

**THE PLANNING AND USE OF OUTDOOR RECREATIONAL PUBLIC  
OPEN SPACES IN GABORONE. //**

*Declaration.*

This thesis is my original work and has not been  
presented for a degree in any other University.

BY

Violet Tendane Kaunda.

*Signature*

Violet T. Kaunda.

A THESIS SUBMITTED IN PART FULFILMENT FOR THE DEGREE OF  
MASTERS IN PLANNING. DEPARTMENT OF URBAN AND  
REGIONAL PLANNING. UNIVERSITY OF NAIROBI.

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Declaration.

This thesis is my original work and has not been presented for a degree in any other University.

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(iii)

My greatest appreciation is to the Department of Urban and Regional Planning staff, who through their diligent effort have managed to equip me with various skills and knowledge which enabled me to put together this thesis. Their inputs during visits and seminars were well appreciated. Beyond that, I pass my sincere gratitude to my supervisor Mr. Zachariah Malsobe, who was ready to assist me all the time. His inexhaustible patience instilled hope and courage during moments of despair when

**Dedicated to my son "Oatlotse" who cheered me up during academic pressures.**

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Maphanyane can not be over looked. She seemed to be sensing moments when I was in a dilemma. Her timely assistance helped me to overcome most problems which hindered the progress in my thesis writing.

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Last but not list, I would like to cherish my success with my sister Ms Mosadimotho Gaborone who inspired confidence in me towards my academic achievements.

... has fairly covered the provision of open spaces. The big problem which emanated from this study in that open spaces are not developed, as well there seem to be a deficit in their supply especially when it comes to sports grounds.

It was also empirically established that social amenities like toilets, benches, dust bins etc are not provided for.

The study further revealed that the Section of Parks, Cemeteries and Open Spaces is technically and professionally incapable of efficiently carrying out its responsibilities.

In order to curb this problem, it is suggested that the local government should give priority to the development of open spaces. Justification of this kind of

**Abstract.**

One of the urban development problems which has not yet received much attention is outdoor recreational public open spaces. Therefore, this study sets out to investigate the way recreational open space problems manifest themselves in Botswana, using Gaborone as a reference point. The main contention here is that open spaces are a neglected area of development and as a result, they do not evoke the interest of the city dwellers. The modified version of Lancaster's Model, of 1983 was used to conceptualize the problems.

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The study further revealed that the Section of Parks, Cemeteries and Open Spaces is technically and professionally incapable of efficiently carrying out its responsibilities.

In order to curb this problems, it is suggested that the local government should give priority to the development of open spaces. Justification of this kind of

development as a priority area should be seen as a long term benefit of good environmental quality and the achievement of the physical health of the city dwellers.

The involvement and the co-ordination between the community, Central Government and the Local Authority could lead to attractive open space environment for the benefit of all City dwellers. (viii)

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1. INTRODUCTION.

Open spaces provide a means of escape from the crowded and congested conditions of the city. They offer a place where the individual can find relief from the pressures of modern life. The availability of such spaces is a measure of the city's progress and its concern for the welfare of its citizens. In the past, open spaces have been neglected and their maintenance has been left to chance. This report aims to identify the existing open spaces in the city and to propose a plan for their development and maintenance. The available open spaces in Calicut are depicted on the attached map and are classified into three categories: (a) public open spaces, (b) private open spaces, and (c) semi-public open spaces. The government should pay special attention to these open spaces. They should be developed and be maintained. The general lack of maintenance of public open spaces is a serious matter and should be given the highest priority in the city's development plan.

## CHAPTER 1.

## 1.0 INTRODUCTION.

In urban areas of Botswana, recreational open spaces have reflected the problem of neglect and there is generally lack of commitment to develop them. It is only in Francistown and Selibi-Pikwe where efforts seem to have been made towards the development of public open spaces. Even though Orapa town is wholly owned by a mining company, it could be used as a model in terms of the greenery of its open spaces. In contrast to recreational open spaces, roundabouts are well landscaped and well maintained in all urban areas of Botswana.

Open spaces provision seem to be inadequate and imbalanced. They seem to be under-utilised and this could be due to the problem of accessibility, lack of social amenities, maintenance, poor landscaping and lack of understanding of the role of outdoor recreational open spaces in the urban environment.

The available open spaces in Gaborone are depleted of the natural resources such as vegetation. Arid climate and poor soils necessitates the government to pay special attention to these open spaces. They need to be developed and be maintained. The general lack of commitment from planners and decision makers to landscape and maintain them properly cause stress to the natural environment.



Heckscher A, (1977.), observed that if urban open spaces are neglected, urban life diminish in quality.<sup>1</sup>

The policy to develop open spaces is not explicit. This is further evidenced by the fact that the development of open spaces is not covered in legislation. The Section of Parks, Cemeteries and open spaces are overburdened in that they are usually small and do not have sufficient qualified manpower. Co-ordination is a problem between local authorities and central government and even within central government departments which are concerned with the planning and management of open spaces.

This study will try to establish the actual problems affecting Gaborone open spaces and the magnitude of these problems. It will be found out how the poor status of the open spaces affect their demand and supply.

### 1.1 STATEMENT OF THE PROBLEM.

Gaborone people spend most of their leisure time by engaging in indoor recreation such as visiting discotheques and restaurants. Another popular indoor recreation which people do not want to accept easily is bar visiting. Gaborone people still have a lot of attachment to the rural population. So they normally visit 'lands' and 'cattleposts' during the week-ends, not necessarily to pass time, but to see relatives and also

to engage in alternative informal economic activities like arable and livestock farming. In Gaborone, people generally allocate little time to outdoor recreation such as visiting sport fields, private and public parks. The low level of demand for open spaces is a symptom of the problem of neglect of recreational open spaces. Currently the status of Gaborone outdoor recreational open spaces are not appealing to the eyes of the urban populace; They do not seem to have been designated for any purpose, apart from being sites for selling and driving lessons. Misuse and negligence as noted by Crowe S, (1956.), inevitably lead to bad landscape.<sup>2</sup> The problem of neglect is more obvious if you compare the well landscaped round about and the depleted open spaces in Gaborone. Below is one of the depleted open spaces illustrated by Plate No. 1.

Plate No. 1.



A bare open space (Tsholofelo Park).

Source: Field Survey, (1992).

The problem is also reflected by the fact that children play on the streets at the risk of accidents.

Observations have indicated that Gaborone open spaces are not adequate to serve the existing population of 133,468.(Population Census Results of (1991)).<sup>3</sup> Gaborone as the capital of Botswana, has over years come under tremendous population pressure because it has attracted quite a considerable amount of immigrants who seek for employment opportunities. So most of the resources have been directed to Gaborone City, and it

therefore grew much faster than other towns. Its rate of growth has been 8.4% per annum on average from 1981 to 1991. (Preliminary Census Results, (1991)).<sup>4</sup> This high population growth rate has exerted pressure on existing facilities like recreational open spaces thereby depleting their environment and rendering them inadequate. The open space environment in Gaborone is indeed depleted as illustrated by Plate No. 2.

Plate No. 2.



A depleted open space (Borakalalo Park) in Extension 11.  
Source: Field Survey, (1992).

The few open spaces available are inequitably distributed therefore they are not easily accessible to

some members of the society. For example, Newly developed areas like Gaborone West, New Naledi (a site and service scheme area) and even old parts of the city like Extension 2, 7, 10, 12 and 14, have limited or no developed open spaces at all. This could have been attributed to by the fact that in urban areas, the level of service provided in an area is a function of affordability since people have to pay for the service rendered. This economic concept of cost recovery does not concern itself with equitable distribution of resources. As such the majority of poor people are far from the few developed open spaces. Accessibility to these few open spaces which are also far for some people becomes a problem to the poor segment of the City dwellers who find public transport expensive for them.

Toffoli P.H, (1992), observed that Gaborone is the world second fastest growing City.<sup>5</sup> The high rate of urbanisation has inevitably brought about a lot of structural developments. The recent trend has been that, open spaces are being encroached upon by other land use activities which are more economically viable like commercial and residential developments.

The proposed development plan for Gaborone, has recommended a reduction in open space plot size to 6m<sup>2</sup> per person, the reason being that there has been a

reduction in residential plot sizes. Since a reduction in residential plot sizes, automatically leads to a reduction in backyards spaces, garden space and children's play grounds. Rationally one would expect a reduction in residential plot size to lead to a simultaneous increase in open spaces.

Botswana has an arid type of climate which has resulted in a fragile eco-system. Hence the open spaces would have fragile vegetation cover unless they are well maintained. Yet in Gaborone, outdoor recreation is a very neglected area of development where most of the open spaces are very bare and in some instances are used as dumping grounds. Even the basic amenities such as rubbish bins, benches and toilets are not provided in most cases. That is the reason why these few open spaces are under-utilized. The existence of uncoordinated activities such as kiosks and driving schools within open spaces is taken as a normal situation in Gaborone. So one wonders whether some of these land uses are meant to complement recreational facilities or they are meant to displace the open spaces.

Generally, open spaces in Gaborone are unattractive and it is questionable whether the society, the local authorities as well as planners appreciate their role.

So far studies have given outdoor recreation

negligible attention as opposed to indoor recreation. A significant amount of development has been done concerning indoor recreation and no published study reports have been undertaken on outdoor recreation for Gaborone in particular and not to mention other smaller urban centres of Botswana.

Therefore this study seeks to examine the current planning and use of outdoor recreational open spaces in Gaborone as a means of determining policy attention and also the level of the need of these open spaces by the urban community in Botswana. It will also look into the current characteristics of the existing open spaces in terms of landscaping and the provision of social amenities such as toilets, refreshment facilities etc.

The study will also find out whether the current management of recreational open spaces is efficient. This study is very important in that it will provide information for planning of the future provision of recreational open spaces facilities in urban areas of Botswana.

