottsville, followed by Hay Paddock/Oribi, Flats, and from the non-White Lower Central area.
- Motor Sport:* Over 35% of the demand comes from Scottsville, followed by Central area with over 20%, followed by Hotels and Flats.
- Cycling:* A very high proportion of the participation, roughly 30%, comes from Hotels, followed by just under one-fifth of the demand from Scottsville, then Blackridge/Prestbury, Northern Park, the Central area, and Wembley/Clarendon.
- Cricket:* Roughly one-quarter of the demand comes from Scottsville, followed by Flats, Raisethorpe/Northdale, Central, Wembley/Clarendon, all producing roughly 10% of the demand, and finally by Mountain Rise.

- Horse Riding & Horse Racing:* Roughly 40% of the activity comes from Scottsville, followed by Central, Flats, Wembley/Clarendon, and Hotels.
- Netball:* Roughly 70% of the participation comes from Raisethorpe/Northdale, followed by Hotels with roughly 30% of visits.
- Childrens Playgrounds:* Just over one-fifth of the demand comes from the Central area of Scottsville, followed by Woodlands, the Coloured area, Flats, Blackridge/Prestbury, and Mayor's Walk.
- Flying Activity:* Nearly 50% of the activity emanates from Scottsville, followed by Flats, Blackridge/Prestbury and Wembley/Clarendon.
- Small Scenic Areas:* Here most of the visits come from Scottsville and Raisethorpe/Northdale, with roughly 20% of the visits, followed by the Lower Central (non-White area), Flats and the White Central area.
- Medium Scenic Areas:* Over one-fifth of the visits come from Scottsville, followed by the Central area, Wembley/Clarendon, Raisethorpe/Northdale, Flats, Mayor's Walk, Blackridge/Prestbury, and Hotels.
- Large Scenic Areas:* Roughly 20% of the visits come from the Central area, followed by Scottsville, Flats, Raisethorpe/Northdale, Wembley/Clarendon, Northern Park, Mayor's Walk, Hotels, and the Lower Central area.
- School Sports Fields:* Roughly one-fifth of the activity emanates from Flats, and from Raisethorpe/Northdale, followed by the Central area, by Scottsville, the Lower Central area, Mountain Rise, Mayor's Walk, and by Wembley/Clarendon.

We note therefore that there is a significant pattern of differences in both relative and absolute terms in the extent to which the utilisation of particular types of open-air recreational facilities varies between the different areas of town. No interpretation of these results will be offered at this stage, but discussion of the findings will follow later in the report.

Up to now we have been looking at the total utilisation of different types of facilities by all people in different types of areas. As indicated before, this has comprised not only active participation in the particular sport or pastime for which the facility exists, but has also included visits for purposes of participation as spectators, as well as informal visits of a variety of sorts. This analysis has been presented to give a picture of the extent to which particular facilities are utilised for any purpose whatever, and in this sense has reflected the extent to which they fulfil a wide range of needs. In a later section of this report, a breakdown will be given of all the types of activities engaged in at particular facilities and this will make quite clear the extent to which these different facilities fulfil a variety of needs.

2.2.1 Active Participation According to area of the City;

In addition to the analysis of total utilisation, an analysis has been conducted of the numbers of people, as opposed to visits, who take an active part in different open-air activities. This analysis has been limited to people of twelve years and over, in order to exclude young children who presumably do not always visit open-air recreational facilities of their own volition. In other words here we are isolating an active, independent interest in different types of open-air activities by people old enough to decide where they want to go and when they want to go. In appendix Table V are presented the percentages of the total numbers of people of twelve years and over living in different areas who participate to some extent or another in various types of open-air activities. It needs to be stated here that this participation is not necessarily very extensive. It can vary from one or two visits a year to 365 visits per year. The table simply represents the proportions of people in Pietermaritzburg in different areas who at one time or another participate actively in various types of open-air recreation. Here the emphasis is also on activities rather than facilities, and for this reason the classification of activities differs somewhat from the classification of facilities given in the previous analysis.

Looking at the total column first, to get a picture for the entire city, we notice the following: the single most popular type of activity among people twelve years and over is undoubtedly visits to parks which, obviously, entails a variety of different activities such as walking around, looking at flowers, walking pets, taking children to play etc. This is followed in order of importance by excursions to various types of scenic areas outside of the city. The activities at the scenic areas may to some extent or another be very similar to those at parks, but we have distinguished between the two because of the different type of area involved; most of the parks being within the city whereas the places to which excursions are undertaken are usually outside the city. Next in order of popularity are visits to beaches. It is significant that virtually 70% of people of twelve years and over in Pietermaritzburg undertake the forty-five mile journey to the coast at some stage during each year in order to visit beaches. This is followed by visits to swimming baths, almost 30% of people actually swim as an active open-air recreational activity. Following swimming comes gardening, then fishing, followed by tennis and soccer. The only other activities in which more than 5% of people participate actually are hockey, cricket, and rugby.

Turning to the analysis according to area of the city, in appendix Table V we note that, with regard to *beach activities*, the proportions are significantly higher than average in the Central area, in Northern Park, among Hotel residents and possibly also in Pentridge. The proportions are significantly lower in Woodlands (Coloured), Mountain Rise (Indian), and in the Indian area of Raisethorpe/Northdale. It seems obvious therefore, that the extent of beach-going among non-Whites is generally lower than among Whites.

With regard to *tennis*, we note that the proportion of people participating actively is significantly higher in Wembley/Clarendon, as well as in Mountain Rise, Northern Park, Central, Blackridge/Prestbury and in Hotels. The proportion is significantly lower than the average in Mayor's Walk, Raisethorpe/Northdale and Woodlands. With *soccer* we notice that the proportions of people participating actively are higher to a significant and important extent in the Lower Central (non-White) area, Pentridge, Mountain Rise, and possibly also in Raisethorpe/Northdale; this reflecting the greater interest in soccer existing among non-Whites than exists among Whites. The proportions are significantly lower in the Central area, Scottsville, Blackridge/Prestbury, Hay Paddock/Oribi, Flats and Hotels. With regard to *bowls* we note that the proportions of people are significantly and importantly higher in the Central area and in the Wembley/Clarendon area. The proportions are significantly lower in Lower Central, Mayor's Walk, Raisethorpe/Northdale, Woodlands, Mountain Rise, and Hotels. This suggests that bowls is not popular in the non-White areas and the lower socio-economic areas. *Hockey* appears to be significantly more popular in the Central area, Pentridge, and among Hotel residents. It attracts significantly less support than average in Raisethorpe/Northdale, Wembley/Clarendon and Scottsville.

Swimming appears to be most popular in Mountain Rise, Hay Paddock/Oribi, Wembley/Clarendon, Central and Pentridge. It draws least participation from Raisethorpe/Northdale and Woodlands. *Cricket* appears to be significantly more popular in Mountain Rise, Northern Park and in Pentridge, whereas it attracts significantly less interest than average in Raisethorpe/Northdale and among Flat dwellers. Visits to *excursion areas* attract relatively higher proportions of people in Pentridge, and in Blackridge/Prestbury than elsewhere, whereas the proportions are significantly lower in Raisethorpe/Northdale, Woodlands and Mountain Rise, these three being non-White areas where presumably transport facilities are an inhibiting factor. Visits to *parks* seem most

popular in the two high socio-economic areas of Blackridge/Prestbury and Wembley/Clarendon, while they are least popular in Raisethorpe/Northdale. With regard to *fishing* the Lower Central area, Mayor's Walk area, Blackridge/Prestbury areas and possibly the Hay Paddock/Oribi areas seem to have the highest proportions of anglers. The lowest proportions are found in Hotels and Wembley/Clarendon.

The proportion of *gardeners* is highest in the Central area, in Blackridge/Prestbury, Wembley/Clarendon, Northern Park and in Woodlands. Understandably it is very low among Hotel and Flat residents, and also low in the non-White Lower Central area and possibly also significantly lower in the Mayor's Walk area. *Netball* is quite clearly most popular in the Lower Central area, and significantly less popular than anywhere else in the Pentridge area, Mayor's Walk area, Wembley/Clarendon, Raisethorpe/Northdale, Hay Paddock/Oribi, and among Hotel residents. *Rugby* appears to draw its greatest interest in Blackridge/Prestbury, Wembley/Clarendon, and among Hotel residents. In the non-White areas of Mountain Rise, Raisethorpe/Northdale, Lower Central and possibly in Flats it is significantly less popular. *Golf* is most popular in the Central area and in the Wembley/Clarendon area, while it attracts no interest in Lower Central, Pentridge, Mayor's Walk, Raisethorpe/Northdale, Hay Paddock/Oribi, Woodlands and Mountain Rise. *Athletics* attracts a surprisingly high proportion of active participation in the Lower Central non-White area, and in the Northern Park and Mountain Rise areas. The interest in active athletics is quite clearly lower in Hay Paddock/Oribi, Raisethorpe/Northdale, Mayor's Walk and Pentridge, and possibly in Scottsville. *Horse riding* attracts interest only in Wembley/Clarendon, Hay Paddock/Oribi and among Flat and Hotel residents.

Boating is most popular in the high socio-economic areas of Blackridge/Prestbury and Wembley/Clarendon, and among Hotel residents. It holds no attraction whatsoever in Lower Central, Raisethorpe/Northdale, Woodlands, Mountain Rise; all non-White areas. With *water skiing* the area where this appears to be significantly more popular than elsewhere is the Central White area followed by the high socio-economic area of Wembley/Clarendon. The extent of interest in water skiing in all other areas is minimal except for Scottsville, where there is some slight amount of interest. *Surfing* reveals a fairly similar pattern inasmuch as it is also most popular in the Central area and in the Wembley/Clarendon area but in this case in the

Mayor's Walk area as well. The interest in surfing in the other areas is minimal. With *basketball* there is a very low level of interest everywhere with the slight exception of Scottsville, Mayor's Walk, Northern Park and Woodlands. *Tennequoits* appear to be remarkably popular in Mountain Rise but hardly anywhere else. *Jukskei* attracts a slight bit of interest in the Hay Paddock/Oribi area, and minimal interest in the Mayor's Walk area and among Hotel residents. *Canoeing and rowing* is popular among a small number of people in Scottsville but hardly anywhere else. No comment can be made on the activities classified as 'other' since they represent such a wide range of rather unique and specialised interests that they are of very little consequence in this analysis.

In appendix Table VI the same results are presented in a different way and this allows us to look at the percentages within each particular type of activity distributed across areas of the city, rather than the percentages within areas distributed across activities as was the case with the previous table. Since the results mean exactly the same thing there is no point in commenting on these results in detail. Essentially the same conclusions will be drawn as can be drawn from the previous table. However, the total column at the end of the table is of interest. Here one can see the relative contribution of the different residential areas to the total number of active participants in all types of open-air activity, among people twelve years and over. From this final column of percentages we note that Scottsville contributes approximately 18% of the active participants; this being the highest. This is followed by the White Central area of town, then by Raisethorpe/Northdale, Flats, and then by the Lower Central area, with all other areas contributing roughly 6% or less to the total number of active participants in all outdoor activities.

2.3 INDICES SUMMARISING PATTERNS OF PUBLIC OUTDOOR RECREATION, ACCORDING TO AREA AND DWELLING TYPE:

In Table II in the text, an attempt has been made to depict various indices of the extent to which facilities are utilised, according to area. This table presents indices of total usage; this being visits to all types of facilities, as well as indices of active participation in outdoor recreational activities.

TABLE II
INDICES OF TOTAL AND ACTIVE UTILIZATION OF FACILITIES BY AREA.

Area of the city	Total annual visits, all activities, all ages, at all facilities	To base 100 for greatest utilization of facilities	Visits per person per annum (rank)	To base 100 for greatest utilization per person	Active participation,* 12 years and over. Number of visits per annum	To base 100 for greatest utilization of facilities	Visits per person per annum for purposes of active participation (rank)	To base 100 for greatest utilization per person	% of visits for active participation, 12 yrs.+ to all visits (ratio of utilization)	% of active visits per person to all visits per person
01 Lower Cent. N/W	602806	38	109 (12)	53	276779	51	62 (11.5)	35	45.9%	56.9%
02 Central	1532010	97	152 (7)	73	476737	88	88 (5)	50	31.1	57.9
03 Scottsville	1577692	<u>100</u>	207 (1)	<u>100</u>	542417	<u>100</u>	62 (11.5)	35	34.4	30.0
04 Pentrich	161867	10	97 (13)	47	76653	14	68 (8.5)	39	47.4	70.1
05 Mayor's Walk	435936	28	132 (9)	64	182045	34	67 (10)	38	41.8	50.8
06 Blackridge/Prestbury	368711	23	145 (8)	70	164694	30	87 (6)	50	44.7	60.0
07 Wembley/Clarendon	556560	35	202 (2)	98	261719	48	117 (2)	67	47.0	57.9
08 Northern Park	271807	17	164 (5)	79	92232	17	78 (7)	45	33.9	47.6
09 Raiserthorpe Northdale	1119668	71	79 (14)	38	416374	77	50 (14)	29	37.2	63.3
10 Hay Paddock Oribi	295446	19	169 (4)	82	101675	19	91 (4)	52	34.4	53.8
11 Woodlands	283978	18	121 (11)	58	93730	17	51 (13)	29	33.0	42.1
12 Mountain Rise	192368	12	196 (3)	95	177778	33	175 (1)	<u>100</u>	92.4	89.3
13 Flats	1106480	70	157 (6)	76	420865	78	68 (8.5)	39	38.0	43.3
14 Hotels	362843	23	128 (10)	62	281156	52	93 (3)	53	77.5	72.7
TOTAL ALL AREAS	8868172	NA	138	NA	3564854	NA	72	NA	40.2	52.2

* Active participation has been matched to total utilization for purposes of comparison (indoor sports, gardening, etc. have been excluded).

In the first column is given the total number of visits per year to all facilities by people of all ages. These results have been presented in other Tables and need no further comment. In the second column, we have taken the area which contributes the greatest number of total visits to all types of facilities and given this area a score of 100, and calculated indices of their comparative contribution for the other areas; the calculations being to the base of the greatest number of visits to outdoor facilities. Therefore, the figures in this column are to the base of 100, which is the index for the area of Scottsville, the residents of which make greatest total use of all facilities. The area of Scottsville is followed in order of contribution to total activity by the White Central area, Raisethorpe/Northdale, Flats, Lower Central, Wembley/Clarendon, Mayor's Walk, Blackridge/Prestbury and Hotels, Hay Paddock/Oribi, Woodlands, Northern Park, Mountain Rise and lastly Pentridge, which with an index of 10, represents the lowest total utilisation of facilities. These indices, however, relate to total usage and therefore reflect population size as well as relative extent of participation. In the third column we give the annual number of visits per person in each of the particular areas. Here we see that Scottsville emerges with the greatest relative intensity of participation in outdoor recreation with 207 visits per person per annum. This area is followed closely by Wembley/Clarendon, then by the Indian area of Mountain Rise and after that by Hay Paddock/Oribi, Northern Park, Flats, the White Central area, Blackridge/Prestbury, Mayor's Walk, Hotels, Woodlands, Lower Central, Pentridge, and, with the lowest index of participation in relation to population, Raisethorpe/Northdale. In the next column the area with maximum relative utilisation of facilities in relation to population, that is Scottsville, is given an index of 100 and the other areas are related to this base. From this column we note that following very closely after Scottsville are the areas of Wembley/Clarendon, Mountain Rise, Hay Paddock/Oribi and Northern Park all with indices of roughly 80 or over. Pentridge and Raisethorpe/Northdale reveal the lowest relative activity, with indices below 50.

The first part of the Table has been concerned with all visits to various types of facilities. The second part of the Table relates to active participation in the various pastimes for which facilities are intended. As we already know, the information is limited to people of twelve years and over; these being people that can make choices and decisions in regard to recreation by themselves and, in most cases, visit facilities independently.

This information excludes certain indoor activities included previously, and gardening, and is therefore matched to the information on total participation in the first part of the Table, Therefore, the difference between the two sets of information is that the one relates to active participation whereas the other relates to total participation, including spectator activity, informal participation and incidental visits to facilities. In the second last column of the Table the relationship between active participation and total participation is expressed in the form of the percentage of the former to the latter. It will be noted here that overall only roughly 40% of visits to facilities are for purposes of active participation. This percentage varies slightly between areas. Hence we find that the ratio of active participation to total participation is highest in the Indian area of Mountain Rise, followed by Hotels, and then by Wembley/Clarendon and Pentridge, and Lower Central. Other areas have ratios which are close to the overall average of roughly 40% except for lower ratios in Woodlands, Central, Northern Park, Hay Paddock/Oribi and Scottsville. In the last column in the Table the ratio of active visits per person to all visits per person is presented for each area. Here again we find that the Mountain Rise area has the highest ratio of active participation in relation to total participation, followed by Hotels, as before, followed closely by Pentridge and Raisethorpe/Northdale. Other areas have ratios which are fairly close to the overall average of roughly 52% except for Scottsville which seems to have an index which is markedly lower than average. It will be noted that the overall ratio of active visits per person to all visits per person at roughly 52% is higher than the ratio of active visits to all visits which is roughly 40%. This difference could reflect the fact that people of twelve years and over do tend to visit more for active participation than is the case with younger people; a quite understandable pattern. Broadly speaking however, we see from the results that active participation in outdoor recreation represents less than one-half of the utilisation of facilities in the city of Pietermaritzburg. The area which appears to have by far the greatest number of active participants in relation to population is the area of Mountain Rise.

Turning now to a more detailed consideration of active participation we find in the fifth column of the Table the total number of visits for purposes of active participation by people twelve years and over, according to area. In the sixth column this number is expressed as an index to the base of 100 for the area producing the greatest degree of participation. Here we

note that Scottsville, as with all visits, produces the greatest active utilisation of facilities, followed by Central, which in regard to both active and passive visits was also very high in the order of absolute utilisation. The Central area is followed by Flats, Raisethorpe/Northdale, Hotels, Lower Central, Wembley/Clarendon, Mayor's Walk, Mountain Rise, Blackridge/Prestbury, with the remaining areas having an index of less than 30.

In column 7 the number of visits per person per annum is presented. The rank order of different areas here changes somewhat from the rank order of areas in regard to total utilisation. The area of Mountain Rise has the greatest intensity of active participation whereas it was third in the order of total utilisations. The Wembley/Clarendon area is second in order of active participation in relation to population and it was second in the previous analysis. Hotels emerge as third in order of intensity of active participation whereas they were tenth previously. The Hay Paddock/Oribi area is fourth in order of active participation in relation to population, as it was in the previous analysis. The White Central area is fifth in order of active participation whereas it was seventh in order of total participation. For the rest there is a broad correlation between the rank ordering of areas in terms of active and total participation in relation to population, as the results in the last two columns in the Table have already suggested.

In column 8 the intensity of participation is expressed as an index to the base of 100 for that area with the greatest intensity of participation, this being the Mountain Rise Indian area with the index being the maximum of 100. Following this we have the Wembley/Clarendon area with an index of 67, Hotels with an index of 53, Hay Paddock/Oribi with an index of 52, Blackridge/Prestbury and Central with an index of 50. All other areas are below 50 in their index of active participation in relation to population, with the areas of Raisethorpe/Northdale and Woodlands, Coloured and Indian areas respectively, having the lowest indices of all at 29 each.

Broadly speaking, therefore, it would seem that the average White, Coloured or Indian citizen of Pietermaritzburg visits outdoor recreational facilities almost three times a week; and visits these facilities for purposes of active participation in outdoor activities roughly one-and-a-half times a week. It would certainly seem as if the population of the city utilises facilities very extensively.

In Table III we present a more detailed analysis of the relative utilisation of different types of facilities according to area. In this analysis we have tried to make the indices of active participation in various categories of activity accurately comparable with total utilisation of various facilities. For this reason it has been necessary to exclude *Horse racing* and *horse riding* which were combined together in the initial computer tabulation of the results. This combination of the two types of activities made it impossible to compare the results for total utilisation of various types of facilities with active participation in various categories of activity. Since the indices of active participation were calculated only for people twelve years and over it was also necessary to exclude *childrens playgrounds* from the body of the material in the Table and to present it separately. This made a comparison of the two sets of information possible. It should be noted that visits to *school sports fields* have to be added to *small planned sporting facilities* in order to make a comparison with active visits to small planned facilities possible.

It was not possible to treat the various activities and facilities involved in fine detail. The size of the sample limited the analysis to broad groups of various types of activities/facilities. Hence, all forms of sport played in small planned sporting facilities (playing fields and courts) within the city have been grouped together. This might make the information potentially less useful, but since in this Table the aim was to produce a firm basis for the assessment of needs, it was necessary to group results so as to make the sample sizes in the various categories an adequate basis for firm generalisation. The categories of activity and categories of facilities at the head of Table V are self explanatory and need no amplification.

In the body of the Table three sets of information are given within each category and for each area. firstly the estimated number of visits, secondly the number of visits per person, and thirdly the number of visits per person related to the highest number of visits per person within each category of activity expressed as 100 (an index of intensity of participation in relation to population, based on 100 for the highest intensity according to area).

Looking at the results for the totals at the base of the Table gives some idea of the relative importance of different types of grouped activities and different types of grouped facilities in Pietermaritzburg, for both

INDICES OF TOTAL AND ACTIVE UTILISATION OF GROUPS OF FACILITIES IN DIFFERENT AREAS OF THE CITY

Area of City		ACTIVE PARTICIPATION IN VARIOUS CATEGORIES OF GROUPED ACTIVITY					
		Total No. of Visits - Active Part. 12 years +	Parks (Excluding incidental visits)	Excursions, Beach, Water - Sports, Cycling, Fishing, Climbing etc.	Swimming Baths	Large planned sporting areas - Golf, Polo, Motor Racing, Flying	Small planned sporting facilities in Town (field sports)
1 Lower Central non White	No. of visits visit/pop.	290719	49766	38056	33735	-	169162
	To base 100 for greatest No. visits/pop	65	11	9	8	-	38
		37	30	32	27	-	28
2 Central	As for 1	476737	150336	105579	82325	21200	117297
		88	28	19	15	4	22
		50	76	68	50	80	16
3 Scottsville	As for 1	542417	182128	148480	102166	7477	102166
		62	21	17	12	1	12
		35	57	61	40	20	9
4 Pentrich	As for 1	76653	17316	13357	15957	-	30023
		58	15	12	14	-	27
		39	41	43	47	-	20
5 Mayor's Walk	As for 1	182045	54558	59512	35707	-	32267
		67	20	22	13	-	12
		38	54	79	43	-	9
6 Blackridge/Prestbury	As for 1	164694	46987	39000	36629	4243	37835
		87	25	21	19	2	20
		50	68	75	63	40	15
7 Wombley/Clarendon	As for 1	260866	83732	46808	64701	11684	53941
		116	37	21	29	5	24
		66	100	75	97	100	18
8 Northern Park	As for 1	92232	27854	23201	13003	202	27972
		78	24	20	11	.2	24
		45	65	71	37	4	18
9 Raisethorpe/Northdale	As for 1	416374	82804	70462	17952	-	245157
		49	10	8	2	-	29
		28	27	29	7	-	22
10 Hay Paddock/Oribi	As for 1	101605	19058	31010	33250	-	18288
		91	17	28	30	-	16
		52	46	100	100	-	12
11 Woodlands	As for 1	93730	30636	18837	4554	-	39703
		52	17	10	3	-	22
		30	46	36	10	-	16
12 Mountain Rise	As for 1	177778	7900	7253	26888	-	135736
		175	8	7	26	-	134
		100	22	25	87	-	100
13 Flats	As for 1	417939	102516	125339	82725	2288	105070
		68	17	20	13	.4	17
		39	46	71	43	8	13
14 Hotels	As for 1	273726	53869	68123	77150	8180	66405
		90	18	22	25	3	22
		51	49	79	83	60	16
TOTAL visits per person		3567515	909460	795017	626742	55274	1181022
		72	18	16	13	1	24

TABLE III (CONTINUED)

TOTAL UTILIZATION IN VARIOUS GROUPS OF FACILITIES							
Total visits (excluding Children's Playgrounds & Horseriding/Racing)	Small/Medium Scenic Areas Roughly comparable to Parks	Beaches, Cycling, & Large Scenic Areas (roughly comparable to Excursions)	Swimming Baths	Large Planned Sporting Areas - Golf, Motor Sport, Flying Activities	Small planned Sporting facilities in Towns	Schools	(Additional) Children's Playgrounds & Nursery schools
1. 457759 83	259013 47	50716 9	75687 14	46 -	72297 13	121309 22	22873 4
51	58	24	22	-	41	20	10
2. 1167347 116 71	382845 38 47	229311 23 62	295570 29 45	17403 2 13	242218 24 75	227778 23 21	124899 12 29
3. 1245478 163 99	581012 76 94	183325 24 65	193145 25 38	115260 15 <u>100</u>	172736 23 72	176221 23 21	130406 17 40
4. 150125 90 55	104792 63 78	16720 10 27	16847 10 15	2714 2 13	9052 5 16	8638 5 5	2205 1 2
5. 293400 89 54	137368 41 51	59224 18 49	40480 12 18	2464 1 7	53864 16 50	93496 28 26	47896 14 33
6. 267306 105 64	116419 46 57	50449 20 54	43742 17 26	6699 3 20	49997 20 63	54315 21 19	45681 18 43
7. 453229 164 <u>100</u>	223253 81 <u>100</u>	79503 29 78	44858 16 25	16501 6 40	89114 32 <u>100</u>	82697 30 28	13744 5 12
8. 234651 141 86	116156 70 86	60643 37 <u>100</u>	20270 12 18	2816 2 13	34766 21 66	22214 13 12	14121 9 21
9. 760120 53 32	417634 29 36	95018 7 19	49699 4 6	1236 - -	196533 14 44	325733 23 21	30523 2 5
10. 243645 139 85	66951 38 47	29050 17 46	112971 65 <u>100</u>	2988 2 13	31685 18 56	35894 21 19	15285 9 21
11. 176133 75 46	106582 45 56	27965 12 32	3153 1 2	797 0.3 2	37636 16 50	7369 3 3	98886 42 <u>100</u>
12. 84336 86 52	45248 46 57	6656 7 19	8096 8 12	272 0.3 2	24064 24 75	106120 108 <u>100</u>	1536 2 5
13. 671369 95 58	310134 44 54	126391 18 49	107731 15 23	7625 1 7	119488 17 53	366669 52 48	59469 8 19
14. 322506 114 70	125647 44 54	70851 25 68	39121 14 22	14364 5 33	72523 26 81	30115 11 10	6346 2 5
6527404 101	2993054 47	1085822 17	1051370 16	191185 3	1205973 19	1658568 26	613870 10

active participation and for total utilisation. In regard to active participation among people twelve years and over, we find that in Pietermaritzburg as a whole, the *small planned sporting facilities* in town attract a greater number of visits per person on average than any single one of the other categories. The average in this category is 24 followed by an average of roughly 18 visits per person per annum to *parks*. There is an average figure of roughly 16 visits per person per annum going on visits to the *beach, excursion areas* (for water sports, cycling fishing, climbing etc.) Following this we have an average of 13 visits per person per annum to *swimming baths*, followed by only one visit per person per annum on average to *large planned sporting areas* such as those provided for golf, polo, motor racing or flying activity. The picture is slightly different when one looks at total utilisation in the second half of the table. *Small planned sporting facilities*, together with *schools*, attract the second highest average number of visits per person per annum at 45, a figure which is exceeded slightly by the average of 47 for visits to *parks*, (small/medium scenic areas). A considerably lower average number of visits per person per annum emerges for *large scenic areas* (including *beaches*) and for *swimming baths*, the respective averages being 17 and 16. The average number of visits per person per annum to *large planned sporting areas* is considerably lower than the averages for the other types of facilities mentioned, as was the case for active visits.

Visits to *childrens' playgrounds* emerges as an average of 10 per person per annum for Pietermaritzburg as a whole; and here it should be remembered that all these visits can be classified as active.

An overall comparison of active and total utilisation of facilities shows that less than 40% of visits to *parks* are 'active' in the sense of not being incidental or cursory visits. Over 90% of visits to *large scenic areas* (including beaches), are 'active'. Over 80% of visits to *swimming baths* are for purposes of swimming or sunbathing. One-third of visits to *large planned sporting areas* are for active participation, and only just over 50% of visits to *small planned sporting facilities* are in order to play the sport for which the facilities are intended.

The figures in the Table are too extensive to be commented on in any great detail. We will limit ourselves to commenting on the relative intensity of use as reflected by the index of participation or utilisation which is

calculated to a base of 100 for the area in which participation is most intense.

In regard to active participation we note that visits to *parks* are most popular in the Wembley/Clarendon area, followed by Central, and then by Blackridge/Prestbury. 'Active' visits to parks appear to be lowest on the other hand, in the non-White areas of Mountain Rise, Raisethorpe/Northdale and Lower Central. Excursions to *large scenic areas* and to *beaches* appear to be most popular in the Hay Paddock/Oribi area followed by Hotels, Mayor's Walk, Wembley/Clarendon and Flats. The lowest interest is in the non-White areas of Mountain Rise, Raisethorpe/Northdale, Lower Central and Woodlands. Therefore it would seem that in regard to visits to *parks*, *scenic areas* and *beaches*, the residents of non-White areas are much less active than those in the White areas.

In regard to visits to *swimming baths* we find the greatest activity in Hay Paddock/Oribi, followed by Wembley/Clarendon, Mountain Rise and Hotels. The least activity is found in the Raisethorpe/Northdale, Woodlands and Lower Central areas. Here again it seems that the non-White areas, with the exception of Mountain Rise, do not contain much active visiting of swimming baths, compared with White areas.

As one would expect, the active utilisation of *large planned sporting areas* is greatest in the high socio-economic area of Wembley/Clarendon, followed by Central. There is extensive interest among Hotel residents and among residents in Blackridge/Prestbury. The amount of activity in other areas is negligible or non-existent, with the slight exception of Scottsville.

The average number of visits per person for active sport in *small planned sporting facilities in town* is relatively very much higher in Mountain Rise than anywhere else. The index of 100 here is followed by an index of only 28 in Lower Central non-White area and then by an index of 20 in Pentridge. The lowest degree of active participation of all is in the Scottsville and Mayor's Walk areas; all other areas being roughly similar with indices between 12 and 18.

Turning to the total utilisation of various groups of facilities, and looking first at *parks* (small and medium scenic areas), we find that once again

the Wembley/Clarendon area has the highest index of intensity of utilisation, followed by Scottsville, Northern Park and Pentridge. The lowest utilisation of parks is in Raisethorpe/Northdale, Hay Paddock/Oribi and Central. Excursions to *large scenic areas* are most popular in Northern Park, followed by Wembley/Clarendon, and among residents of Hotels. Lowest degree of utilisation is in Mountain Rise, Raisethorpe/Northdale, Lower Central and Woodlands. This reflects as it has before in regard to active participation, the relatively lower extent to which *large scenic areas* are visited by non-Whites.

In regard to *swimming baths*, once again as in regard to active visits, Hay Paddock/Oribi shows a relatively much higher interest in swimming baths than other areas; the next highest index being 45 for Central. The areas of lowest activity are Woodlands, with an index of 2, Raisethorpe/Northdale, with an index of 6, followed by Mountain Rise, Pentridge and Northern Park.

Large planned sporting areas are utilised most intensively by residents in Scottsville, followed by residents in Wembley/Clarendon and Hotel residents. Other areas have relatively low degrees of activity of this type and in Lower Central, the Raisethorpe/Northdale, Woodlands and Mountain Rise area the extent of visiting is very low indeed.

The pattern is completely different in regard to *small planned sporting facilities*, excluding school sports fields. Wembley/Clarendon has a considerably higher proportion of people who visit small planned sporting facilities in town. The next highest index is 81 for Flats, and 75 for Mountain Rise. There is an extremely low relative degree of activity in Pentridge area, and Lower Central and Raisethorpe/Northdale are well below average.

In this section of the Table, visits to school sports fields are specified separately whereas they are included in the results for small planned sporting facilities in the results for active participation. Mountain Rise has the highest index of activity at school sports fields by far; the next highest being 48 among residents of Flats. Woodlands and Pentridge have particularly low indices of activity.

The category of childrens' playgrounds, which has been added in as an additional item of information in this Table, and which is not included in the totals, shows an interesting pattern, in which the Woodlands area has an index

of participation in relation to population which is very much higher than all other areas; the Blackridge/Prestbury area has the next highest index - 43. Relatively very low utilisation of playgrounds occurs in Pentridge, Raisethorpe/Northdale, Mountain Rise, and among Hotel residents.

This completes the descriptive analysis of the extent of utilisation of different types of public facilities by the residents of different areas in Pietermaritzburg. In this analysis, the study of the facilities has always taken the form of an assessment of the relative degree of utilisation of open-air facilities grouped in various categories according to the type of activity for which the facilities are intended. For various reasons no attempt has been made to analyse the use of individual open-air sites, i.e. individual sports grounds or individual scenic areas, etc. This would have been impossible for two major reasons. Firstly, the tabulations concerned would have been so detailed as to be virtually meaningless, since the sample size in cells would have been so small as to prevent any adequate generalisation being made. Secondly, an analysis of the utilisation of individual facilities by area would have produced a Table of such large size that it would have been well beyond the capacity of the computer used for tabulating the material. As a matter of fact an attempt was made to produce such a Table, but we found that it could not be produced in the usual form; i.e. reflecting number of visits per annum. We concluded that it was utterly impractical to attempt an analysis of the use of individual facilities according to area.

No attempt has been made to summarise the results discussed thusfar. The trends according to area of the city have been found to be extremely diverse, and any accurate summary would have to be almost as long as the preceding discussion. In fact a faithful impression of the material can only be obtained from looking at the tabulations themselves.