Outdoor recreation is taken as a residual activity because it is normally, given low priority when it comes to allocation of funds. If outdoor recreation was taken seriously, more funds would be allocated to the Section of Parks, Playgrounds and Cemeteries in Gaborone City

Council. Planners and decision makers also seem not to consider it as one of the major land use activities because they do not protect open spaces against encroachment by other land use types. For instance in Gaborone, land which has been set aside for open spaces, tends to have uncoordinated and mixed developments. Therefore one wonders whether these are incidental development meant to facilitate the operation of open spaces or they are placed there to make efficient use of this undeveloped land.

Taking all these observations into account, one is bound to think that People do not understand the role of open spaces in urban development. This study will sensitise the decision makers, planners and the community at large about the importance of recreational open spaces vis-a-vis other development activities.

Among other things this study will reveal the shortcomings and strengths of the existing open spaces. It will examine the supply and the demand patterns of Gaborone Open Spaces. It will also establish their sufficiency and distribution. The status of the open spaces will be studied very closely, in so far as maintenance and availability of social amenities is concerned. Thus decision makers and planners will have a basis upon which they can correct the current situation.



Gaborone City being the biggest and the capital city of the Botswana, most tourists do visit it. Therefore it has to have attractive open spaces which are memorable so as to enhance the tourist sector of the economy. Hence there is the need to study the status of existing open spaces and to have an input in their future development.

Since this study is also evaluative in nature:

## 1.2 OBJECTIVES. *distribution of open spaces will be*

The Study sets out the following as the main objectives. *various and wide field visits to different*

1. To examine the spatial distribution of recreational open spaces according to residential densities and their adequacy in relation to the existing population.
2. To ascertain the level of demand and its relationship with socio-economic factors such as education, income and car ownership.
3. To investigate how landscaping and the provision of social amenities affect the demand of open spaces.
4. To study the management structure of the responsible authorities and their effectiveness in implementing laws and regulations.
5. To predict the likely future demand for open spaces and come up with the necessary recommendations.

*physical attributes affect the demand and hence*

*of open spaces. The null hypothesis (H<sub>0</sub>) is that*

### 1.3 HYPOTHESIS.

In line with the set objectives, the main hypotheses are put forward.

1. There is a premise that the provision of recreational open spaces in urban areas changes in accordance with residential densities. Since this study is also evaluative by nature spatial distribution of open spaces will be assessed by studying available structure plans for Gaborone and make field visits to different areas of differing densities.
2. The hypothesis is that there is a significant relationship between the number of open space visits with the level of income and the level of education. Since the information to be collected here is interval type of data, Cross tabulations will be run and Chi-square will be used to test the relationships. However the influence of two variables will be tested separately.
3. The hypothesis ( $H_1$ ) is that the organisational structure responsible for implementing plans is ineffective.
4. The review of literature has revealed that the physical attributes affect the demand and use of open spaces. The null hypothesis ( $H_0$ )

is suggested is that there is no significant difference in the level of demand for open spaces with varying physical attributes.

5. It is the contention of this study that policy and legislation on planning and management of outdoor recreational public open spaces are inadequate.

#### 1.4 OPERATIONAL CONCEPTS AND DEFINITIONS.

Recreation Facility - It is the land which has been developed for recreational use during leisure time as well as the amenities which is meant to facilitate the functioning of these open spaces.

Leisure Time - It refers to spare time, which is spent outside the normal working hours by participating in enjoyable or relaxing activities which helps to break from the boring daily routine. Leisure time can be spent on an organised or unorganised setting.

Open space - It is open land set aside within the built up environment for recreational use or future development.

Outdoor Recreation - It means activities which are performed in the open air for people to derive some pleasure e.g. picnicking, watching a drive-in-cinema or just being a spectator when others are physically engaged

in sports. It is one of the three typical Batswana

Indoor Recreation - There are activities which are undertaken within the built up environment.

Landscaping - It is the improvement of open spaces for aesthetic reasons. That is to enhance the beauty of open spaces and the general environment, either by planting trees, flowers, grass or by introducing some artificial structures to produce some kind of aesthetic quality.<sup>6</sup>

Participation Days - It is the average number of times that each individual user will participate in a recreation activity within a year.

Turnover Rates - The number of times a recreation activity spatial unit can be used during a single day.<sup>7</sup>

Attraction capability - This is the primary factor determining the service radii of any recreation facility. That is the actual drawing power of a park or ground is determined by the individual activity or the special interest facilities with that park/ground and the degree to which they will satisfy social recreation desires of the projected participants.<sup>8</sup>

Cattlepost - It is one of the three typical Batswana settlements where cattle are kept.<sup>1\*</sup>

<sup>1\*</sup> Traditionally Batswana have three types of residents. These 'lands', 'cattle-post' and 'home' (Village/Town/City).

Lands - It is one of the three typical Batswana settlements where arable farming is produced.

### 1.5 THE STUDY AREA.

Gaborone City borders with Tlokweng village at Notwane river in the east and in the west with Kweneng District, with the boundary passing on the edge of Mogoditshane Village. In the south it goes up to Kgale hills. In the North it borders with Kgatleng District including Phakalane Estate. Phakalane estate is a privately owned township in the second phase of its development. Previously it was administered by South East District Council (S.E.D.C.). Currently it is part of Gaborone City. It is now being administered by both Gaborone City Council (G.C.C.) and S.E.D.C. The area under study runs to about 11 kilometres South to North and 8.5 kilometres East west excluding Phakalane estate. Gaborone city falls within the administrative and political boundaries of Gaborone City Council.

The population of Gaborone city was 59,656 in 1981 and in 1991 it was 133,486. The average population growth rate was 8.4% between 1981 and 1991.<sup>9</sup> The population structure by age shows 61.7% of the population between the age of 15 and 44. This is the group which intensively engage in recreation activities. See Gaborone

City on the map 1.

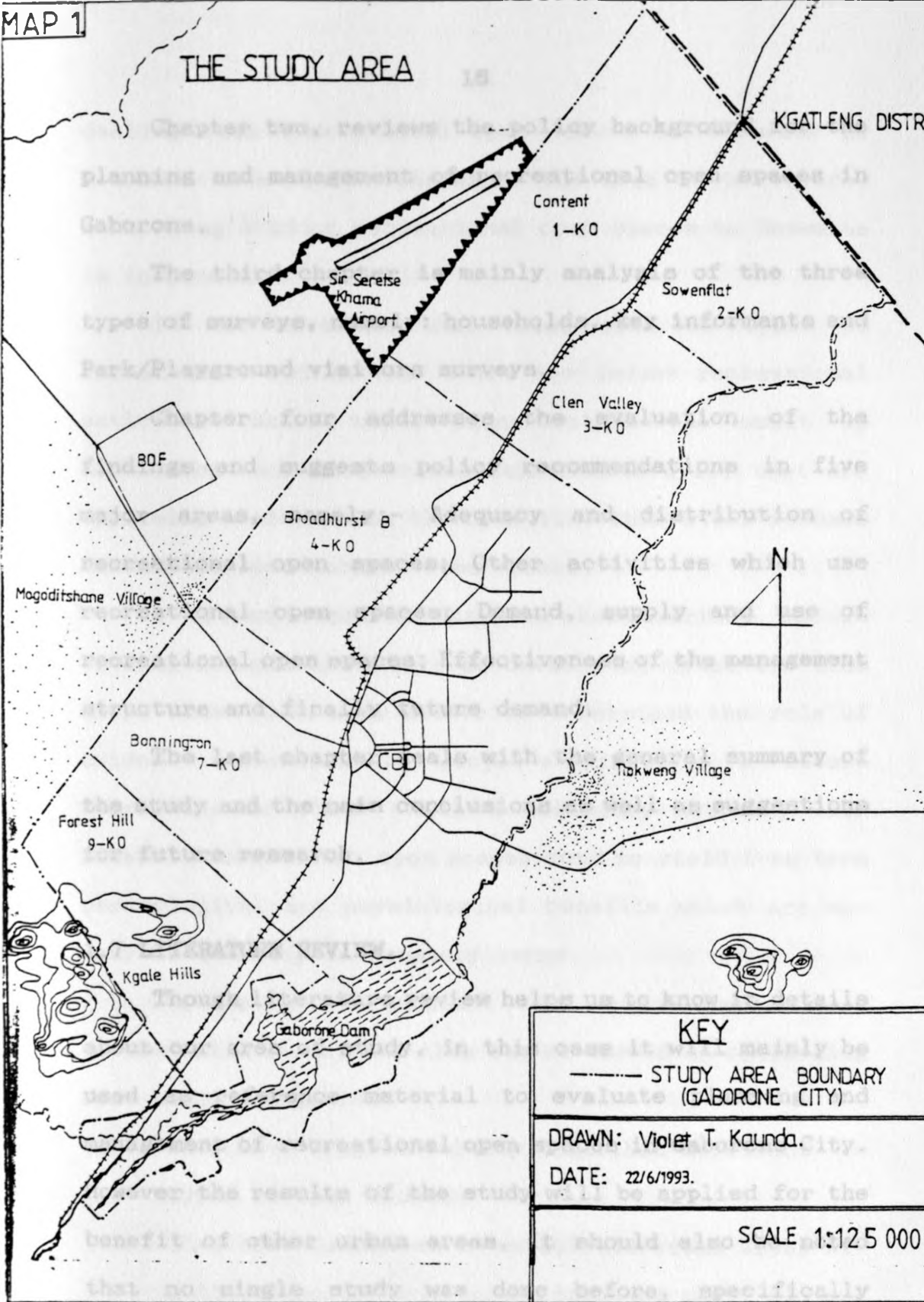
### 1.6 SCOPE OF THE STUDY.