2.4 OUTDOOR ACTIVITIES IN PRIVATE SPACE, ACCORDING TO AREA OF THE CITY:



Before turning from the analysis according to area of the city, a few additional aspects of the results have to be considered. These concern activities in private gardens and the play activities of children; also to a large extent activities taking place in private space. Although these two sets of information do not relate directly to the utilisation of public outdoor

facilities, they are valuable nevertheless since they indicate to what extent children and adults make use of private facilities in their outdoor recreational patterns, and obviously this has an important indirect bearing on the demand for public open-air facilities in Pietermaritzburg.

2.4.1 Activities in Private Gardens in Different Residential Areas:

In appendix Table VII we present a percentage distribution of people doing various types of activities in their own or other *private gardens*, given separately according to the area of town in which people live. In the total column at the end of the Table we note that one-third of people in Pietermaritzburg have no activities in private gardens. Roughly 17% of people doing things in private gardens appear to be children playing various types of games with or without play equipment. If one adds to this figure the 3% who ride bicycles, tricycles, roller skates, etc., which are also childrens activities, we arrive at a total of roughly 20% for activities which are quite clearly those engaged in mainly by young children. Gardening itself is obviously an important activity, accounting for roughly 13% of the responses. Other activities which are mentioned by significant numbers of people are playing soccer or football, swimming, playing cricket, tennis, netball and other sports, (excluding rugby and croquet).

Turning to the individual areas and looking first at the people with no activities in private gardens, we note some very interesting variations. In Scottsville, Blackridge/Prestbury, Wembley/Clarendon, all areas of relatively high socio-economic status with large gardens, the proportion of people with no activities in private gardens is significantly lower than the average, as could be expected. The proportion of the Coloured residential area of Woodlands is also probably significantly lower than average, indicating that there is a high degree of interest in activities in private gardens among Coloureds in areas where gardens exist. On the other hand, in the White areas of Pentridge and Mayor's Walk, two areas of lower socio-economic status, the proportion having no activities in private gardens is significantly higher than the average. As would be expected the proportions of people having no activities in private gardens are very high indeed among Flat dwellers and Hotel residents. The fact that somewhat over 40% of these people do engage in activities in private gardens can be ascribed to the fact that these activities take place in the private gardens of friends. The proportion of people who actually garden is higher than average in Scottsville, Blackridge/Prestbury, Wembley/Clarendon, Northern Park and in the Coloured area of Woodlands; these results being as one would expect in areas of higher socio-economic status

with large and comparatively beautiful gardens. The fact that a significantly high proportion of people in the Coloured residential area of Woodlands engage in gardening activity alerts one to the fact that gardening is not the prerogative of middle-class Whites. In Lower Central and among residents of Flats and Hotels and possible also in the Mayor's Walk area, the proportion of people engaging in gardening activity is significantly lower than average.

Taking the two categories of childrens' games together (that is playing with or without equipment and riding tricycles, bicycles, roller skating etc.), we find that the proportions are higher in Blackridge/Prestbury, Raisethorpe/Northdale, Hay Paddock/Oribi, and very much higher in the Coloured area of Woodlands. In the Raisethorpe/Northdale, Woodlands areas, and Hay Paddock/Oribi areas these higher proportions partly reflect the larger number of children per family. It is difficult to explain the significantly higher incidence of childrens' games in Blackridge/Prestbury and therefore this result has to be treated with caution. The proportion of people engaging in childrens activities is very much lower among Hotel residents, residents of Flats and, surprisingly in the area of Mountain Rise. Also surprising is that it appears to be lower in the Wembley/Clarendon area. The result for the Mountain Rise area has to be treated with some caution because of the small sample size, but possibly the lower incidence is due to the fact that it is a middle to upper middle class Indian residential area with a lower proportion of children than is typical of other Indian areas. The same explanation would hold for the White area of Wembley/Clarendon.

The combined activities of relaxing doing minor chores, washing or fixing cars, enjoying braaiivleis, etc., would appear to attract more participation in the Northern Park area than elsewhere and less participation than elsewhere in the Mountain Rise area and the Pentridge area. Caring for animals and pets seems to be a feature of the Mayor's Walk area; the other differences in the table do not appear to be significant.

Swimming in private pools is quite clearly very characteristic of the Wembley/Clarendon area and is absent or insignificant in Woodlands, Raisethorpe/Northdale, Lower Central, Pentridge, and Hay Paddock/Oribi. This would appear to reflect the incidence of private swimming pools, and as such, relates to the socio-economic level of the areas.

Tennis in private gardens is a prominent activity in the Wembley/Clarendon area and is also possibly more popular among residents of Hotels, some of which might have the facility of Hotel tennis courts. It is significantly absent in the Hay Paddock/Oribi areas and clearly insignificant in the Raisethorpe/Northdale, Pentridge and Lower Central areas.

Playing soccer or football appears to be significantly more popular in the Lower Central area, in Pentridge, in Raisethorpe/Northdale, and in Mountain Rise. It is clearly significantly less popular in the White Central area and possibly also in the Blackridge/Prestbury area and among residents of Flats and Hotels. The playing of cricket might be significantly more popular in the Mountain Rise area although this result has to be treated with caution, but it is significantly absent among residents of Flats and among the residents of Pentridge and the White Central area. The playing of croquet in private gardens is nowhere particularly prominent and the distribution of results cannot be regarded as either important or significant. The same applies to playing rugby where the variation in proportions is so slight and the total incidence of playing rugby is so small that it cannot be given any particular consideration. All that can be said for the playing of a range of other sports including netball, is that this activity is significantly absent in the Pentridge and Mountain Rise areas.

The category of activities which include fishing, shooting and horse-riding includes, for the most part, activities which can only be engaged in on large estates, presumably owned by friends. For this reason it is rather inexplicable that a significantly higher proportion of people in Lower Central non-White area appear to engage in what are the pastimes of the wealthy; this result therefore has to be treated with extreme caution. Although the participation in this type of activity might be significantly higher among residents of Flats and Hotels, the most important conclusion that can be drawn from the percentages given in this category is that this type of activity is not engaged in by residents in the Central area, the Scottsville area, the Pentridge area, the Woodlands area and the Mountain Rise area.

The remaining categories of activities in the Table are quite clearly very sparsely distributed across the body of the Table and the most notable conclusion to emerge is that there is very limited interest in pastimes other than those already mentioned.

We have considered the type of activities engaged in in private gardens and, following on this, it is necessary to consider the *frequency* of participation in these activities in order to assess their importance in the leisure time of people in Pietermaritzburg. In appendix Table VIII information is presented on the frequency of activity in private gardens according to area. In this Table our major interest is in the second row, this being activity which is engaged in every week-end, daily or weekly, since this represents what could be considered to be consistent and regular active participation in recreational activity in private gardens.

Fairly significant differences appear to exist between the different areas. Overall, for the city of Pietermaritzburg, it would appear that slightly more than 50% of people have regular outdoor recreational activities in private gardens. This proportion is significantly higher in the high-income areas of Blackridge/Prestbury and Wembley/Clarendon; the proportion being roughly seven out of ten in these areas, which usually have very large private gardens. It is also significant that the proportion of people in this category is higher in the Coloured residential area of Woodlands, and in the Indian area of Mountain Rise; the proportions in these two areas also being in the region of seven out of ten. It is consistent with our earlier finding that people who live in Flats, and to a lesser extent, people who live in Hotels, have significantly less regular recreational activity in private gardens than is the case in the city as a whole. This is only to be expected. The other results in the tables do not represent statistically significant trends, but tentatively, it is probable that people in Scottsville, Northern Park and Raisethorpe/Northdale have slightly more regular activity in private gardens than is average, and that people in Lower Central and Pentridge enjoy fewer regular leisure-time pursuits in their private gardens.

For the purposes of a later assessment of recreational needs it is necessary to construct an index of regular participation in activities in private gardens in order that this could be taken into account along with other quantitative indices at a later stage. What we have done before and what seems appropriate here as well, is to relate the frequency of regular activity in each area to the frequency in the area which reveals the maximum utilisation of private gardens, regarding the latter as a base or standard of 100. This calculation produces the indices of regular activity in private gardens according to area which are presented in Table IV below.

TABLE IV

INDICES OF INTENSITY OF REGULAR ACTIVITIES IN
PRIVATE GARDENS ACCORDING TO AREA OF CITY

Area of City	Index of Intensity of Activity
Lower Central (non-White)	62
Central	73
Scottsville	74
Pentridge	54
Mayor's Walk	74
Blackridge/Prestbury	95
Wembley/Clarendon	94
Northern Park	81
Raisethorpe/Northdale	78
Hay Paddock/Oribi	66
Woodlands	100
Mountain Rise	94
Residents in Flats	38
Residents in Hotels	49

The above figures require no comment, other than drawing attention once again to the fact that there is a rough tendency for areas of higher socio-economic level to have higher indices. An obvious exception is the Coloured area of Woodlands.

In order to complete our understanding of the patterns of leisure-time activity in private gardens it is necessary to see which activities are engaged in regularly and which are engaged in less regularly or infrequently. In appendix Table IX we present a percentage distribution of people engaging in the various forms of open-air activity in private gardens according to the frequency of the activity in question. Here again, our interest is in the activities which are engaged in regularly, i.e. the column which includes activities which are engaged in every weekend, daily, or weekly. From this table we note that roughly 90% or more of children who play in their gardens do so weekly or more often, and the same applies to those who play soccer or

football. Roughly 85% of people who garden do so weekly or more often and the same applies to those who play cricket and rugby in their gardens. Roughly 80% of people who care for pets and animals, who swim, and who engage in horse-riding or jumping, do so weekly or more often. Roughly 70% of people who play tennis, who relax by doing minor activities such as washing of fixing cars, etc., people who play sports other than those already mentioned, and people who engage in a variety of other activities too detailed to classify, do so weekly or more often. As is only to be expected those people who hunt, fish or shoot in private gardens (in this case it would be private estates) tend to do so far less regularly than those doing other activities. Generally speaking, the impression gained is that for most of the activities, certainly for all the major activities, at least 70% or more people engage in these activities very regularly and consistently. Therefore one has to regard activities in private gardens as a very substantial form of open-air recreation for people in Pietermaritzburg who have private gardens, which they use. This certainly has to be taken into account in assessing the need for open-air recreational facilities.

2.4.2 The Play Activities of Children in Different Areas:

Finally, we turn to a consideration of the places in which children usually play. In appendix Table X we present a percentage distribution of responses of children under the age of 14. The sum of the percentages exceeds 100 because, obviously, children could mention more than one place at which they most often played. Looking at the table we find that in Pietermaritzburg as a whole, children under the age of 14 tend to play most often in their own gardens. This is followed, but with very much lower incidence, by play in streets, between houses and in unused open spaces. Following this we have play activity at schools, then play at friends' garden, play indoors, play in playlots, parks, and lastly, in a variety of other types of spaces too varied to specify. Broadly, one can conclude that over 50% play in private gardens, and if one includes play indoors, it would seem that over 60% of children play on their own or on friends' properties. Playlots attract more children than do parks, as one would expect. Overall, less than one-fifth of children play in the street, on open lots and in other unused open spaces; this relatively low proportion reflecting a fairly healthy picture for Pietermaritzburg as a whole.

Turning to the pattern in different areas, we find that in the Lower Central non-White area, a relatively very high proportion of children play in the streets, between houses and in open lots and in other spaces; the

proportion approaching one-half of children. There is a higher use of school facilities in this area than is average. A slightly higher proportion of these children also play indoors than is typical elsewhere. In the White Central area, a lower proportion than average play indoors, a higher proportion play in gardens or in the gardens of friends, and a higher proportion than is average use school playgrounds. In this area it would seem that a lower proportion of children than is average play in streets and in other spaces, and a lower proportion play in parks.

In the Scottsville area we have an extremely high proportion playing in their own gardens and in friends' gardens, a relatively high proportion playing in parks and playlots, and a slightly higher proportion than is average playing in streets, between houses and in other unused spaces; in the Scottsville area these spaces probably being rather more salubrious than similar spaces nearer the centre of town.

In the Pentridge area virtually all the play activity is either in the childrens' own gardens, indoors, or at schools. The proportion playing in their own gardens and at schools being very much higher than is typical for the city as a whole.

In the Mayor's Walk area a considerably higher proportion of children than is average play in their own gardens than is the case in the city as a whole. A lower proportion play in open spaces and in streets, a higher proportion play in parks, a lower proportion play in playlots, and a higher proportion play at schools.

In the Blackridge/Prestbury area we find that a lower proportion of children play indoors than is typical of the city as a whole, while considerably higher proportions play in their own gardens or in the gardens of friends. A higher proportion also play in parks than is typical for the city as a whole.

In the Wembley/Clarendon area we find that no children appear to play indoors, a considerably higher proportion than is average for the city, play in their own gardens, and a very high proportion of nearly 50% play in the gardens of friends. A relatively lower proportion play between houses, in streets and in undeveloped spaces, *but* a higher proportion than is typical for the city as a whole play in other spaces. These spaces in Wembley/Clarendon are probably fairly attractive. A higher proportion of children play at schools in the

Wembley/Clarendon area than is the case in the city as a whole.

In the Northern Park area we find once again that a relatively high proportion of children play in their own gardens or in the gardens of friends, and that virtually none play indoors. A lower proportion than is typical for the city as a whole play in streets, between houses and in undeveloped spaces. A lower proportion play in playlots, and a higher proportion utilise the play facilities at schools than is the case in the city as a whole.

In the Raisethorpe/Northdale area a higher proportion of children play indoors than is the case in the city as a whole. A higher proportion of children play in their own gardens, and a higher proportion of children also play in open spaces, in streets, between houses, and in other spaces. Relative to the city as a whole a very high proportion of children in this area play in playlots and a somewhat higher proportion of children play in schools than is the case elsewhere.

In the Hay Paddock/Oribi area a somewhat higher proportion of children play indoors than is typical in other White areas, and slightly higher proportions of children play in their own gardens and in the gardens of friends than we find in the city as a whole. We find that a very much higher proportion of children play in open spaces, in streets and in other types of spaces than is the case in all other White areas; the proportion approaching 60%. The other proportions relating to the Hay Paddock/Oribi area are not significantly different from those which apply in the city as a whole.

In the Woodlands Coloured area the proportion of children playing in their own gardens and those of friends is somewhat higher than the proportions for the city as a whole, but the difference might not be statistically significant. A significantly higher proportion of children in this area play in streets, between houses and in undeveloped spaces than is the case in the city as a whole. Virtually no children appear to play in parks, a slightly higher proportion of children than average play in playlots, while a slightly lower proportion of children in this area play in schoolgrounds.

In the Mountain Rise area it would seem that a higher proportion of children than is typical for the city as a whole play indoors while higher proportions of children also play in their own gardens and those of friends.

Virtually no children in this area play in the streets or in open spaces between houses, etc., and very few or virtually no children play in parks or playlots. The proportion of children playing in schoolgrounds is significantly higher than is the average for the city as a whole.

As one would expect, children living in Flats tend to play indoors much more than children anywhere else, the proportion being over 40%. The proportion of children playing in the gardens of flats or in the flat yards is roughly similar to the average for the city as a whole, and the proportion playing in the gardens of friends seems to be significantly lower than the proportion for the city as a whole. A higher proportion of children tend to play between houses, in streets and in undeveloped spaces, while virtually no children appear to play in parks and playlots, which is surprising. The results for the Hotels cannot be regarded as significant since there were too few children involved to make any generalisations.

It needs to be stated at this point that the results commented on in this table are generally less trustworthy than those for the other tables discussed thusfar; the reason being that the results in this table are based on the very small samples which remained after adults were excluded. Therefore, although this table has been commented on in exactly the same way as other tables, the patterns which have been discernible will be used mainly for purposes of providing additional insights rather than as a basis for any assessment of needs which can be quantitatively expressed. Broadly speaking, however, the pattern appears to be that the non-White areas and the Hay Paddock/Oribi White area are areas where alarmingly large proportions of children appear to play in the street or in spaces between houses and in vacant lots. This problem also appears to exist to some extent among children who live in flats.

This brings the analysis of the statistical material relating to different areas in the city to a close. Very little comment has been given in regard to the precise character of the different areas discussed. It has been left largely to the reader to relate what has been said to what has been said in an earlier section of the report in the description of the different areas in which samples were drawn.

2.5 VARIATIONS IN PUBLIC OPEN-AIR RECREATIONAL ACTIVITY ACCORDING TO RACE AND SOCIO-ECONOMIC STATUS: ALL ACTIVITIES AT PUBLIC OUTDOOR RECREATIONAL FACILITIES:

In the previous chapter the index of socio-economic status used in this analysis was explained, and readers were given a broad description of the various status categories. This description should be borne in mind in assessing the results which will be presented in this section. As was indicated in the discussion of the index of socio-economic status, it is a composite index of occupation, education, income and area of the city. It is not purely an indicator of social prestige, nor does it refer solely to economic or educational status. The names that have been assigned to the categories of socio-economic status (lower, lower-middle, middle, upper-middle, upper, etc.) are to some extent arbitrary and do not necessarily relate accurately to the groups in our society which people identify by these names, since the latter form of identification refers to social status or prestige rather than to a composite index, although the comparison is fairly close.

In appendix Table XI we present a percentage distribution of visits to different types of open-air facilities given separately for the different status groups within the three races. The previous analysis according to area of the city allowed some comparison to be made between the races; however, these differences were partly obscured by differences between areas. Of first interest in appendix Table XI therefore, is the difference between the results for Europeans, Indians and Coloureds.

We note, for example, that the popularity of visits to *tennis* courts is highest among Coloureds, followed by Whites and then by Indians, among whom very few visits occur. The proportion of visits to *soccer* facilities by Indians is considerably higher than the proportion for Coloureds, which is in turn higher than that for Whites. We note that the proportion of visits to facilities offering *bowls* as an activity is higher among Whites than among Indians and that bowling activities are non-existent among Coloureds. The proportion of visits to *golfing* facilities among Whites, although low, nonetheless contrasts with the total absence of any visits to this type of facility among both non-White groups. With *athletics* we find virtually no differences in the proportions of visits among Indians, Whites and Coloureds; the level of activity among all three groups is low. In regard to *beaches*, we find that the proportion of visits among Whites and Coloureds is significantly higher than that among Indians. *Hockey* attracts more visits among Coloureds than it

does among Whites and Indians. *Basketball* facilities are visited only by Whites. *Rugby* is more popular among Whites than it is among Coloureds, and almost no visits occur among Indians. We find that visits to *swimming baths* are considerably higher among Whites than they are among Indians, and also that visits among Indians are considerably higher than visits among Coloureds. There do not appear to be any significant differences between races in the pattern of results for *motor sport, cycling, cricket, horse-racing, horse-riding riding and netball*, which attracts no participation at all.

In regard to visits to *childrens' playgrounds* the proportion among Coloureds is very considerably higher than is the case with either Whites or Indians. With *small scenic areas* (suburban parks), the picture which emerges is that the relative proportion of visits among Indians and Coloureds might be slightly higher than the proportion of visits among Whites. In regard to *medium-size scenic areas* (large parks), however, we find that the proportion of visits to the facilities is roughly double the proportion among Coloureds and Indians. Visits to *large scenic areas* are roughly twice as popular among Whites and Coloureds as they are among Indians. Among Indians, visits to *school sports fields* are more than three times as popular as they are among Whites and Coloureds.

It is important to remember that we have been discussing the relative popularity of visits to different types of facilities, not the absolute numbers of visits. Since Whites tend to be more active than non-Whites, the relatively greater popularity of visits to a particular facility among non-Whites does not necessarily mean that non-Whites visit that type of facility more than Whites, in absolute terms. The relative amount of activity among the different races is reflected very clearly in the information on the total number of visits at the bottom of appendix Table XI. Whites contribute 70% of all visits, Indians 26% and Coloureds 4%, compared with proportions in the sample of 59%, 34% and 7%.

Turning to the analysis according to socio-economic status, we will deal firstly with differences among Whites. With *tennis* there does not appear to be any significant or systematic trend according to socio-economic status. This is not the case with *soccer*, where there appears to be a tendency for the popularity of visits to soccer facilities to decrease with increasing socio-economic status. With *bowls* the broad trend is for the popularity to increase slightly with increases in socio-economic status, up to the upper middle status category. In the case of *golf*, unlike bowls, the upper socio-economic group

has a markedly higher incidence of visits to golfing facilities than anyone else. There would not appear to be any clearly defined trend according to status in visits to *athletics* facilities, nor is there any clearly defined trend with regard to *beaches*. There is no particular trend according to status with *basketball*, nor with *rugby*. The upper socio-economic group appears to frequent public *swimming baths* less than socio-economic groups below it; possibly because of the higher incidence of private swimming pools among the very wealthy. With *motor sport* there is no particular pattern of results, nor is there with *cycling*, and nor is there with *cricket*. *Horse-racing and horse-riding*, unfortunately a very mixed category of activities, appears to be slightly more popular among the upper, upper-middle and middle socio-economic groups than among the lower levels of socio-economic status.

There is a clearly defined tendency for visits to *childrens playgrounds* to be more frequent and common among the lower and lower-middle socio-economic groups than among other groups. Visits to *small scenic areas* reveal no distinct pattern. Visits to *medium scenic areas* would seem to be more popular in the upper and upper-middle status groups than among others. With regard to *large scenic areas*, no clearly defined trend emerges. Visits to *school sports fields* appear to be more frequent amongst the lower status groups than among others, possibly because of a relatively greater number of children in this group.

Among Indians we find that visits to *tennis* facilities are more popular in the middle group than in the upper and lower groups. Visits to *soccer* facilities appears to be equally popular in the lower and middle status groups, but less popular in the upper groups. The trend with regard to visits to *athletics* facilities appears to be for the popularity to lower in the upper status group than in other groups. Visits to *beaches* are more popular in the lower status group than among other groups. *Hockey* would appear to be more popular in the upper group than in the other group. Unlike the position with Whites, it would appear as if visits to *swimming baths* are equally popular among all socio-economic groups in the Indian community. There would appear to be a tendency for *cricket* to be more popular among upper socio-economic group of Indians than among the middle and lower socio-economic group. Unlike the case with Whites, visits to *childrens playgrounds* appear to be relatively more frequent at the higher level of socio-economic status among Indians than among the middle and lower status groups. With regard to *small scenic areas* there is an indication that these areas hold a greater attraction for the

middle and upper socio-economic groups than for the lowest groups. This tendency is reversed with regard to *medium scenic areas*, and there does not appear to be any trend at all with regard to *large scenic areas*.

Very few generalisations can be made about the Coloured group, since the lower socio-economic level includes so few sample cases that the results are extremely unreliable. The only differences between status groups which would appear to be significant and important is that there is a marked tendency for the members of the lower socio-economic group to visit *childrens play-grounds* more often than members of the middle and upper socio-economic groups, and a tendency for the middle and upper status groups to visit *small scenic areas* more often than members of the lower status group.

Generally, the trends revealed in these results, broadly speaking, are what we would expect to find after looking at the results obtained in the analysis according to area of the city. No comments on the trends or attempts at explanation will be offered at this stage, since further results and tabulations have to be considered before it will be clear whether the trends which do emerge are due to preferences among the various status groups, or whether they are also due to limitations on the recreational activity of various groups due to factors beyond a person's control, such as means of transport, amount of leisure-time available, absence of facilities for particular groups, and so forth.

2.6 DETAILED ACTIVITIES AT PUBLIC OUTDOOR RECREATIONAL FACILITIES, ACCORDING TO RACE AND SOCIO-ECONOMIC STATUS:

In the analysis of outdoor recreational activities according to area of the city, information was presented on the contrast between the total number of visits to different types of facilities and visits undertaken for purposes of active participation. It became obvious that the broad category of 'visits' includes a wide variety of activities for which the particular facility is not necessarily intended. However, no information was presented on the range of activities which occur at various types of facilities which are not necessarily active participation in the activity or sport for which the facility is intended. It is necessary to go into this matter a little more deeply, since the discrepancy between total visits and visits for the purposes of active participation is very large in some cases. It is apparent that various types of facilities are serving a function which might, as it were, be

unintended in the planning of such facilities. It is essential to know what the detailed activities at particular facilities are since the full range of activities at various types of places designed for open-air recreation are probably an expression of essential leisure-time needs of people. Looking at the detailed activities which take place at facilities of different types can also shed light on needs which particular groups may have for facilities or opportunities for recreation which might not exist; the needs then having to be gratified at facilities not intended for the particular purpose for which they are used. As part of our analysis according to race, we present information on the relationship between particular activities and the type of facilities which are used by people in Pietermaritzburg.

In appendix Table XIIa we present a percentage distribution of the number of visits for particular activities according to the type of facility at which these activities take place. Appendix Table XIIa gives the patterns which exist among Whites while Table XIIb and Table XIIc give the pattern of activities among the Indian and Coloured communities respectively.

In considering the results in appendix Table XIIa, b and c, we should bear in mind that the classification of types of facilities is based on the major purpose of the particular facility and not on the secondary purposes for which the particular facility might have been constructed or planned. In classifying the types of facilities an attempt was made to make the classification mutually exclusive to the greatest possible extent, but this was not always possible and in some cases a particular place of open-air recreation can contain provision for more types of recreation than the category heading would imply. This will become apparent somewhat later in this report when we consider information relating to particular sites and venues in the city. However, at this stage we can accept that the type of facility headings at the top of these tables (and in previous tables) is an indication of the major purpose for which the particular facilities were intended. An important aspect of the tables to be discussed is that it was not possible to separate out school activities from public outdoor activities, and many facilities such as *athletics, rugby, basketball, netball, etc.* include the organised or informal sport played at school (All the earlier processing of the material had school activities included with public activities and it was not possible to retabulate all the material).

Turning first to appendix Table XIIa, that for Whites, we will take each of the different types of facilities in turn and look at the range of activities which take place during visits to the particular facility. The activities here are presented in considerable detail because it might be necessary to refer back to the detail when (hopefully) the present report is being used for purposes of recreational planning.

Taking White *tennis* facilities first, we note that only roughly 41% of activity is for the purpose of actually playing tennis, and an additional 23% roughly is for the purpose of watching tennis. At the base of the table we note that there are a few odd sports in which people participate at tennis courts, which raises the proportion for active participating in any sport from roughly 41% for tennis to roughly 44% to 45% for all types of sport. This additional activity is mainly *tennequoits*, *tennisette* or table tennis, as we will note from the table. Looking at the other activities we notice that the other major activity at tennis facilities is social activity: associating with or being entertained by other people. This accounts for some 12% of activity and underlines the fact that tennis is a social game and any facility catering for tennis should also take the social needs of participants into account. Other activities which are worthy of mention include roughly 5% of activity which entail looking after children, and roughly 3% to 4% of activity involving childrens' games. Here again this shows that in addition to playing tennis and watching tennis and the social activities there is also a tendency for some people to take their children with them to tennis courts. Taking refreshment at a club or tearoom accounts for roughly 4% of all activity and this might be grouped with the social activities, which would raise this proportion of activity to roughly 16% to 17%. Hence, broadly, one can state that tennis facilities are used mainly for playing and watching tennis, for social activities and for activities connected with caring for children or childrens' games, presumably around the tennis courts.

At *soccer* facilities we notice that the proportion of activity involving active participation in sport is very much lower than that with tennis courts; roughly 10%, while the proportion of activities embracing watching sport is much higher than in the case of tennis. Looking at the detailed results in the table we note that only some 7% to 8% of activity at soccer facilities is actually playing soccer. Roughly 41% of the activity involves watching soccer. To this must be added however, roughly 6% of activity which involves sitting in a car which probably involves watching the soccer game to some extent.

Therefore, the extent of passive participation in the sport is roughly 47%. Other activities which assume significant proportions include eating at kiosks, etc., roughly 12%. Playing with model planes and kites etc., is roughly 4% to 5%. Childrens' games account for roughly 4% of activity, social activities roughly 3% to 4%, and casual activities such as standing, sitting, relaxing, doing minor activities in the open space, roughly 3%. Quite significant proportions use the soccer fields for walking in or walking through, the proportion being roughly 9%. Hence, apart from an active or passive interest in soccer itself, approximately 25% of activity at soccer facilities is either social in nature, or playing games, childrens' games or casual exercise. It is quite clear, therefore, that soccer fields are used for much more than watching or playing soccer, and as large open spaces, they fulfil a variety of purposes.

Looking at *bowling* facilities, we notice that almost 50% of the activity at bowling facilities involves playing bowls, a percentage which is slightly higher than that for active tennis. Only roughly 4% of activity is specifically for the purpose of watching bowls, indicating a very high rate of active as opposed to passive participation in this sport. Bowling facilities are obviously very important for social purposes since roughly 19% of the activity is mixing with other people, or being entertained by other people, and roughly 19% is eating or having snacks. Some 5% to 6% of activity involves simply relaxing, walking around and engaging in other casual activities. None of the other activities appearing in the table are sufficiently important to be discussed.

With *golf*, roughly 32% of activities is playing golf, and a very low proportion of less than 2% consists of watching golf. Golfing facilities are important for other purposes, since roughly 19% of activities includes eating or refreshment, roughly 26% playing childrens' games, roughly 10% associating with other people, and roughly 9% of the activity was simply casual with no real purpose. This casual activity, however, probably does involve walking around golf courses and enjoying the space.

With *jukskei* the activity appears to be roughly evenly divided between active participation and childrens' games, but with roughly 6% consisting of sitting in cars and watching.

At *athletics* facilities an extremely low proportion (which in this tabulation includes school athletics facilities) of activity is actually engaging in active athletics or road running; under 20%. There is also virtually no activity which involves watching organised track meetings. Athletics facilities cater for a number of other purposes and needs such as social activity, roughly 17% to 18%, playing informal games roughly 12%, playing childrens' games, (this would include all the various activities at school athletics tracks), roughly 37%, and driving to or from place, probably being visits by parents who take their children to the athletics facilities at schools, roughly 7%. It is quite apparent therefore that athletics facilities cater for a great deal more than organised athletics.

With *beaches*, we find that some 39% of activity consists of beach activities in the water or on the sand, roughly 6% is fishing, roughly 13% is for purposes of eating, picnicking or buying food from kiosks, roughly 6% consists of looking after children, and an equal proportion comprises mainly social activities.

Hockey facilities are, overwhelmingly, used for the sake of hockey, with some roughly 30% of activity consisting of actually playing hockey, and over 50% watching hockey. The only other major activities involved are some 4% for social activities, roughly 2% consisting of looking after children, and roughly 6% consisting of either playing or watching informal games other than hockey organised on hockey fields.

Basketball facilities cater overwhelmingly for playing basketball with just under 50% of the activity being precisely this. Just under 35% of activity is taking refreshment at the clubs or kiosk. Social attractions account for roughly 6% of the activity, and childrens' games for just under 10%.

Croquet facilities cater overwhelmingly for active participation in croquet. The remainder of the activities are for a variety of purposes which are simply too diverse to be classified in any way.

With *rugby* among Whites, we find that roughly 30% of activity is playing rugby and just under 50% of activity is watching rugby. Other significant activities are social activities (5%), and childrens games on rugby fields 5%.

Roughly 50% of activity at *swimming pools* is the conventional swimming, diving, playing water polo or sunbathing, while other significant activities are childrens' games (15%), social activities (10%), looking after children (roughly 5%), and relaxing, sitting and doing minor activities (7%).

With *motor sport* only roughly 50% of activity consists of watching actual sporting events, and an insignificant 1% of activity is participation in motor racing. Other significant activities are eating (15%) taking pets for walks (4%), social activities (10%), and walking around or through the open space of the circuit (5%).

With *cricket* facilities just under 30% of activity is playing cricket, while approximately 55% of activities are watching cricket, mainly as ordinary spectators would, although some watch the cricket from their motor cars. The only other activity which is of any consequence is that of childrens' games and childrens' playing which accounts for roughly 3% to 4% of activity.

The category of *horse riding and horse racing* cannot be commented on with any precision since the two categories of horse riding and horse racing are an unfortunate combination under one heading. This was unavoidable because of certain classification problems and the need to conserve computer capacity. However, we can say that roughly 30% of the activity in both these types of facilities combined is watching or betting on horses at horse race-tracks, whereas 13% of activity is horse riding, which is not likely to include any active horse racing. The other activities are not able to be related to the particular type of facility - be it race courses or farms where horses are kept, so no further comment will be given.

With regard to *netball* (played exclusively at school), the overwhelming activity is playing netball (over 90%). No other activities are sufficiently significant to comment on.

At *childrens playgrounds (including nursery schools)* we find that roughly 15% of activity is general relaxation, walking, walking through or doing casual things, etc. Just under 20% of activities is looking after children, and just under 60% of activity is playing games in the playgrounds with or without equipment. No other activities are sufficiently important to mention.

At the aerodrome - *flying activity* - we find that just under 45% of activity is watching flying, gliding or parachuting, just under 9% is participation in these types of activities, just over 20% is playing with model aeroplanes and kites, and roughly 16% is social activity.

We come now to parks and scenic areas. With *small scenic areas (small parks)* we find that roughly 12% of activity is casual not involving much exercise, like sitting around and relaxing, whereas just under 45% of activity is walking around or walking through parks. Twelve percent of activity is enjoying the plants, trees and flowers, and just under 16% is looking at features of historical or constructional interest at buildings in the parks, etc. With *medium scenic areas (medium sized parks and small to medium scenic areas)* we find that a smaller proportion of the activities are the relatively inactive casual pastimes such as sitting and relaxing, since they account for only just over 5% of all activity, and also that a smaller proportion of activities consist of walking through or around the particular facilities, the proportion here being just under 20%. Roughly 4% of activities are looking after children, and an equal proportion are children playing childrens' games. Roughly the same proportion of activity as in the case with small parks (12%) is enjoying the plants and the trees, and roughly 3% enjoying the scenery. Interest in wild life accounts for some 12% to 13% of activity, and sitting in cars, presumably to appreciate the surroundings, accounts for just under 4% of the activity. Over 11% of the activity consists of taking other people to such facilities. Roughly 10% of the activity consists of eating, either by having picnics or buying from kiosks, etc. etc. This more or less completes the list of significant individual activities in medium sized scenic areas. The breakdown of specific activities is roughly similar for large scenic areas, with the exception that walking around these areas accounts for a lesser proportion of activity at under 9%, while some roughly 3% of activity is social, some 4% is looking after children, and roughly 4% of activity is for childrens' games. Enjoying the scenery accounts for just under 10% of activity, while watching boating, fishing, or water-skiing for another roughly 10% of activity. Roughly 15% of activity is centred around an interest in wild life in these areas, and just under 15% is picnicking. Roughly 8% of activity is fishing, and roughly 6% is boating and water-skiing.