The study uses both appraisal and hypothesis testing approaches. It evaluates the current planning and management of recreational public open spaces. Related policies and legislations are also reviewed. On the other hand, income level, education level and distance are tested to find out if they influence the visit to open spaces. At the end of these reviews and analyses, remedial issues are proposed in the short and the long run for the betterment of recreational open spaces in Gaborone and all the urban areas of Botswana as a whole. In this context, the short run refers to the problems which can be sorted out within five years period (1993-1998). The long run refers to the problems which can be sorted out within 6-20 years (1999-2013)

The study has five chapters and the first chapter deals with the introduction. This chapter introduces the problem in a broader perspective. Objectives, hypothesis, operational concepts and definitions are also outlined in this chapter. The study area is defined, followed by the scope of the study and then literature review. The methodology and research limitations forms the last bit of this chapter.

MAP 1

# THE STUDY AREA



### KEY

----- STUDY AREA BOUNDARY (GABORONE CITY)

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DATE: 22/6/1993.

SCALE 1:125 000

Chapter two, reviews the policy background for the planning and management of recreational open spaces in Gaborone.

The third chapter is mainly analysis of the three types of surveys, namely: households, key informants and Park/Playground visitors surveys.

Chapter four addresses the evaluation of the findings and suggests policy recommendations in five major areas, namely:- Adequacy and distribution of recreational open spaces; Other activities which use recreational open spaces; Demand, supply and use of recreational open spaces; Effectiveness of the management structure and finally future demand.

The last chapter deals with the general summary of the study and the main conclusions as well as suggestions for future research.

psychological and sociological benefits which are not

## 1.7 LITERATURE REVIEW.

Though literature review helps us to know in details about our area of study, in this case it will mainly be used as reference material to evaluate planning and management of recreational open spaces in Gaborone City. However the results of the study will be applied for the benefit of other urban areas. It should also be noted that no single study was done before, specifically



dealing with recreational open spaces in Gaborone or Botswana as a whole. Therefore the area to be covered concerning outdoor recreational open spaces in Botswana is insurmountable.

It was revealed that there are two types of recreational activities. There are indoor recreational activities which takes place within the built up environment and outdoor recreation activities that are typically performed in the open air. This study focuses on outdoor recreational open spaces.

A lot of research that has been carried out in developed countries and some developing countries like Kenya shows that many countries understand the role of outdoor recreation in people's life. As a result recreation is found to be a necessary activity like others. Recreational open spaces tend to yield long term psychological and physiological benefits which are not easy to quantify in monetary terms.

Experts in recreational open spaces have widely covered this field, and this can be viewed as comprising four broad categories.

- (i) They have comprehensively described different types of open spaces.
- (ii) They have described in detail different types of outdoor recreational activities and the

satisfaction derived from them.

(iii) They have made the guidelines on the process of recreation planning for open spaces, including open space development planning standards.

(vi) Management of recreational open spaces is not adequately dealt with.

#### 1.7.1. Types of Recreational Open Spaces.

Authors like, Burton T.L, and Noad P.A, (1968), have classified these recreation areas into three groups.<sup>10</sup> The first group is the user oriented areas. They include parks, sports fields and children's playgrounds. Such areas are normally small and within easy reach. The second group are resource based areas and are a distant from the user. Their dominant characteristics lie on their outstanding scenic features. There are natural resources like mountains, coastlines, beaches, lake shores etc. They are generally far and they cover large tracts of land. The third group are the intermediate areas that lie between these two extremes. There are moderately large and involve a reasonable amount of travel compared to the resource based areas. These are for example game parks and river and water reserves. These three groups are not necessarily isolated from one another, they can form an inter-related system of open

space.

The study is concerned with the user oriented recreational open spaces which are local open spaces meant for short frequent visits and the intermediate recreational open spaces for longer visits which are less frequent. They should be given a special attention because they are located where there is concentration of population and developments so they compete with other activities for scarce resources like land, financial manpower etc. Moreover the demand for user oriented open spaces is higher than of other outdoor open spaces. Literature has also reflected that demand of play fields and parks are influenced by factors like climate, leisure time, distance involved level of education and income.

#### **1.7.2 Types of Recreational Activities and the Role they play.**

Recreation is paramount to the urban population especially when you consider the unpleasant working hours that the urban dwellers are exposed to. Therefore it is essential for them to participate in recreation activities during their leisure time in order to relax and escape from work and other necessary activities. There are three basic reasons why people participate in recreation. The reasons are to positively enhance

physical, mental and emotional satisfaction. There are a number of activities that are undertaken in outdoor areas. People participate in recreation to achieve various benefits. For example people visit parks, picnic sites, playgrounds and gardens in order to relax; to derive excitement; to appreciate the environment; to learn and test competence.

These lead to three main benefits derived from engaging in recreation as elaborated by Burton T.L, and Noad P.A, (1968).<sup>11</sup>

- It provides entertainment as an antidote to the boredom and repetition that are often involved in work, personal and domestic chores.

- It provides both mental and physical relaxation from work and other necessary chores.

- It provides a means for personal and social development by allowing a person to deviate from the normal restrictive way of thought and behaviour which is experienced at work and other chores.

As urbanization increases, the urban populace experience socio-economic and environmental problems like sprawl growth, poverty, unemployment, long working hours, pollution, disintegration in marriages, overcrowding etc., which results in personal stress. There should be

a place for people to relax and to escape from these problems. Ebenezer Howard had also observed these problems in 1898 in British towns and he developed a model city with abundance open spaces in order to solve these problems.<sup>12</sup> Apparently the model is an old one, but he had realised that as the society become more and more urbanised with greater affluence, leisure is increasingly taken as an important part of their lives. Recreation is an act which people undertake during their leisure time to break the monotony and release stress. Hence the urban environment needs to be provided with agreeable open spaces which take into account the social and economic aspects of the urban dwellers. It should be able to crystallize the community's feeling. Economic benefits alone cannot sufficiently make a person happy, unless they are supplemented by such things like entertainment derived from participating in recreation. There is a considerable evidence in surveys that rising income and standards of living are not necessarily accompanied by greater satisfaction and a sense of well being. Surveys indicates that leisure is one major element of satisfaction in life (Kelly R.J. 1983).<sup>13</sup> Therefore recreation needs to be given the priority it deserves.

As such recreational facilities should be a major component of both spatial and economic development plans.

Kornblum (1981) in his research of psychology of city space supports the notion that the role of parks is to refresh the mind and soothe the nerves of city people.<sup>14</sup> Development of recreational open spaces is not only to develop people physically and mentally but also help to conserve the environment. In such fragile environment like Gaborone, the land put aside for open spaces would be another way of conserving the environment. This is elaborated by three basic objectives of open spaces below:- (i) To establish healthful outdoor recreational opportunities. (ii) To provide an attractive environment for the satisfaction of the dwellers. (iii) To help perpetuate the natural processes and maintains the eco-system at the equilibrium. (Little E.C. 1968).<sup>15</sup>

### 1.7.3. The most critical issues to be considered in

#### planning for Recreational open spaces.

1. The level of the economy: That is the standard of living of the people should be considered in planning for open spaces.
2. Changing attitudes towards recreation and leisure: Recreation is increasingly viewed as an important factor in maintaining adults' mental and physical health. It is

no longer perceived as just a week-end activity. It is an integral and necessary element of adult life to be incorporated into a daily routine.

3. Changing population and household composition: Population characteristics determine the amount and type of recreational facilities to be provided. Programs and activities should be geared towards the physical and mental abilities of all age groups as well as their interests.

4. Changes in work place: Changes in employment patterns do influence park use. For example long working hours, short vacations and late retirement do alter park visits.

5. Changing housing patterns: The cost of serviced land is forcing planners to reduce residential plot sizes, thereby decreasing private backyard open spaces. In this case the size of open space should be increased and the residential layout should encourage people to meet and mingle as well as to be spectators.

6. Level of transport: This means that the distance to open spaces should consider availability of transport. The issues to be considered is whether there is easy access to open spaces and parking facilities for private and public transport. As well as whether there is easy access by foot. Lack of transport facilities increases the need for close to home outdoor recreation.

7. Political situation: Politics play a major role in planning, especially in a democratic country like Botswana. Politicians are the policy makers and the final decision makers. So in planning for open spaces politicians should be involved at the initial stage up to the end of the planning process.

Lancaster (1983) gave an outline of how to come up with a policy plan.<sup>16</sup> He emphasises that in planning for recreational open spaces, the following tasks should be undertaken: data can be collection through literature review; use of previous physical plans; administering of questionnaires; site visits and observations. The existing situation can be analyzed and people can come up with policy plan. Experts like ecologists, economists, sociologists, psychologists, market analysts, lawyers, landscape architects, engineers, leisure specialists and urban planners can combine their talents to provide a multi-disciplinary approach to the planning of open spaces. The policy plan should be reviewed from time to time because of rapid physical, economic and social change of the city.

A concept/structure plan should be prepared once the comprehensive policy plan is completed and the location of sites for individual park/grounds should be determined.