We turn now to look at the similar results for Indians which are given in appendix Table XIIb. In discussing the results for Indians, we will consider

only those facilities where there is an appreciable utilisation by members of the Indian community. For *tennis* facilities we see that roughly 35% of activity is playing tennis, roughly 25% is watching tennis, roughly 17% to 18% eating, picnicking, etc., the same proportion is social activity, and roughly 5% is informal games and activities. Therefore approximately 40% of activity at tennis facilities by Indians is not strictly speaking, for the purpose of either playing or watching tennis.

In regard to *soccer* facilities, only 12% to 13% of activity is playing soccer, just short of 15% is watching soccer, and the only other activity which is significant is associating with people, accounting for roughly 15%, childrens' games and general playing (6%), and walking around the soccer fields accounting for just under 10%.

At *athletics* facilities (mainly school sports fields) only 7% of the activity is active participation in athletics, and an almost equal proportion of activity (roughly 5%) is actively playing tennisette and tennequoits. The major interest of athletics facilities for the Indian community is as a venue for childrens' games and general childrens' playing, accounting for almost 40% of activity. Informal games, not necessarily by children, account for 14% of activity. Walking around the athletics facilities or the sports grounds at schools accounts for some 13% of activity; roughly 10% is for informal relaxation and some 5% are social activities.

At *beaches* the major activity is the beach activity that one would normally expect, accounting for some roughly 40% of all activity, while eating accounts for just under 20% of activity, watching boating, fishing, and water skiing roughly 11%, childrens' games and caring for children just under 5%, social activities just over 11%, and walking around roughly 6% of all activity.

Hockey facilities among Indians are used almost exclusively for either playing hockey, (over 50%), or for watching hockey (just over 40%). If one adds those activities which involve sitting in a car in order to watch sport, it brings the proportion for watching up to 50%.

At *swimming pools*, two-thirds of activity is active swimming or sunbathing, while some 12% is just for general relaxation. Just under 10% are social activities, and roughly 10% are childrens' games.

At *cricket* facilities just under 40% of activity consists of playing cricket, while roughly the same proportion is watching cricket, if one takes watching from motor cars into account as well. Walking around on cricket grounds accounts for 5% of activity, while social activity accounts for just under 5%.

At *netball* facilities (exclusively at schools), almost all visits are for purposes of playing netball.

At *childrens' playgrounds and nursery schools* we find that some 11% of activity is general relaxation by adults, roughly 14% is looking after children, roughly an equal proportion is playing informal games, and nearly 60% of activity is childrens' games with or without the use of playground equipment.

In *small scenic areas (small parks)* just over 26% of activity is relaxation not involving exercise, some 20% is walking around or walking through, some 18% to 19% are social activities, some 6% to 7% is enjoying plants, trees, flowers and scenery, almost 20% is seeing features of historic or constructional interest, and some 5% of activity is driving to the place and giving people a lift.

In *medium scenic areas* the proportion of people visiting for informal relaxation involving no exercise drops to slightly under 20%, while those visiting these places to walk around is also just under 20%. Social activities in these medium sized scenic areas account for 7% of activity, while childrens' games account for just under 10%. Enjoying plants and scenery accounts for roughly 15% of activity and an interest in wild life accounts for roughly the same proportion of activity. Just over 8% of activity is eating, having picnics, etc.

In *large scenic areas* informal relaxation involving very little exercise accounts for roughly 15% of activity, walking accounts for roughly 14%. social activities for 5% to 6%, childrens' games at rivers or waters edge for nearly 4%, and watching boating, fishing and water skiing also 4%. The attraction of the scenery accounts for just over 10% of activity, and the interest offered by the wild life for just under 5% of activity. Some 8% of the activity is having picnics, while, in contrast to other scenic areas, as much as 18% of the activity is fishing. Apparently quite a good deal of soccer or football

is played informally at such areas because some 6% of activity is watching these games.

Turning to appendix Table XIIc and looking at the results for the Coloured community, we note in regard to *tennis* that roughly equal proportions of people visit to play tennis or to watch tennis at roughly 35% each. Social activities account for some 12% of the total activity, and looking after children for some 7%.

With *soccer* facilities, only roughly 7% of people actually visit to play soccer, while an additional 3% to 4% visit in order to run or train for athletics. Over 40% of total activity consists of watching soccer, 15% consists of social activities, and roughly the same proportion is playing informal games on the soccer field. Six per cent of the activity consists of childrens' games and roughly the same proportion involves eating and taking snacks.

At *athletics* facilities and school sports fields, roughly a third of the total activity is active participation in athletics, 14% of activity is watching school cricket, 17% is attending school sports days or other special occasions, and 6% to 7% involves taking refreshment.

At *beaches*, roughly 45% of the activity consists of conventional beach activities, or simply enjoying an outing, 30% involves taking refreshments and eating at kiosks, nearly 8% is looking after children, and roughly 10% of activity is social in nature.

At *hockey* facilities just over 20% of the activity is playing hockey, 45% of the activity consists of watching some form of sport, nearly 20% is social, nearly 5% of the visits are childrens' games and general playing by children, and roughly 7% involves eating or taking refreshment.

At *cricket* facilities, roughly 45% of the activity is playing cricket, roughly 35% consists of watching cricket, and roughly 17% is social.

Childrens' playgrounds and nursery school activity which as we have seen before is a very popular activity among Coloureds, appears to attract mainly children, since nearly 55% of the activities engaged in are by children playing childrens' games. These places are also used by adults for informal relaxation, nearly 8% of the activity being of this nature, while some 35% of

the activity by adults involves social intercourse.

In *small scenic areas and parks*, some 18% of activity is informal relaxation involving little activity. This proportion drops to 7% to 8% in *medium and large scenic areas*. Walking around or through the park accounts for nearly 17% of the activity in small scenic areas, and this appears to drop to roughly 10% in large scenic areas. In all three areas roughly 4% to 8% of activity is social, while looking after children accounts for 6% to 7% of activity in medium and large scenic areas, but for only a very small proportion in the small scenic areas. Childrens' games account for between 6% and 8% of activity in medium and large scenic areas, but for very much fewer in small scenic areas. Enjoying the plants, trees and flowers, or the scenery, accounts for roughly 18% to 21% of activity in the small to medium scenic areas, but for no more than roughly 5% in the large scenic areas. Roughly 18% of the activity in small scenic areas consists of seeing features of historical or constructional interest. An interest in the wild life makes up 19% to 20% of activity in medium sized scenic areas and some 10% in large scenic areas. In small scenic areas driving to or from the place or waiting to give people a lift etc., accounts for a rather high proportion of roughly 20% of activity. Having picnics accounts for some 9% of activity in medium sized scenic areas, and this proportion rises to almost 20% in large scenic areas, but this type of activity is non-existent in small scenic areas. In the large scenic areas some 9% of activity is fishing, and roughly 10% is swimming.

The preceding results have revealed some interesting differences between the three races, but they have to be summarised in order to make these differences evident. If we take Tables XIIa, b, and c together and compare the totals at the end of each table: the percentage distributions of activities for all types of outdoor facilities, then we can make the necessary comparisons between Whites, Coloureds and Indians. Indians would appear to use facilities rather more for informal relaxation involving little exercise than do either Whites or Coloureds. Non-Whites tend, more often than Whites, to play informal games at outdoor facilities. One difference which is both interesting and significant is that a higher proportion of Whites enjoy refreshment in clubs or tearooms at facilities than do either Indians or Coloureds; this probably reflecting the differential provision of such facilities for the different groups. Boating and water skiing occurs to a slight extent among Whites, but is non-existent among Indians and Coloureds. Watching rugby is obviously more popular among Whites than among Indians or Coloureds, as is participation

in rugby, a sport which is non-existent among Indians or Coloureds. On the other hand, watching and playing soccer is much more popular among Indians than among Coloureds, and it is even less popular among Whites generally. Bowls is non-existent among Indians and Coloureds whereas it has a small following among Whites and the same pattern applies in regard to golf. Horse riding is non-existent among Coloureds and Indians, whereas it has a small following among Whites, and the same applies to cycling. Watching motor racing is more common among Whites than among Indians and Coloureds. Active swimming is more popular among Whites than among Indians, and it is even less typical of Coloureds. Netball is more popular among Whites and Indians than it is among Coloureds.

In appendix Tables XIIIa, b, and c, the percentage distributions of activities at all types of facilities taken together are presented for the different socio-economic status groups. In looking at these results we will only comment on those where there appear to be significant and important differences between the status groups.

Among Whites we find that members of the middle-status group appear to visit facilities in order to watch passers-by more frequently than do status groups above or below them. The lower middle and middle-status groups tend typically to look after children more frequently than other status groups. The lower-status group among Whites appears to have more children who visit playgrounds using the equipment at the playgrounds than do higher status groups. The lower-status group also appears to visit scenic areas to see features of historical or constructional interest more frequently than do other status groups. Members of the lower-status group appear to drive to or from various facilities in order to give people lifts less often than do the other status groups, possibly because they have fewer cars. The lower-status group also appears to take refreshment at clubs or tearooms at facilities less frequently than do other status groups. The lower-status groups visit facilities more frequently for the purposes of watching hockey than do the more highly placed status groups. The upper middle-status group visits facilities more often than others in order to play bowls and golf. The upper-status group appears to be less interested in swimming at public swimming pools, possibly because of the greater number of private pools among this type of person. Playing soccer appears to be limited to the lower-status group, and to a lesser extent the lower middle-status group.

Turning to the Indians, we find that the upper status group tends to visit less frequently for informal relaxation involving very little exercise. They, on the other hand, tend to enjoy walking and strolling in the open more than do the lower and middle-status groups. The upper-status group also tends to watch people and passers-by more frequently than do the lower and middle status groups, but the lower-status group would appear to visit facilities more frequently for the purposes of being entertained or associating with people. The lower-status group tend to play informal games more often than others. The upper-status group is characterised less by childrens' activity than are the middle and lower-status groups. The lower and middle-status groups appear to be more interested in features of historical and constructional interest in parks and buildings than the upper status group. The upper status group appears to be more interested in watching hockey than the lower and the middle-status groups. Playing tennis appears to be limited to the lower and the middle-status groups.

Among the Coloured people, the results for the upper-status group are extremely unreliable due to the small size of the sample. For this reason we will look only at the results for the lower and the middle groups. Even here in view of the small size of the sample great caution has to be exercised in drawing any conclusions. It is quite apparent however, that the lower-status group is very much more interested in watching people and passers-by than the middle-status group. It would appear that children in the middle-status groups make more use of facilities than is the case among the lower-status group. The middle-status group is also rather more interested in looking at plants, trees and flowers or features of historical interest than the lower-status group. Driving to or from a place for the purpose of giving a person a lift occurs more frequently in the middle-status group than in the lower-status group. Beach activities appear to be limited to the middle and upper-status groups only. The same would apply to fishing, watching cricket, playing cricket, watching rugby, playing hockey, watching tennis and playing tennis. The lower-status group appears to be more interested in active participation in athletics than the middle-status group, but members of the latter group appear to be more interested in playing soccer than the lower status group.

2.7 ACTIVE VERSUS PASSIVE PARTICIPATION IN SPORT
ACCORDING TO RACE AND SOCIO-ECONOMIC STATUS:

Having looked at the detailed relationship between the attendance at various types of facilities and the particular activities engaged in on such visits, we are now in a better position to understand the tables that follow. As was the case in the analysis according to area, we will shortly present information on active participation in various types of activities by people 12 years and older. Before doing so, however, we should briefly consider a summary of the tables which have just been analysed, in which those respondents who actively participate in the sports for which a variety of sporting facilities are intended, have been isolated and expressed as a proportion of the total number of respondents in each status and racial group. This analysis differs from those which are to follow in that it is not confined to people of 12 years of age and older.

In appendix Table XIV we present a percentage distribution of all respondents who actually participate actively in the sports for which particular facilities are intended. Here the analysis is based on the number of respondents and not on the number of visits, and hence the sum of the percentages exceeds 100 since people can participate in more than one activity at a time. Obviously the respondents who actually participate actively in the sports mentioned here include some people who participate very often and others who participate very infrequently; this material simply gives an analysis of the people who at some stage during the year preceeding the study actively participated in one of the sports mentioned. Scenic areas were omitted from this analysis because of the extreme difficulty in deciding whether a particular type of activity constituted active participation or not. In the independent analysis of active participation among people 12 years and over which is to be considered in due course, this operation was found to be possible but it was not possible to accomplish with small children in the sample.

Looking first at the differences between the races we notice that the proportion of Whites who actively participate in *tennis* is significantly higher than the proportion among Coloureds which in turn is slightly higher than the proportion among Indians. With regard to *soccer*, however, the proportion among Indians is slightly more than double what it is among Whites, and the same applies to Coloureds where the proportion is only slightly lower than that among Indians. *Bowls, golf and jukskei*, are not played at all by non-Whites.

The proportions among the different races for people taking part in *athletics* do not differ significantly. We note that the proportion of Whites who actively engage in *beach* activities is substantially higher than the proportion among Indians, which is in turn substantially higher than the proportion among Coloureds. The popularity of playing *hockey* is considerably higher among Whites and to a lesser extent among Coloureds than it is among Indians. *Basketball and croquet* are not played at all by non-Whites. The percentage of Whites playing *netball* is significantly higher than the proportion among Indians. Finally, we note that *flying* activity is limited to Whites only.

At this stage we must interrupt the analysis of results in appendix Table XIV to briefly look at the results in appendix Table XV, where the same results according to race are presented in a different way. In appendix Table XV the proportions are calculated to the base of the number of people participating in activities for which facilities are intended, rather than to the base of the number of people in the different racial groups. This gives a very clear picture of the contribution of different races to active sport in Pietermaritzburg.

Looking at these results, we notice that roughly 85% of *tennis* players are White and roughly 11% and 5% are Indian and Coloured respectively. With *soccer*, however, the Whites are in a minority among active participants; representing roughly 37% of soccer players, compared with 53% who are Indians, and roughly 11% who are Coloureds. With *bowls, golf and jukskei* the participants are all White. With *athletics* slightly over half of participants are White, roughly 38% are Indians and roughly 10% are Coloureds. In regard to *hockey*, Whites constitute almost 90% of hockey players with Indians and Coloureds contributing roughly equal numbers in the balance. *Basketball and croquet* are all White, and so is *rugby*, virtually.

The overwhelming proportion of people who *swim* are White, roughly 76%, compared with roughly 19% who are Indian and 6% Coloured. *Motor sport and cycling* are exclusively White activities. With *cricket* the proportions are very similar to those among people who swim - three-quarters of them being White. *Horse riding and horse racing* are also supported overwhelmingly by White enthusiasts, with Indians contributing roughly 13% and Coloureds roughly 5%. Whites constitute roughly 80% of *netball* players, compared with roughly 21% who are Indian. *Flying* activity, as would be expected, is exclusively White.

If we look at the proportional representation of the different race groups in the sample (Whites constitute roughly 55% of the Coloured, Indian and White group), we see that only with *soccer* and *athletics* is the contribution of Whites to total active participation in sport lower than their proportion in the sample. In all other activities Whites contribute disproportionately to the ranks of active sportsmen and women. Only with *soccer* and to a lesser extent *athletics*, do Indians contribute more than their expected numbers of players. The proportion of active Coloured participants in the various sports is generally somewhat closer to their proportion in the sample than is the case with Indians and Whites. Broadly, the conclusions to be drawn from the analysis according to race in both appendix Table XIV and appendix Table XV are that Whites contribute a disproportionately high number of active sportswomen and men in open-air recreational activity in Pietermaritzburg in general. This is borne out by the percentages in the last column where the sum total of participants in all types of facilities together, has been expressed as a percentage for Whites, Coloureds and Indians. We note that the distribution of these totals is 76% for Whites, compared with their representation of roughly 59% in the sample. The proportion of active participants is 21% for Indians compared with their proportion of broadly 34% of the sample, and only 3% for Coloured people, compared with the 8% which is their proportion of the sample.

We return now to look at Table XIV in the appendix, looking this time at the analysis according to socio-economic status. In regard to *tennis*, it is apparent that among Whites, there is a clear tendency for the incidence of active participation in tennis to increase with increasing socio-economic status. In regard to *soccer*, it would seem as if the upper middle and upper groups participate actively in soccer to a lesser extent than is the case among the middle to lower socio-economic groups. With *bowls* there does seem to be a very slight tendency for the incidence of active participation to increase with socio-economic status, with the one reservation that the upper group might participate less than the upper middle group. The trend towards increased active participation with increased socio-economic status is even more clearly apparent with regard to *golf*. In regard to participation in *athletics* and *school sports*, there does not appear to be any particular trend with status.

It does seem that there is a tendency for lower proportions of the upper and lower socio-economic groups to visit *beaches* than is the case in the three middle groups. With regard to *hockey*, there is a slight tendency for active

participation to increase with increasing socio-economic status. *Basketball* seems limited to the middle status group. With *rugby*, it seems that lower proportions of the upper and lower status groups participate actively than the three middle groups. The same tendency is discernible but at a much higher level of participation, with *swimming*. Here, however, the lower degree of active participation in open-air swimming facilities is probably due to the high incidence of private swimming pools among the rich. There is no apparent trend manifest with participation in *cricket*. *Horse-riding* appears to be limited to the upper-middle and upper groups. *Netball* is most popular among the middle and upper-middle groups of Whites.

Among Indians, *tennis* appears to be more popular in the middle group than in the lower or in the upper groups. The differences in the proportions participating actively in *soccer* are not significant. There does seem to be a tendency, however, for the middle groups to participate more in athletics and *school sports* than is the case in the lower socio-economic group. Visits to *beaches* appear to be more popular in the upper group than in the middle and lower groups; this pattern differing markedly from Whites. The same would appear to be the case with *hockey*. With *swimming*, unlike Whites, there is a fairly clear tendency for the popularity of swimming pools to increase with socio-economic status, and the same can be said of *cricket*. *Netball*, as with the Whites, appears to be a middle status group activity.

Among Coloureds, although the sample is very small, it would seem that there is more active participation in *tennis* and *soccer* among the middle and upper socio-economic groups than in the lower socio-economic groups. The same applies to visits to *beaches*, *hockey*, *swimming* and *cricket*.

In appendix Table XVI the same analysis is presented as in appendix Table XIV with the difference that this time the analysis is of *visits* rather than of respondents participating actively in outdoor pursuits. In Table XVI, the percentage distribution of visits to facilities for purposes of active participation in the activity for which the facilities are intended is given according to the usual classification of socio-economic status and race.

Looking first at the differences according to race, we find that the relative incidence of visits for purposes of active participation in *tennis* is somewhat higher among Coloureds than it is among Indians or Whites; the differences between the latter two groups not being statistically significant.

The relative incidence of visits in order to play *soccer* is significantly higher among Indians and Coloureds than it is among Whites. *Bowls* is limited to Whites and so are visits to play *golf*. The amount of active participation in *athletics* is significantly higher among Indians and Coloureds than it is among Whites. *Hockey* playing is more common among Coloureds than it is among both Whites and Indians. The playing of *basketball*, *rugby* and *croquet* is almost exclusively limited to Whites. With *swimming*, the relative incidence of visits is possibly slightly higher among Whites than it is among Indians and very much higher than it is among Coloureds.

Differences in the extent of active enjoyment of outdoor sports is analysed further in appendix Table XVII. Here the percentage distribution of visits to facilities for active participation is given for the various race groups within the categories of type of facility. In this table we note that the overall differences in the actual amount of active sport between Whites and non-Whites are even greater than differences in the proportions of the White and non-White groups taking part in active sport. For all activities taken together, Whites contribute over 80% of all visits for purposes of playing sport, compared with under 20% for Indians and less than 2% for Coloureds. We should compare this with the sample distribution of roughly 59% Whites, 34% Indians and 7% Coloureds.

As one would expect from the previous results, it is only in *soccer* that Indians contribute an overwhelming majority of active visits, the proportion being roughly 70%. In *athletics* and *school sports*, Indians contribute over 50%, while the next highest contributions of Indians to active visits is in *cricket* at 30% and *netball* at roughly 25%.

In no particular type of activity do Coloureds contribute more than 5% of the visits. (Note their proportion in the population of 8%). These results strengthen the conclusion that the outdoor recreational activities of Whites are overwhelmingly more full, varied and comprehensive than those of non-Whites.

Returning to appendix Table XVI, and the analysis according to socio-economic status, we consider the results for Whites first. There is no particular trend according to socio-economic status in the amount of active participation in *tennis*. With *soccer*, the usual tendency is repeated; this being that the relative frequency of active visits tends to decrease with increasing socio-economic status. The reverse trend applies with *bowls* where

the proportion tends to increase up to the upper-middle group, but with the upper group playing relatively little bowls. In *golf*, there is a clear tendency for the incidence of visits to increase with increasing socio-economic status. Visits for purposes of *jukskei* seem limited to the lower group. In *athletics* and *school sports* there is a tendency apparent for the incidence of visiting to increase with increasing socio-economic status, although these results would probably not be statistically significant. With *hockey* no particular trend is apparent. The overwhelming bulk of visits for playing *basketball* come from the middle class. *Croquet* is an upper-middle class game. With *rugby*, there might just be a tendency for the middle groups to contribute a slightly higher proportion of visits but these results are probably not statistically significant. As before, there is a marked decrease in the amount of swimming at swimming baths with increasing socio-economic status. With *cricket*, there appears to be a tendency for the upper-middle and upper classes to participate less frequently than the groups below them. It is quite clear that *horse riding* is participated in almost only by the upper-middle and upper groups. *Netball*, as noted before, seems pre-eminently a middle to upper-middle status pursuit.

With Indians it is clear that *tennis* is more of a middle class game than a lower or upper class pursuit. There might be a tendency for the upper-status group among Indians to participate less than others in *soccer*, although the results have to be treated with caution on statistical grounds. With regard to *athletics and school sports* it is quite apparent that the middle group is the group which contributes the bulk of the active participation. The high incidence of *athletics and school sports* in the middle status group is probably due to the higher school attendance in this group compared with the lower group. *Hockey* is quite clearly a middle to upper-status pastime among Indians. The results for *swimming* are confusing since there appears to be no apparent reason why the middle status group should be significantly less active than the upper or the lower status groups. *Cricket* appears to become more popular with increasing socio-economic status, while *netball* appears to be an overwhelmingly middle-status group pastime among Indians.

Among Coloureds, we find that *tennis* is overwhelmingly the sport of the middle to upper-status groups, as is the case with *soccer, hockey and cricket*. It is only in *athletics and school sports* that the lower socio-economic group is prominent.

It should be remembered that in these results we have been looking at the relative incidence of visiting for purposes of active participation within classes. We have not considered the absolute extent of visiting within each type of activity according to class. Therefore, although a higher proportion of, say, the upper-class might play a particular sport than the proportion in the lower class, in absolute terms the lower-class might produce more sportsmen or women.

2.8 ACTIVE PARTICIPATION IN OUTDOOR RECREATION AMONG PEOPLE TWELVE YEARS AND OLDER ACCORDING TO RACE & SOCIO-ECONOMIC STATUS:

We now turn to the type of analysis which was undertaken when looking at area of the city in a previous section. This concerns those people of 12 years and over who participate actively in various types of open-air recreational pursuits. As mentioned before, the age limitation was introduced in order to include only those people who normally undertake open-air recreational activity on their own volition. Here the analysis is concerned with particular types of activities, wherever they occur. In the previous section (2.7) we were also concerned with active participation, but among people of all ages and with active participation which is directly linked with particular types of facilities. For the following analysis hand tabulations were made of the results from the schedules in order to include all active participation in public open-air recreation, even if it occurred at facilities not intended for the purpose.

In appendix Table XVIII we present percentage distributions of the estimated number of people of 12 years and over who participate actively in various types of open-air recreational pursuits, given separately for race and the categories of socio-economic status. Looking first at the differences according to race, we find that relatively more Whites and Indians (roughly just under 70% each), participate in active activities at *beaches* than is the case with Coloureds, where the proportion is just over 50%. With *tennis*, it appears that both among Whites and Coloureds there are relatively more people of 12 years and over who participate actively than is the case among Indians. Looking at *soccer*, we see that relatively fewer Whites participate actively than is the case with Coloureds, and the proportion of Indians of 12 years and over who participate actively is highest of all at just under one-quarter. *Bowls*, as we have noted before, appears to be an exclusively White activity. With *hockey* the differences between the races are not significant. *Swimming*

appears to attract a relatively higher proportion of Whites than is the case with either Coloureds or Indians; the proportion of Whites being roughly 45%, and this is almost double the proportion among Indians and Coloureds. The differences in relative numbers playing do not appear to be significant or important.

The relative numbers of Whites, Coloureds and Indians playing *netball* seem roughly the same. *Rugby* quite clearly attracts a far higher proportion of Whites than it does among Indians or Coloureds, among whom rugby is virtually non-existent as a pastime. The same applies to *golf*. In both these sports, however, the proportion of Whites who play is not very high either - both are under 10%. The differences between the races in regard to active participation in *athletics* by people 12 years and over are not important or significant. It is quite clear that *horse riding, boating and skiing* are exclusively White activities, as is *surfing and jukskei* as well as *canoeing and rowing*. There are no significant differences in the very low proportions of people who participate actively in *basketball*, but it would appear that a low but significantly greater proportion of Indians than either Whites or Coloureds participate actively in *tennequoits*.

In regard to excursions to *scenic areas*, the proportion of Whites is significantly and considerably higher than the proportion among both Indians and Coloureds, and the difference between the two non-White groups is not significant. With *parks*, we find that the proportion among Whites, once again, is higher than that among both Indians and Coloureds, although fairly high proportions (over 70%) of Indians and Coloureds appear to visit parks nonetheless. There would not appear to be any significant difference between the proportions of Whites, Coloureds and Indians who go *fishing*. The results also suggest that roughly equal proportions of Whites, Coloureds and Indians of 12 years and over engage actively in *gardening* activity.

In appendix Table XIX, the same results are presented differently, with the percentage breakdown given according to race for each type of activity. Looking firstly at the average for all types of activity combined at the end of the table, we notice that the percentage for Whites, which is their contribution to all forms of active participation, would seem to be in excess of their proportion in the sample, while the percentages for Indians and Coloureds are lower than their proportions of the sample¹⁾.

1) The percentage distribution of people 12 years and over according to race in the sample is: Whites 64%; Indians 29%; Coloureds 7%.

However, the discrepancies between proportional contribution to active outdoor pursuits among people 12 years and older for the different races and the proportions of the races in the population is less marked than it was in previous analyses where people of all ages were included. For example, when all people are considered, including those under 12 years of age, the index of total active participation for Whites is approximately 16% to 17% above their proportion in the population, whereas here, it is roughly 5%. This indicates that the higher dependency ratio among non-Whites (larger numbers of children in relation to adults) is a factor which influences the levels of active participation in open-air recreational pursuits. This is applicable to both Coloureds and Indians.

However, there are a number of pastimes in which Whites participate to a far greater relative extent than their share in the population. This applies to *tennis, swimming, excursions to large scenic areas, golf, rugby, horse riding, boating, water skiing, surfing, basketball, jukskei, canoeing and rowing* as well as certain residual activities. Participation by Whites is under-represented in *soccer, netball, athletics, and tennequoits*.

Turning to the Indians we note that the group is over-represented significantly in active participation in *soccer, netball, athletics* and in *tennequoits*. They are under-represented in *tennis*, possibly in *hockey* and *swimming*, in *basketball* and in residual activities. They are totally unrepresented in *bowls, rugby, golf, horse riding, boating, water skiing, surfing, jukskei, and canoeing*. The Coloured group is not significantly over-represented in any of the activities in which they take part actively, but they are totally unrepresented in *bowls, golf, horse riding, boating, water-skiing, surfing, jukskei, tennequoits, and canoeing*.

We return to appendix Table XVIII and the analysis of active leisure among people 12 years and over according to socio-economic status. Looking at Whites first of all, we find that relatively fewer Whites in the lower class go to *beaches* than those in the status groups above them. With *tennis*, there appears to be a clear tendency for relatively more Whites in the higher status groups to play tennis. There are no significant differences with *soccer*, and there is no particular trend evident with *bowls*, except for the possibility that the upper-middle class might participate more than higher or lower status groups. With *hockey*, the lower status group is relatively less active than the others. There seems to be a trend for those in the higher socio-economic

categories to go *swimming* more than is the case in the lower status categories. There is no particular trend evident in playing *cricket*.

Netball is particularly poorly represented in the lower and in the upper status groups. There is no particularly important trend evident with *rugby*. With *golf*, however, there is a clear indication that relatively much higher proportions of upper socio-economic status Whites play the game than is the case lower down the socio-economic scale. With *athletics*, we notice once again, that the lowest status group has relatively fewer people actively participating than the other status groups. Strangely enough, *horse riding* does not appear to have a relatively higher number of active participants in the upper groups than it does in the lower groups. *Boating* appears to become more popular with increasing socio-economic status, although the results may not statistically be significant. *Water-skiing* is quite clearly more popular among the upper two socio-economic status groups than among the three lower status groups, although the overall level of participation is not particularly high in any group. The same pattern applies to *surfing*. *Basketball* appears to be most popular in the lower middle and middle groups, although the overall level of interest is low. The figures for *tennequoits* and *jukskei* are so low as to be insignificant and this applies to some extent to *canoeing* and *rowing* as well.

With *excursions to large scenic areas*, once again, we find that among the lower socio-economic groups there is relatively less interest than among higher status groups. However, the level of participation here among all groups is very high. There is no significant trend evident in regard to visiting *parks*. Nor is there any particular trend evident with regard to *fishing*, except for the fact that a relatively lower proportion of Whites in the upper status group go fishing than among people in other status groups. There appears to be an increase in the proportion of *gardeners* with increasing socio-economic status.

Looking at the Indians we find a tendency for active participation to become relatively more common with increasing socio-economic status in the following active pursuits: *beaches*, *tennis*, *hockey*, possibly *swimming*, *cricket*, *excursions to large scenic areas*, *visits to parks*, possibly *athletics*, and *tennequoits*. On the other hand, there is a tendency for *gardening* to decrease with increasing socio-economic status. There is no particularly

significant trend in the remainder of active pursuits. At this stage we cannot comment on the patterns according to socio-economic status with Coloureds, since due to the relatively high number of children in the sample as well as the low initial size of the sample, none of the differences which did emerge were significant, and for this reason no breakdown according to socio-economic status is presented here.

We have been looking at the analysis of the proportion of people in different races and classes 12 years and over who at some stage or another participate actively in various types of outdoor recreation. In appendix Table XX we present percentage distribution of visits by people 12 years and over for purposes of active participation in various outdoor recreational pursuits, and these percentage distributions are given separately for the different socio-economic status groups and for the different races as before.

Firstly, we consider the differences between the races in the percentage breakdown of visits for different types of activities. We find that visits to *beaches* represent a roughly equal proportion of total visits for Coloureds and Whites, but that the Indians visit *beaches* relatively less frequently. The same appears to apply in regard to the relative proportion of visits to play *tennis*, where the relative incidence among Whites and Coloureds is roughly equal, but lower among the Indians. With *soccer*, the relative incidence of visits among both Indians and Coloureds exceeds the relative incidence among Whites by far. The proportion of visits to play soccer among the Indians is also significantly higher than that among Coloureds. *Bowls* is quite clearly an exclusively White pastime. There are no significant differences between races in the proportions of visits for purposes of playing *hockey*. It is quite clear that Whites *swim* relatively more often than Indians, and that Indians swim more often than Coloureds. The results for *cricket* do not reflect any significant or important differences between the races.

It would seem that Indians are relatively more inclined to play *netball* than are Whites or Coloureds. *Rugby*-playing appears to be exclusively limited to Whites and Coloureds, and *golf* exclusively to Whites. It seems that Indians tend to participate in *athletics* relatively more frequently than Whites and Coloureds. *Horse riding* is quite clearly a White activity, as are *boating*, *water-skiing*, and *surfing*. *Basketball* on the other hand appears to be more popular among Indians and among Coloureds in particular than it is among Whites. *Tennequoits* might be played a little more frequently among Indians than among

Whites. *Jukskei* and *canoeing* and *rowing* are quite clearly White activities.

The relative incidence of visits to *large scenic areas* appears to be roughly the same for the three races. With *parks* we find that the Whites and the Coloureds might be a little more inclined to visit parks than is the case with Indians. With *fishing*, the results do not reflect any particular trend. There is clearly a tendency for Whites and Coloureds to garden more frequently than do Indians.

In appendix Table XXI we look at the same results in a different way, with the percentage distribution of visits being for the different races within categories of types of activity. Firstly, looking at the percentage distribution across the race groups of visits for all activities except *gardening*, we notice that the results are almost identical to those obtained in appendix Table XIX, where the results were for the estimated numbers of people and not for visits. We note that Whites have a 70% share of all active recreation, the Indians a 26% share, and the Coloureds a 4% share. We find then that the Whites participate actively in outdoor recreation to a greater degree than their share of the total population would suggest, and that the Indians and the Coloureds participate to a lesser extent than their share of the population would have led one to expect¹⁾.

Looking at the individual activities, we notice that the proportion of total visits made by Whites exceeds the proportion of Whites in the total population significantly in *beach* activity, *tennis*, possibly *hockey*, *swimming*, *excursions to large scenic areas*, visits to *parks*, possibly *fishing*, *gardening*, and *rugby*. This is apart from those activities where participation is exclusive to Whites: *bowls*, *golf*, *horse riding*, *boating*, *water skiing*, *surfing*, *jukskei*, *canoeing* and *rowing*. The extent of participation of Whites is significantly less than their share of the population with *soccer*, *netball*, *athletics*, *basketball*, and *tennequoits*.

The only activities in which the proportion of visits by Indians exceeds the proportion of Indians in the population are *soccer*, *netball*, *athletics*, *basketball* and *tennequoits*. In no single activity does the proportion of visits by Coloureds significantly exceed the proportion of Coloureds in the population.

1) The percentage distribution of people 12 years and over according to race in the population as estimated by the sample was: Whites, 64%; Indians, 29% and Coloureds 7%.

Coming back to appendix Table XX for an analysis of active participation by people 12 years and over according to socio-economic status, we look first at the position among Whites. With activities at *beaches* there does not appear to be any particular trend according to status. There is a slight tendency for relatively higher proportions of more highly placed Whites to play *tennis* than is the case among lower status groups. With regard to *soccer*, there is a clear indication that the proportion of Whites participating actively is much higher in the lower status group, the percentage being nearly 10% more than in any of the more highly placed socio-economic status groups. With *bowls*, the impression is that relatively higher proportions in the three middle-status groups play this game than the proportions in either the upper or lower groups. *Hockey* appears to attract relatively more participation in the middle status group than it does in any of the other status groups. There is no particular trend evident in regard to *swimming*. The position with *cricket* appears to be that the lower status groups is relatively more active than any of the other status groups.

There is no particular trend evident in regard to *excursions to large scenic areas*, and nor is there a significant trend with visits to *parks*. With *fishing* there appears to be a slightly inverse correlation between socio-economic status and relative amount of activity. *Gardening* does not appear to reflect any particular trend, except possibly that the upper middle status group might participate more intensively than others. *Netball* shows no trend according to socio-economic level, and nor does *rugby*. *Golf* is quite clearly a pursuit of the upper status groups. There is no particular trend evident in regard to *athletics*, *horse riding*, *boating*, *water skiing*, *surfing*, *basketball*, *tennequoits* or *jukskei*.

Among Indians there is no trend according to status with *beach* activities. It would appear however, as if significantly lower proportions of people in the lower group play *tennis* than is the case with the middle and the upper group. *Soccer* would seem to be more popular in the middle group than in either the upper or the lower group. There is no particular trend with regard to *hockey* or *swimming*, while *cricket* seems limited to the middle and the upper groups. There is no particular trend in regard to *excursions to large scenic areas*. With visits to *parks* it would appear as if the upper and the lower status groups participate relatively more frequently than the middle status group. There appears to be an inverse correlation between status and *fishing*. The same inverse correlation appears to hold with regard to *gardening*, although

this result is statistically unreliable, and therefore tentative. With *netball* it is clearly apparent that relatively higher proportions of the lower and to a lesser extent the middle status groups play netball than is the case with the upper-status group. With *athletics*, the trend is reversed where the proportion of visits rise with increasing status. *Basketball* appears to be primarily a middle status group activity among Indians and *tennequoits* a middle and upper status group activity. For reasons mentioned previously no breakdown according to status could be made for the Coloured community.

2.9 LEISURE ACTIVITIES OF ALL TYPES, INDOOR AND OUTDOOR, ACCORDING TO RACE AND SOCIO-ECONOMIC STATUS:

Up to now we have been looking exclusively at open-air leisure time activities and the frequency of participation in such activities. In order to situate open-air recreational activity in relation to all leisure-time activities, respondents were asked what days and times they have free for leisure activities and what they usually do in these times. In appendix Table XXII a very detailed breakdown of the leisure-time activities is given for the information of those readers who are interested. We will not comment on this table in any detail since much of this information duplicates that which has already been discussed.

What is of interest in appendix Table XXII, however, is the row at the bottom of the table where we have tabulated the average number of activities mentioned by respondents of different races, and in different status groups. We note that the average number of activities mentioned by Whites is 3.9, compared with an average for Indians and Coloureds of 2.3. This difference being significant. This is not necessarily conclusive proof that Indians and Coloureds do less in their leisure time than Whites, since they might simply have mentioned fewer pursuits to interviewers. However, taken in conjunction with the much higher levels of recreational activity among Whites which we have noted in previous tables, a certain validity can be attached to the figures given here. It is fair to say that Whites probably have richer recreational lives than do non-Whites, and that this is partly a function of the facilities available and partly a function of the higher socio-economic level and particularly the higher financial status of Whites. The results in this table certainly confirm the hypothesis that Whites enjoy more adequate recreation than non-Whites. Whites clearly mention more leisure time activities than non-Whites. Looking at the differences according to status groups,

we find that there is a tendency for lower and lower-middle status group Whites to mention rather fewer leisure-time activities than the middle and upper groups. The same trend is apparent among non-Whites. Therefore we can accept that the higher the socio-economic status, and the higher the ethnic status of groups in Pietermaritzburg, the more varied and extensive their recreational pursuits become.

In appendix Table XXIII, the major leisure time pursuits mentioned by respondents have been grouped into various categories. Looking firstly at the differences according to race, we find that there is a slight tendency in the proportions of Whites mentioning field sports to be higher than that among non-Whites. These differences are very small however, and are probably not significant. The differences between races in regard to *indoor sports* is not significant. However, when we look at open-air activities such as *swimming, walking, mountaineering, yachting, boating, etc.*, Whites mention these activities more frequently than do non-Whites; the relative proportions being just under 40% for Whites compared with just over 20% for non-Whites. *Domestic activities* are mentioned by a far higher proportion of Whites than non-Whites. The domestic activities involve things like household repairs, repairs to motor cars, cooking, sewing, etc., etc. It is hardly conceivable that non-Whites do fewer of these activities; rather it is probably the case that they do not regard these activities as recreation in the same way that Whites do. With non-Whites, these activities are probably engaged in more often than not as a necessity rather than as a relaxing pastime. A White man repairs his motor car usually because he enjoys doing it. The non-White man might have to repair it out of necessity.

The difference in regard to *hobbies* is very striking, with over 60% of Whites mentioning hobbies compared with less than 15% among non-Whites. The reasons for this are probably that hobbies require money and that they require a certain amount of education; in both these respects Whites have an advantage over non-Whites. With regard to casual activities like *relaxing, sleeping or gardening*, there is also a tendency for Whites to mention these more frequently than non-Whites. It is conceivable that non-Whites have less time than Whites due to larger families etc. The fact that a higher proportion of non-Whites mention *children's games* is a function of the fact that the proportion of children among the non-White sample was higher than the proportion among the White sample. The higher proportion of Whites (nearly 50%) mentioning visits to *beauty spots* is understandable in view of the results we have considered

previously. *Social activities* and *club* and *cinema* attendance is considerably higher among Whites than among non-Whites. This is readily understandable since there are very much fewer facilities of this nature available to non-Whites than there are to Whites. It is also just conceivable that interaction among members of the extended family among Indians is engaged in more frequently than among Whites, at the cost of the type of informal socialising with friends that appears to be more typical among Whites.

When we consider the relative importance of the various types of activities mentioned, we note, among Whites, that *field sports* and *open-air activities* are mentioned by roughly the same proportion of people (i.e. under 40%) and that visits to *beauty spots* are mentioned by just under 50%. These are, primarily, the activities in which we are most interested in this study. It is interesting to note, therefore, that *hobbies* and *social activities*, including *club activities* and *cinema attendance*, are mentioned by higher proportions of Whites than the individual categories of open-air activities mentioned above. Among non-Whites, in contrast, the proportion mentioning *field sports* is second highest in the distribution, at roughly 45%, and this proportion is exceeded only by the percentage mentioning *children playing*, also an outdoor activity of a type, albeit less formal. Even among non-Whites however, *social activities* take precedence over *open-air activities* and over *visits to beauty spots*. These figures suggest that indoor activities are generally more important than outdoor activities among Whites, while they are more important than all outdoor activities except *field sports* among non-Whites.

Looking at the trend according to socio-economic status, we find among Whites, that there is a tendency for relatively more Whites in the middle, upper-middle, and to some extent upper-status groups to mention *field sports* than is the case with the lower two groups. With regard to *indoor sports*, we find a slight increase with increasing socio-economic status, although this is not significant. The mention of *open-air activities* also tends to increase slightly with increasing socio-economic status, although this conclusion is also very tentative. There does not appear to be any trend in regard to *domestic activities* other than the tentative indication in the table that the three middle groups engage in these activities relatively more than the upper and the lower groups. There is a slight tendency for participation in *hobbies* to increase with increasing socio-economic status. There is also a tendency for visits to *beauty spots* to be mentioned more often by the three middle-status groups than by the upper and particularly by the lower status group.

Among Indians and Coloureds it would appear that the lower-status group includes a relatively lower proportion of people interested in *field sports* than is the case in the middle and upper-status groups. With open-air activities there is an indication that the middle-status group is the more active than either the upper or the lower group. The middle-status group in the non-White sample appears to include less *informal childrens' play* than the upper or the lower group. This is difficult to explain and requires further investigation. It certainly could not relate to relative numbers of children, since these do not differ significantly between the middle and the upper-status group. There is a tendency for a much higher proportion of upper-status non-Whites to visit *beauty spots* than is the case with the middle and the lower-status groups, presumably because of access to private transport facilities and more money to spend on journeys to such facilities. Among non-Whites there is no significant trend according to socio-economic status with *social activities*, *club activities* and *cinema attendance*.

2.10 SUMMARY OF OUTDOOR RECREATIONAL PATTERNS ACCORDING TO RACE AND SOCIO-ECONOMIC STATUS:

Before concluding the analysis of open-air recreational activity according to race and socio-economic status, we require to summarise some of the more important patterns which we have discussed. As with the analysis according to area of the city, the most adequate way of summarising the material is by presenting standard indexes of the extent of activity of various types.

The indices that are presented below are comparable to those which have been presented in the analysis according to area of the city, although some of the measures have been omitted since they are not appropriate to an analysis according to socio-economic status. One of the measures omitted is that of total number of visits per annum, and also total number of visits per annum for purposes of active participation. With the analysis according to area, it was appropriate to present a measure of total utilisation of outdoor facilities generated by each particular area, since an area has a defined boundary and facilities can be assessed in the light of the habits and needs of people in the particular area. This is not the case with socio-economic status or race, however, both of which are city-wide aggregates. Therefore, it is not appropriate to present measures which are indicative of total demand from or total utilisation by any particular race or status-group, since the group cannot be spatially identified. Therefore, the measures we present are those which can

be related to any population with known characteristics. They are potentially useful for determining requirements in any new area or any existing area where the socio-economic status and racial characteristics are known. The indices presented are indices of the total number of visits per person per annum. For the most part, they are averages which have a general applicability to dwelling areas about which the characteristics of socio-economic status and race are known. In Table V we present indices of the total utilisation of all open-air facilities taken together, and of active participation in all open-air recreational pursuits combined, according to socio-economic status and race.

Looking first at the differences between the racial groups in Table V we note that the trends which have become apparent in previous tables are reflected very clearly in the indices presented. The average number of visits per person per annum for all ages and all activities at all facilities among Whites is roughly 160, while that for Indians is roughly 100, and Coloureds roughly 90. This represents a ratio of 1.8 visits for Whites; 1.1 for Indians and 1.0 for Coloureds. Taking the average number of visits for purposes of active participation among people 12 years and older we find that virtually the same discrepancy exists between Whites and others. The Whites have an average number of visits per person per annum of 84, compared with 66 for Indians and 45 for Coloureds. If one looks at the index of the number of people (as opposed to visits) of 12 years and over active in open-air pursuits in relation to the estimated total population of people 12 years and over, (the final column in Table V), we find that the ratio improves somewhat in favour of the non-Whites. The equivalent indices are 84 for Whites, 69 for Indians and 60 for Coloureds; the ratios being 1.4 to 1.2 to 1.0. Once again it appears obvious, both in terms of the relative numbers of people participating and of the extent of active and total utilisation of facilities, that Whites have a considerable advantage over non-Whites. The Coloured group is least active, both in terms of relative numbers of people involved, and extent of participation or utilisation of facilities. The fact that two of the indices which reflect this hierarchy of participation are limited to people of 12 years and older means that the effect of the large number of dependent young children in the non-White communities is cancelled out. It is safe to conclude that the outdoor recreation of non-White groups is less extensive than that of White groups, and among non-Whites that the outdoor recreation of Coloureds is less extensive than that of Indians, particularly in regard to active participation.

TABLE V

INDICES OF TOTAL UTILIZATION OF ALL OPEN-AIR FACILITIES AND
ACTIVE PARTICIPATION IN ALL OPEN-AIR RECREATIONAL PURSUITS
ACCORDING TO SOCIO-ECONOMIC STATUS AND RACE

Socio-Economic status and Race	Average Number of visits per person per annum, all ages, all activities at all facilities		Average Number of Visits for purposes of Active participation, 12 years and older, all activities (excluding private gardens)		Index** of no. of people 12 yrs. + active in all pursuits in relation to estimated total population 12 years +
	Visits per person	To base 100 for greatest utilization	Visits per person	To base 100 for greatest participation	To base 100 for greatest number of people in relation to population
Whites - Lower	149	65	73	62	67
- Lower Middle	142	62	74	63	80
- Middle	151	66	84	71	91
- Upper Middle	229	<u>100</u>	96	81	98
- Upper	183	80	118	<u>100</u>	<u>100</u>
Indians - Lower	71	31	41	35	53
- Middle	124	54	77	65	76
- Upper	200	87	86	73	96
TOTAL - Whites	163	71	84	71	84
TOTAL - Indian	103	45	66	56	69
TOTAL - Coloureds*	91	40	45	38	60

* Sample sizes too small to allow a breakdown according to socio-economic level for Coloureds.

** Index calculated by summing all active participants in all activities (excluding private gardens) and dividing by total Estimated number of people in Race/Status group.

Turning to the indices according to socio-economic status in the first column in Table V, we find that in terms of the average number of visits per person, the upper-middle status group among Whites has a figure which is considerably higher than the indices for other groups. Following this group, in order of relative extent of total utilisation of all facilities we have upper status group Indians, upper-status Whites, middle, lower-middle and lower-status Whites with roughly the same indices, middle status group Indians, Coloureds, and lowest of all, lower-status Indians.

Looking at active participation among people 12 years and older, the position changes somewhat with the maximum extent of participation being in the upper-status group among Whites, followed by the White upper-middle status group, the upper-status group of Indians (although this result is very tentative), and the middle status group among Whites. The middle status group among Indians and the lower-middle and lower-status groups among Whites all have roughly the same indices, but the Coloureds and the lower-status group among Indians have very low indices compared with other groups.

Turning to the indices in the final column in the table, we note that it is mainly the extent of participation which distinguishes the different status groups and not so much the relative number of people participating actively. This is shown by the fact that the discrepancies between the indices are not as large in this column, which relates to the relative numbers of people, as the discrepancies in the other indices, which relate to relative numbers of visits. The maximum, once again, is in the upper-status group among Whites, but this index is followed very closely by that for the upper-middle status group among Whites, the upper-status group among Indians, the middle status groups among Whites, the lower-middle status group among Whites and the middle status group among Indians. The indices for lower-status Whites, Coloureds, and lower-status Indians are fairly markedly lower, in the order mentioned.

It should have become apparent that there is a very broad relationship between the socio-economic status and both the relative numbers of people participating as well as the intensity of active participation among people 12 years and older. The higher the socio-economic status position, the greater the relative number of people who participate and the greater the intensity of participation. However, this relationship does not hold with regard to total participation (as opposed to active participation). Here we note, among Whites, that the upper-middle status group is highest, followed by the upper-status group. No significant relationship between status and total activity

exists among the middle to lower-status groups among Whites. Among the Indians, however, there is a clear relationship between socio-economic status and intensity of total utilisation of facilities.

In Table VI the same indices of extent of participation in outdoor recreation are calculated for various groups of activities or for groups of facilities. We look firstly at the differences according to race. In *small and medium scenic areas (parks)*, the intensity of visiting among Whites is clearly higher generally than that among non-Whites both with regard to active participation in the activities for which parks are intended and for total utilisation of this type of facility (which includes casual walks through parks and incidental visits).

In regard to excursions to *large scenic areas*, visits to *beaches* as well as other activities involving excursions, the discrepancy between Whites and non-Whites is somewhat greater than with parks. In both total visits as well as in active visits among people 12 years and older, Whites are followed in order of extent of activity by Coloureds with the Indians being the lowest group of all. The discrepancy between the indexes for the White group and that of the highest non-White group, the Coloureds, is very large indeed in both active and total activity. This is probably to be understood in the light of the transportation facilities which are available to Whites compared with those which are available to Indians and Coloureds.

The discrepancy between Whites and non-Whites in regard to visits to *swimming baths* is even greater still. Here the index for Whites is well over double that of the next highest group, the Indians, who are in turn quite clearly more active than are Coloureds, both as regards total visits as well as visits for active swimming among people 12 years and older. Visits to and activities at *large planned spectator* areas such as those for motor sport, for flying activity and for golf, are quite clearly limited virtually only to Whites; non-Whites having an insignificant share of the total activity at these areas.

In regard to *small planned sports facilities* in the suburbs of the city, (i.e. those facilities which cater for field sports such as tennis, hockey, cricket, rugby, soccer, etc.), we find the pattern somewhat different. When one looks at the index for total utilisation we find that the average activity among Whites is only slightly higher than that for Coloureds, and about double

TABLE VI

INDICES OF TOTAL UTILIZATION OF AND ACTIVE PARTICIPATION AT GROUPS OF OPEN-AIR RECREATIONAL FACILITIES ACCORDING TO SOCIO-ECONOMIC STATUS AND RACE

Socio-economic status and race/average no. of visits per person and index to base 100 for greatest utilization	Average no. of visits per person per annum to all facilities, all ages, all activities at various types of open-air facilities							Average no. of visits per person per annum 12 yrs and over, for purposes of active participation in various types of open-air recreation				
	Small/medium scenic areas (mainly parks)	Beach, cycling, and large scenic areas	Swimming baths	Large planned spectator areas (motor sport, flying activity, golf)	Small planned sports facilities	Schools	Childrens play-grounds and nursery schools	Parks	Beaches, cycling, excursions	Swimming baths	Golf, motor sport, flying activity	Small planned sports facilities
Whites -												
Lower Visits/people	45	16	24	1	11	31	21	15	21	16	-	21
To base 100	48	57	57	6	41	48	81	33	91	64	-	43
Lower Visits/people	45	22	20	2	26	15	12	25	19	16	-	14
Middle To base 100	48	79	48	11	96	23	46	56	83	64	-	29
Middle Visits/people	48	28	17	9	25	18	5	18	22	18	2	22
To base 100	51	<u>100</u>	40	50	93	28	19	40	96	72	25	45
Upper Visits/people	94	25	42	5	27	26	7	24	23	25	3	21
Middle To base 100	<u>100</u>	89	<u>100</u>	28	<u>100</u>	41	27	53	<u>100</u>	<u>100</u>	38	43
Upper Visits/people	69	28	17	18	23	21	4	45	18	24	8	22
To base 100	73	<u>100</u>	40	<u>100</u>	85	33	15	<u>100</u>	78	96	<u>100</u>	45
Indians -												
Lower Visits/people	24	6	5	-	7	25	2	11	7	5	-	18
To base 100	26	21	12	-	26	39	8	24	30	20	-	37
Middle Visits/people	46	8	9	0.1	12	46	3	9	8	7	-	49
To base 100	49	29	21	0.6	44	72	12	20	35	28	-	<u>100</u>
Upper Visits/people	71	10	14	0.3	18	64	23	19	10	11	-	42
To base 100	76	36	33	1.7	67	<u>100</u>	88	42	43	44	-	86
Total												
Whites Visits/people	55	23	23	5	23	22	11	23	21	19	2	19
To base 100	59	82	55	28	85	34	42	51	91	76	25	39
Indians Visits/people	35	7	7	0.1	12	37	4	11	8	7	-	41
To base 100	37	25	17	0.6	44	58	15	24	35	28	-	84
Coloureds Visits/people	30	12	0.3	0.2	17	5	26	15	10	3	-	17
To base 100	32	43	0.7	1.0	63	8	<u>100</u>	33	43	12	-	35

NOTE: Horseracing, Horseriding, activities in private gardens, and indoor sports excluded from all indices.

Small sample size made a breakdown according to socio-economic status for Coloureds impossible.

that for Indians. However, in considering active participation in the various sports for which these types of facilities cater, (among people 12 years and older), we find that the index for Indians is considerably higher (in fact more than double) than that of both Whites and Coloureds who are at roughly equal levels of participation in terms of the index. This is partly due to the fact that this activity includes sport on school premises which is given separately in the indexes for total participation. However, it also indicate that although slightly fewer Indians than Whites visit small planned sports fields, when it comes to active participation in the sports, there is a relatively much higher number of Indians actively involved than is the case with either Whites or Coloureds. In fact, it appears that Indians are significantly more active in field sports than any other group and significantly more active than one would expect.

Indexes of activities at schools and at childrens playgrounds are calculated only for total participation and presented in the first part of the table. Quite clearly Coloureds utilise childrens playgrounds far more than anyone else, but utilise school sports fields far less than other groups. Indian children make most intensive use of school sports facilities.

Turning to the indices according to socio-economic level and looking firstly at *small* and *medium scenic areas (parks)* we find somewhat of a tendency for total utilisation to increase with increasing socio-economic status, with the upper-middle Whites having the highest index for total utilisation of facilities. The upper White group reveals the highest active utilisation of parks, but no particular trend is apparent in the other results. Among Indians there appears to be a tendency for the extent of participation to rise with increasing socio-economic level with total utilisation, although this is not the case in regard to active pastimes at parks.

With beaches, cycling and excursions to *large scenic areas*, we find among Whites that there is no particular correlation between extent of participation and socio-economic level. The middle group has the largest extent of total utilisation whereas the upper-middle group the largest extent of active participation. Among Indians, however, there is a slight trend for the extent of participation to increase with increasing socio-economic level.

Visits to *swimming baths* also do not reflect a pattern of association with socio-economic level. The upper-middle group shows the greatest extent

of total utilisation and this is the same in the case of active swimming activity. Among Indians, however, once again we find that there is a trend for the utilisation of swimming bath facilities to increase with increasing socio-economic level, both as regards total utilisation and active swimming.

In regard to *large planned spectator areas*; i.e. those for motor sport, flying activity & golf, there is a fairly clear tendency for the overall popularity of these areas and the active participation at these areas to increase with increasing socio-economic status; this being mainly due to the fact that golf is an upper-middle to upper-status group sport.

In the *small planned sports facilities* in the city and suburbs, it is interesting to note that the White lower-status group has a markedly lower index of total utilisation than any other White group. This group also has a lower index of active participation, although the difference is less marked. Apart from this there is no consistent trend according to socio-economic level in attendance at, or active participation at small planned sports facilities among Whites. There is, however, somewhat of a trend for the degree of utilisation and active participation to increase with increasing socio-economic level among Indians.

With *childrens playgrounds*, there is, if anything, an inverse correlation between the use of these facilities and socio-economic status among Whites, with the tendency being for the lower and lower-middle status groups to use childrens playgrounds and nursery schools to a greater extent than is the case with the upper and upper-middle groups. The same tendency is not apparent among Indians where the upper-status group might use childrens playgrounds far more than other Indians. As said before, the extent to which Coloureds use childrens playgrounds eclipses the extent of use by Whites and Indians. The extent to which *school sports fields* are used by Whites does not reveal any consistent trend according to socio-economic level, although among Indians the trend, quite clearly, is for the extent of use to increase with increasing status.

In the two tables we have just dealt with, indices have been so constructed as to give the greatest possible degree of statistical reliability in the results, with a view to a more adequate assessment of needs later in this analysis. For this reason a great deal of detail has, of necessity, been sacrificed. In this process some interesting trends have been lost due to the

combination of diverse activities under single headings. However, this has been unavoidable due mainly to the small size of the samples for some of the various population groups considered. In appendix Table XXIV however, more detailed indices of active participation in various open-air pursuits are presented according to the usual categories of socio-economic status and race. These results have to be treated with some caution, and cannot be used as a basis for any firm assessment of needs, but they do however, allow us to gain interesting additional insight into the patterns in regard to active participation among different status groups and race groups. These results will not be discussed since they are not central to our problem concerning the assessment of needs. For the reader who is interested, however, two indices presented in table XXIV are firstly the proportion of the total population of 12 years and over participating in the various sports and activities mentioned, and secondly, the number of times per annum that those who participate actively engage in the particular sport or pastime. It is important to note that the figure for the average visits per person per annum is not related to the total population, but is the number of visits among those who participate actively only; non-participants are excluded entirely from the calculation. This is an index which has not been used before and gives some idea of the number of times per year in which people engage in the activities for which they are listed as participants. Anyone wishing to make detailed comparisons between activities and groups can consult this table.

This brings to an end the discussion of results according to race and socio-economic status. Generally speaking, the pattern has been for the incidence and the frequency of activities to increase with improved socio-economic status, among both Whites and Indians. The differences between the race groups have tended to be larger, on the whole, than the differences between socio-economic status groups within race groups. This is consistent with the general trend for the discrepancies in education, income and standard of living between the races to be greater than any such differences within race groups. On the basis of the results we have presented, there can be little doubt that richness and variety in open-air recreational pursuits is in large measure facilitated by greater material wealth and higher educational and occupational status. It would appear that the poor are not only financially deprived, but to a large degree they are also deprived in terms of quality of living, certainly in those aspects of living which involve an enjoyment of outdoor recreational activity.

CHAPTER IIIPATTERNS OF OUTDOOR RECREATIONAL ACTIVITY AMONG
THE PEOPLES OF PIETERMARITZBURG: (Continued)3.1 OUTDOOR RECREATIONAL PATTERNS ACCORDING TO
AGE AND SEX - ALL OUTDOOR ACTIVITY:

The factors of age and sex are obviously related in an important way to the types of outdoor recreational activities in which people are interested. Certain pastimes are regarded as typical for people in certain age-groups and for males or females, and therefore an analysis according to these variables is essential. The analysis according to age is also particularly important because different ethnic and socio-economic status groups tend to differ in their age composition. It is a well-known fact that the non-White communities for example, have a higher proportion of people in the younger age groups than the White community; and this applies to the lower socio-economic groups in comparison with the higher socio-economic groups within the different racial groups as well.

Notwithstanding the obvious importance of the factors of age and sex, the commentary on the tabulated results according to age and sex will not be given in as much detail as found in the commentary in the previous chapter. No more than a broad summary of the results will be presented, for reasons of space in the first place, and in the second place because results according to age and sex are not of immediate practical importance in the assessment of town-planning requirements regarding recreation. Age and sex groups cannot be spatially identified as separate aggregates; they do not reside or enjoy recreation in separate areas. Therefore, results according to sex and age cannot be directly translated into open-space requirements. At most the results according to these factors can provide insights and contribute to a greater understanding of the quality of recreational needs in Pietermaritzburg. Furthermore, the effects of differences in age and sex ratios in different population groups are expressed in the results according to area of the city and socio-economic status. For these reasons the following discussion is brief.

While the tabulated results according to age and sex which relate to active participation in outdoor recreation (see 3.2) are based on numbers of respondents participating or numbers of visits for purposes of active participation, tables in this section which relate to all outdoor recreational activity, whether active or passive, are not based on numbers of visits. The unit of analysis in these tables is number of activities during visits. It is therefore, a multiple index of activity, and will be referred to simply as activity, which is essentially what it is. For example, if an individual visited a soccer field to play soccer and watch another soccer match, his visit was recorded twice, and it is the distribution of this recorded activity which forms the basis of the analysis. This index of activity, then, can be regarded as a measure of the intensity of outdoor recreational activity.

It should also be noted that in all these results, the activity on school playing fields is classified with similar activity at public recreational sites, and is not given separately as in the previous chapter.

In the appendix, tables XXVa, b and c, present percentage distributions of activity at the various types of outdoor facilities according to age, for Whites, Indians and Coloureds respectively. Appendix Table XXVd presents percentage distributions of activity at the different types of outdoor facilities according to broader categories of age, for all three race groups. In appendix Table XXVI, percentage distributions of activity are presented for males and females. All these tables in the appendix relate to total activity, and not only to active participation in the various outdoor pursuits.

3.1.1 Trends According to Age:

What follows is a very broad summary of the significant trends in the results contained in these tables. Among Whites, people in the following age categories display relatively greater intensity of activity in outdoor recreational pursuits of all types than is typical among Whites as a whole: 5 - 9 years, and 15 - 19 years (markedly higher intensity of activity). The following age groups display less activity generally than is typical of all Whites taken together: 0 - 4 years, and 25 - 65 years and older.

With Indians, the following age groups appear to engage in relatively more activity than is typical in the Indian group as a whole: 10 - 14 years, and 20 - 24 years. Groups displaying relatively less activity are: 0 - 4 years (much less), 5 - 9 years, 15 - 19 years, and 65 years and older.

Among Coloureds, the 15 - 19 year age group engages in relatively much more activity than is average in the whole Coloured group. Age groups displaying relatively less activity are: 0 - 4 years and 10 - 14 years.

From these results we note, therefore, that the three races differ significantly in the distribution of intensity of outdoor recreational activity according to age. An additional and very striking difference between Whites and non-Whites is that White children in the 0 - 9 year age groups are very much more active in outdoor recreational pursuits at public facilities than either of the two groups of non-White children of the same age.

In regard to total activity at different types of facilities, the following broad patterns emerge. Among Whites, *tennis* facilities are most popular among 15 - 24 year olds. *Soccer* grounds are most popular among people in a broader range of ages - 15 - 44 years. The popularity of *bowls* facilities tends to increase with age and it attracts the greatest proportion of people in the 45 year and older group. Relative activity at *golf* courses also shows a steady increase with age. *Athletics* facilities, which include school sports fields, are most popular among the 0 - 14 year olds and show a steady decline in relative popularity with increasing age. *Beaches* appear to attract roughly equal proportions of people in all age groups. *Hockey* and *rugby* facilities are most popular among 15 - 24 year olds. *Swimming pools* attract relatively higher proportions of 0 - 14 year olds, and their popularity declines with age among older groups. The popularity of *cycling*, *horse riding*, and *horse racing* facilities appears to show no particular trend according to age. *Motor sport* is most popular among 15 - 44 year olds, and *cricket* facilities among members of the 15 - 24 year age group. *Netball*, as we would expect, attracts relatively greatest numbers in the 0 - 14 year group. *Childrens playgrounds*, which include nursery schools and creches, are most popular in the 0 - 9 years group and in the 25 - 44 year group; the latter probably being parents who accompany their young children. *Small parks* appear to become more popular with increasing age, while *large parks* and *small scenic areas* appear to be most popular in the 0 - 14 year group and among groups of people 45 years and older. There does not appear to be any particular trend with age in the popularity of *large scenic areas*.

Among Indians, the age groups among which different types of facilities are most popular are as follows: (only those facilities attracting significant numbers of Indians are discussed).

Tennis facilities: 0 - 14 years, and a decrease with age among older people;
Soccer facilities: 0 - 24 years, and a decrease with age thereafter;
Athletics facilities: 0 - 14 years, and a decrease with age thereafter;
Beaches: popular among all groups;
Hockey fields: 0 - 24 years;
Swimming pools: 0 - 14 years, declining in popularity with age thereafter;
Cricket fields: 15 - 24 years;
Netball: 0 - 14 years;
Childrens playgrounds: 0 - 14 years and 25 - 44 years;
Small parks: Increase in popularity with age.
Large parks and small scenic areas: 25 - 44 years;
Large scenic areas: Increase in popularity with age;

In the Coloured community, the age groups among which specific types of facilities are most popular are given below. Once again, only those facilities attracting substantial numbers of Coloureds are mentioned:

Tennis facilities: 25 - 44 years;
Soccer facilities: No trend according to age;
Athletics facilities: 0 - 14 years;
Beaches: 25 - 44 years;
Swimming pools: 0 - 44 years;
Cricket fields: 15 - 44 years;
Childrens playgrounds: 0 - 14 years, 45 years and older;
Small parks: 15 - 24 years, thereafter decreasing with age,
Large parks and small scenic areas: No trend according to age;
Large scenic areas: No trend with age.

3.1.2 Trends According to Sex:

Trends according to sex are very interesting. In regard to overall activity at outdoor recreational sites, White men and women appear to be roughly equally active. Among Indians, however, men are much more active than women, and the same applies to Coloureds, although the discrepancies are not quite as great as among Indians. If one considers that non-Whites generally are less active in public outdoor pursuits than Whites, one obtains some idea of how very little public outdoor recreational activity there is among Coloured and particularly Indian women.

Facilities which are relatively more popular among White women than among White men are: *jukskei grounds, beaches, hockey, basketball, croquet and netball fields, childrens playgrounds, and small parks.*

The following facilities are relatively more popular among White men than among White women: *soccer, rugby and cricket fields, golf courses, athletic facilities, cycling, motor sport and facilities for flying activity.*

Only *tennis* and *netball* facilities are more popular among Indian women than among men. *Soccer and cricket fields, horse racing, small, medium and large scenic areas, and surprisingly, childrens playgrounds,* are more popular among Indian males than females.

Childrens playgrounds are the only facilities which are more popular among Coloured women than Coloured men. *Tennis, soccer, rugby, cricket, motor sport, and horse racing facilities, as well as small and medium scenic areas,* are more popular among Coloured men than among women.

3.2 ACTIVE PARTICIPATION IN OUTDOOR RECREATIONAL PURSUITS ACCORDING TO AGE AND SEX:

3.2.1 Trends According to Age:

We turn next to a consideration of active participation in the various types of open-air leisure pursuits among people who are able to participate on their own volition; that is, people of 12 years and older. The analysis is presented for three age groups: 12 - 25 years; 26 - 44 years; and 45 years and older. In appendix Table XXVII are presented the proportions of total numbers of people within particular age groups who participate actively in various types of open-air activity.