Advocates of environmental systems hold that the designation of open spaces should be determined mainly by the natural environment. Such areas as major animal habitats, unusual scenery, areas of geological, ecological and historic importance. As noted by Chapin S.F, and Kaizer J.E, (1979); '----- land use allocation should begin from the proposition that nature is a legitimate land use in its own right'.<sup>17</sup>

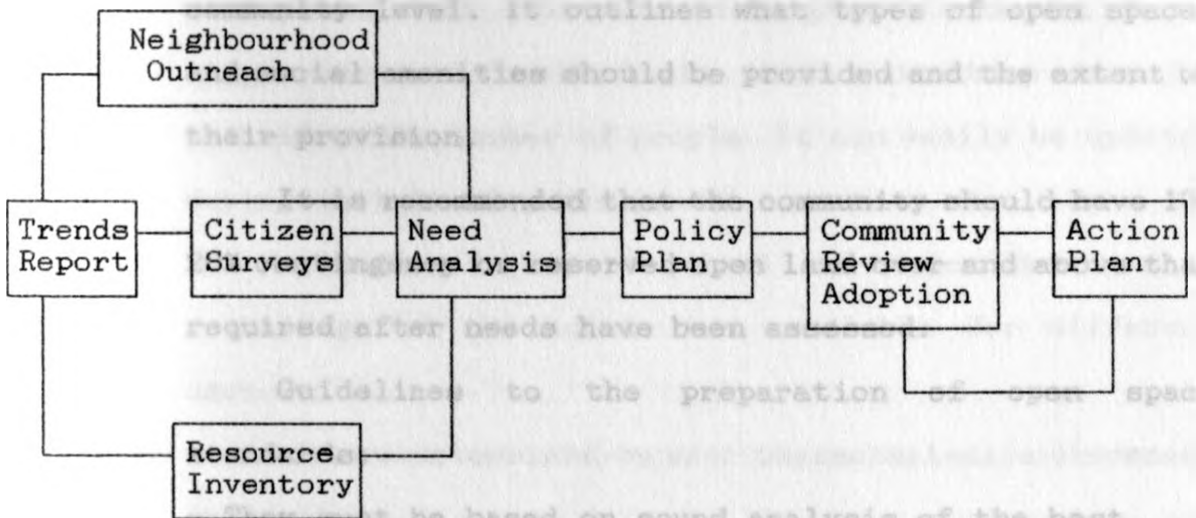
Services and activities to be provided should be outlined as well as support needs in terms of manpower, equipments and finance. As noted by Chapin S.F, and Kaizer J.E, (1979); allocation of open spaces should not just be perceived as preserving land presently open. The concept of redevelopment and rehabilitation should apply to open spaces as developed land can be redeveloped as open spaces.<sup>18</sup>

In allocating open spaces, the amount of water and land available should be analyzed with respect to the set standards and amenities required are identified. Then the amount of area required is computed in relation to population.

Structure plans outline the overall physical arrangement of recreational areas and supporting elements like circulation, lighting, water, sewer, safety, emergency provisions and landscape. Structure

plans are not working drawings. Instead the operation and the management plans are prepared by either an agency, staff or consultants for a specific park or a system of interrelated parks. (These are detailed layout plans upon which implementation could be based).

Suggested Model for Developing a Policy Plan.



SOURCE: Lancaster A.R. (editor) A Publication of the National Recreation and Park Association (U.S.A.), 1983.

Trends Report outlines past trends, status of open spaces including problems, achievements and issues to be addressed. It accomplishes two objectives as follows:-  
 (i) Provokes interaction; (ii) A means of compiling existing information. That is, it is a basis upon which planning and decisions can be undertaken. The trends

report has three aspects. The first one is Leisure marketing study which include neighbourhood outreach and citizen surveys. The second one is equity model, that is resource inventory. It determines the distribution of open spaces in relation to population and establishes city wide deficiencies. The third one is zone profiles; through data analysis priorities are identified at a community level. It outlines what types of open spaces and social amenities should be provided and the extent of their provision.

It is recommended that the community should have 10-20% contingency or reserved open land over and above that required after needs have been assessed.

Guidelines to the preparation of open space standards;

- They must be based on sound analysis of the best available information.
- They must be realistic and attainable.
- They must reflect the needs of the people in the specific service area.
- They must be acceptable and useful for both practitioners and the policy makers.

Standards differ from one place to another because there are meant to suit different environment or situations. They depend on aspects such as climate,

culture, population characteristics and other issues which have been mentioned above.

Methods of determining the amount of open land required are listed below;<sup>19</sup>

1. Population ratio method (acres of park land per 100 people).

It is the best known and the most used method of determining Park and recreation space standards. It is simple and has basic logic that recreation must be related to the number of people. It can easily be updated during periods of urban growth.

2. Recreation space required is calculated as a percentage of the total land available for different uses.

3. Needs are determined by user characteristics or demand projections.

It uses participation rates or recreation demand projections to determine spatial needs.

4. Carrying capacity of land incorporates the above three. It uses threshold analysis type of approach where the status of the environment (natural resources) determines the number of people who can use the facility at a given time period. It is good where the balanced ecosystem of a particular area is the basis of attraction.

Each individual open space has its own patrons or users and patronage or the market is usually distinguished by similar demographic characteristics such as age, sex, education and income.

Participation rate multiplied by base population shows the number of individuals who desire to participate in a specific recreation activity. This product is then multiplied by participation days to obtain the total number of participation events that will occur during a year (preference).

Participation \* Population \* Participation days = Preference.

Multiplying preference by design capacity determines the number of people who should be accommodated on any given day for each activity. Dividing this figure by the product of the spatial standard and turnover results in the basic facility need (it includes both active and passive events).

$$\frac{\text{Preference} * \text{Design Capacity}}{\text{Spatial Standard} * \text{Turnover Rate}} = \text{Facility Need}$$

Facility requirement, can be converted into land

requirements which can be satisfied through use of existing land or acquisition of additional park land. This is to cater for those areas of the community where the park and the recreation indicates a park land deficiency. (This represents the minimum park land acreage needed to meet the facility needs).

Exclusive reliance on survey gathered primarily from users and participants will invariably perpetuate lack of interest in those services and facilities that do not exist. Planners must recognise this limitation and consider the need for activities or facilities that are not provided.

Participation days per capita should be adjusted to reflect local factors eg physical and climatic (seasonal) influences, activity preferences, participation rates for the full range of activities identified as desired by the community.

Each recreational open space should be designed according to the type of activities(s) it is going to be used for. The characteristics of its patrons should be considered and the amenities to be provided therein, need to be compatible with the type of use.<sup>20</sup>

#### **7.2.4. Management of Recreational Open Spaces.**

The development of recreational open spaces should

be seen as the responsibility of different interest groups such as the government, Local Authority, Voluntary organisations, private sector and individuals.

Community participation needs to be emphasised in the development and management of open spaces, so that the city dwellers can feel that the open spaces are theirs. This could be helpful if coupled with a programme to educate people on the benefits of having open spaces.<sup>21</sup>

The information on the types and the role of recreational open spaces is satisfactory and more important to this study is that planning recreational open spaces is adequately covered and is detailed. Management of recreational open spaces is scantily addressed. This is a major gap because the planning process does not end until the goals of the plan has been realised.

#### 1.7.5 The Conceptual Framework for Planning and

##### Management of Recreational Open Spaces in

##### Gaborone City.

It is conceptualized that problems associated with population growth in cities such as unemployment, environmental pollution etc, and hardships experienced during working hours make the provision of recreational

open spaces a necessity. So planning and provision of recreational open spaces becomes very crucial. According to Lancaster, (1983),<sup>22</sup> planning for recreational activities should be carried out separately without integrating it with other land use activities like residential and commercial. It is however not necessary to plan for recreational open spaces in isolation from other land use activities. Actually, it is worth while to plan for recreational open spaces together with other land use activities, so that their functional relationship in the urban system is clearly defined. Nevertheless, whether planning for recreation alone, or planning it with other activities, there are always certain important aspects which have to be taken care of. These are outlined by Lancaster (1983) as follows: population size and growth; level of the economy; changing attitude towards leisure and recreation; cost of land; political situation; employment patterns and the level of transport.<sup>23</sup>

From data analysis, the status of the resources such as land, finance, manpower and equipment will be reflected. Multi-disciplinary approach requires that each subsector should have an input towards the documentation of the survey report. However normally the co-ordination of the whole planning activity is on the



hands of the physical planner. The outdoor recreational open space subsector as an area of focus, should have professionally competent staff to be able to contribute sufficiently to the integrated plan, and in turn to the adequate provision of recreational open space facilities.

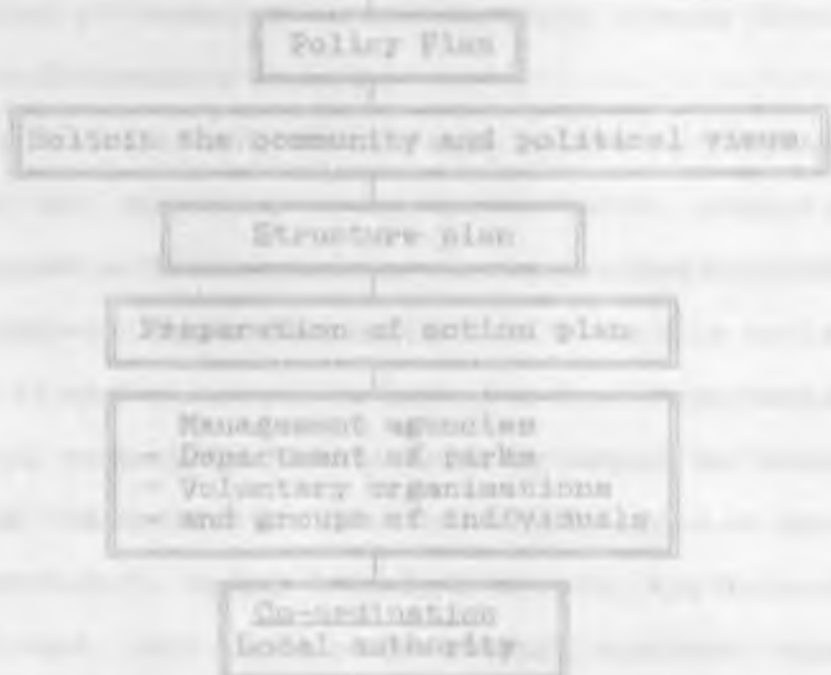
The survey report should be presented to experts in different fields and interested departments. After incorporating the feed back, a policy plan is formulated and it is presented to the politicians and the community. If it is adopted, department of Town Planning should prepare a structure plan. The action plan, in this case for recreational open spaces will be done by the professional staff in this subsection or the contracted consultant(s). An action plan will guide the actual implementation.