We note among Whites, that roughly 80% of people of 12 - 25 years visit beaches and actively engage in *beach activities*, and that there is a clear trend for the proportion of people participating actively in beach activities to drop with increasing age. At a much lower level of participation we find the proportion actively participating in *tennis* also dropping from roughly 25% in the youngest group to roughly 5% in the oldest group. With regard to *soccer*, active participation drops even more sharply with age from roughly 15% of people in the youngest group to virtually nothing at all in the older groups. *Bowls* on the other hand, shows an increase with age from virtually no activity

among young people to roughly 10%. *Hockey* shows a decrease with age as with *soccer*, except that the trend is more marked. With *swimming* there is also a sharp decrease from the very high proportion of over 70% in the age group 12 - 25 years, to roughly 11% in the oldest group. The same trend applies to *cricket* at a much lower level of participation. With *excursions to medium and large scenic areas*, there is only a very slight and hardly a significant tendency for the proportions of people to drop with increasing age. In regard to the *smaller scenic areas (parks)* there is no particular trend with age, with well over 80% of people in all three age groups visiting these areas. *Fishing* is equally popular in the first two age groups, although the proportion drops from roughly 25% to roughly 15% of people in the age group of 45 years and older. *Gardening*, surprisingly, also tends to drop very slightly in popularity with increasing age from a relatively low proportion of 8% of people in the youngest group to 3% to 4% in the oldest group. The proportion of people playing *netball* drops with age, as do the proportions playing *rugby*. *Golf*, on the other hand, remains fairly constant at between 4% and 8% of total numbers in the various age groups. With *athletics*, the proportion drops from roughly 8% in the youngest age group to nothing at all in the oldest age group. With *boating*, there is also a trend for the proportions to decrease with increasing age. The rest of the sports mentioned also show decreases with age although even with the youngest group the proportions participating are very low; all being under 5%.

Among Indians the proportions of people who actively participate in *beach* activities tend to increase between the youngest and the middle age groups then to decrease again in the oldest age group. With *tennis* and *soccer* there is also a sharp decrease with age, as is the case with *hockey*, *swimming*, *netball*, *athletics*, *basketball*, *tennequoits* and *cricket*. However, the picture is rather different with regard to *excursions to large scenic areas*, where, unlike Whites, it is the age group of 26 to 45 years rather than either the younger or the older age groups that patronise these types of activities. With *parks* this same trend also appears, although it is much less marked. With *fishing*, again the middle group tends to have a higher proportion of people participating than either the younger or the older groups. With *gardening*, we find, surprisingly, that higher proportions of Indians than Whites actively garden, and that the proportion rises from roughly 15% in the youngest age group to 26% in the middle group to roughly 37% in the oldest age group; a very significant increase with age.

Among Coloureds we notice decreases with age in the proportion of people participating actively in *soccer, hockey, swimming, cricket, rugby, athletics and basketball*. With *beaches*, however, the proportion tends to rise slightly to reach a peak of roughly 60% in the age group 26 - 45 years only to drop again to below 35% in the older group. Excursions to *large scenic areas* are undertaken by higher proportions of people in the youngest and the oldest age groups than in the middle group. With *parks*, the trend is for the proportion to remain roughly constant up to age 45, only to drop fairly considerably among the older people of 45 years and over. With *fishing*, there is a tendency for both the older and the youngest groups to have higher proportions of fishermen than the middle group. *Gardening*, once again, is at a relative level of participation which is higher than that among Whites, and shows an increase with increasing age.

Generally speaking, the results discussed above are what one would have expected with the exception of certain patterns among Indians and Coloureds. In certain activities, where the relative proportions of active participants are highest among younger Whites, we find the middle and older groups among Indians and Coloureds showing the highest relative proportions of people participating actively. This applies to activities at *beaches*, to some extent *tennis, excursions to medium and large scenic areas*, and to *gardening*.

In appendix Table XXVIII we look at the average number of visits per annum among those people who actively participate in various types of outdoor recreational pursuits. This is not a figure representing overall average numbers of visits per annum; it is a figure indicating how often active participants engage in the activity in question. In many cases the figures for numbers of visits per annum appearing in the results might appear to represent trends but in fact do not, because the figures are based on extremely small numbers of active participants, and are therefore unstable. We will comment only on those figures which are sufficiently stable to give a significant indication of trends, and in those instances where no comment is given on a particular pattern of results, it must be assumed that there is no significant difference in the number of visits according to age.

Among Whites there is an increase in the average number of visits per annum among active participants in *tennis, visitors to parks, gardeners and golf*. There is a decrease with increasing age among active participants in *soccer, swimming* (although the very oldest group tends to visit more often than

the 26 - 45 year old group), *cricket*, *athletics*, and *boating*. With *basketball*, *cycling*, *climbing*, *trampolining*, *skin-diving*, *softball*, *water polo* and *table tennis*, active participants are drawn virtually only from the very youngest age group. *Flying activity*, *squash*, *hunting*, *polo*, *motor racing* and *croquet* are engaged in virtually only by the middle or older groups.

Among Indian participants, there is a significant decrease in the number of visits per annum with increasing age with *tennis*, *soccer*, *swimming*, *cricket*, and *gardening*. The number of visits appears to increase between the two youngest and the oldest age group with visits to *parks* and with *fishing*.

Among Coloureds there are significant decreases in the number of visits per annum with increasing age with *soccer*, and with excursions to *medium* and *large scenic areas*; the latter decrease being significant between the two youngest age groups and the oldest group of 45 years plus. Among Coloureds there is an increase with age in the frequency of *gardening*, and between the youngest and the middle group with *beach* activities and *tennis*.

3.2.2 Trends According to Sex:

Having looked at the variation according to age among people of 12 years and over, we turn to the consideration of the differences according to sex. In appendix Table XXIX, we present, separately, the estimated proportions of all males and all females who actively engage in various types of open-air recreational pursuits. In commenting on the table we will concentrate only on those results where there appears to be a significant difference between the percentages applicable to the two sexes. Among Whites, for example, it is quite clear that playing *soccer* is popular only among men. *Hockey* would appear to be somewhat more popular among men than among women, although the difference is hardly important. With *cricket* an insignificant number of women participate. With *fishing* we find that whereas almost 40% of men take some sort of an active interest in fishing, the proportion among women is well under 10%. *Gardening*, surprisingly, appears to be more popular among women than among men, and although the difference is not large, it appears significant. *Netball* is quite clearly solely a woman's game, whereas *rugby* is solely a man's game, as is the case with *golf* and to a somewhat lesser extent with *athletics*. Although the difference is hardly important, it is quite apparent that *horse riding* attracts a larger proportion of men than of women. There is an indication that *boating* is more popular among men than among women although the difference is not large. *Surfing* is quite clearly predominantly

a male activity, although for every five men actively participating there is, surprisingly, one woman. *Basketball* appears to be almost solely a woman's activity, although the proportion of women participating is low at roughly 3%. *Tennequoits* is also predominantly a woman's sport although it is not popular in relative terms. *Canoeing* and *rowing* is overwhelmingly a male activity as is to some extent *jukskei*. With all other activities there are no significant or important differences between the proportions of men and proportions of women who participate in the activities listed.

Among Indians, as was the case among Whites, we find that *soccer* is overwhelmingly a male activity with almost 40% of Indian men playing soccer in some form or another. *Hockey* among Indians, is overwhelmingly a woman's activity, unlike the case with Whites where there is a significant proportion of men interested in the game. Among Whites there was no significant difference between the proportions of men and the proportions of women taking an active interest in *swimming*, but there is among Indians with roughly 33% of men compared with roughly 20% being active swimmers. *Cricket*, as with Whites, is overwhelmingly a male activity among Indians, as is *fishing*. As was the case among Whites, a slightly higher proportion of Indian women than Indian men take an active interest in *gardening*. Once again like Whites, *netball* is an overwhelmingly female activity among Indians and *athletics* tends to attract a higher proportion of males than females although the relative proportion of females among Indians is higher than it is among White females. *Basketball* is a female activity among Indians, as is *tennequoits*, where interest in the game is substantially higher than is the case with Whites, as we have seen previous previously.

Unlike the position among Whites and Indians, among Coloureds there is a difference between the proportions of men and women who engage actively in *beach* activities, with women clearly having a higher interest than men. As was the case with Whites and Indians, it is overwhelmingly Coloured men who play *soccer*, and the position is reversed with *hockey*. In the Coloured group the active interest in *swimming* activities is very much more pronounced among men than it is among women; the relative proportion of men being roughly four times as high as it is among women. *Cricket*, as with Whites and Indians, is overwhelmingly a male activity. With *excursions to medium and large scenic areas* we find among Coloureds that relatively more men than women are active in these pursuits unlike the case among Whites and Indians where the proportions are roughly equal. The position is reversed with *parks*, which are

visited by relatively more women than men. *Fishing* among Coloureds is overwhelmingly a male activity, with the proportion of Coloured men taking an interest in this activity being nearly 50%, relatively a very high figure. *Netball*, as is the case with Whites and Indians is overwhelmingly a female activity, and *rugby* is overwhelmingly a male activity, as is the case with *athletics*. *Basketball*, among Coloureds is overwhelmingly a female activity.

In appendix Table XXX the same results are presented in a different way. In this table the ratio of men to women among active participants in various types of activities is presented in order to give an indication of the comparison in terms of absolute numbers of men and women participating. The figures are quite clear and need no commentary. They do not give any information which is additional to that which has already been presented in appendix Table XXIX, and the table has been included for the information of readers more than for the purposes of analysis. The results will be taken into account in a later section of the report in dealing with the needs of various groups.

The analysis of results of active participation among people 12 years and over according to sex has up to now been concentrated on the proportion of people actively engaging in the particular activities. A more complete account of the extent of active participation is given by the number of visits per annum among active people. Before turning to appendix Table XXXI for a presentation of these results, a more general picture of the number of visits for purposes of active participation according to sex should be presented. If the number of visits per annum for active engagement in all types of public outdoor activities (gardening excluded) are summed for the two sexes within the various race groups, we get the following results:

White males 36,230 visits (51%), White females 35,100 visits, (49%);
all Whites 71,330 visits, (100%);

Indian males 6,440 visits, (65%); Indian females 3,455 visits, (35%);
all Indians 9,890 visits, (100%);

Coloured males 1,620 visits, (54%); Coloured females 1,390 visits (46%);
all Coloureds 3,010 visits, (100%).

When we relate these figures to the estimated proportions of the sexes in the population as a whole, we note that whereas White males constitute 48% of the estimated population they account for 51% of the total visits for purposes of active participation. Therefore it is apparent that White males are in relative terms slightly more active than White females when it comes to active participation in public outdoor recreational activities. This tendency

however, is much more marked among Indians where Indian males constitute an estimated 51% of the estimated population but account for roughly 65% of visits for active participation. With Coloureds, men represent an estimated 42% of the population of 12 years and over among Coloureds, but account for 54% of the visits to outdoor recreational facilities for purposes of active participation. Although the disparity between men and women is not so marked in the case of Coloureds as it is in the case of Indians, it is still obvious that Coloured men are markedly more active in outdoor recreational activity than are Coloured women. It remains to be seen in a later chapter whether this relative disadvantage among Coloured women and more especially among Indian women is due mainly to any lack of facilities or opportunities or whether it is due to cultural and other factors operating to prevent them enjoying open-air recreational activity to the same extent as men do.

In commenting on the results in appendix Table XXXI, where the average number of visits per person per annum are given for the two sexes separately, only those results which reveal a significant difference between the two sexes will be mentioned. With Whites, it would appear as if there are slightly higher numbers of visits to *tennis* facilities among White women participants than there are among White men. Certainly with regard to *soccer*, it is apparent that this is exclusively a male sport. The average number of visits among White women to *bowling* facilities is higher than the average among men, as is the case with *hockey*.

It would seem that White women gardeners tend to *garden* more often than do men. *Netball* is solely a woman's activity and *rugby* is solely a man's activity. As pointed out previously, *horse riding* and *tennequoits* are solely womens' activities and *canoeing* and *rowing* solely mens' activities.

Among Indians, apart from those results which show that particular sports like *hockey*, *netball*, *basketball*, and *tennequoits* are activities solely engaged in by women, there are no results which reflect significant differences in the average number of visits between men and women participants. Those results which appear to suggest this are based on figures which are so small as to be unstable. The same applies to the results for Coloureds where none of the differences which appear to be significant are based on samples which are sufficiently large to allow any firm conclusions to be drawn.

This, for the moment, concludes the analysis of results according to age and sex. Major conclusions have been that non-White children particularly in the very youngest group are not exposed to as much outdoor recreational activity as is the case with White children, and that women appear to be less active than men, particularly among the two non-White groups.

CHAPTER IVACTIVITY AT MAJOR INDIVIDUAL VENUES IN PIETERMARITZBURG

In previous sections we have looked at the distinction between active participation in various types of outdoor pursuits and more general activities engaged in during visits to outdoor facilities including informal and passive recreation. We have noted that not all visits are for purposes of active participation in organised activities for which particular facilities are intended. In this section we look at this distinction in more detail, and in so doing also consider the range of different activities which take place during visits to particular recreational sites in Pietermaritzburg. Results bearing on this are presented in appendix Tables XXXII and XXXIII. In appendix Table XXXII the full range of activities engaged in during visits is presented, whereas in Table XXXIII a percentage distribution of types of organised sport (including swimming) which are actively engaged in by people are presented. Hence the second table is a further breakdown of the activities of those people in the first table who participate actively either in water and beach activities or in various forms of organised sport.

The figures in the tables scarcely need comment since they are quite straightforward. The percentages represent a distribution of activities rather than people since one person can obviously engage in more than one activity at a particular place during the course of a year. The results are purely descriptive and need no interpretation. For example, at Alexandra Park, which caters for a very wide range of different activities, almost 50% of activities engaged in at this particular recreational site consist of relaxing, strolling around, passing through, sitting around or simply enjoying flowers, wild life and scenery. Roughly 14% of activities involve watching organised sport, roughly 6% of activities involve water activities, and only roughly 2% of activities involve actual participation in forms of organised sport. Of the roughly 2% of activities which involve participation in organised sport as well as the roughly 6% of activities which consist of swimming or water activities, we note from appendix Table XXXVII that roughly 75% of such activities consist of swimming, roughly 7% playing soccer, roughly 5% playing cricket, 4% playing bowls, and hockey, 3% consist of various forms of athletics, and just over 2% jukskei, croquet and cycling together. Taking an overall view of the results in the tables, we note from

appendix Table XXXII that it is only at the following sites where either watching or participating in organised or non-competitive sport and exercise comprise more than 50% of the activities at the particular place:

Collegians Club; Wanderers Club; Westmore Park, University of Natal, Jan Smuts Stadium; Oval and Alexandra Park fields, non-European soccer fields; rugby facilities at Woodburn; Roy Hesketh Circuit, Cricket or hockey at Standard; cricket fields at Northdale, Woodlands, and Chatterton Road; Scottsville race course; the Showgrounds; High school fields; Oribi airport, and Northdale fields, (although in regard to the latter the proportion is just below 50%).

Appendix Table XXXIII deserves some comment in places. At Durban beach for example, a distinction is made between swimming and beach activities, the former being swimming at beach swimming pools as opposed to in the sea. The same applies to the other beaches listed. It is interesting to note the breakdown of various types of sporting activities at schools, since these have contributed overwhelmingly to the activities which have been specified in some previous tables as *athletics*. At high schools we note that the major form of organised sport is *tennis* followed by *hockey*, *rugby*, *swimming* then by *netball* and *cricket*, with other activities being *soccer* and *tennisette* or *table tennis*. At primary schools the major activity appears to be *athletics* itself, (of various types) followed by *swimming*, *soccer*, *netball*, and then by *hockey*, with other minor activities being *cricket*, *tennis*, *rugby*, *tennisette*, and *table tennis*.

The distinction between active and passive participation in forms of organised sport is more clearly indicated in appendix Table XXXIV where results for active and passive participation in organised sport are presented for each of the major public open-air recreational sites in Pietermaritzburg. The results in the table are, once again, quite straightforward and need very little commentary. Two sets of results are given: the first being the ratio of active to passive participation calculated as percentages to a base of 100 for all participation whether active or passive, the second being the percentage distribution of estimated numbers of people of all races who participate either actively or passively in various types of activities at particular recreational sites.

The final column at the end of the table presents results which have not yet been fully discussed; these being the overall proportions of people who at some time or another visit different major open-air recreational sites for purposes of both active and passive participation in all types of organised sport and water activities. The results give some indication of the differing extents to which various major public open-air recreational facilities attract people for the purpose of participating in sport either as competitors or as onlookers. In actual fact, the proportions given in the total column at the right of the table are not percentages of people, but rather percentages of attendance since people can and do visit more than one facility during the course of the year. Therefore the results should not be taken to indicate percentages of the total population of Pietermaritzburg but rather percentages of all attendance by people at particular recreational sites. From the results under discussion we note that Alexandra Park attracts by far the most people for purposes of both active and passive participation in organised sport, followed by non-White *soccer facilities* (taken together), followed by the Oval and Alexandra Park fields, high schools, Roy Hesketh Circuit, Alexandra baths, Northdale fields, the Showgrounds and Collegians Club, with other specific facilities attracting relatively fewer people.

This percentage breakdown gives a very broad indication of the relative popularity of various specific recreational sites in Pietermaritzburg. It does not give an indication of the incidence of attendance, since this would have required results expressed in number of visits which was not the case. For various technical reasons, it was not possible to do an analysis equivalent to that presented in appendix Tables XXXII and XXXIII, based on numbers of visits. These reasons were mainly connected with the size of the table and the inability of the computer to accommodate the amount of information required in its memory in order to produce the table. However, it has been possible to build up a picture of the relative popularity of different specific recreational sites in Pietermaritzburg based on 'activity' by extracting information from other tables, and we present this in Table VII below. The index 'activity' has been discussed previously, and is a compound measure based on activities during visits (visits multiplied by activities during visits).

TABLE VII

RELATIVE ANNUAL UTILISATION OF SPECIFIC MAJOR PUBLIC OPEN-AIR
FACILITIES IN PIETERMARITZBURG; BASED ON ANNUAL NUMBER OF
ACTIVITIES DURING VISITS

	Percentage Distribution of estimated annual 'activity'	Estimated Number of activities per person per annum
Alexandra Park	16.0	30
Kershaw Park	.6	9
Collegians Club	1.5	12
Wanderers Club	.4	17
Westmore Park	1.0	14
University	.4	13
Jan Smuts Stadium	.5	6
Oval & Alexandra Park fields	1.7	7
Non-White soccer fields	3.0	11
Sax Young grounds	.4	11
Durban Beach	2.0	9
Other beaches (White)	1.1	7
Non-White beaches	.7	4
Rugby at Woodburn	1.0	10
Wylie Park	2.1	10
Albert Allison Park	.5	5
Alexandra Park (park section)	5.4	14
Queen Elizabeth Park	1.7	4
Botanic Gardens & Playlots	4.2	7
Percy Taylor rockeries & Mayor's Rose Garden	1.3	7
City garden	13.0	59
St. Peter's Garden	2.7	48
Relief Street Market area	1.2	78
Alexandra baths	5.5	32
Pine Street baths	3.1	35
Berg Street Indian baths	1.9	20
Roy Hesketh circuit & go-kart racing	.8	4
Standard Cricket & Hockey	.2	7
Non-White cricket: Northdale/ Woodlands/Chatterton Road	.4	11
Scottsville race course	.5	7
Showgrounds/soccer/riding/ jumping/royal spectator Oval	.8	5
Midmar Dam	2.4	4
Henley Dam	.8	4
Peatties Lake	.8	4
Chase Valley hatcheries	.4	4
World's View	.7	4
High schools	7.6	32
Primary schools	9.8	52
Oribi airport	.1	7
Northdale fields	1.9	12

Previous results in relation to specific major open-air recreational sites which have been discussed have related to the numbers of people participating in various ways in outdoor activities at the sites. This type of analysis is of interest from the point of view of understanding the recreational behaviour of the population. However, when it comes to assessing the importance of different sites and venue, one has to look not at results which relate to numbers of people, but results which relate to numbers of visits or to 'activity' as reflected in the table given above. From these results it would seem, as previous results have suggested, that Alexandra Park does handle a lion's share of public open-air recreation in Pietermaritzburg. If one takes the three different sections of Alexandra Park together, the park, the general facility, and the sports fields in the Oval, we find that the site accounts for no less than roughly 23% or just short of a quarter of the total annual activity at public open-air facilities in Pietermaritzburg. If one adds the Alexandra swimming baths to the percentage for the park, then one arrives at a figure just short of 30% of activity. Other sites of particular importance are city gardens, accounting for roughly 13% of visits, the Pine Street swimming baths, St. Peter's Garden, Midmar Dam, Durban beach, Wylie Park, and Queen Elizabeth park. However, apart from the City Gardens, not one of these facilities account for more than 5% of activity, and most of them attract below 2½% of activity.

The facilities differ in that some of them attract relatively large numbers of people but the people who do visit do not visit very frequently, or do fewer things while visiting, whereas others attract relatively smaller numbers of people but who visit very much more frequently and do more things. The sites which appear to attract large numbers of visits per annum throughout the course of the year are City Gardens, presumably because many people pass through it regularly, the Retief Street Market area and St. Peter's Garden, for the same reason, Alexandra Park, primary schools and high schools, major swimming baths, and Wanderers Club. All the other facilities attracting below 15 'activities' per person per annum.

From these results it appears that Alexandra Park not only draws large numbers of visits but also attracts people frequently. Another indication of its importance is that the facilities at Alexandra Park taken together attract roughly 5½ million 'activities' per annum, a phenomenal figure.

This brings us to the end of the descriptive presentation of patterns of recreation at public open-air facilities in Pietermaritzburg. In certain sections we have compiled indices of active and passive participation in recreational pursuits with a view to a later assessment of the needs of different groups in the community, but for the most part, the analysis has been concerned with presenting a picture of the variety and distribution of recreational pursuits in the city, according to social, ethnic and other groupings in the population. In the following section we turn to results which bear upon the needs of the population rather than on their existing patterns of recreation.

CHAPTER VOUTDOOR RECREATIONAL PROBLEMS AND NEEDS AS
PERCEIVED BY PEOPLE IN PIETERMARITZBURG5.1 RECREATIONAL PROBLEMS IN PIETERMARITZBURG:
INTRODUCTION TO THE ASSESSMENT OF NEEDS:

In the previous sections we have presented results which have been largely descriptive of the extent, frequency and variety of recreational pursuits in Pietermaritzburg. These do not in themselves provide any basis for the assessment of whether or not a particular group of people require more space to be set aside for facilities for outdoor recreation. There are no absolute standards which have been calculated which can give any indication of the quantity of outdoor leisure-time activity which any particular type of group of people require. A perusal of all the relevant literature has failed to uncover any such objective standards, and for this reason, the present study is somewhat in the nature of a pioneering attempt to produce rough indications of the requirements of different population groups.

It is only the individual himself or herself who is in a position to assess whether or not additional recreation is required. No doubt it is possible for medical experts to prescribe the amount of physical exercise which people in different age groups and in different occupations require, but physical exertion is by no means synonymous with outdoor recreation. Outdoor recreation is far more comprehensive than exercise, and it embraces social and psychological, aesthetic and status rewards, as well as the satisfaction of needs for physical exercise. It is beyond the present stage of development of the social sciences to attempt to prescribe even the rough degree of gratification which individuals generally require in regard to the needs mentioned above. For this reason we have had to go to the population of Pietermaritzburg itself and on the basis of questioning attempt to isolate recreational problems and deficiencies in its leisure pursuits. However, as indicated in the introductory comments, people themselves are not necessarily aware of the problems they face, they might experience frustration as a result of these problems and not know the cause. They might blame their frustrations, irritations, their lack of gratification on other factors. Because of this, the approach to the assessment of the additional recreational facilities which different groups in the population of Pietermaritzburg may require has had to be based on a variety of different assessments and types of questions.

As mentioned in the description of the survey methodology in the beginning of this report, the interview schedule contained a range of different questions which were designed to isolate the areas of need for additional recreational facilities. These included questions on the distance which has to be travelled by people to reach open-air recreational facilities and the means of transport they have to use; questions on the reasons for visiting recreational facilities (included on the assumption that the stated reasons would provide some basis for assessing whether the needs which people perceived themselves to have were being met by the type of activity involved), questions on the quality of recreational facilities, on activities desired most and on reasons for not being able to engage in these desired activities; on the amount of time available for leisure pursuits, on sizes of gardens, on the additional facilities which people perceived to be necessary in their areas, and questions on the extent to which facilities are perceived as overcrowded or not.

These questions, analysed singly, did not achieve the desired results. The questions on the activities ideally desired by people did not work adequately, mainly because people appeared not to be able to differentiate clearly between their present favourite activities and activities they would pursue given no practical limitations, not all respondents' were able to conceptualise hypothetical situations.

The questions on the additional facilities which people felt necessary in their areas were also not very successful. Generally far too many people named facilities which they in reality did not need or could not realistically use. We found, for example, old people mentioning the need for facilities for themselves which would have involved them in physical exertion far beyond their capabilities. Girls sometimes mentioned the need for facilities for rugged manly sports. Children very often mentioned totally unrealistic desires. For this reason the results which are presented and discussed could not be accorded undue weight in drawing conclusions in regard to the need for additional facilities.

In order to arrive at a fairly realistic assessment of the needs of different groups for additional facilities in their areas, it was decided to depart from the analysis of individual questions and to assess the interview results in each schedule as a whole, attempting to integrate various replies, eliminate contradictions, and by interpreting directly from verbatim answers, as far as possible make an individual assessment of each respondent's real and

authentic requirements. The results of this very tedious and time-consuming hand analysis of the schedules are presented in this section as the major basis for the assessment of needs for additional facilities in local areas in Pietermaritzburg. The methods used are certainly not fool-proof, and certainly not without a measure of unknown bias, but we are satisfied that they do provide a firm basis for assessing in broad terms, what needs to be provided for people over and above what already exists.

Other questions on needs and problems in regard to recreation in Pietermaritzburg are discussed in full in this section, in a sense as findings complementary to those based on the hand tabulations of the schedules. The results are presented very much for the information of readers.

The procedures which will be followed in the presentation of the analysis of needs is first of all, to consider the needs which do exist and then to relate these to the existing patterns of recreation among major social groupings in the community, and then on the basis of these operations to make a final assessment of the desirability of providing additional facilities, of types of facilities which are needed, and of the quantity of additional recreational space which is required.

5.2 PROBLEMS AND NEED FOR IMPROVEMENT AT EXISTING RECREATIONAL SITES IN PIETERMARITZBURG:

Before proceeding to the analysis of more general needs in regard to recreation in Pietermaritzburg, we turn to look firstly at the extent to which people experience certain problems at the recreational facilities which they visit presently. Since the latter section of the preceding chapter was devoted to an analysis of the relative popularity of particular major open-air recreational sites in Pietermaritzburg, we commence the analysis by looking at problems which people experience at the same open-air recreational venues as dealt with in the last chapter.

In appendix Table XXXV is presented a percentage distribution of number of people in Pietermaritzburg mentioning various types of improvements and additions desired at particular open-air facilities which they visited during the course of the year. From the results it is abundantly clear that all facilities are seen as having some problem or another by the people who visit them. There are venues, however, where fairly large proportions of people

see no particular problem or no need for any particular type of improvement or addition. These sites are the Percy Taylor rockeries, the high school sports facilities (where over 50% of people, mainly children, who visit them perceive no particular problems), primary schools and Wylie Park, (where just short of 50% of people see no particular problem or need for improvement), Wanderers Club, Westmore Park, the University sports grounds, and Henley Dam (where roughly 40% of people see no particular problem or need for improvement). In the majority of facilities roughly 30% of people see no need for any sort of improvement. However, at non-White soccer grounds, rugby fields at Woodburn, the Berg Street Indian baths and the Standard Cricket and Hockey grounds, just short of 20% of people have no complaints. At the Northdale fields, Oribi airport, Midmar dam, Roy Hesketh Circuit, even fewer people have no complaint, and people who visit the Retief Street Market area and the non-White cricket grounds virtually all have complaints about these venues.

In looking at the types of improvements or additions seen as being required, we will first take the facilities where the largest proportion of people seem dissatisfied. At all facilities a certain proportion of people mentioned particular problems, and therefore, in order to isolate problems of particular importance, we take those percentages which are significantly larger than the average percentage of people mentioning a particular problem at facilities in general.

At the Retief Street Market area we find, for example, that a larger proportion of people than average mention the need for children's facilities, for better gardens and natural plant life, for restrictions to be placed on the types of people visiting the place (presumably referring to members of other race groups), and pleas in general for the quality of the place to be improved without any problem being specified.

At the non-White cricket fields, major problems seem to be that the quality of the facilities need to be improved, and that restuarants, picnicking and eating facilities should be provided. At the Northdale fields, people seem to require that gardens and natural plant life at the facilities should be improved, that transport and parking problems need to be looked at, and that eating places, restuarants and picnicking facilities should be provided. At the Roy Hesketh circuit, the main needs appear to be for gardens and natural plant life to be improved and for parking problems to be solved. At Oribi airport, it is once again parking problems, and facilities for eating

and refreshment which seem to require attention. At Midmar dam, the plea is for gardens or natural surroundings to be improved, for parking and transport problems to be solved, and for restaurant facilities to be provided. At the Woodburn rugby fields transport and parking problems appear to require attention, gardens and natural plant life and surroundings require to be improved and there are general pleas from an above average proportion of people for the quality of the place in general to be improved. At the Berg Street Indian baths particular facilities require looking at, (presumably changing facilities), and people appear to object to some of the people who patronise the baths on grounds that they represent an undesirable element. At the Standard cricket and hockey grounds there are general pleas for improved quality.

These are the problems which seem to characterise those areas where a larger than average proportion of people feel that there is need for improvement at the particular venue. More generally, however, a scanning of the results shows that larger than average proportions of people require childrens' facilities to be provided at Alexandra Park, Kershaw Park, Wanderers Club, Botanic Gardens and the Retief Street market area. Gardens and natural plant life and the appearance of the surroundings are thought to need improvement at Kershaw Park, Jan Smuts Stadium, the non-White soccer venues, rugby fields at Woodburn, Albert Allison Park, St. Peter's Garden, the Retief Street Market area, Pine Street baths, Roy Hesketh circuit, Midmar dam, Peatties lake, World's View, primary schools, and at Northdale fields. Improvements to particular facilities (too varied to specify) are required at the non-White beaches, (presumably changing room facilities), Albert Allison Park, Queen Elizabeth Park (these two referring mainly to toilets), Alexandra baths, (change-room facilities), Berg Street Indian baths (change-room facilities), and at Peatties lake. Transport and parking problems appear to require attention at Collegians Club, rugby fields at Woodburn, Queen Elizabeth park, Roy Hesketh circuit, Midmar dam, Peatties lake, Oribi airport, and Northdale fields. Larger than average proportions of people appear to require restaurant and refreshment facilities and/or picnicking facilities at the non-White beaches, at Queen Elizabeth park, at Pine Street baths, at the non-White cricket fields, at Midmar dam, at Oribi airport, and at the Northdale fields. Larger than average proportions of people appear to object to undesirable visitors at Alexandra Park, City Gardens, St. Peter's Garden, the Retief Street Market area and at the Berg Street Indian baths. There are pleas for the quality of the facilities to be improved in general at the University grounds, the Sax Young grounds, rugby fields at Woodburn, the Retief Street Market area, the Standard cricket and hockey fields, the non-White cricket fields.

It must be emphasised, once again, that the problems mentioned as existing at particular facilities are certainly not unique to those facilities; the same problems are mentioned for other facilities as well. However, the significant factor here is that larger proportions of people than is average for all facilities mention certain problems at particular facilities, and it is these which we have isolated.

In general for all facilities together, roughly 3% of people require additional childrens' facilities, roughly 8% of people require that gardens and natural plant life should be improved; roughly 32% require that the quality of the places in general be improved without specifying necessarily what aspects need improvement; 4% plead for improvements in particular facilities - mainly changing facilities at beaches and swimming pools, roughly 6% of people mention transport and parking problems, roughly 9% mention the need for eating and refreshment facilities at picnic and scenic areas, and sports fields, approximately 4% object to the types of people they encounter at facilities, and another 4% mention a range of other problems too diverse to specify.

In general, for all facilities taken together, only roughly 30% of people on average have no particular complaint, and this does seem to indicate that most outdoor recreational sites in or near Pietermaritzburg require to be improved in one way or another.

5.3 THE EXTENT OF OVER-CROWDING AT OUTDOOR RECREATIONAL SITES IN PIETERMARITZBURG:

The problems which visitors to different open-air recreational sites experience, as reflected in the results of the appendix Table XXXV, do not in all cases necessarily reflect a need for an increased provision of recreation facilities, they refer mainly to improvements, some important, some unimportant, which visitors feel are needed. In appendix Table XXXVI, however, we present results which do to some extent bear upon the need for increased facilities of particular types in Pietermaritzburg. These results relate to the extent of crowding at recreational sites and the extent to which particular sites are seen as accommodating too many people. This can be taken as some indication of the need for providing additional facilities of a similar type.

In appendix Table XXXVI, we present a percentage distribution of people according to the extent to which they see particular open-air recreational facilities to be crowded or over-utilised or not. Scanning the table as a whole, we note that generally speaking the majority of people seem to feel that most sites accommodate the right numbers of people, and generally a higher proportion of people feel that most sites accommodate too few people than too many. There are however, exceptions to this, and these exceptions are of interest to us in our consideration of the need for additional facilities. Hence we find for example that a larger proportion of visitors to non-White soccer fields feel that there are too many people accommodated than the proportion who feel that there are too few accommodated. The same applies, but in very much greater measure to Durban beach, and to a somewhat lesser but nonetheless serious extent to the non-White beaches. The Retief Street Market area, Alexandra baths, the Pine street baths, and the Berg Street Indian baths, Roy Hesketh circuit, Scottsville race course, the Showgrounds, Peatties lake, primary schools, Oribi airport and the Northdale fields are also facilities where more people consider that they are crowded than the number of people who consider them to be under-utilised. In many of the facilities mentioned, however, a majority of people nonetheless felt that the particular sites were utilised by neither too many nor too few people. Therefore we should single out those sites where an overall majority of people considered that the facilities were over-utilised, and hence too crowded. They are Durban beach, the Retief Street market area, and the Berg Street Indian baths. One must assume that crowding reaches fairly serious proportions at these sites in order to prompt a majority of visitors interviewed to state that they felt that too many people visit the facilities. In addition to the facilities just mentioned, we need to add one or two where seriously large proportions of people consider that the facilities are too crowded. Here we would include the non-White beaches, the Alexandra baths, the Pine Street baths, Scottsville race course, and the Showgrounds, where very roughly 40% of visitors consider that the facilities are too crowded. In the case of Northdale fields, Oribi airport, Roy Hesketh circuit and non-White soccer facilities, between 25% and roughly 30% of people consider that they are too crowded.

Where substantial proportions, and in some cases an overall majority of people visiting particular sites consider that too many people are usually present for adequate enjoyment of the facilities, there would appear to be a need for the particular sites to be considered for possible expansion or for duplication elsewhere.

In the table just discussed, only major open-air recreational facilities were being discussed, and a number of public open-air facilities of lesser size and importance were omitted. In appendix Table XXXVII, however, recreational facilities have been grouped into categories according to the type of activity for which the facilities are intended. This table gives a percentage distribution of visits to different types of open-air facilities according to the extent to which visitors feel that the facilities are crowded, or over-utilised or not. These results reflect the extent to which a number of different recreational venues of a similar type taken together are considered to be over-crowded or not.

However, before proceeding to the analysis of particular types of facilities, it is of interest to look at the differences according to race in the evaluation of all types of facilities taken together. This is given in the total column on the far right of the table. It is of interest to note that while roughly 14% of visitors to facilities patronised by Whites feel that their facilities are over-crowded, the proportion among Indians is roughly double that at 30%, and the proportion among Coloureds is also slightly higher than that among Whites, at 20%. At facilities patronised by Indians, it would appear that rather more visitors consider that the facilities are over-crowded than the numbers who considered them to be under-utilised, and this is in direct contrast to the position among Whites and Coloureds where the opposite holds true. It would seem, therefore, that those facilities utilised by Indians are, generally speaking, rather more heavily utilised than those visited by Whites or Coloureds.

Turning to the results according to particular types of facilities, and looking at the results for Whites first, we find that substantial proportions of people (over one-fifth) consider the following facilities to be over-crowded: *beaches*, (37%); *swimming facilities* (28%); *motor sport* (which is the Roy Hesketh circuit) (23%); *horse racing or riding* (23%). Among Indians, we find that the following facilities appear to be regarded by substantial proportions of visitors as over-crowded, and here as with the Whites, we take proportions of over 20% or one-fifth as an indication of a problem in regard to crowding: *soccer facilities* (39%); *athletics and high school facilities* (47%); *beaches* (47%); *rugby facilities* (54%), *swimming facilities* (63%); *cricket facilities* (22%), *horse racing and horse riding facilities* (82%); *parks* (26%); and *motor sport* (53%). Hence we note that amongst Indians a far wider range of types of activities appear to suffer from over-crowding

than is the case among Whites. Among Coloureds the types of facilities where substantial proportions of over one-fifth regard them as being over-crowded are the following: *swimming facilities* (roughly 25%) *motor sport facilities* (44%), *horse racing and horse riding facilities* (75%), *childrens' playgrounds* (49%).

Hence there would appear to be a need to consider carefully whether there is not a cause for concern in the degree of over-crowding at the following types of facilities in Pietermaritzburg: *swimming facilities* for Whites, Indians and Coloureds, *motor sport facilities* for Whites, Indians and Coloureds, *horse racing facilities* for Whites, Indians and Coloureds, *soccer facilities* for Indians, *athletics facilities and school sports grounds* for Indians, *rugby facilities* for Indians, and to some extent *cricket facilities* for Indians and *parks* for Indians.

A problem which Coloureds alone appeared to experience is that of over-crowding as experienced by roughly 50% of visitors at *children's playgrounds and nursery schools*. neither Indians nor Whites experience the same problem at similar facilities utilised by members of their groups.

In appendix Table XXXVIII, the extent to which facilities in general are considered to be over-crowded, under-crowded or not, is presented according to socio-economic level. Our interest here is to see whether over-crowding at facilities affects particular socio-economic groups more or less than it affects others. Among the Whites, we notice that there is no particular trend according to socio-economic status. Among Indians and Coloureds however, it is quite clearly apparent that the most serious degree of over-crowding is experienced by visitors from the lowest socio-economic group and that the highest socio-economic group experience the least over-crowding of all at facilities they visit. Tentatively, it would seem from the results in appendix Table XXXVIII that facilities visited by lower and middle class Indians, and facilities visited by lower status group Coloureds are those which are fairly seriously over-crowded.

Evidence of over-crowding at facilities is not sufficient in itself as a basis for any recommendations in regard to the need to provide additional facilities. In very few instances in the results discussed above, has an absolute majority of visitors to a particular recreational venue or to a type of recreational facility regarded the facility as over-crowded.

Our conclusions have been based merely on substantial proportions of people making such an assessment, and this leaves some doubt as to whether or not there is a basis for firm recommendations. Furthermore, the type of question asked was not adequate to reveal whether the degree of over-crowding perceived was such as to constitute a serious problem or not. In some cases this was undoubtedly the case, but in others the perceived over-crowding might have been little more than a minor inconvenience. For these reasons we have to turn to other types of evidence in order to assess the need for additional facilities for particular groups in the population of Pietermaritzburg

5.4 DIFFICULTIES IN THE ASSESSMENT OF THE NEED FOR ADDITIONAL FACILITIES:

In the previous section we considered evidence of problems at existing facilities, and those problems relating to over-crowding give some indication, albeit tentative, of a need for the provision of additional facilities. Much more direct evidence for such needs can be brought to bear based on questions asked in the schedule. As mentioned previously, such questions included probes in regard to reasons for visit, ideal activities, reasons for not being able to engage in ideal activity, perceived needs for additional space for recreational facilities in the immediate neighbourhood, and the type of facility required in the immediate neighbourhood. However, as we have also pointed out previously some of these questions did not produce results which can be regarded as sufficiently valid to enable conclusions to be drawn. The reasons for this have been discussed and they include the fact that respondents did not appear to be able to distinguish between their activities at present and what they would really like to do, between what they would simply like to do and what they needed to do, and between what they needed to do and what they were reasonably able to do, bearing in mind limitations of physique, sex, age, time and money. These problems made it necessary for the team to go back to the schedules after results had been tabulated and to make a thorough content analysis of each schedule separately, taking all possible evidence into account in order to build up a reasonably sound and internally consistent assessment of valid needs and requirements for additional facilities. This was an extremely tedious and time-consuming task, but the results have more than justified the additional effort, since in the vast majority of cases it was possible to refine the information by checking for internal consistency within the schedule in such a way as to exclude inauthentic requirements expressed by respondents. The results of this hand analysis of the schedules will be dealt with presently.

Some of the tabulations based on questions which did not provide an adequate basis for an assessment of valid needs are given in appendix IV where they can be perused by the reader who is interested. In many cases the information appears to be very interesting and in some cases it appears to reflect needs which are valid. However, the hand-tabulation of the results showed that to a very considerable extent the information in the tables presented in appendix IV is not entirely trustworthy and in some cases seriously misleading. Therefore, the major thrust of our present analysis will be based on the results of the hand tabulation itself, as well as on the results of certain additional questions on objective topics, such as distance travelled to recreational facilities, means of transport, time available for recreational pursuits and sizes of private gardens.

5.5 PROBLEMS IN AND IMPEDIMENTS TO THE ENJOYMENT OF ADEQUATE OUTDOOR RECREATION:

There was, however, one question which produced results which are sufficiently interesting and to some extent revealing of real needs which will be analysed first before proceeding to the other topics mentioned in section 5.4. This was the question on the reasons why people could not engage in activities which they really desired to do and wished they could do if it were not for certain problems and impediments. The replies to the question on activities ideally desired are sometimes misleading and not always valid, but in many cases the reasons given for not being able to engage in these desired activities are, in a very broad way, indicative of problems which affect particular groups in the population. These results have to be assessed cautiously, but they do contribute to our overall understanding of problems of recreation in Pietermaritzburg. These results are presented in appendix Tables XXXIX and XLa, b, and c.

Looking first at appendix Tables XLa, b and c together, and at the totals column at the far right of each table, we find differences according to race in the problems standing in the way of desired activities. We notice that only roughly 22% of Whites mention lack of facilities as compared with roughly 56% of Indians and roughly 44% of Coloureds. There can be little doubt that this does to some extent reflect the relative under-provision of recreational facilities in the non-White areas of Pietermaritzburg.

A rather interesting finding is that whereas some 9% of Whites mention finance as a reason for not being able to do the things they would wish to do, less than 1% of Indians and Coloureds mention the same problem. This is possibly because the type of activities which Whites aspire to generally involve heavy expenditure on equipment, (like boats, caravans, and a host of other types of recreation equipment), whereas the activities to which Indians and Coloureds aspire were generally not such as to involve much money in capital outlay. Here is an interesting case of a phenomenon which is quite general; this being that greater affluence leads to even greater expectations and hence to increased frustration and a sense of relative financial deprivation.

Among Whites roughly 6% mentioned transport difficulties as a reason for not being able to do what they wanted to do, compared with roughly 3% among Indians and roughly 14% among Coloureds. The difference between the Whites and the Indians here is not significant, but the Coloureds do seem to experience somewhat greater problems in regard to transportation to recreational facilities than is the case with the other two groups. The differences in this regard are however, not serious and it would seem that the major 'external factor' (in the sense of not being related to the individual's own circumstances), is the relative absence of facilities for the two non-White groups.

A perusal of table XLb suggests that the relative lack of facilities experienced by Indians is most severe in regard to the following types of activities: *hockey facilities, rugby facilities, bowls facilities, boating and water sport facilities, gardening facilities* (a relative absence of private gardens), *playlot facilities* and other facilities where children can be cared for during the day, and facilities for *basketball*. From this list we have omitted those activities which are mentioned by so few people as to be unimportant.

Among Coloureds the following are the types of activities where the lack of adequate facilities appears to be a major factor preventing people from engaging in the desired activities: *cricket, swimming and basketball*. Here again we have omitted mentioning activities which are desired by so few people as to be insignificant.

Among Whites a lack of facilities appears to be particularly important with *netball, boating and water sports*, (although this would appear to be more of a transport problem than anything else since adequate boating and water-sport facilities are undoubtedly present at some distance away from Pietermaritzburg), visits to *scenic areas and beauty spots* (where once again the problem might be one of transportation), *gardening, horse riding, ice skating, trampolining, karate and judo*.

In general therefore, it seems that those facilities which the non-White respondents feel the lack of are more often than not more conventional and ordinary facilities than is the case among Whites. Among the latter group it is more often the less usual and unconventional types of activities for which there appears to be a lack of facilities.

Transport problems appear to weigh most heavily on Indians in regard to *picnicking, visits to beaches, and spectator sport*.

Among Coloureds transport seems to be a particular problem with regard to *hockey and fishing*. Among Whites transport is a frustration among those who wish to do more visiting of *beauty spots, scenic areas, and picnic spots*, among those who wish to visit *beaches* more often, and among those who wish to watch more sport - *spectator facilities*.

It is of interest to see whether problems involving lack of facilities, transportation, or other factors affect the different socio-economic groups in differing extents and ways. In appendix Table XXXIX is presented a percentage distribution of reasons why people cannot do those things which they want to do, according to socio-economic level, for all types of activities taken together. We note among Whites that the lack of facilities appears to become progressively slightly more important as a factor with increasing socio-economic level. This does not, obviously, mean that the more affluent Whites are under-provided with regard to outdoor facilities, it may simply mean that their expectations are higher or more varied than those in other groups. Among Indians and Coloureds, at an obviously higher level of need for additional facilities, the proportion of people mentioning the lack of facilities also tends to increase with increasing socio-economic level. Here again, it is possible that it is the type of desired activity which produces this trend rather than an absolute lack of facilities in the higher socio-economic group, since the results of our previous analysis showed that it was mainly among the lower socio-economic status groups among non-Whites that existing

facilities were seen to be over-crowded or over-utilised. However, there is likely to be a greater absolute lack of facilities among higher-status Indians than among higher status Whites.

Among Whites there is also a tendency for the proportion mentioning finance as a problem to increase with increasing socio-economic level up to the upper-middle status group. Here again, this cannot be taken to reveal any absolute lack of finance, but rather a financial need which is relative to the type of activity which is desired. Among the upper socio-economic group of Whites desired activities would tend to be much more expensive than those among the lower socio-economic groups.

Among Whites the proportion mentioning transportation problems also tends to increase slightly with increasing socio-economic level, suggesting that it is, once again, the type of activity which is desired rather than an absolute lack of transportation facilities which causes the trend. There is no significant trend in regard to transport as a problem among Indians, whereas among Coloureds it affects the lower socio-economic group to a relatively greater extent than the upper and middle socio-economic groups. Among poorer Coloureds there is probably an absolute problem of lack of adequate transport facilities (motor cars, bus services, etc.).

The results in appendix Table XXXIX and XL have been presented to furnish some insight into recreational problems among people in Pietermaritzburg, they have not been discussed as a basis for any sort of recommendation since the results are probably not sufficiently precise to justify using them in this way. They have drawn our attention to the probability that non-White groups experience a greater lack of facilities than do White groups, and that Coloureds, and in particular working class Coloureds, experience a relatively severe problem of transportation which prevents them from doing some of the things they would like to do.

5.6 THE PATTERNS OF NEED FOR ADDITIONAL OPEN-AIR FACILITIES IN PIETERMARITZBURG:

At this stage we look briefly at aspects of the results of the hand tabulation of the schedules, which as stated before, was undertaken in order to isolate realistic needs for additional facilities among the various groups in the city. These results will not be commented on in any detail at this

stage since they are to be more fully utilised in a later section of the report when attempts will be made to quantify the level of need for open-air facilities in Pietermaritzburg. As mentioned previously these results were compiled after going through each schedule and making a thorough study of its entire contents in order to assess the needs for additional facilities. The point of departure for the assessment were the needs which respondents themselves expressed, and these expressed needs were then assessed in the light of a variety of factors such as the existing patterns of recreation, whether or not they had time for any additional recreation, the distances and means of transport used to get to recreational facilities, the age of respondents, the sex of respondents, and a host of other factors. They represent an attempt to refine the expressed needs and desires of respondents by eliminating all preferences which appeared unrealistic or unnecessary in the light of the other results in the schedules. In appendix Tables XLI, XLII, XLIII and XLIV we present the results of this analysis of needs for additional facilities according to race, socio-economic status and area of the city. Very broadly, the results show that there are striking differences between the races, between different areas of the city, and to a lesser extent between the different socio-economic groups. Two types of need are discussed.

- i) a need for facilities of a type which respondents presently do not utilise or have access to, and
- ii) a need for facilities which respondents already utilise but do so outside the immediate areas, or otherwise find inadequate.

In assessing which facilities could be regarded as being outside a respondent's area, we took as a rough guide the breakdown of suburbs used in the analysis according to area of the city, but without any suburbs being combined, however. This classification was applied only in regard to types of recreation which require 'neighbourhood' facilities, however. In the case of needs for recreation requiring larger facilities members of the team had no option but to make a judgement in regard to the maximum distance away from a respondent's home such facilities could be. Obviously, large parks, golf courses, picnic-spots, ice rinks, gymnasiums, fishing facilities and the like cannot be placed in each respondent's neighbourhood. Arbitrary but nonetheless carefully considered appropriate maximum distances for each type of facility were used in the assessment of needs.

5.6.1 Needs According to Race:

In appendix Table XLI we note that whereas roughly 55% of Whites realistically require no facilities additional to those they already use, the proportion among Indians drops to roughly 20% and among Coloureds slightly over 20%. The major needs for additional facilities among Whites are for *tennis facilities* (roughly 7%), *water sports facilities* (roughly 6%), certain indoor facilities like *trampolining and ice skating* (roughly 6%), *swimming facilities* (roughly 5%), an assortment of *types of playing fields* (roughly 5%), and for *children's playlots* (roughly 4%). Among Indians the major needs for additional facilities are for *tennis facilities* (roughly 17%), *children's playlots* (roughly 12%), *swimming facilities* (roughly 10%), *cricket facilities* (roughly 7%), *netball facilities* (roughly 8%), *hockey and soccer facilities* (roughly 4% apiece). Among Coloureds the major additional needs are for *swimming facilities* (almost 40%), *tennis facilities* (roughly 11%), *hockey* (roughly 7%), and a variety of *types of playing fields* (roughly 6%).

Turning to needs for facilities which respondents utilise outside of their areas or otherwise find inadequate, we find that the proportion among Whites who do not require such facilities in their areas is just over 70% and that this proportion drops to 63% among Coloureds and roughly 52% among Indians. The differences between the races here are not quite so startling as differences in the needs for additional facilities. Among Whites the major needs for types of facilities which respondents presently utilise outside of their areas or utilise inadequately, are for *swimming facilities* (roughly 10%), *children's playlots* (roughly 5%) and *tennis facilities* (roughly 3%). Among Indians the major needs of this type are for additional *soccer facilities* (roughly 14%), followed by a need for additional *swimming facilities* (roughly 11%), *playlots* (roughly 4%), *tennis facilities* (roughly 4%), and *hockey facilities* (roughly 3%). Among Coloureds, major needs are for *children's playlots* (roughly 6%), *hockey facilities* (roughly 6%), *tennis facilities* (roughly 6%), *soccer facilities* (roughly 6%), *swimming facilities* (roughly 6%) and for *parks* (roughly 5%). (See appendix Table XLII).

The striking difference between the needs of Whites and those of Coloureds and Indians is the fact that Whites do not appear to need additional facilities of the type usually provided by public authorities, apart from *tennis* and possibly *swimming pools*, although the latter is felt to be a need by as little as 5% of the population. Among Indians and Coloureds, on the other hand, it is precisely the facilities which are more usually provided by

public authorities which are very much needed, like *tennis facilities, children's playlots, swimming facilities, cricket facilities, hockey facilities, netball facilities, etc.* It is also very striking indeed that no less than roughly 37% of Coloureds feel a need for additional *swimming facilities* and this is indicative of the very serious under-provision of an important public amenity for the Coloured group. Therefore, among non-Whites, to a much greater extent than among Whites, there appears to be a need for the sort of facilities which are normally assumed to be the type provided by municipal authorities.

5.6.2 Needs According to Area of the City:

Turning to the analysis according to the area of the city among Whites we notice that there is considerable variation in the extent of need for additional facilities not presently utilised between the different areas. Hence in the Central area we find the lowest level of need for new facilities, with just short of 30% of people expressing a need, followed by Flats, surprisingly, with just over 30% expressing a need for new facilities, then by Scottsville (roughly 45%), Hotels and the Wembley/Clarendon area (roughly 50% each), Northern Park (slightly over 50%), Mayor's Walk and Blackridge/Prestbury (55% or slightly more). The highest level of need appears in the Hay Paddock and Oribi areas where over 60% of people appear to require some form of additional facility.

In all Indian areas at least 70% of people have a realistic need for additional facilities of a type which are not presently utilised. The level of need is highest in the Raisethorpe, Northdale and Mountain Rise areas where over 80% of people require new facilities, followed by Lower Central area and Pentridge (roughly 80%) and by Flats (74%).

Among Coloureds there is a marked difference between the Coloured residential area of Woodlands and other Coloured residential areas. In Woodlands over 90% of people would appear to require additional facilities of a type not presently utilised, whereas in the other Coloured areas taken together, it is only roughly 61% who require additional facilities. Woodlands therefore appears to be an area of considerable need; in fact it is here that we find the highest recorded level of need for additional facilities not presently used.

When we look at the need for additional facilities which people utilise at present, but utilise outside their areas or find inadequate, we note that the highest level of need among Whites is in the Pentrich and Northern Park areas where 55% of people appear to require facilities in the area, followed by Mayor's Walk and Wembley/Clarendon (roughly 40%), Hay Paddock/Oribi (35%), flats and hotels (30%) and Blackridge/Prestbury and Central, where less than 20% of people need additional facilities in their areas.

As with the previous analysis, the level of need among Indians for facilities in their areas of a type which they utilise elsewhere or find inadequate is substantially higher than that among Whites. The highest level of need is found in the Raisethorpe/Northdale and Mountain Rise areas, where roughly 50% of people require additional facilities in their areas, followed by Lower Central (roughly 45%) and by Flats, where the level of need is lowest and only roughly 35% of people appear to require additional facilities in their area of a type utilised elsewhere.

Among Coloureds we find, once again, that the level of need in Woodlands is very much higher than in other Coloured areas. Just short of 50% of people in Woodlands appear to require facilities of a type which they presently utilise elsewhere or find inadequate, whereas only roughly 15% of Coloureds elsewhere have this need.

5.6.3 Needs according to Socio-Economic Status:

As noted previously, differences between the socio-economic status groups appear to be less marked than differences between people in different areas and between the races. In regard to needs for facilities of a type which are not presently utilised, we find that there is no really important trend in the level of need according to socio-economic level among Whites. The lower and upper-status groups may have a slightly lower level for additional facilities than the three middle-status groups, but differences are slight.

Among Indians we find that the lower-status group has a lower level of need for additional facilities of a type not presently utilised than the middle and upper-status groups, while among Coloureds there is no difference between the status groups.

When we consider the needs for additional facilities of a type which are presently utilised outside of people's areas or are found to be inadequate, we find, among Whites, that once again it is in the lower and upper-status groups where the need for such facilities appears to be lowest, although the differences between the groups are not particularly large. Among Indians we find, once again, that it is in the lower-status groups where the lowest level of needs for additional facilities of this type exists, and among Coloureds we find, once again, that there is no significant difference between the status groups.

5.6.4 Needs according to Age:

We turn now to consideration of the differences in the need for additional facilities according to age. We will comment on the results relating to age and sex in somewhat more detail than we have done with the results of needs for additional facilities as they relate to class, race and area, since it is not the intention to return to needs according to age and sex at a later stage of the analysis.

In appendix Table XLV a, b, c, are represented percentage distributions of facilities which respondents need in their areas of a type which they do not presently make use of and which they are realistically able to benefit from. We note that the need for additional facilities among Whites is highest in the age groups 5 to 9 years, 10 to 19 years, and 20 to 34 years. It is in these three age groups where the proportions of people requiring no additional facilities is lowest. The greatest need for additional facilities in any single age group is in the age group 10 to 19 years. Here the major additional need is for certain indoor facilities such as *gymnastics, trampolining, ice skating, squash*, followed by a need for *tennis* facilities, facilities for *water-sports* (such as boating, yachting, water skiing, fishing and surfing), next by less conventional facilities for field sports such as *shooting, baseball, tennequoits*, and then by *horse riding* and *horse jumping* facilities, and for additional *swimming* facilities. Other requirements are not mentioned by more than 5% of the group in any particular case. Following the 10 to 19 year old age group among the Whites in the extent of need is the 5 to 9 year old age group, where some 55% appear to require additional facilities. Major needs here appear to be for *children's playlots* and *swimming facilities*, followed by *tennis, indoor*

facilities (trampoline, ice skating, squash etc.), *horse riding* and *horse jumping* facilities. Following the 5 to 9 year old age group in the extent of need is the 20 to 34 year old group where some 48% of people appear to require additional facilities. Here the major need is for facilities for *water sports*, followed by *tennis facilities* and by facilities for *indoor activities* (such as gymnastics, trampolining, ice skating and squash). The other needs are limited to less than 5% of the population in each particular case. Among the age group 35 to 59 years, roughly 36% of people appear to require additional facilities. The major need here is for *tennis facilities*, followed by *swimming facilities*, with the other needs existing among less than 5% of the population. The level of need for additional facilities among Whites appears to be second lowest in the age group 0 to 4 years, with only some 26% of children in this group requiring additional facilities. The major need here is for additional *children's playlots*, followed by the need for additional *swimming facilities*; the other needs being limited to very small proportions of the population. In the age group 60 years and over, the level of need for additional facilities is at its lowest, with only some 14% of this group appearing to require additional facilities. No particular facility is required by more than 5% of the population; only some 3% of this population appears to need additional bowling facilities, and the other needs are insignificant.

Among Indians the trend in regard to the level of need for facilities not used elsewhere, among different age groups, tends to be roughly the same as that among Whites, but at a much higher level of need. Among the 10 to 19 year old Indians only 5% appear to require no additional facilities, and among the 95% that require additional facilities the greatest need appears to be for the following: *tennis facilities*, *netball facilities*, *cricket facilities*, *children's playlots*, *hockey facilities* and facilities for other *field sports* like baseball and tennequoits. Among Indians in the 5 to 9 year old group roughly 88% would appear to require additional facilities. The major needs here are for additional *children's playlots*, followed by *tennis facilities*, *facilities for other field sports* (like baseball and tennequoits), for *swimming facilities*, *cricket* and *soccer facilities*, and for *netball*. In the age group 20 to 34 years, roughly 75% of people appear to require additional facilities; the major needs being for *tennis facilities*, *swimming facilities*, *golf facilities*, *facilities for other field sports* like baseball and tennequoits, and for *netball* facilities. In the age group 0 to 4 years among Indians, roughly some 60% of children appear to require additional facilities; the major needs being for *swimming facilities*, followed by *children's playlots*. In the age group 35 to 59 years roughly the

same proportion - i.e. just short of 60% of people, require more than they have at the moment, and the major needs are for *tennis facilities, children's playlots, bowls, swimming facilities and soccer facilities*. In the age group 60 years and over, among Indians, just short of 55% of people appear to require additional facilities, and the major needs here are for *water sports facilities, bowls, children's playlots* (presumably among parents and grandparents) and *tennis facilities*.

As among Whites and Indians, among Coloureds the highest level of need for additional facilities (95%) is in the age group 10 to 19 years. Here the major and dominant need is for additional *swimming facilities*, followed by *tennis facilities, hockey facilities and facilities for other field sports* (like base ball and tennequoits) and for *rugby facilities*. In the age group 20 to 34 years some 82% of people require additional facilities, the major need being for *swimming facilities* (a need felt by nearly 50% in this group), followed by *tennis facilities*. In the age group 5 to 9 years we also find that over 80% of the children need additional facilities, and once again the need for additional *swimming facilities* is felt among a very large proportion of the children (roughly 42%), followed by a need for *hockey facilities, facilities for other field sports* (like baseball and tennequoits) and for *tennis* (just 5%). In the age group 35 to 59 years roughly 70% of people have a need for additional facilities, and here once again the major need is for *swimming facilities*, followed by *tennis facilities, facilities for other field sports* (such as baseball and tennequoits) and for *bowls*. In the age group 60 years and older, where roughly 30% of people require additional facilities, the overwhelming need is for additional *parks*, where the emphasis is on scenic landscape features. In the age group 0 to 4 years, just over 30% of Coloured children require additional facilities, the major needs being for *children's playlots and swimming pools*.

Turning to the differences according to age in regard to the need for facilities which are used outside of respondents' areas or found to be inadequate, we look first at appendix Table XLVIa, which presents the results for White people in Pietermaritzburg. Unlike the previous analysis, which was based on the need for facilities not used elsewhere, the greatest level of need for facilities of a type used elsewhere exists in the 5 to 9 year old group, and not in the 10 to 19 year old group. In the 5 to 9 year old group, roughly 53% of children appear to require additional facilities in their area. In this group, the main need is for *swimming facilities*, followed by *children's playlots* and by *tennis facilities*. The next highest level of need is in the 10 to 19 year old age group,

where roughly 44% of children and teenagers require additional facilities. Here again, the major need is for *swimming facilities*, followed in this case by *tennis facilities* and, among just short of 5% of this group, by *rugby facilities*. The next highest level of need is in the 0 to 4 year old age group, where roughly 32% of the children require additional facilities; the major needs here being for *children's playlots*, followed by *swimming facilities*. The 20 to 34 year old group has a proportion of roughly 20% requiring additional facilities; the major needs being *swimming facilities* and among just short of 5% of the group, *tennis facilities*. In the 35 to 59 year old group, only some 14% require additional facilities, and the highest level of need here is for *swimming facilities* among roughly 4% of the group. In the age group 60 years and over only some 9% appear to require additional facilities, and here the major need is for *parks*.

Among Indians (appendix Table XLVIb) the highest level of need is as before, in the 10 to 19 year old group, unlike the case among Whites. In this age group roughly 63% appear to require facilities in their areas of a type which they use elsewhere or find inadequate. The major needs are for *soccer facilities*, followed by *swimming facilities* and by *tennis facilities*. The next highest level of need is in the age group 5 to 9 years, where some roughly 51% appear to require additional facilities closer to home; the major needs being for *soccer facilities*, followed by *swimming facilities*, *children's playlots* and *cricket facilities*. Roughly the same level of need exists in the age group 20 to 34 years, where about 49% require additional facilities, and here once again the need is for *swimming* and *soccer facilities*, followed by *parks*, *cricket* and *hockey facilities*. In the age group 35 to 59 years, where some 39% require additional facilities, the major need is for more *parks*, *soccer facilities* and *swimming facilities*. In the age group 60 years and over, no one appears to require any additional facilities in the immediate vicinity.

Among members of the Coloured group (appendix Table XLVIc), like the Indians, the highest level of need is in the age group 10 to 19 years, where 63% require additional facilities; the major needs being for additional *soccer facilities*, followed by *swimming facilities*, *tennis facilities*, *hockey facilities* and *children's playlots*. In the age groups 20 to 34 and 35 to 59 years roughly 30% of the population require additional facilities. In the 20 to 34 year old age group the major needs are for *hockey facilities*, followed by *tennis facilities* and by *parks*. In the age group 35 to 59 years, the major need is for *parks* and *children's playlots*. Among children under 5 years of age, only

roughly 9% require additional facilities, and the requirements here are entirely for *children's playlots*. There appears to be no need for additional facilities of this type among Coloureds in the age group 60 years and over.

5.6.5 Needs According to Sex:

Tables XLV and XLVI in the appendix also provide information on the different needs of the two sexes. The most crucial needs are those for facilities which respondents do not make use of elsewhere but desire in their areas. This information is presented in appendix Table XLV. Looking first at Whites, we note from the table that among those who require no additional facilities 51% are men and 49% are women. In actual fact the proportion of men out of the total of all men, who require no additional facilities is 57%, compared with 51% among women. Therefore the level of need for additional facilities appears to be slightly higher among men than among women.

Looking at the major specific needs according to sex, among Whites, we find that among those requiring *tennis facilities* roughly 79% are women compared with only 21% of men. Among those requiring certain types of *indoor facilities* (like gymnastics, trampoline, ice skating, squash etc.) we find once again that the majority are women (61% versus 39%). The need for *boating, yachting, water skiing, fishing* and *surfing facilities* is mainly among men, with 72% of those requiring these facilities being men. On the other hand, the need for additional *swimming facilities* exists mainly among women, 62% of those requiring these facilities being females. Against this, roughly 60% of those requiring a variety of *less usual playing fields* are men, and roughly 54% of those requiring additional *playlots* are men, although in this latter regard the difference between the men and the women is not significant.

Among Indians roughly the same proportion of men and women appear to require additional facilities; there is no material difference here between the sexes. However, when we look at the major needs we find differences; for example, among those requiring *tennis facilities* 56% are women. Among those requiring *childrens playlots* 59% are women. Among those needing additional *swimming facilities*, on the other hand, 61% are men, and the predominance of men is even more marked among those requiring *cricket facilities*, where 96% are men. Those requiring *netball facilities* are exclusively women.

Among Coloureds, roughly 16% of men require no additional facilities, compared with 28% among women. Therefore the level of need among men can be considered to be significantly higher than that among women.

Turning to the major specific needs, we find that the need for additional *swimming facilities*, which is by far the most prominent need among Coloureds, is more or less equally divided between the sexes. However, the need for additional *tennis facilities* exists mainly among women; 63% of those requiring this facility are women. The need for additional *hockey facilities* exists exclusively among women. The need for a variety of the *less usual playing fields* is also found largely among women, 62% of those requiring these facilities are women.

The need for facilities of a type which is used elsewhere or which have been found to be inadequate is possibly less urgent as a need than the needs for facilities which were not used at all. Nonetheless, these needs are important, and we must take account of them.

In Table XLVI, among Whites we see that the need for complementary facilities is almost evenly divided between the two sexes. The major need among Whites is for *swimming facilities*, and here roughly 70% of those needing this facility are women. The need for *children's playlots* is more or less equally divided between the two sexes, and so is the need for additional *tennis facilities*. The other needs reflected in the table are needs expressed by too few respondents to enable reliable generalisations to be made about the relative need among men as opposed to women. The other differences according to sex in the body of the table are generally speaking not sufficiently reliable to allow for detailed comment. Among Whites, therefore, it is clear that one major area of need is for additional *swimming facilities*, and that the demand is mainly among women. The other major needs are equally divided among men and women.

Among Indians roughly the same numbers of men and women require complementary facilities. A look at the type of facilities required, however, reveals marked differences. The major additional need is for *soccer facilities*, and here roughly 92% of the people requiring these facilities are men. This is followed by a need for additional *swimming facilities*, and here again the needs of men predominate, since roughly 70% of those requiring this facility are men. However, when it comes to a need for additional *parks*, two-thirds are women.

The need for *children's playlots* is, surprisingly, almost entirely limited to men, and the need for additional *tennis facilities* is also dominated by men to the extent of 73%.

Among Coloureds the level of need for facilities to replace those used elsewhere or found to be inadequate is roughly equally divided between men and women. Among Coloureds, the main additional needs are for *soccer facilities*, a need which is limited entirely to men. Additional *children's playlots* are a need experienced mainly by women in the ratio of roughly 6:4. Additional *tennis facilities* are required overwhelmingly by women, in the ratio of 9:1. The same goes for *hockey facilities*, where women's needs dominate in the ratio of 95:5, and for *parks*, where women's needs dominate in the ratio of 62:38. *Swimming facilities* are required overwhelmingly by men.