Management of recreational open spaces should involve both the department of parks, voluntary organisations and groups of people. Co-ordination should be done by the local authority. It is hoped that if council could mobilize the community; assign them some open spaces to manage and give them technical and financial support in terms of funds, the community would improve the status of open spaces. They will have to charge some minimum amount for the services they render to the public. This money will be re-invested for further

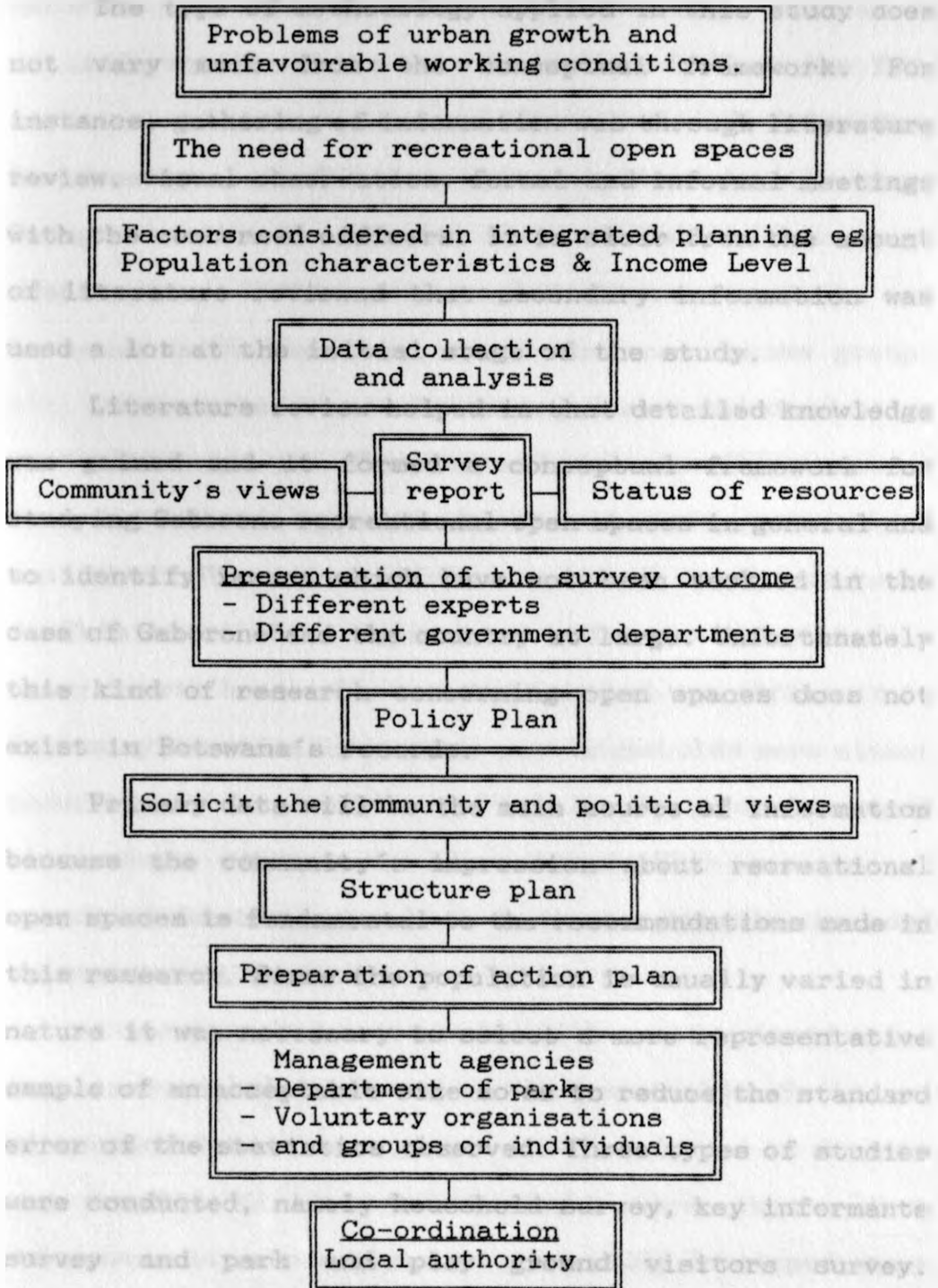
improvement of recreational open spaces and develop those which do not earn any income. On the other hand Parks department as local government agency will develop other recreational open spaces and co-ordinate the activities of the voluntary people and organisations.

For this model to work, there is need for financial support from central government and a lot of commitment from both the local authority and the community.

The model below was based on the model suggested by Lancaster A.R, (editor) 1983,<sup>24</sup> but modified to elaborate more on the management of recreational open spaces and also to show why recreational open spaces are important for the urban community.



Source: Self Perception.

1.8 CONCEPTUAL MODEL.

Source: Self Perception.

### 1.9 METHODOLOGY.

The type of methodology applied in this study does not vary much from the conceptual framework. For instance, gathering of information was through literature review, visual observation, formal and informal meetings with the concerned officers. It is clear from the amount of literature reviewed that secondary information was used a lot at the initial stage of the study.

Literature review helped in that detailed knowledge was gained and it formed a conceptual framework for studying Gaborone recreational open spaces in general and to identify issues which have not been tackled in the case of Gaborone and the country at large. Unfortunately this kind of research concerning open spaces does not exist in Botswana's records.

Primary data will be the main source of information because the community's impression about recreational open spaces is fundamental to the recommendations made in this research. Since the population is usually varied in nature it was necessary to select a more representative sample of an acceptable size so as to reduce the standard error of the statistics observed. Three types of studies were conducted, namely household survey, key informants survey and park and play ground visitors survey.

Household sample survey was selected using

stratified systematic sampling. This involved subdividing Gaborone in different residential densities. Four areas of different densities were be selected. Thus the four strata were heterogeneous and these included: Selemela a low density area; Gaborone West, a medium density area; Taung, a medium/low density area and Tsholofelo a high density area. Within each sampled stratum, variants are homogeneous in that they are of the same income group. The household to be interviewed were selected using systematic approach. This method involved writing numbers from 1 to 10 on separate papers and putting them on a small box. The number which was picked, turned up to be 4. This meant that, interviews had to be conducted in every fourth house. However this method was difficult to follow systematically because most households were either under age or there was no one at all. So interviews took place where interviewees were found. This exercise of searching for the respondents in the neighbourhoods ended up being very hectic.

A structured questionnaire with mostly closed ended questions was administered to the households. Parks and playground interview surveys, were conducted in 2 parks and 2 play fields. The 2 parks were chosen from relatively old areas because in the newly developed areas of Gaborone there are no developed parks. These parks are

Tsholofelo park and Extension 11 park (Borakalalo). Tsholofelo park is spacious but not fully developed, while Extension 11 park is small and developed but it looks bare because of dry season and lack of maintenance. The play grounds were chosen from both the old part and the new part of the city. From the old part of the city Tswapong United football ground which is next to the National Stadium was chosen. From the new part of the city, a ground used by Gaborone West football club was sampled, within the site and service area. Both grounds were just cleared but not fenced.

The interviews were conducted for the whole week from the 6<sup>th</sup> to the 12<sup>th</sup> in the month of September. 8 people were interviewed in Tsholofelo park, 6 in Extension 11 park, 8 on Tswapong United Football ground and 8 at Gaborone West Block IV ground. Structured closed ended questions were administered to the visitors. At least there was always one person or two, to be interviewed in parks and playgrounds.

Key informants were also interviewed. Key informants here, refers to officers who deal with planning and implementation of development plans as well as those who are responsible for the development of open spaces such as those officers in the section of parks and recreation. By virtue of the fact that the Environmental Science

Lecturers have knowledge about the environment, the University of Botswana lecturers were interviewed also. The local politicians were among key informants because they are the final decision makers in the over all development of the city. A questionnaire with open ended structured questions dominating was administered to them.

Questions were asked to all respondents about the capacities of open spaces, provision of social amenities in recreational open spaces such as refreshments facilities and toilets and how these affect the use of open spaces. The key informants in particular were asked about the effectiveness of the regulations as regards the implementation and development of open spaces. The questionnaire solicited the opinions about the use of open spaces for incompatible activities such as driving schools. The main problem encountered in this survey, was that out of six councillors who were given questionnaires, only one among them, responded.

All respondents were asked about the distance to the nearest open space. This helped in assessing the spatial distribution and the accessibility of open spaces. The assumption stated above is that different residential densities have different amount of open spaces. The form, direction and strength of the relationship will be revealed. The residential densities will be the

independent variable and the open spaces will be the dependent variable. The spearman's rank correlation method will be used.

The questions were seeking to find out whether physical attributes affect the demand of open spaces. It is also believed that social and economic characteristics, especially education and income influence the demand of open spaces. The information was analyzed by the help of computers using SPSS programme (Statistical Package for Social Sciences). The study will test the relationship between the open spaces visits and different independent variables such as the age, distance from the open spaces, education and income. Appropriate statistical tests will be used. Cross tabulations were run, concerning the number of visits to open spaces against residential densities and the level of education. In both cases Chi-Square was used to find out whether there is significant relationship. Pearson's correlation coefficient will be used as a measuring tool since the information is going to be interval data. The dependent variable will be open spaces. The independent variables will be education and income but both independent variables will be tested separately. The results obtained will further be discussed in the analysis chapter.



#### 1.10. LIMITATIONS OF RESEARCH METHODOLOGY.

The main limitation of the research methodology was the time constraint. Little time was spent on the field collecting data because of having to travel from Gaborone to Nairobi urgently. This led to five main problems.