This brings us to the end of a brief discussion of the results of the special hand-tabulation of respondents' needs. We turn now to a consideration of certain objective factors which are important elements in these needs.

CHAPTER VIMAJOR OBJECTIVE FACTORS BEARING UPON NEEDS FOR PUBLIC
OUTDOOR RECREATIONAL FACILITIES IN PIETERMARITZBURG

Theoretically, there are probably dozens of objective factors which could influence community needs for the provision of public outdoor recreational facilities in the community. One would assume that financial resources are of great importance in influencing such needs, and yet some of our findings discussed earlier have shown that poorer people do not generally see lack of money as a factor preventing adequate leisure pursuits. In this section we have selected for discussion a few objective factors, external to the respondent, which are of obvious reliance to community needs. These factors are: the distances people travel to existing facilities, the amount of spare time people have for recreation and the type of transport people use to visit facilities, as well as the amount of private garden space which people have.

These variables have been taken fully into account in the hand-analysis of respondents' needs which we have discussed in the previous chapter. There is nonetheless some merit in presenting these results separately, albeit briefly, in order to illustrate some of the major practical problems which combine with other factors in determining why particular groups may have greater needs for additional facilities than others. Hence the analysis which follows is possibly not essential to the conclusions drawn at the end of this report, but is nevertheless essential to any understanding of recreational needs in Pietermaritzburg.

6.1 THE DISTRIBUTION OF PRIVATE GARDEN SPACE:

We commence with a brief assessment of the extent to which people in different areas of Pietermaritzburg have the use of private gardens for purposes of outdoor recreation. In appendix table XLVII we present a percentage distribution of respondents in different areas of Pietermaritzburg with private gardens of different sizes. From this table we note that, among people in all areas in Pietermaritzburg, taken together, roughly one-fifth

have no gardens at all. The largest single group (approaching 50%) have gardens of less than one-quarter of an acre. Approximately one-twentieth have gardens of between one-quarter and one-half of an acre, while roughly 15% have more than one-half acre.

In the Wembly/Clarendon areas, we find that as many as 71% of people have more than half an acre, and only roughly 5% have less than a quarter of an acre, with no people at all having no garden. In the Blackridge/Presbury area the position is almost as favourable, with roughly 45% of households possessing gardens of more than one-half of an acre, and with only roughly 10% with gardens of less than a quarter of an acre. In terms of space, few other areas compare with those just mentioned.

Taking into account the people with no gardens at all, we find that the distribution of rough averages (medians) for the different areas is as follows: Wembley/Clarendon, slightly more than half an acre; Blackridge/Prestbury, very slightly less than half an acre, Scottsville, roughly three-eighths of an acre; Northern Park and Pentridge, very slightly more than one-quarter of an acre (although in the Pentridge area there is a much greater range of sizes of gardens than in the Northern Park area, since nearly 30% have no garden at all, and slightly over 25% have more than half an acre); Mayor's Walk, slightly less than one-quarter of an acre, Central, taking into account those with no gardens at all, roughly one-eighth of an acre.

In Non-White areas, the Mountain Rise area has an average garden size of slightly less than one-quarter of an acre (although there is quite clearly a tremendous spread of sizes of gardens in this area, with over 35% having more than one-half of an acre). Raisethorpe/Northdale, Hay Paddock/Oribi and Woodlands areas all have roughly the same average garden size of roughly one-eighth of an acre. In Lower Central the average size of gardens is even less, due to the tremendously high proportion of people (40%) with no gardens at all.

In flats over 70% of people have no gardens at all, while the position in hotels is somewhat better since only roughly 40% of people who live in hotels have no gardens. In fact, over 40% of hotel residents enjoy extremely spacious grounds of more than one-half of an acre.

From this it would seem that the following areas are problem areas inasmuch as a large proportion of people do not have any gardens at all:

Lower Central, 40%, Pentridge, nearly 30%; Raisethorpe/Northdale, 11%; Hay Paddock/Oribi, 11%, flats, 73%, hotels, 41%.

6.2 THE DISTRIBUTION OF TIME AVAILABLE FOR LEISURE:

Next we turn to the distribution of another valuable resource in people's lives; this being the availability of time for leisure. Here the analysis has not been done according to area of the city, but rather according to socio-economic status, since the amount of leisure time is not likely to be associated with geographical area but rather with the occupational, financial and family circumstances of people.

The analysis was commenced by taking the amount of leisure-time which people stated they had and calculating the amount of time as a proportion to the base of 100 hours per week. One hundred hours a week was assumed to be a theoretical maximum which could be realistically assumed for the overwhelming majority of people.

In appendix table XLVIII we present a percentage distribution of respondents according to the proportions of their time which is available for leisure pursuits, calculated in the way outlined above, according to race and socio-economic status. The proportions of people's time available for leisure have been grouped into categories of 10%. The mid-point of each category is given in an equivalent of hours in brackets.

Looking first at the difference between the races, we note that there are very few people in any of the three race groups that have no leisure time at all. However, it would seem that there are relatively more Indians and Coloureds with very little leisure time than Whites. The proportion of Whites with between 0 and 10% of possible maximum leisure time per week (100 hours) is roughly 6%, compared with roughly 19% among Indians and 25% among Coloureds. There are also relatively fewer Whites with between 10 and 20% of 100 hours per week than there are Indians and Coloureds. The proportion among Whites is 14% compared with 24% among Indians and roughly 29% among Coloureds. However, the proportion of Whites with over 50% of 100 hours leisure time per week is roughly the same as that among Indians, although the proportion among Whites and Indians is higher than that among Coloureds. Overall, it is quite clear that the Whites have more leisure time than either the Indians or Coloureds.

The median proportion of the theoretical maximum of 100 hours per week for Whites is roughly 33%, compared with roughly 24% among Indians and 18% among Coloureds. Therefore, it would seem that Whites not only have certain advantages in material resources to aid them in their leisure pursuits but they also have more time at their disposal in which to recreate themselves.

When we look at the extent of leisure time available according to socio-economic status among Whites, we find that the only group where there are significant numbers with no leisure time is the lower socio-economic status group, where roughly 7% of people claim to have no leisure time at all. It would also seem that the lower-status group and the upper-middle-status group seem to have larger proportions of people with less than 20% of the theoretical maximum available for leisure than the lower-middle and middle-status group. Furthermore, the lower and upper-middle status groups might have a slightly higher proportion of people with more than 50 hours of leisure time a week. The position seems therefore to be that while the lower and upper-middle status groups include a relatively high proportion of people with very little leisure time, they also contain a high proportion of people with a great deal of leisure time. The fact that both these groups have a high proportion of people with very little leisure time is probably due to a good deal of shift work and the demands of large families in the former group, and a good deal of executive responsibility and the demands of voluntary association membership among the upper-middle status group.

Among Indians, the position seems to be that the lower-status group has a relatively lower proportion of people with less than 20 hours of leisure time a week than the middle and upper-status groups. It also seems that the lower-status group has a relatively larger proportion of people with more than 50 hours of leisure time a week than the middle and upper-status groups. Among Indians therefore the middle and upper-status groups are the groups with least amount of leisure time.

Among Coloureds, on the other hand, it is the lower-status group which quite clearly has the least amount of leisure time available with some 93% of their members with less than 20 hours of leisure time a week compared with just over 50% of the members of the middle and upper status groups.

Broadly speaking, among Whites we cannot assume that there are very important overall differences between the status groups in regard to the amount of leisure time they have available, except for the fact that members of the lower and upper-middle status group have on average somewhat less leisure time than members of other groups. Among Indians the position is that the lower-status group has more leisure time available than the higher-status groups, whereas among Coloureds the lower-status group definitely has less leisure time available than the middle and upper status groups.

6.3 DISTANCES OF TRAVEL TO OUTDOOR RECREATIONAL SITES:

Another important objective factor bearing upon the need for additional open-air recreational facilities in neighbourhood areas is the distances which people have to travel in pursuit of their existing open-air recreation. In appendix table XLIX we present a percentage distribution of activity at open-air recreational facilities, according to the distances travelled for each activity, by socio-economic status and race. Looking first at the differences between the race groups, we note that there is a very wide spread of varying distances for all groups. What is of particular concern here, however, are the proportions of visits of under one mile, since this is an indication of the ease with which people are able to reach their local everyday facilities. We note among Whites that the proportion of visits of under one mile is roughly 36%, and among Coloureds it is roughly 41%. There is no significant difference between these two proportions. However, among Indians, the proportion is significantly lower, at roughly 24%, which might suggest that Indians have to travel somewhat further than do either Whites or Coloureds for their everyday recreational pursuits, and more importantly it also suggests that a lower proportion of the visits of Indians are to recreational facilities in their neighbourhood. The fact that, among all groups, there are substantial proportions who travel a number of miles for recreational enjoyment is not necessarily indicative of a problem, because these are probably visits to outdoor facilities and scenic areas which are attractive by virtue of their distance away from the city. For this reason the proportion of visits at short distance (i.e. in the neighbourhood) is the most significant indicator of any problems.

Turning to the differences between the socio-economic groups and looking first at Whites, we notice a fairly healthy trend. It is in the lower socio-economic status group that we find the largest proportion of visits of under

one mile: 54%. There is no particular trend according to socio-economic status among the other groups. However, the fact that the poorest group appears able to visit recreational facilities close by to such a considerable extent is a fairly positive fact, although this does not mean, of course, that all the facilities which these people require are available close by.

Among Indians the opposite appears to hold true, because there is a significantly lower proportion of visits of under one mile among the lower socio-economic group than among the middle and upper socio-economic groups. This does seem to indicate that there might be a problem of availability of facilities affecting the lower-status Indians, inasmuch as they appear to have to travel further for their recreation than the more affluent groups.

Among Coloureds the position is healthier, with as much as roughly 77% of visits among the lower group being visits of under one mile, compared with roughly 36% among the middle and upper status group.

Broadly speaking, what these results indicate is that there might be a distance problem affecting recreation among Indians, and that it is particularly in the lower-status group that this problem manifests itself.

No attempt has been made to analyse the distances travelled according to particular types of facilities, since these patterns were fully incorporated into the assessment of needs for additional facilities which was discussed in the previous chapter.



6.4 THE MEANS OF TRAVEL TO OUTDOOR RECREATIONAL FACILITIES:

Closely related to the factor of distance is the type of transportation used. In appendix table L we present a percentage distribution of activities according to type of transportation for the different socio-economic status groups and races. We have noted, in the previous analysis, that the lower-status group among Indians appears to have a problem in regard to the availability of neighbourhood facilities within short distance. In appendix table L we find in addition that the proportion of lower-status Indians who walk or cycle to facilities is higher than the proportion among middle and upper-status group Indians. Therefore the problem of distance for Indians is not minimised by good transportation facilities. In fact, results presented in Appendix IV (i.e. results which have not been discussed in this text)

suggest that the problem among lower-status Indians is very serious. For example, of the visits of between one and two-and-a-half miles, roughly 88% are visits where the mode of transportation is walking. Among lower and middle-class Coloureds this proportion is also high, at roughly 60%. However, the proportion of walking visits is definitely much higher among lower-status Indians than among any other group. Other results presented in Appendix IV also bear out the fact that the Indian group, and in particular lower-status Indians, have a very real problem in regard to transportation to open-air recreational facilities.

Coming back to appendix table L, we note that among the middle and upper-status group Indians the proportion walking to facilities is not very much higher than that among lower-middle and middle status group Whites. Therefore, there does not seem to be a particular problem in this regard among Indians.

Among middle and lower-status Coloureds, the proportion of visits where the mode of transportation is walking is also very high relative to that among other groups generally. We also know from the results of the previous analysis that among middle-status Coloureds the proportion of visits of more than one mile is relatively high, which aggravates the problem. Results presented in Appendix IV suggest that among middle-status Coloureds there is a fairly serious transportation problem. Roughly 60% of visits of between one and two-and-a-half miles among lower and middle-status Coloureds are walking visits, which is indicative of a real problem. This problem affects the Coloured middle-status group in particular, because the lower-status group does tend to visit neighbourhood facilities which are close by far more than members of the middle-status group.

Among Whites a relatively high proportion of people in the lower-status group walk to facilities, in fact it is as high as that among lower-status Indians and middle-status Coloureds. However, we know from previous results that an exceptionally high proportion of Whites in the lower-status group visit facilities at a distance of less than one mile, and therefore the high proportion of walking visits does not necessarily indicate a serious problem. However, results in Appendix IV suggest that roughly one-third of visits among both lower and lower-middle status Whites to facilities between one and two-and-a-half miles away are walking visits, and here we see an indication of a problem among lower and lower-middle class Whites as well, although the problem

is less serious than that which exists for lower-status Indians and middle-status Coloureds.

Among Whites generally there tends to be a decrease in the proportion of pedestrian visits with increasing socio-economic status, and a marked increase in the proportion of visits by private motor vehicle between the lower and lower-middle class group, on the one hand, and the higher-status groups on the other. There is also significantly more train or bus transportation to recreational facilities in the White lower-status group than there is in other status groups, as one would expect.

Among Indians there does not appear to be a significant difference between the status groups in the proportions of visits for which private motor transportation is used. The lower-status Indians appear to use train or bus transportation less than middle and upper-status Indians.

There is a very low incidence of visiting by private motor transport among Coloureds, and the proportion tends to increase sharply between the lower and middle-status group. Public transportation among Coloureds appears to be relatively constant between the lower and middle-status groups. The proportion using public transportation appears much higher among the upper-status Coloureds, but this result is not significant due to small numbers in the sample.

Overall, then, it appears that lower-status Indians and, to a lesser extent, middle-status Indians; and lower and particularly middle-status Coloureds; and, to a much lesser extent, lower status Whites, walk long distances to visit public open-air recreational facilities. This is a very concrete indication of an area of need existing in the community in Pietermaritzburg. These problems have been taken into account in assessing the needs for additional facilities for the different groups, and it is to a discussion of this that we now turn.

CHAPTER VIITOWARDS STANDARDS FOR THE PROVISION
OF SPACE FOR OUTDOOR RECREATION IN
PIETERMARITZBURG

We now come to the most challenging aspect of the study. This is the attempt to assess the level of need for existing and additional recreational facilities among the people of Pietermaritzburg, and on the basis of this to attempt the formulation of broad standards for the provision of outdoor recreational space. Up to now the analysis has, broadly speaking, been descriptive; very few inferences have been drawn from the data presented and little attempt has been made to spell out in detail what requires to be provided for people in different communities and in different areas in the city. The task of making such recommendations is by no means an easy one because of the fact that it is extremely difficult to quantify so elusive, subtle, varied and often contradictory a phenomenon as needs and desires for additional recreational facilities. Nonetheless the task has to be attempted, and the material analysed thus far has to be utilised to best practical advantage.

In the attempt to quantify the need for recreational facilities and outdoor recreational space, we have limited ourselves to the categories of race, socio-economic status, area of the city and type of dwelling. These categories are likely to be the most useful for planners, because they are immediately visible to experienced observers and do not require tremendously detailed knowledge based on surveys in order to be isolated. An area can be demarcated on a map and for skilled observers the socio-economic status of a group of people can be assessed from the visual appearances of houses and from some knowledge of the occupations of people in the area. Another important category is age and sex, but we have not attempted to quantify the needs of different age groups and of the two sexes, because this type of information, obviously, is somewhat less useful for planners. Firstly, in any area there are members of both sexes and members of all age groups, and the variations in the age distributions in different areas, although significant, are often not sufficiently marked for planning decisions to be formulated with a view to accommodating

the distributions of ages or sexes. This is not to say that age and sex should not be taken into account, and hopefully the insights presented thus far from the descriptive analysis of needs will allow planners to take full consideration of factors of age and sex in deciding upon the types of facilities required by different groups. However, for present purposes, it would obviously be futile to attempt to quantify the needs of 0 to 4 year olds, 5 to 9 year olds, 10 to 19 year olds, etc., since these age groups live side by side and it is impossible to provide a duplication of facilities for different groups in a single area. One cannot plan for segments of a population living in a single area separately. One can merely take the distribution of such segments, whether they be age or sex groups, into account in considering what variation should be introduced into the planning. One can, however, plan for apartment house areas as opposed to areas of suburban housing, for low-status houses as opposed to middle or upper-status areas, and for Indians as opposed to Coloureds or Whites. It is to this end that we have chosen to concentrate in this chapter on an analysis according to race, socio-economic level and area and/or dwelling type, in broad categories.

7.1 THE NEED FOR ADDITIONAL LOCAL COMMUNITY OUTDOOR RECREATIONAL FACILITIES IN PIETERMARITZBURG:

In the analysis which follows we have attempted to quantify the total additional need for outdoor recreational facilities according to race and socio-economic status, as well as to area of the city, flats and hotels. In a previous analysis we presented the results of an analysis of additional facilities which people realistically required and which they did not utilize elsewhere, as well as an analysis of additional facilities required by people in their areas of a type which they utilize elsewhere at greater distance or which are for a variety of reasons found to be inadequate. In both these analyses the results were presented as the estimated proportion of people in different groups requiring additional facilities of different types. In the presentation which follows, an attempt has been made to combine both these sets of results in order to present an index of total additional needs for local community facilities according to race, socio-economic status, and area of the city.

Before proceeding to the analysis of the results, a word of explanation is required about what is meant by local community facilities. The results are presented separately for *parks, swimming baths, planned sports fields of different types, playlots, golf facilities* and *facilities for excursions to scenic areas and beaches*; the latter including picnicking, camping, swimming and a variety of other activities. Obviously such facilities as golf courses and picnic sites cannot be provided locally in suburban areas. In the case of this type of facility it is sufficient that the particular facility is not too remote but is reasonably accessible to the population under consideration. Hence for members of the Indian community, for example, many of whom do not possess motor cars, there should be a picnic site fairly close to the area in which the majority of members live, if such a facility is in fact needed. However, this facility need not be within the local community itself, since this is clearly impossible and even undesirable. On the other hand, in the case of *parks, swimming baths, planned sports fields* and *playlots*, the ideal would definitely be for such facilities to be located well within the local suburban area. Therefore, when preparing the analysis which follows it was assumed that with *parks, swimming baths, planned sports fields* and *playlots* any need emerging for additional community facilities could be considered as a need for additional facilities within the local suburban residential area (i.e. no more than say $1\frac{1}{2}$ to 2 miles away from any particular resident in the area.) However, in regard to *golf courses* and *picnic sites*, etc., the need would be for facilities simply within reasonable distance of the particular residential area, bearing in mind the type of locality required for the particular facility and the typical means of transport used. *Beaches*, obviously, can be no closer than roughly 50 miles away, but needs can exist for additional beach facilities to be made available as near as possible to the major route from Pietermaritzburg to the sea, and for amenities to be improved at existing facilities. In the analysis itself, however, even though beaches have been included in the category of *excursions to scenic areas*, they can effectively be discounted because the overwhelming need found was for picnic sites, camping and hiking facilities rather than for additional beaches. This was perhaps precisely because beaches are of necessity so far away. Therefore, our concept of local community facilities is one which has to be applied with due regard to the type of facility being discussed.

Some comment also needs to be made upon the classification of types of facilities. The results presented in this section are to serve as a basis for firm recommendations in regard to the provision of extra facilities in Pietermaritzburg. It is essential, therefore, that these results are reliable and not subject to very large chance fluctuations (sampling errors). This necessitated that different types of facilities be combined into large groupings in order to maximise the sample sizes on which results were based. It was considered that the presentation of results for individual types of recreational facilities would not have met minimum criteria of reliability, since the sizes of the samples on which results would have been based would have been very much smaller than those for facilities grouped together. Some detail had to be lost in the interests of reliability. As far as possible the different types of open-air facilities were combined in such a way that the different types of facilities included in a single category would each require roughly the same extent and type of outdoor space. Parks can be oddly shaped and even undulating or hilly, whereas planned sports fields generally have to be located on flat ground. Playlots can obviously be considerably smaller than parks, whereas golfing facilities have to be considerably larger than planned sports fields. The terrain requirements of picnic and camping areas are obvious. It was with these considerations in mind that individual types of facilities were combined into broader categories.

In the interests of the greatest possible reliability in the findings on which recommendations are to be based, it was decided not to sub-divide the sample of Coloured people into different status groups. This was possible among Whites and Indians, due to the larger sample sizes involved, but with Coloureds the sample size was too small to allow for this type of distinction. The results for Coloureds, therefore, are presented for the single group as a whole.

In tables VIII and IX below, percentages are given which are a sufficiently reliable broad index of the proportional increase in the total capacity of local community facilities which different groups require. The figures represent the numbers of people requiring additional facilities of various types, expressed as a percentage which is calculated to the base of the estimated number of existing participants in each social group.

We consider that this can be accepted as an index of the required proportional increase in the capacity of local community facilities required, on the basis of the following assumption. The assumption is that existing community facilities represent a base line which can be either adequate or inadequate, but which is not likely to represent an over-provision of facilities. The results in fact bear out this assumption, since it is only among one or two specific groups that there appears to be no need for additional local community facilities. Generally speaking there is very little evidence in any of our results that any particular open-air recreational facility is over-provided in Pietermaritzburg.

Additionally, it needs to be mentioned that in taking as a basis for the needs for additional local community facilities the numbers of people requiring additional community facilities in relation to all existing participants, the assumption has been that the people requiring additional community facilities in any particular group would display visiting characteristics essentially similar to the rest of the people in the particular group. The assumption was that they would not make very much more intensive or very much less intensive use of any additional facility than is the case with others in the particular group of existing facilities. For these reasons, percentages of people requiring additional facilities, to the base of all existing participants, have been regarded as an index of the increases required in the capacity of existing local community facilities.

However, we also need to make it clear that these results are not exact proportions of people requiring additional facilities, since it was possible for any person to mention more than one type of facility of a similar type. Therefore, it is more correct to regard them simply as an index of the extent of increase required in community facilities.

Another assumption which should be noted is that school sports grounds have not been taken as part of local community open-air recreational facilities. Hence the suggested proportional increases in 'planned sports fields' in the tables below do not include possible increases in school facilities. Sports fields at schools are a very important facility for daily open-air sports activities for a very large and important section of each community - the school children. It is realised, however, that adults generally cannot make use of sports fields at schools, and children wishing to participate in forms of sport other than those organised at schools also have to seek facilities elsewhere.

Since the overwhelming majority of needs expressed were for facilities not likely to be provided by schools, we took the decision to exclude school sports fields from the calculations. Presumably the school authorities have a firm policy in regard to the types of facilities which are to be provided at schools and are not likely to deviate from such a policy in response to community needs. We can assume, therefore, that most of the needs are of a type which can only be met by public authorities.

In parenthesis, however, there is perhaps a need for a recommendation to be made that school sports facilities be made available, if not to everyone in the community, at least to all children in a community as places where games can be played after school hours and over week-ends. This is felt to be essential, since limitations on the amount of space which can be provided make it essential that as many open-air facilities as possible be open to the community at large.

As is the case with all other results presented in this section, the figures in the tables below relate to all types of activities at particular types of facilities; they do not refer only to a need for active participation in sports or the activity for which each type of facility is intended. Hence the figures include a small proportion of people who wish to use planned sports fields for less formal and less planned leisure than competitive sport. However, this type of informal activity is rather less important in the figures below, which reflect the need for additional local community facilities, than it is in the figures relating to the utilisation of existing community facilities, since people asking for additional facilities more often than not have a fairly structured goal in mind when asking for such additional facilities. Therefore, the results presented below are to some extent an under-estimate of the use to which additional local community facilities would be put were they to be provided. The informal uses to which, say, community sports facilities can be put tend only to be discovered after the facility is in existence and cannot be expected to be considered by respondents in stating their needs for additional facilities. In this sense, therefore, the figures on the increased capacity required in local community facilities are minimum figures.

TABLE VIII

ESTIMATED PROPORTIONAL INCREASE IN THE CAPACITY OF COMMUNITY FACILITIES UTILIZED, REQUIRED BY DIFFERENT RACES, SOCIO-ECONOMIC STATUS GROUPS AND DWELLING TYPES IN PIETERMARITZBURG, ACCORDING TO MAJOR TYPES OF OPEN-AIR RECREATIONAL FACILITIES.

SOCIO ECONOMIC STATUS, RACE, AND DWELLING TYPE	ESTIMATED PROPORTIONAL INCREASE IN CAPACITY OF COMMUNITY FACILITIES UTILIZED BY TYPE					
	Parks	Swimming Baths	Planned Sports Fields	Playlots	Golf	Facilities for excursions to scenic areas & beaches
White - Lower Status	3%	41%	54%	33%	NIL	7%
" - Lower Middle	3%	32%	56%	36%	43%	9%
" - Middle	2%	28%	57%	26%	22%	8%
" - Upper Middle	1%	32%	43%	23%	8%	9%
" - Upper	NIL	25%	30%	7%	9%	8%
All Whites	2.5%	32%	46%	30%	15%	9%
White - Houses	2%	32%	52%	31%	12%	10%
" - Flats	4%	29%	32%	33%	48%	5.5%
" - Hotels	5.33%	25%	35%	NIL	24%	16%
Indian - Lower Status	9%	68%	142%	68%	(2% of pop see text)	6%
" - Middle	6%	64%	122%	29%	(5% of pop.)	8%
" - Upper	NIL	43%	116%	29%	NIL	NIL
All Indians	6%	63%	131%	44%	(3% of pop.)	6.5%
Indian- Houses	7.5%	70%	128%	41%	(3% of pop)	7%
" - Flats & Hotels	NIL	17%	166%	54%	(3% of pop).	NIL
All Coloureds *	8%	over 1000% (43% of pop see text)	83%	22% (But taken as 44% see text)	(1% of pop)	4%

* Sample sizes not sufficiently large to allow Coloureds to be divided into Status groups.

In table VIII is presented the estimated proportional increase in the capacity of community facilities utilised which is required by different races and socio-economic status-groups in Pietermaritzburg¹⁾. These figures should be seen as broad estimates of the theoretical increase required in the capacity of that share of community facilities used by members of the particular race or status group. It is a theoretical figure since the use of facilities by different groups tends to overlap. Hence it is not the intention that these indices should be seen as referring to increases required in discrete, separate facilities for different groups. The figures are a reflection of needs and not recommendations for increases in the capacity of particular venues.

Taking the most important first, this being the need for *planned sports fields* we find that, among Whites, the level of need for additional facilities required tends to increase with increasing socio-economic status up to the middle status group, after which it declines sharply among the upper-middle and upper-status groups. Just short of a 50% increase in *planned sports facilities* in neighbourhoods is required by Whites, with the highest level of need being in the lower-middle and middle-status groups, where an increase of slightly under 60% in facilities of this type is required.

Among Indians, the required proportional increase in the capacity of local *planned sports facilities* is very much higher than that among Whites. Overall, an increase of just over 130% is required by Indians in Pietermaritzburg. The proportion tends to decline with increasing socio-economic status.

Among Coloureds, the level of need for additional *sports fields* falls midway between that of Whites and that of Indians, with an increase of just over 80% in *planned sports facilities* being required in Pietermaritzburg.

In regard to neighbourhood *swimming baths*, we note that the facilities for Whites in local neighbourhoods should be increased to the extent of some 32% overall. Among lower-status Whites the proportion is higher than 32%, and in the upper-status group the proportion is slightly lower; this pattern

1) A breakdown is also given by dwelling type, which will not be discussed in the text but utilised presently in the calculation of standards.

being in keeping with the general trend mentioned previously that members of the upper-status group do not require additional swimming facilities to the same extent as others, indicating quite probably that the upper-status Whites can make their own private arrangements to a far greater extent than other groups - even the upper-middle status group.

Among Indians the required proportional increase in *swimming baths* in local neighbourhoods is higher than among Whites, at roughly 63% overall. The lower-status group among Indians has the highest level of need for increased swimming facilities, i.e. roughly 68%, whereas the upper-status group among Indians requires no more than a 43% increase in the capacity of *swimming baths* in the neighbourhood.

Among Coloureds, the proportion requiring additional *swimming baths* is highest of all with the indicated proportional increase at well over 1000%. This figure is totally unrealistic and derives from the fact that Coloured people had no swimming facilities at all at the time of the study. The base-line for the calculation of the proportional increase required was unstable, therefore, and this figure should only be taken to mean that a desperate need existed for swimming facilities. In fact, just over 40% of the Coloured people had need of swimming facilities.

With *playlots*, we note that an increase of roughly 30% is required by Whites, and that the proportion tends to decrease with increasing socio-economic status. The lower and lower-middle status groups require the greatest proportional increase in local neighbourhood playlots, followed by middle and upper-middle groups, with a sharp decrease in the proportion among members of the upper-status group. This trend is understandable in view of the alternative arrangements which wealthier people can make for the play of their children, the lower numbers of children in households of higher socio-economic status, and the larger gardens in the wealthier areas.

Among Indians, an increase of roughly 45% in the capacity of community *playlots* is required, and this proportion also tends to decrease with increasing socio-economic status. The figure is 68% for Indians in the lower-status group, and this proportion drops to roughly 30% in the middle and upper-status groups.

Among Coloureds, on the basis of expressed needs, an overall increase of 22% in local community facilities is required. However, from careful observations in Pietermaritzburg, made by the senior author, it would appear that this figure is artificially low, since very large numbers of Coloured children can be observed to be playing in streets in the afternoons, and this might reflect a higher need for playlots in Woodlands in particular than the expressed wishes of Coloured respondents would suggest. For this reason this figure has been rejected in favour of the figure applicable to Indians, i.e. a need for a 44% increase in the capacity of local community playlots.

In regard to facilities for *excursions to scenic areas and beaches*, we find that Whites require roughly a 9% increase in the capacity of facilities close to Pietermaritzburg, and that there are no important differences between the socio-economic status groups in this regard. Therefore, no distinction between socio-economic groups appears to be necessary in our recommendation that a 9% increase in this type of facility for the entire White community in Pietermaritzburg would be desirable.

Among Indians, the required increase in such facilities close to Pietermaritzburg is slightly lower, and once again the differences between the status groups are not important, except insofar as the upper-status group does not appear to require any increase at all. However, this group is very small in relation to the rest of the Indian community, and can be ignored. A provision for a 6% to 7% increase in the capacity of facilities of this nature close to Pietermaritzburg would appear to be adequate for the Indian community as a whole.

Among Coloureds, the required increase in facilities of this type is even lower, at roughly 4%, but since the sample of Coloureds was small and the result subject to fairly large sampling error, an increase of roughly the same order as that for Indians would be appropriate, i.e. 6% to 7%.

Turning to *parks*, another single category facility, we find, among Whites, that an increase of roughly 2% to 3% in *local neighbourhood parks* is required, and that there are no important differences between the status groups, with the possible exception of the fact that the upper-status group appears to require no increase at all. Thus the need for additional neighbourhood parks is small among Whites and does not exceed a 3% increase in the capacity of existing facilities.

Among Indians, the level of need for improved provision of *parks* in local neighbourhoods is slightly higher than among Whites, at roughly 6%, and this need exists only among the lower and middle-status groups; the upper-status group apparently having no additional needs at all.

Among Coloureds the need for increased park facilities is slightly higher than that among Indians, at roughly 8%.

The need for increased local *golf* facilities among Whites is roughly 15% overall. The extent of this need differs significantly between the status groups and declines sharply in the higher status groups. Generally speaking, though, it can be assumed that what is needed is roughly a 15% increase in the capacity of local community facilities, to be made available for the White community as a whole. In view of the nature of golfing facilities, this would not necessarily merit the construction of any additional golf courses for Whites, unless lower-status Whites have difficulty in gaining access to existing facilities. If this is so, the provision of a somewhat less exclusive golf course by local authorities, with a capacity of at least 15% of existing facilities, should be seriously considered.

Among Indians and Coloureds, the level of need for increased facilities has to be expressed in terms of the proportion of the total population within status groups, since no baseline exists for calculating any indices comparable to those among Whites. However, the figures suggest that consideration might be given to the construction of golfing facilities for Indians and Coloureds, with the capacity to cater for the needs of roughly 900 to 1000 people at present, although obviously capacity for a steady increase on this figure should exist.

TABLE IX

ESTIMATED PROPORTIONAL INCREASE IN THE CAPACITY OF LOCAL COMMUNITY FACILITIES UTILIZED, REQUIRED IN DIFFERENT AREAS OF PIETERMARITZBURG AND AMONG FLATS AND HOTELS, ACCORDING TO MAJOR TYPES OF OPEN-AIR RECREATIONAL FACILITIES.

Area of the City, Flats and Hotels.	ESTIMATED PROPORTIONAL INCREASE IN CAPACITY OF COMMUNITY FACILITIES UTILIZED, BY TYPE					
	Parks	Swimming Baths	Planned Sports Fields	Playlots	Golf	Facilities for excursions to scenic areas & beaches
Central - non white	1%	59% over- whelming -ly Col -oured need)	98% (Mainly Indian need)	12%	(1% of pop)	9%
Central	4%	25%	19%	35%	NIL	3.5%
Scottsville	1%	24%	38%	21%	NIL	7%
Pentrich	7%	107%	110%	40%	(1% of pop)	18%
Mayor's Walk	NIL	34%	76%	42%	NIL	10%
Blackridge/ Prestbury	2%	23%	38%	23%	30%	12%
Wembley/ Clarendon	NIL	49%	63%	18%	26%	6%
Northern Park	NIL	58%	79%	47%	67%	8%
Raisethorpe/ Northdale	9.5% (mainly Raise- thorpe)	113%	165%	64%	(3% of pop)	6%
Hay Paddock - Oribi	3%	28%	98%	41%	36%	8.5%
Woodlands	10%	373%	88%	31%	(1% of pop)	6%
Mountain Rise	5%	49%	89%	9%	(2% of pop)	15%
Flats	4%	28%	54%	34%	77%	5%
Hotels	6%	25%	34%	NIL	27%	16%

In Table IX the same results are presented according to area of the city and for flats and hotels. Turning first of all to the most important item, this being the need for additional *planned sports fields*, we find that the need for increased facilities is greatest in the Raisethorpe/Northdale area. Here the need probably exists mainly in Raisethorpe, since Northdale, being a planned township area, has a much more adequate provision of facilities of this type than has Raisethorpe. In these two Indian communities taken together, an increase just short of 170% in local sports fields appears to be required. Following close after Raisethorpe/Northdale are Pentrich, Lower Central, Hay Paddock/Oribi, Mountain Rise and Woodlands, where increases of between 90% and 110% in the capacity of *community sports fields* appear to be necessary. The other figures in this column of the table are self evident, and it can be noted that other areas require considerably less in the way of an increase in local sports fields than the areas we have mentioned. The lowest level of need for increased sports facilities is in the White Central area of town.