1. Maps required for illustrations in chapter two were not readily available.
2. Out of so many playgrounds and parks, only two parks and two playgrounds were selected as a sample
3. Park and playground visitors' survey was limited to one month only, which means that this information can not be used to compare the demand and use of open spaces in different seasons.
4. During the time of interviews, local councillors had gone out of Gaborone. This forced us to deliver the questionnaires at their homes during their absence. This led to low level of response, as a result political views were not fully solicited.
5. Up to date information about the planning standards were not readily available from the time of data was collected until the final draft of the thesis.

However, some of the problems could have been overcome, if reaching the study area did not entail travelling long distance and incurring heavy transport expenses.

3. Lack of any reference material about recreational open spaces in Botswana was a disadvantage to this study.

4. Also experienced in the field, was the inconsistency in answering questions especially in park/playground visitors' survey and households survey.

5. Therefore this data is not hundred percent reliable, it should be used with some reservation.

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... This high growth, together with its pattern of development is a result of the decision that the country's capital is to be built in Gaborone. Previously the administrative headquarters of the then Bechuanaland Protectorate had been outside the country in Mafikeng in the Republic of South Africa. The decision to build a new capital was taken about the same time as the decision that Botswana should become independent soon after. Accordingly, the administrative staff was directed to prepare a plan for the new capital. The first Master Plan for Gaborone was prepared in 1960 by a team of surveyors, engineers and architects in Bechuanaland. It was subsequently approved by the administration following technical assistance from the British Government's building research stations. See Chap 2.

At the time of its selection as the site for the new capital, Gaborone had an estimated population of 1,000. Then it was the administrative centre for Gaborone District (which included ten tribal villages of Tlokweng and Sedibana), as well as the location of

**CHAPTER 2.****2.0 BACKGROUND INFORMATION.****2.1 Planning and Development of Gaborone Since Independence**

The urban growth rate for Gaborone has been generally very high, and in 1976-78 it was on average 19% per annum.<sup>1</sup> This high growth, together with its spatial pattern of development is a result of the decision to make Gaborone the Country's capital in 1962. Previously the administrative headquarters of the then Bechuanaland Protectorate had been outside the country in Mafikeng in the Republic of South Africa. The decision to build a new capital was taken about the same time as the decision that Botswana should become independent was made. Accordingly, the administration set up a committee to prepare a plan for the new Capital. The first Master Plan for Gaborone was produced in 1963 by a team of Surveyors, Engineers and Architects in Bechuanaland. It was subsequently approved by the administration following technical comments from the British Governments building research stations. See Map 2.

At the time of its selection as the site for the new capital, Gaborone had an estimated population of 3,800. Then it was the administrative centre for Gaborone District (which included two tribal villages of Tlokweng and Ramotswa), as well as the location of



# GABORONE

0 1 km



Sewage Ponds

Golf Course

Airport

VILLAGE




Sewage Ponds

RESERVOIR

## GABORONE ORIGINAL TOWNSHIP - 1962.

SOURCE: GABORONE GROWTH STUDY

### LEGEND

-  Planned built-up area
-  Unplanned Settlement
-  Open Space

central prison and police headquarters for Bechuanaland Protectorate. These buildings and Government houses were situated in an unplanned government camp in what is today known as 'the Village'. In addition there were a few houses and a hotel around the railway station as well as a small Air Strip north west of the village. The rest of the area, which is now being occupied by Gaborone City was open land, predominated by arable agriculture.

The 1963 Master Plan for Gaborone was based on the Garden City model founded by Ebenezer Howard. See map 2. The physical features of the new capital location also greatly influenced the proposals made in the 1963 Master Plan. These features which were more of constraints included the Air Strip and the Notwane river on the eastern direction. On the western direction, the railway provided a definite barrier to the town's westerly growth. The tribal boundaries of Batlokwa, Balete and Bakwena presented stronger barriers in both the eastern, southern and western directions respectively.

The main objective of the Master Plan was to come up with a town as a complete entity at each stage of development growth. This objective tallies well with one of Howard's ideas, which he brought up in his book 'Garden Cities of Tomorrow', in 1898. He noted that 'A town should at each stage of its growth, ----



possess unity, symmetry, completeness, and the effect of growth should never be to destroy that unity nor to mar the symmetry, but to give the town a greater purpose. The completeness of the early structure should be merged in the yet greater completeness of the later development.<sup>2</sup>

Another objective in the Master Plan was to achieve generally a low density form of development. The vehicular movement was to be segregated from pedestrian movement as far as possible. The neighbourhood units proposed by Howard were also maintained.

Pedestrian walkways, the public buildings in the centre and the green belts on the periphery gave the township its form but paving and landscaping of pedestrian walkways has always lagged behind.

The large public buildings and the Shopping Mall were located on the highest ground not far from the railway, where soil conditions were most favourable. A significant feature of the original plan was the reservation of the semi-circular area, bounded by Khama Crescent and Francistown Road, as the government enclave for the national assembly and major government buildings. The industrial areas were also located close to the railway, south west of the public and commercial areas, and the housing areas were grouped in a semi-circle around the Mall, separated into three

zones. North of the Mall were big plots giving an average density of about two to four dwellings per hectare, and used for high cost residential purposes. In the middle, between the Mall and Kaunda Road were medium-density housing at five to twelve dwellings per hectare and south of that was an area for low cost residential development. The road system forms a regular series of semi circular rings around the mall named Independence Avenue, and the Inner Ring Road respectively. These are linked to the Mall by radial roads and the whole system is threaded by a series of pedestrian walkways. This road network demonstrates the interconnectivity of the boulevards and avenues in the garden city model. As already noted in the garden city model, the main objective was to conserve the greenbelt around the city by providing abundant open spaces, so to the east, of the Outer Ring Road (now Nyerere Drive/Maputo/Machel Drive), were placed major 'open spaces'. These were to be used as the Golf Course and Showground and the other open spaces were of unspecified purpose.

However with increasing population pressure some open spaces were later used for institutions like University of Botswana and BRIDEC as well as the sewage ponds. At the same time the plan contained two

significant features which today would be regarded as inappropriate. Firstly housing developments were polarised with high and medium cost units on one side and low cost units on the other. Secondly, the urban structure was such that it allowed little scope for expansion within the original layout. This was so because the Garden City was supposed to accommodate a maximum population of 30,000, beyond which another City was to be established.

Under 'The Capital Project' Programme construction of the new town began in 1964, and the first Government buildings and housing were ready for occupation by 1966.<sup>3</sup> By September 1966, Botswana got its independence from the British government. The minimum population of Gaborone was expected to be about 5,000 after the removal of offices from Mafikeng in the Republic of South Africa was completed and thereafter the town would grow by a natural increase to about 7,500 within twenty years. At the same time it was expected that there probably would be some additional growth as people would be attracted to town life and that the ultimate planned size of the town in the mid 80's would be about 18,000 - 20,000 including the village.

After independence, however, the growth of the town was very rapid. Immigrants, especially who came seeking

jobs from the construction companies settled themselves in areas such as Old Naledi where a squatter settlement of some 6,000 persons quickly developed. By 1971, the towns population had risen up to 17,700 and the government commissioned consultants to prepare plans for further expansion of the town. The report of 'Gaborone Planning Proposal', by Wilson and Womersley predicted a population of 40,000 by 1980 and 72,000 by 1990 and recommended that the new development should take place north of the existing town.<sup>4</sup> By mid 1970's some major problems were identified as follows; (a) The characteristics of rapid and some-what unbalanced urban growth began to be apparent; (b) A general shortage of serviced land for all types of development, and the extended journey to work patterns emerged.

The problem of non-existence of developed parks and other outdoor recreational public open spaces was never addressed. In 1974, the need to service land beyond Broadhurst I was recognised and a plan for Broadhurst II was prepared in 1975. The layouts of Broadhurst I and II differed in two significant ways from the layout of the 'old town.' Firstly, they provided an increased proportion of housing for low income households including sites and service plots. Therefore the low density development which was planned for initially, was proving

to be difficult to achieve. Secondly, they introduced a greater integration of house types to diminish the social disparities obvious among different parts of the original town. The expansion included the upgrading of the Mall because it was proving to be inadequate and industrial plots were also provided.

In 1978, the Government commenced a major upgrading scheme for Old Naledi, resulting in formal designation of some 1,600 sites and service plots. It was not easy to provide adequate recreational open spaces within the already existing high density areas. With regard to the other characteristics it was realised that there was a limit to the extent to which the town could keep expanding in a northward direction. More long term planning was required and, in order to assess the relative benefits for a number of growth direction options, the 'Gaborone Growth Study' was prepared by John Burrow and Partners and Department of Town and Regional Planning (DTRP). The study estimated that by 1990, the town's population would be between 128,000 and 148,000. Among the alternatives considered it was finally agreed that immediate housing needs be met by the development of the state land at Broadhurst III (Tsholofelo Extension), and that after 1981 development would be directed to the west of the railway line.<sup>5</sup> The report's recommendations

were submitted to Cabinet and approved in June, 1978.

Design work on Tsholofelo commenced immediately and infrastructure was largely complete by 1981. The layout for Tsholofelo made provision for 1,300 residential plots of all types and a number of local open spaces.<sup>6</sup> The layout was very much based on the concept of mixed residential properties. The new approach was to sell unserviced blocks of residential land to private developers as well as to Botswana Housing Corporation (BHC) for high and medium cost housing. In addition, the shortage of site and service plots in 1981 forced Government to approve a further 500 plots to the north of Tsholofelo Extension. The high population pressure forced Government to direct most of the resources to residential developments and infrastructural facilities. Development of land to cater for other sectors of the economy such as outdoor recreation, was not taken as a priority, more so that they do not yield economic benefits.

In June, 1979, D.T.R.P. had produced the Draft Structure Plan for Gaborone West. This provides the overall development area of 3,000 hectares stretching from the railway line in the east to Mogoditshane in the west, and from Sebele in the north to the farm forest hill in the South. Included in this structure plan was the second golf course next to Sheraton hotel.

Development in this area, (only a portion of it will be completed in 1992/93,) would take the form of ten phases. Each phase was to accommodate 12,000 people with a complete range of housing types provided. However there will be an emphasis in providing the site and service housing most affordable by the majority of the population. Furthermore, each phase would be largely self-contained, like the neighbourhood units of the Garden City model, with its own provision of parks, local shopping centres, primary and secondary schools. In addition sites were earmarked for major recreational uses (largely along the Segoditshane and Notwane River Valleys).

Provision for employment was made in the plan in the form of three new industrial estates and a new Central Business District which would have shops and offices.

Circulation within the structure plan area was to be in the form of a 2 kilometres grid of major roads which would be on either sides of each phase block. These would link Gaborone West to the "old town's" existing system by means of seven crossings across the railway line. These would form a similar road pattern like the boulevards and avenues in the Garden City model. Two of these roads would be of regional and national importance respectively, namely; The existing Molepolole road would

serve as the main link between the major villages of Kweneng District and the Capital City; A new road running North-South through the structure plan area linking the Francistown road and the Lobatse road would serve as a bye pass for transit traffic which does not intend to enter Gaborone City. Much of the Gaborone West structure plan today contains detailed layouts which provide ample land for recreational open spaces. Phase I is currently largely developed and provides housing plots of all types, a local shopping centre and sites for parks and community facilities. An associated project, the Phase I industrial area, comprises both rail and non-rail served plots. Though there are parks provided none of them are developed.

The Second stage of development in Gaborone West has been identified as Phase II, the area north of Molepolole road. The area is currently being developed. In addition to the residential and associated components, a new Central Business District, has been planned for, and its design is currently underway.

The third stage of development has been identified as the area north of phase II. This includes an industrial component located to the west of the Broadhurst Industrial Area and this is currently being implemented.



In 1989, Gaborone was declared a city. Although Gaborone City has followed some of the Garden City's principles, it still has to improve in certain areas. For example among other things, Gaborone does not have those lordly parks which are advocated for in the model; it does not have adequate employment opportunities and it still suffers from high rentals because of shortage in housing.

Throughout the review of the development stages of Gaborone, there has been no mention of the development of open spaces. It is clear that the previous layout plans and the Proposed Development Plan for 1992-2012, supported by the legislations have sufficiently covered recreational outdoor open spaces in terms of land allocation, but their development still lags far behind. The status of outdoor recreational open spaces in Gaborone leaves much more to be desired.

## 2.2. Evaluation of the Planning Policies and

### Standards.

The main legislation tools used in development control are the Town and Country Planning Act, Development Control Code, Building Act, General Development Order and Public Health Act. The ones which relate more to physical planning are the Town and Country

Planning Act and the Development Control Code. Planning Standards give a planning guide in town planning.

### 2.2.1 Evaluation of the Town and Country Planning Act

#### (T.C.P.A).

The objective of the 1980 T.C.P.A., is to 'make provision for orderly and progressive development of land in both urban and rural areas and to preserve and improve the amenities thereof; for the grant of permission to develop land for other powers of control over the use of land; and for purposes ancillary to or connected with the matters aforesaid.'<sup>7</sup>

The 1980, T.C.P.A. Sec 6 gives the Minister of Local Government and Lands the powers to prepare a Development Plan.<sup>8</sup> The Master Plan of 1963, expansion Plans, such as Broadhurst Block I and II, and Gaborone West structure plan, have provided for adequate public recreational open spaces as one of the requirements as per Part III of the 1980 T.C.P.A.

The Act emphasises that the development plans should designate sites for various activities including sites for parks and sports grounds and thus Section 6 (3a), states that, 'A Development Plan ----- may in particular define sites of proposed roads, public and other buildings and works, airfields, parks, pleasure

grounds, nature reserves and other open space;'.<sup>9</sup> The Second Schedule of the T.C.P.A. elaborates on the provisions of T.C.P.A. Section 6 by giving a detailed outline on what should be provided in Development Plans.

It is reflected in the Second Schedule Part I, subsection 2, that the layout of the housing areas, including density, spacing, grouping and orientation of houses, flats and other forms of housing accommodation should be regulated in relation to roads, open spaces and other buildings. Subsection 3 further indicates the following: 'Determining the provision and location of:-  
(a) Community facilities (including shops, schools and other educational establishments, churches, meeting Halls, Libraries, play centres and recreational grounds, government offices and hospitals, clinics, health centres and other similar establishments.'<sup>10</sup>

It is contained in Part IV of the Second Schedule (amenities Subsection) that land should be allocated for open spaces regardless of whether they are public or private. Subsection 3 also states that land should be allocated for the following uses; '(a) for communal parks, (b) for game and bird sanctuaries; (c) for the protection of marine life.'<sup>11</sup> Therefore all types of open spaces are provided for as far as land is concerned.

### 2.2.2 Evaluation of Development Control Code.

At independence, development control in urban areas was managed by central government agencies. Transitional planning legislation was replaced by the Town and Country Planning Act of 1977. The Act provided for the quasi-legal development control until it became formally operational in 1980. The development control code is designed at providing for orderly, pleasant, healthy, beneficial, useful, serviceable and compatible development in the planning areas of Botswana. The code complies with the second schedule of the Town and Country planning Act (T.C.P.A), (1980)., where regulations are laid down to control and regulate land development proposed in a development plan. The code supplements and complies with the General Development Order (GDO) authorised by the Town and Country Planning Act, 1980. Development Control Code (1978), outlines that Development can only take place if it complies with the following:-

- The development plan of the area.
- The Development Control Code, i.e. developments can only occur if the developer has followed the application procedures of obtaining development permission as articulated in the General Development Order (GDO) of the Town and

Country Planning Act, 1980.

- Development can also take place if it complies with the building regulations, 1978 of Botswana and the recommendations of the local authority as well as development control staff.<sup>12</sup> Development control staff are those officers who see to it that the drawn plans and the development on the ground comply with the development plan. They are experts in their own fields and they include such officers as physical planners, architects, health inspectors, engineers etc. Some developments may meet the goals of this code without complying to its specific requirements. These should be referred to the local authority concerned and for the Town and Country Planning Board for judgement of whether the development fulfils the goals of the code or not. (Development Control Code (1978)).<sup>13</sup>

In the Development Control Code, the provision and development of open spaces is covered only at a smaller scale. That is, it talks about open spaces within residential, commercial and industrial plots only. It is silent when it comes to the provision and development of bigger open spaces which are meant to service neighbourhood(s) or residential, commercial and industrial block(s). These provisions are tabled in details below.

### 2.2.2.1 Residential Land Uses

The way the residential buildings are placed and constructed should aim at ensuring a healthy, safe, socially harmonious, useable and pleasant living environment both for the inhabitants and the neighbours. In order to achieve this, suitable adequate open space should be provided on the plot to allow: (1) for light to enter the house and yard, (2) for circulation of air (3) for servicing of sewerage pits and tanks, (4) for the absorption of sewage liquids where necessary, (5) for the storage and easy removal of rubbish, (6) for protection from the spread of fires (7) for protection of unobserveable burglary, (8) for private recreational outdoor space, (9) for vehicle access, (10) for storage of vehicles and personal materials, (11) for flower and vegetable gardening, (12) for keeping animals for personal use, (13) for protection from unnecessary disturbance and (14) for maintenance of a feeling of openness. Development Control Code, (1978).<sup>14</sup>

### 2.2.2.2 Commercial Development

In the development of commercial establishment, the aim should be to create a pleasant, health and economically viable business operation. For these reasons, commercial areas should be inviting and

attractive. To achieve these aims suitable adequate space on the plot should be provided for (1) the entrance, exit, parking, and unloading, employee, customer and delivery vehicles; (2) the storage of goods; (3) for the shop itself; (4) for pedestrian and vehicles access to the plot; (5) for the neat storage of rubbish and (6) for the landscaping and beautification of the plot and building. For example, a tree must be planted and maintained in the car parks at a ratio of one tree per eight parking spaces. Development Control Code (1978).<sup>15</sup> local open spaces, major open spaces and core forest public parks.

#### 2.2.2.3. Industrial Development

The construction of industrial buildings should seek to provide a useable, healthy, safe and economically viable, industrial plant which does not adversely affect the neighbouring land uses, immediately or in the future. To achieve these aims industrial establishments should have as a minimum sufficient space on the plot for (1) the loading, unloading and storage of goods; vehicles; (2) the safe access and parking of employee and visitor vehicles; (3) the neat storage and disposal of refuse and (4) for sufficient acoustic, visual and factory buffers.<sup>16</sup> 1,000 residents 100-200 plots at 2 persons per plot. They should also form part of the pedestrian

### 2.2.3. Evaluation of Botswana Open Space Standards.

The development of open space standards begins by determining the spatial requirements of activities that have to take place within the confines of the space (including both active and passive experiences) plus the space required for support services.

The standards for outdoor recreational open spaces in Botswana are in the same category with the green belts and environmental conservation. The three categories of public open spaces recommended for urban areas are semi-private or local open spaces, major open spaces and more formal public parks.

(i) Semi-private or local open spaces are provided to clusters of houses at a preferred rate of 20m<sup>2</sup> per person. This translates to 1,000-1,500m<sup>2</sup> for 10-15 plots with 5 persons per plot. (The household size for Gaborone in 1981 was 4.53 persons per household on average). In some cases the ratio may be reduced to 10m<sup>2</sup> per person, or 1,000-2,000m<sup>2</sup> for clusters of 20-40 plots.