At this stage it might be necessary to repeat some qualifying comments on these figures. It will be noted, for example, that in Northdale and in Raisethorpe an increase is required which is equivalent to a demand from 90% of people, in the two areas. We must remind readers that this would be an artificial percentage in the sense that it does not really represent 90% of the community, since a particular individual expressing a need for additional facilities could mention more than one particular type of sports field in the interview. Because of the duplication of individuals these proportions attain the size that they do. Therefore, where we are dealing with combined categories like sports fields or excursion facilities, the figures are to be understood as reflecting a need for an increase in the capacity of local facilities resulting from multiple needs within sections of the particular community.

In regard to the need for increased *swimming facilities*, we find the greatest level of need in the Woodlands area where just short of 400% increase in facilities is required. As mentioned previously, this is an artificially high figure due to the fact that no facilities at all existed at the time of the survey. In actual fact, roughly 40% of people in Woodlands needed a swimming pool. This is followed by the Raisethorpe/Northdale (mainly Raisethorpe) area and by Pentrich. The lowest level of need for additional

swimming baths is found among hotels and in the White Central area, the Scottsville area, and in Blackridge/Prestbury.

Further commentary is unnecessary, since what has been said already serves to illustrate the way in which these percentages in Table IX should be interpreted. As said before, the proportion of people expressing needs in the Raisethorpe/Northdale area are drawn mainly from Raisethorpe, since this area compares most unfavourably with Northdale in terms of the provision of open-air sites. Once again, in this table, one needs to bear in mind, in regard to golf facilities and facilities for excursions to scenic areas and beaches etc., that the figures do not indicate a need for local neighbourhood facilities close by, but rather for increased provision of facilities close to Pietermaritzburg which could serve all suburbs in the city.

In order to quantify these figures in such a way as to be useful for planners, it is necessary to take them one stage further and to translate them into some index like, possibly, the required number of visits per annum for which facilities have to be provided. If all facilities of the various types mentioned in these two tables were present within the broad boundaries of every area, then there would be some basis for utilising the proportions in the table as a quantitative measure of the extent to which existing facilities should be increased. However, this is not the case in, for example, an area like Raisethorpe, where virtually nothing exists, and one cannot therefore use the figures as any basis for a quantitative recommendation, since the base-line provision to which a planner might wish to add facilities is absent. Similarly, in the Lower Central area, where an equivalent of 65% of residents desire an additional provision of planned sports facilities and where this need is overwhelmingly found among Indian people, there are virtually no sports facilities for Indians. Therefore, there is no base line of open-air space which can be employed as a basis from which the additional space required can be calculated.

7.2 TOWARDS STANDARDS FOR THE PROVISION OF OUTDOOR RECREATIONAL SPACE:

One way of dealing with the problem raised at the end of section 7.1 would be to translate the additional requirements for outdoor space among various groups into the estimated number of visits per annum likely to be generated by the percentage increases in recreational activity which would take place if additional facilities were to be provided. Here one would assume the same ratio of visits to people as applies with existing recreation. We could then specify, broadly, the number of additional visits which, ideally, should be catered for in Pietermaritzburg.

This approach has serious drawbacks. The resulting recommendations would be time-bound and, strictly speaking, would apply only to the time of the survey. Also, this would only give an indication of additional needs, and not of ideal standards. However, this drawback could be overcome by adding the estimated additional visits to existing visits for each sub-group in the population, and to express the result as a ratio of visits to population. This could give, for the different groups, the ideally desired number of visits per annum per 1000 people for different types of outdoor facilities. This could be regarded as a 'standard', since it would be generally applicable to Pietermaritzburg at any time within the not too distant future and would not be restricted solely to the needs for additional facilities as they existed at the time of the field-work. With refinement this could be a very useful index.

The major drawback here, however, would be that it would leave the planner with the thorny problem of translating a standard expressed in terms of annual numbers of visits into a space standard. Since the authors could find no way of making such a transformation of indexes without recourse to a good deal of purely personal judgment, this line of approach has not been pursued.

7.2.1 General Methodology for the Calculation of Standards:

Accordingly, a different approach has been adopted which incorporates an empirically established relationship between recreational visits and outdoor space.

1.) In order to establish a basic relationship between the size of outdoor space and numbers of visits, we needed to use an area where all visits occurred at (urban) facilities within the area. (Here large scenic areas, beaches, etc., had to be excluded). Obviously, the only area to take was the city of Pietermaritzburg as a whole, since patterns of visiting would approximate closely to this requirement.

2.) In order to minimize sampling error and make results sufficiently stable for use in formulating standards, outdoor recreational facilities were classified in the following broad categories:

Parks;

Playlots, Nursery Schools and Creches;

Swimming Baths;

*Small Planned Sports Areas in the City (playing fields),
exclusive of schools;*

*Large Planned Sports Areas (Golf, Polo, Horse-racing,
Motor Sport and Flying activity);*

Excursion Areas (large scenic areas and beaches).

The last two categories were excluded from the calculations, since they represent types of facilities which are usually very large and of irregular size. At such areas it is primarily the quality of the space rather than the quantity which is important, provided a generous minimum of space exists. The most important requirement for such facilities is that there should be a variety of attractions to meet the needs of people, and that they should not be too distant from the city. Previous results, including the assessment of respondents' needs for additional facilities, are useful in providing an indication of the adequacy of existing facilities of this type.

3.) *Swimming Baths, Playlots and Nursery Schools and small planned sports facilities* were further subdivided into White and Non-White facilities, since these facilities are formally or informally segregated. *Parks*, however, were not separated, since members of all groups tend to visit the same parks.

Indians and Coloureds had to be combined into a single category of Non-Whites because, in many instances, the two groups use the same facilities, and because the sample size among Coloureds was rather too small to allow independent calculations to be made for this group.

4.) The next step was to establish the total acreage of *Parks* in the city, the acreages of White and Non-White *Playlots*, *Nursery Schools and Creches*, the numbers of *Swimming Baths*, and the acreage of *small planned sports-fields* (excluding school-fields) for Whites and Non-Whites separately.

5.) At this stage the assumption had to be made that no type of planned outdoor recreational space within the city is presently under-utilized at peak times. This assumption was unavoidable, since nothing in the results of the survey allowed any firm conclusions to be drawn regarding any possible under-utilization. The results of the question on numbers of people at facilities were not in themselves sufficient to assist in this regard, since the sample sizes did not allow a very refined cross-tabulation of this information according to type of facility, time of visit, and nature of activity during the visit simultaneously. The question asked in regard to numbers of people at facilities was also rather too simple and brief and allowed no assessment to be made of each respondent's criteria in giving an answer.

In any case, there is nothing in the results to suggest that *Swimming Baths* and *small planned sports fields* in Pietermaritzburg are under-utilized. *Parks* and *Playlots* are of psychological as well as physical importance to people, and the very openness and spaciousness of relatively under-utilized *Parks* can increase their psychological importance. Hence, we submit, it is impossible to provide a purely quantitative assessment of whether or not a *Park* is under-utilized.

6.) On the basis of the assumption that no type of recreational land is at present under-utilized, we then proceeded to relate the acreage (or numbers) of facilities to existing numbers of visits per annum for the size of the population group in question. We obtained a ratio of land area (or numbers of facilities) to visits per 1000 population per annum for the city as a whole; in some cases for the two race groups in the city as a whole.

7.) The next step was to increase the land area (or numbers of facilities) to a hypothetical level by increasing it by a percentage corresponding to the proportional increases in facilities required in the city as a whole, as given in Tables VIII and IX of the preceding text.



8.) Thereafter, the new land area (or numbers of facilities) could be related to the base population size to give a ratio of land for facilities of different types to population: land per 1000 of population. This then would represent an approximate general set of standards for the population of Pietermaritzburg as a whole (according to race).

This, however, was not our only task, and a further step was required: the calculation of sub-standards for different race and status groups in the population.

9.) In this operation it was decided to calculate separate standards for the different socio-economic status groups and race groups only. It would have been pointless to attempt to calculate separate standards for residential areas, since few existing residential areas are likely to be duplicated in the future growth of the city. Hence such standards would be limited in their general applicability. Race and socio-economic level are the most flexible and generally useful categories in this regard and, once calculated, can be applied to existing areas quite readily. However, dwelling-type was included in the calculations.

10.) The standards calculated for the city as a whole, used in the form of a ratio of land to annual visits per 1000 population, were then taken as an average, to be modified in the light of the differing needs of various groups.

11. For each class and race group, the ideal annual number of visits to types of facilities per 1000 of population was calculated from information on the existing and desired additional activity among the different groups.

12.) These indexes were compared with the general standard for the city as a whole, in order to assess the degree to which particular groups would be likely to be more or less active than average, provided they were given an increase in facilities matching their requirements.

13.) The resulting variations were compared against the indices of optimum existing utilisation, given in Tables V and VI early in the report. Where a particular figure was very far below the index of optimum utilisation and no logical reason could be discerned for the discrepancy, the result was modified to bring it closer to optimum utilisation. Where the calculated figures exceeded optimum utilisation, no modification was considered necessary.

14). The final step was to calculate the increased or decreased space needs of particular groups in relation to the average space standards for the city as a whole. In this way race-specific and status group specific standards were arrived at.

15). Two points require to be emphasised. Firstly, school sports facilities were totally excluded, both from the basic data and from the estimated required increases. This was justified on the grounds that only a negligible amount of the desired increases in facilities referred to facilities of the type which would be likely to be introduced by particular schools. Secondly, in calculating the increased provision of facilities required, both the facilities desired which were not utilised elsewhere, and the facilities desired which were utilised inadequately outside respondents' areas, were included. The latter measure does result in a slight over-estimation of ideal levels of activity, since some activity does take place at remote and inconvenient venues, however inadequate it might be. However, if facilities were nearer at hand the activity would probably increase, so that over-estimation was probably not too great. It was considered advisable to incorporate a measure which would produce a slight over-estimation rather than an under-estimation of space needs, particularly since the calculations, in another sense, can be argued to be under-estimates of needs. Here we refer to the fact that the percentage increases required were based on the expressed desires of respondents and did not include all the informal activity of outdoor recreational sites which tends to occur only once a new facility is in existence.

7.2.2 The Calculation of Standards:

a) Existing Outdoor Space¹⁾:

In calculating the acreages of existing outdoor facilities within the municipal boundaries of Pietermaritzburg, the fact was taken into account that different types of activities often take place on the same site, particularly in the case of games which are played in different seasons. For present purposes, the actual amount of land available was calculated, excluding any duplication of usage. Gross acreages were obtained for all the different

1) Very helpful assistance in calculating the acreages of existing outdoor space in Pietermaritzburg was obtained from Mr. Geoff Price of the Town and Regional Planning Commission.

individual sites in Pietermaritzburg, including the area for parking facilities, service areas, etc. This was considered necessary for the simple reason that planners cannot consider only the nett areas of land necessary for sport-fields and other facilities, but should make provision for essential ancilliary space as well. In Table X below are presented the gross acreages for the various types of outdoor facilities in Pietermaritzburg existing at the time of the survey. All types of facilities are included; not only those for which standards can be calculated (See 7.2.1).

TABLE X

GROSS ACREAGES OF DIFFERENT TYPES OF
PUBLIC OUTDOOR RECREATIONAL FACILITIES
IN PIETERMARITZBURG - 1966

Type of Facility	Gross Acreage
Parks ¹⁾ (racially mixed)	214.4
Playlots, Nursery schools and creches - White	28.7
Playlots, Nursery schools and creches - Non-White	3.9
Swimming baths - White	(4) 5.3
Swimming baths - Non-White	(1) .9
Small Planned sports facilities ²⁾ - (Sports fields) - White	176.2
Small Planned sports facilities ²⁾ - (sports fields) - Non-White	77.8
Golf (all White)	266.1
Motor sport (all White)	264.3
Horseriding (all White)	9.7
Horseracing (Mixed)	120.8
Oribi aerodrome (mixed)	231.8
Scenic areas ³⁾ (mixed)	220.1
TOTAL	1620.0

- 1) Excludes Queen Elizabeth Park which was coded as a Scenic Area in the survey data.
- 2) Excludes school sports grounds.
- 3) Queen Elizabeth Park, Chase Valley Hatcheries and World's View.

In order to obtain an assessment of the amount of outdoor space needed by people in Pietermaritzburg as a whole (as opposed to the actual space existing at the time of the survey), the material on the needs of people for additional outdoor recreational space (as reflected in Tables VIII and IX) was used in order to augment the existing acreages. The results of this operation are presented in table XI below. Only those facilities for which calculations were possible are presented in the table.

TABLE XI

PERCENTAGE INCREASES IN DIFFERENT TYPES OF
OUTDOOR RECREATIONAL SPACE REQUIRED BY
PEOPLE IN PIETERMARITZBURG AND THE ACREAGES
REQUIRED AS A RESULT

Type of Facility	Percentage increase needed	Acreages required as a result
Parks (mixed)	4%	223 acres
Playlots, etc. - White	30%	37 acres
Playlots, etc. - Non-White	44%	6 acres
Swimming Baths - White	32%	7 acres
Swimming Baths - Non-White	270%	3.33 acres
Small Planned Sports facilities (sports fields) - White	46%	257 acres
Small Planned Sports facilities (sports fields) - Non-White	123%	174 acres

We may term the acreages given in the final column in Table XI the ideal open-space requirements in Pietermaritzburg, resulting from our calculations. However, a perusal of the results suggests serious shortcomings in the figures. Particularly in the case of non-White facilities such as playlots and swimming baths, very restricted existing outdoor space, even when 'raised' by a substantial percentage, results in a figure for the ideal space requirement which, in relative terms, is very low. In this way our results have been unduly influenced by the very restricted and crowded character of some non-White facilities; disadvantages to which non-Whites have presumably become accustomed to some extent. As explained in section 7.2.1, all standards calculated in a routine mechanical way will have to be carefully assessed in

comparative terms, and modified if necessary. Obviously some of the acreages in table XI require modification, but this will not be done at this stage, but at a later stage when standards for subgroups in the population have been calculated.

Following the general methodology outlined in 7.2.1, our next step is to relate acreages to annual visits for purposes of both active and passive enjoyment of facilities. In table XII below we present details of the relationship between acreages of open-space of different types and annual numbers of visits, both raised to the 'ideal' levels indicated in tables VIII and IX.

TABLE XII

RELATIONSHIP BETWEEN ACREAGES OF OUTDOOR
RECREATIONAL SPACE AND ANNUAL NUMBERS OF VISITS,
BOTH INCREASED BY THE PROPORTIONAL INCREASE IN
FACILITIES REQUIRED FOR THE POPULATION AS A WHOLE

Type of Facility	Augmented Acreages (See table XI)	Estimated Annual No. of visits	Acreage per 1000 visits p.a.
Parks (mixed)	223	3113464	.0716 acres
Playlots etc. - White	37	535347	.0691 acres
Playlots etc. - Non-White	6	306840	.0196 acres ¹⁾
Swimming baths - White	7	1169803	.0060 acres
Swimming baths - Non-White	3.33	610386	.0055 acres
Sports fields - White	257	1263079	.2035 acres
Sports fields - Non-White	174	760651	.2288 acres

NOTE: Since both acreages and visits have been 'raised' by the same proportions, the ratios in the final column reflect the existing position as well.

1) Subsequently trebled - see text.

The ratios in the final column of Table XII are interesting in that they provide a comparison of the extent of 'crowding' at some White and non-White facilities. Here the problem raised immediately beforehand (in connection with the results in table XI) is thrown into sharper focus. From the ratios in table XII it would seem that relatively heavy over-utilisation of existing space is a particular problem only in regard to non-White playlots. Tentatively, it would appear at this stage that the acreage of non-White playlots should at least be trebled in order to bring the ratio of visits to space into line with that pertaining to White playlot facilities.

Having arrived at a ratio of acreages to visits (acreages per 1000 visits), we are now in a position to calculate initial standards for the various sub-groups in the population. Previous results presented in the text have provided ratios of numbers of visits per person per annum (an index of intensity of activity), for each of the various race and status groups in the population. These ratios have been modified by increasing the estimated numbers of visits per annum in proportion to the indexes of additional needs for outdoor recreational facilities for various groups, some of which were presented earlier in Tables VIII and IX in the text. These modified ratios could have been used immediately as a means of translating the calculated ideal visiting patterns of various groups into space needs, employing the ratios of visits to acreage in Table XII.

However, it was considered necessary to carefully assess the indexes of intensity of activity - the estimated average numbers of visits per person per annum - as modified, in order to correct any particularly aberrant figures which might have resulted from a particular group having extremely limited recreational facilities available, causing their existing patterns of recreational activity to be abnormally low. In such a case, even when the initial index is modified in the light of expressed needs, as we have done, the result will nonetheless reflect the markedly inadequate 'baseline' activity of the particular group.

In Table XIII below, therefore, we present two indexes of intensity of activity: 1) the average number of visits per person per annum as augmented by the realistic expressed needs of the members of the particular group concerned, and 2) (in some cases) indexes which have been subjected to further modification after a careful consideration of a variety of findings and impressions from the entire study, and after a comparison of indices with one another.

TABLE XIII

INDICES OF IDEAL EXTENT OF PARTICIPATION IN OUTDOOR RECREATIONAL FACILITIES. ACCORDING TO SOCIO-ECONOMIC STATUS RACE & DWELLING TYPE: FIRSTLY, AS CALCULATED ON THE BASIS OF QUANTITATIVE SURVEY RESULTS. & SECONDLY AS MODIFIED IN THE LIGHT OF QUALITATIVE ASSESSMENTS.

Race, Socio-Economic Status & Dwelling Type.	Estimated Ideal Average No. of Visits per person per annum according to type of Recreational Facility.							
	PARKS		PLAYLOTS		SWIMMING BATHS		SMALL PLANNED SPORTS FACILITIES (Sports Fields & Courts)	
	Index Quantitatively Derived	Qualitatively Modified Final	Index Quantitatively Derived	Qualitatively Modified Final	Index Quantitatively Derived	Qualitatively Modified Final	Index Quantitatively Derived	Qualitatively Modified Final
WHITE - Lower	46	46	28	28	34	34	17	20
Lower - Middle	46	46	16.33	17	26.5	27	41	41
Middle	49	49	6.33	8.5	22	25	39	39
Upper - Middle	95	95	8.5	8.5	55	55	38.5	38.5
Upper	69	69	4.33	4.33	21	21	30	30
ALL WHITES	56	57	14.33	14.75	30	31.75	33.5	35
WHITE - Houses	56	56	16.75	17	33	34	34	35
Flats	63	63	5	8	21.5	25	31.5	34
Hotels	47	56	2.33	3	17.5	20	34	34
INDIAN- Lower	26	35	3.33	10	8.5	15	17	20
Middle	49	49	4	10	15	18	26.5	33
Upper	71	71	30	30	20	20	39	39
ALL INDIANS	37	45	5.75	12	11.5	17	28	28
INDIAN- Houses	40.5	46	3.5	10	11.5	17	30	30
Flats & Hotels	10	35	28	28	15	17	8	11
ALL COLOUREDS	32.5	35	37	37	4.33	17	31	33

1. The small size of the Coloured sample made a breakdown according to Status and Dwelling Type impossible.

NOTE: The averages for subgroups taken together do not always correspond to Race totals, due to respondents of indeterminate Status being omitted.

For reasons of space we will not discuss in any detail the basis of the qualitative modifications made to the indices derived quantitatively. For the most part the reasoning is quite evident in the figures presented. Indices which appeared abnormally low in the light of comparison and of impressions from the study have been 'raised'. With regard to Planned Sports facilities, the exceptional degree of enthusiasm for field-sports like soccer and hockey etc., among Coloured and Indian people has been taken into account in modifying the figures. The participation of these groups could equal that of Whites quite easily it is felt, provided a generous provision of facilities were possible.

All that remains, now, is to convert the 'ideal' indices of participation; the modified numbers of visits per person per annum, into ratios of acreage to population, using the figures on acreages per 1000 visits calculated and presented in Table XII

7.3 STANDARDS FOR THE PROVISION OF OUTDOOR RECREATIONAL SPACE IN PIETERMARITZBURG:

In calculating the following standards, one modification has been made to the ratios of acreage to visits in Table XII. The figure for Non-White Playlots has been raised to correspond roughly to the ratio applicable to White Playlots. The need for this has already been referred to; the ratio for Non-White Playlots is the only figure which reveals, in objective terms, a considerable extent of over-crowding at these facilities. This should not be seen as suggesting an over-generous provision of land for Indian and Coloured children. Because of the smaller average size of private gardens in Non-White areas, these children have a very much greater need for a generous provision of public space for games and exercise. Hence the ratio used for Non-White playlots is .0588 acres per 1000 visits, instead of the figure of .0196 appearing in the table.

In Table XIV below, we present the final results of the major exercise of the present study - the open-space standards.

These standards have been calculated to as great a degree of refinement as the coverage and sample design of the study has permitted. They represent a first attempt in South Africa to quantify the results of a survey investigation of recreational needs, for the benefit of planners. However generous

TABLE XIV

STANDARDS FOR THE PROVISION OF PUBLIC OUTDOOR RECREATION-
AL SPACE FOR MAJOR TYPES OF URBAN FACILITIES, GIVEN ACCORD-
ING TO RACE, SOCIO-ECONOMIC STATUS AND TYPE OF DWELLING
IN PIETERMARITZBURG.

Race, Socio-Economic Status and Dwelling Type	Standards, expressed in ACRES PER 1000 POPULATION .			
	Parks	Creches, Nursery Schools & Playlots	Swimming Baths	Planned Urban Sports Facilit- ies. (1)
White - Lower Status	3.3a	1.9a	0.21a	4.1a
Lower - Middle	3.3a	1.2a	0.16a	8.3a
Middle	3.5a	0.6a	0.15a	7.9a
Upper - Middle	6.8a	0.6a	0.33a	7.8a
Upper status	4.9a	0.3a	0.13a	6.1a
White - Houses	4.0a	1.2a	0.21a	7.1a
Flats	4.5a	0.6a	0.15a	6.9a
Hotels	4.0a	0.2a	0.12a	6.9a
ALL WHITES	4.1a	1.0a	0.19a	7.1a
Indian - Lower Status	2.5a	0.6a	0.08a	4.6a
Middle	3.5a	0.6a	0.10a	7.6a
Upper Status	5.1a	1.8a	0.11a	8.9a
Indian - Houses	3.3a	0.6a	0.09a	6.9a
Flats & Hotels	2.5a	1.6a	0.09a	2.5a
ALL INDIANS	3.2a	0.7a	0.09a	6.4a
ALL COLOURED PEOPLE (2)	2.5a	2.2a	0.09a	7.6a

(1) Includes all sports fields, courts, greens, etc. (Cricket, Hockey, Soccer, Basketball, Netball, Croquet, Jukskei, Rugby, Tennis, Bowls, etc., etc., but excludes very large facilities such as Golf which cannot be regarded as "neighbourhood" facilities.

(2) The small sample made it impossible to subdivide the Coloured Group.

these standards may appear to be in comparison with commonly accepted estimates of open-space needs, we submit, very earnestly, that they are minimum standards in the light of the needs revealed by our investigation.

No claims can be made regarding the validity of these standards, other than those implicit in our methodological procedures, which we have attempted to describe in all appropriate detail. The only true and final test of the validity of our results will be in the application of these findings in urban neighbourhood planning. It is our earnest hope that such a test will be carried out. We can recommend this with full confidence that any community in which these results are applied will derive substantial benefit.

CHAPTER VIIIOVERVIEW

The findings presented in the body of this report are extremely difficult to summarise. Most of the detailed trends in outdoor leisure activity and needs which we have described do not combine readily with each other in broader patterns suitable for presentation in summary form. This is one reason why a comprehensive overall summary will not be attempted in this, the final section. Another reason is that such a summary would perhaps be inappropriate. This report has been written, not for laymen, but primarily for planners; people who, hopefully, will not baulk at studying the more detailed commentary in the text, if not the statistical tables themselves in which a wealth of information additional to that discussed in the text is contained.

All that will be attempted here is brief mention of the more striking and important findings contained in this report, with the major emphasis on the needs and problems of different groups in Pietermaritzburg. If it appears that undue emphasis is placed on differences between the races in this overview, it is only because the contrasts between the outdoor recreational patterns of Whites, on the one hand, and those of Indians and Coloured people, on the other, were by far the most dramatic and compelling findings of the study.

Firstly, let us look at all public outdoor recreational activity, and single out and consider those groups in Pietermaritzburg which reveal a typical level of activity which is significantly below the average for the population as a whole.

Lower-status Indians as well as Coloured people in general make less use of *parks* than is typical for the population as a whole. Lower-status Whites, Indians and Coloured people, in general, are much less inclined, or able, to enjoy *excursions to Scenic areas and Beaches* than others. The relative incidence of visits to *Swimming baths* is very much lower than average among middle-status Indians; and among lower-status Indians it is even lower, while among Coloured people, the relative amount of activity is exceptionally low - it is very much less than among any other group in the city. The relative frequency of visits to *Small Planned Sporting facilities* (playing fields and courts) is lower than average among lower-status Whites, middle-status Indians, and is

particularly low among lower-status Indians. Lower and middle-status Indians reveal a particularly low relative level of activity at *Children's Playgrounds*. Recreational activities like *golf, flying activity, motor racing, horse racing and horse riding*, which have all been included under the heading of *Large Planned Sporting facilities*, attract a diversity of different groups of people with the result that no particular trends are apparent. *Golf*, however, tends to attract only middle to upper-status Whites.

The comments given above have referred to all forms of activity, whether they involve active or passive enjoyment of the particular type of recreation. The patterns generally, tend to be fairly similar when we consider only active participation in various types of recreation among people of 12 years and older (who are assumed to be able to participate at their own volition). In this regard, we find that deliberate, planned visits to *Parks* (i.e. visits which are not purely incidental) are less common than average among lower-status Whites and lower and middle-status Indians. Planned visits to *Large Scenic areas* are less frequent than average among all Indians and all Coloured people. The relative incidence of active visits to *Swimming baths* (i.e. for purposes of swimming) is lower than average among middle and lower-status Indians and is exceptionally low, once again, among Coloured people. At *Small Planned Sporting facilities*, the one group which reveals a relative amount of activity which is markedly less than average is the group of lower-middle status Whites.

All the comments given above combine to suggest that lower or lower-middle status Whites and, more particularly, Indians and/or Coloured people tend to be less active at outdoor recreational activity than is typical for the population of Pietermaritzburg in general. This trend is borne out by a number of other patterns emerging from the tabulated results of this study. In particular, it is significant that the proportionate contribution of Coloured people and Indians to outdoor recreational activity, in terms of percentages of visits for both active and passive recreation, is consistently lower than their respective proportions in the population. These two groups are consistently under-represented in the overall incidence of most types of outdoor recreational activity in Pietermaritzburg. Very broadly, there appears to be a correspondence between low socio-economic level or low ethnic status and a relatively low level of outdoor recreational activity. Poor people are not only poorer in material means but it would seem, poorer in terms of their leisure pursuits as well.

Speaking specifically of the two non-White groups, we find among Indians, that it is only in *Soccer, School sports, and Tennequoits*, that Indians participate to a relative extent which is equal to or greater than their proportion in the population. Among Coloured people this applies only in regard to visits to *Children's Playgrounds*.

Among the Indian and Coloured groups, it is very young children and women in particular, who appear to be seriously deprived of outdoor recreational activity, in objective terms.

When we consider all leisure pursuits, as opposed to public outdoor recreational activity only, we also find a broad correlation between socio-economic level and the amount of leisure activity. Lower and lower-middle status Whites mention significantly fewer current leisure pursuits than other Whites, and Coloureds and Indians mention even fewer than lower-status Whites, on average.

All the patterns referred to above do not necessarily reflect relative access to adequate facilities; in part they are also a reflection of the preferences of particular groups. One cannot infer needs for outdoor facilities from existing patterns of activity. Other results have to be consulted in order to assess whether present facilities are adequate or not.

Some guide to the adequacy of facilities is provided by the extent to which facilities used by people are perceived to be over-crowded. In general we find that a rather high proportion of Indians consider that their facilities are over-crowded; that the proportion among Coloureds is lower, and that it is lower still among Whites.

In particular, over-crowding at outdoor facilities appears to be a serious problem at the following types of outdoor recreational facilities:

Swimming Baths for Whites, Indians and Coloureds.
 Motor-sport spectator facilities for Whites, Indians and Coloureds.
 Horse racing spectator facilities for Whites, Indians and Coloureds.
 Soccer grounds for Indians.
 School sports facilities for Indians.
 Rugby grounds for Indians.
 Children's Playgrounds for Coloureds,
 and to a somewhat lesser extent:
 Cricket grounds for Indians.
 Parks accessible to Indians.

Over-crowded facilities are a particular problem for lower and middle-status Indians and for lower-status Coloured people.

More directly concerning the need for additional facilities, respondents were asked to give reasons as to why they were not able to enjoy forms of outdoor recreation which they considered desirable.

Roughly 22% of Whites mentioned a lack of adequate facilities as a reason, and this proportion rose to roughly 44% among Coloureds, and to roughly 56% among Indians. It is of particular interest to note, however, among all race groups, that people in the higher levels of socio-economic status were more inclined to mention a lack of facilities than people in the lower-status groups. This finding is important in that it suggests that the relatively low levels of activity among the lower-status groups, within racial groups, are due, probably, more to a lack of interest in outdoor recreational activity than to a absence of adequate facilities.

In order to arrive at an adequate assessment of the additional facilities required by different groups, each respondent's interview schedule was carefully examined, and all expressions of need or desire for additional facilities were related to age, sex, time available for leisure, to the person's existing pattern of recreation, as well as to any significant problems affecting the person's leisure pursuits, such as a lack of transport and the accessibility of appropriate facilities. The aim of this time-consuming exercise was to make it possible to specify for each respondent, those desires for additional facilities which were realistic and appropriate to the circumstances of the individual.

On this basis, it could be established that whereas only roughly 20% of Coloureds and Indians realistically require NO additional facilities for public outdoor recreation, the proportion among Whites is as high as 55%. Among Whites it is in the lower-middle to upper-middle status groups that the need for additional facilities is highest. Similarly, among Indians it is the middle and upper-status groups, and not the very lowest status group, which contain the largest proportions of people realistically requiring additional facilities. No distinctions between the status-groups within the Coloured community could be made in this particular analysis. These results also support the earlier conclusion that it is not necessarily always the least active status-groups, within categories of race, in which the need for additional facilities is highest.

Among Whites, the major realistic needs for increased provision of facilities are for:

- Tennis courts.
- Water sport facilities.
- Children's Playlots.
- Swimming baths.
- Trampolining and ice-skating, and for an assortment of
- Playing fields of a less conventional type.

Indians realistically appear to require the following types of additional facilities:

- Tennis courts.
- Children's Playlots.
- Swimming baths.
- Cricket facilities.
- Netball facilities.
- Hockey facilities.
- Soccer facilities.

Coloured people have a realistic need for the following additional facilities:

Swimming baths.
Tennis courts.
Hockey facilities.
Soccer facilities.
Parks.
Children's Playlots, and an assortment of less conventional
Playing fields.

In the immediately preceding chapter in the report, these needs for additional facilities were related to patterns of existing recreation and to the amounts of outdoor space available for different activities among the three race groups, in order to arrive at broad standards for the provision of outdoor recreational space for different status and race groups, and for groups living in houses, flats and hotels in Pietermaritzburg. These 'standards' are set out in detail in the preceding chapter and need not be repeated here.

The 'standards' arrived at, as far as can be ascertained, represent a very first attempt in South Africa to quantify the outdoor recreational space needs of different groups of people in an urban community, on the basis of survey results. The present study has been very much in the nature of a pioneering attempt to provide empirically-based standards for the planning of community recreation, and, as with most new operations, many major practical and methodological problems have had to be overcome, some successfully, some less successfully. Without doubt, the final recommendations are not as accurate and refined as those of future studies are likely to be, but, nevertheless, it is our view that they represent an adequate and sufficiently reliable basis for urban planning. If anything, the 'standards' set out err on the side of conservatism - they are minimum standards - for several reasons. Two major reasons are, firstly, that once any public outdoor recreational facility is provided it tends to acquire a range of additional informal and incidental uses which cannot be taken into account in estimating community needs on the basis of survey data; and secondly, the results could not take into account fully those needs of people which are less obvious and of which the people interviewed may not be fully aware.

In any community, it is probably true to say that there are needs which would only become apparent if people are exposed to new opportunities for outdoor recreation, and these needs are not reflected fully in our results. This might apply particularly to members of less-privileged groups among the three races in Pietermaritzburg.

In this sense our research has not been able to meet completely one of the important ideal requirements set out in the first chapter of this report. However, in order to achieve this ideal, our research would have had to include a great deal of intensive depth investigation of the needs and desires of people, which would have been beyond the scope of the present project. We submit, however, that in providing some assessment of minimum 'standards', we have provided planners with broad guidelines which are an advance on the often arbitrary rule of thumb procedures which have had to be adopted hitherto in the planning of public outdoor recreational facilities.

It is our earnest hope that these recommendations will be implemented in future years. We are convinced that their implementation at the very least, will lead to a significant improvement in the quality of leisure among all people in Pietermaritzburg.



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