(ii) Major open spaces are provided primarily for recreation and sports activities and they are meant to serve larger population thresholds at a rate of 10m<sup>2</sup> per person. This may be for example, 3-4 hectares for an area with 3,000-4,000 residents (600-800 plots at 5 persons per plot). They should also form part of the pedestrian

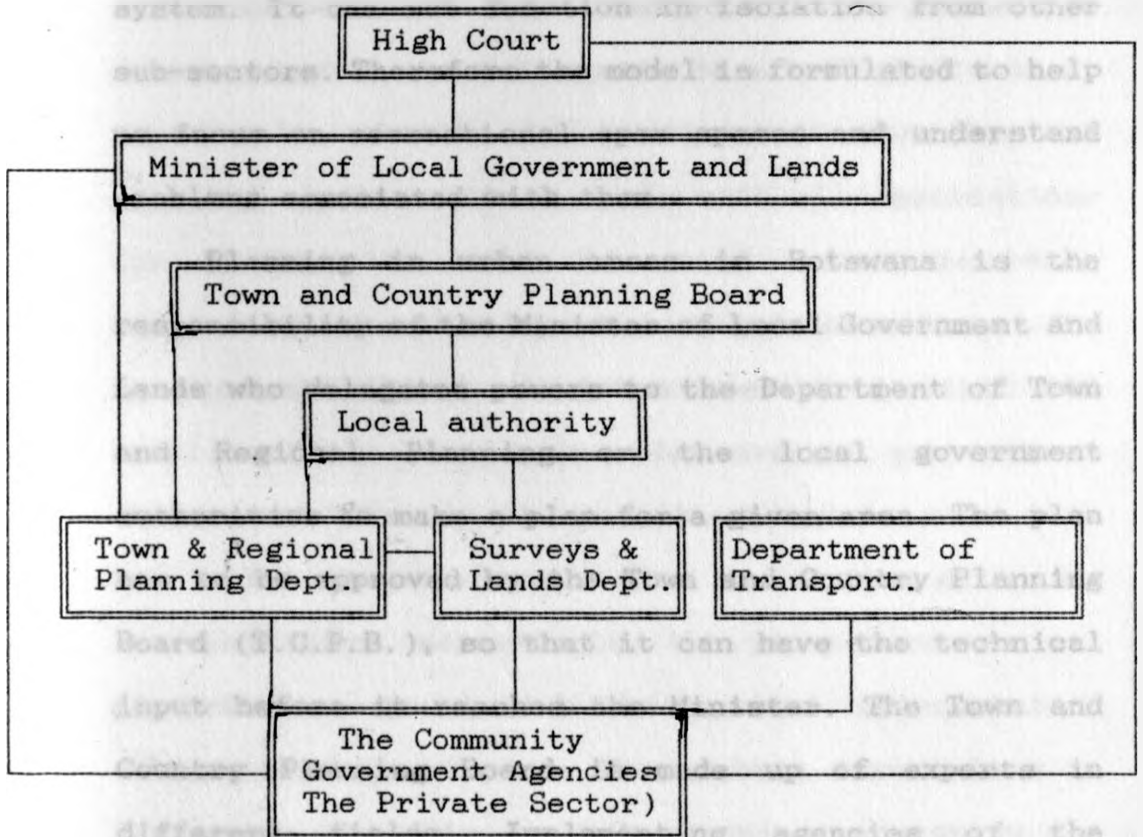


network. (The Organisational Model - Our Planning)

(iii) More formal public parks; These can often be located in areas unsuitable for building, such as along streams, hill slopes, some areas of rock outcrop (not all such areas are suitable), and can be designated in conjunction with conservation or forestry areas. Proper development require adequate funding, but the planner can provide the necessary space. Small formal parks may be created around buildings or sites of historic or current significance, magistrates Court, libraries, community hall or office blocks, etc.<sup>17</sup>

Open space should be designed in combination with pedestrian ways, water stand pipes, areas of natural drainage, and areas requiring conservation. An open space may include areas unsuitable for other purposes (areas of rock outcrops, gullies, heavy clay, disused burrow pits, etc), but in such cases it should not be included in calculations for required sports and play areas.

2.3. Evaluation of the Organisational Model for Planning and implementation of Recreational Open Spaces.  
Organizational Model.



Source: Own perception.

Since development planning and implementation involves basically all government agencies, the private sector and the public at large. It was difficult to come up with the organizational structure which include all the concerned parties. So the organisational model above is meant to simplify the whole situation by analyzing all organizations which deal or whose activities affect planning and management of recreational open

spaces. Of course, there is no way open spaces can be divorced from the whole planning process, because as a sub-sector, it is part of the integrated urban system. It can not function in isolation from other sub-sectors. Therefore the model is formulated to help us focus on recreational open spaces and understand problems associated with them.

Planning in urban areas in Botswana is the responsibility of the Minister of Local Government and Lands who delegates powers to the Department of Town and Regional Planning or the local government authorities to make a plan for a given area. The plan has to be approved by the Town and Country Planning Board (T.C.P.B.), so that it can have the technical input before it reaches the Minister. The Town and Country Planning Board is made up of experts in different fields. Implementing agencies of the development plan are from the central government and the local government. At central government level development control is managed by mainly T.C.P.B. whose Chairman is the Permanent Secretary to the Ministry of Local Governments and Lands (M.L.G.L.). The secretary for the Board is D.T.R.P. officer. The Town and Country Planning Board (TCPB) handle applications for large scale developments and the rejected plans from the local authorities. Department of Town and regional planning (DTRP) advise the TCPB,

the local authorities and the Minister. The Minister finally approves the Development Plan and makes final decision on appeals for planning permission. If the injurious person is not satisfied with the minister's decision he/she can take up the case to High Court. At the local authority level, there is the physical planning committee which deals with all applications for developments which are small and it is being advised by the development control committee. The development control committee sees to it that the details of the development plan are put properly on the ground. That is the committee members make it a point that the development plan is complied with.

Government departments, the private sector and the public are involved in the physical implementation of the development plan. They submit drawn plans to the local authority to seek planning permission for physical development of their land.

Small scale developments such as the operation of Kiosks and driving schools do not require planning permission. However, they apply for licences from Trade and Licensing Board, which is one of the council sub-committees. Though Kiosks and driving schools apply for licences, to operate, sites for kiosks are not strategically allocated. This is reflected by the fact that the areas designated for the informal sector like in extension 14 and Bontleng are under-utilized.

It is only the sites at Ginger and at the station which are fully utilized. In fact the market at the station is congested because it is in a more strategic place than other sites. This means that people now look for open land where they feel their small businesses can thrive well and they illegally allocate themselves. Sometime back in 1989 bye-laws were formulated by Gaborone City Council concerning the self allocation of kiosks in open spaces. People were supposed to apply for the location of kiosks within developed industrial plots with permission from the owners of these plots, where there are no such services which are provided by the kiosks. This was meant to control illegal allocations as well as to aid kiosks owners to be able to connect their temporary structures to the already existing services like electricity, sewerage system and water. Though people have started complying, some old kiosks are still located in open spaces where there are no such facilities. Consequently open spaces becomes filthy.

As for driving schools, Transport Department is offering licences without bothering itself to find out where these people are going to run their school. Moreover sites for driving schools are not provided for at all in the development plan. So people go ahead to self-allocate their driving schools in which ever open space they come across. This creates a very big

problem in controlling the operations of driving schools because they are indispensable. This shows that there is no co-ordination between the licensing authority (Transport Department), planners and Surveys and Lands which allocate land in urban areas. Even prior to this, Council was issuing such licences without concerning itself about where these schools are going to be run or at least restricting them to any particular open spaces. The board also seem not to be aware of what is taking place within the open spaces. If at all they are aware, they seem not to be taking the security and the moral implications of the operation of driving schools in recreational open spaces. However the Town and Country Planning Board may establish development control orders which supersede this code in connection with development plans for specific geographic areas. What it means is that T.C.P.B has the powers to protect these open spaces if it wishes to do so. The same applies to council, through formulating bye-laws, it can control the use of recreational open spaces.

On the other hand, the development and maintenance of recreational open spaces is the responsibility of the Section of Parks, Cemeteries and other Open Spaces. At

Section has 5 permanent and pensionable staff and 143 wage earners employees. Refer to table 1 and 2 below.

**Table 1: Existing Posts of Permanent Employees for Parks Section.**

Available Posts For Permanent Officers	No. of Posts Approved	Filled Posts
Parks Superintendent	1	0
Senior Technical Officer (Horticulture)	1	1
Technical Officer (Horticulture)	2	0
Senior Technical Assistant (Horticulture)	1	2
Technical Assistant	1	0
Senior Administration Assistant	1	1
Revenue collector	1	1
Supplies Clerk	1	0
<b>Total</b>	<b>9</b>	<b>5</b>

work. He is still training. At the moment, there is literally no one who is working in the section of Parks. There are two available like the 2 Technical Assistants who are junior to handle the required work. Although this section seems to be well provided with casual labourers, without proper guidance from the top, very little work is done.

**Table 2: Existing Posts of Wage Earners for Parks Section.**

Available Posts For Wage Earners	Existing Posts Are All filled
Nursery Attendants	26
Small Plant Operators	3
Stores Attendants	2
Semi-Skilled	6
Unskilled	106
<b>Total</b>	<b>143</b>

Source: Park's Notes, (1993). Page 18.

A very senior post of Parks Superintendent has not been filled for a long time now and two technical officer's (Horticulture) posts are also vacant. The only senior officer who could do some reasonable work is the Senior Technical Officer (Horticulture), but there is too much work on his hands. Moreover, he is not available for

work, he is still training. At the moment, there is literally no body who is managing the Section of Parks.

Those who are available like the 2 Technical Assistants are too junior to handle the required tasks. Although

this Section seems to be well provided with Casual labourers, without proper guidance from the top, very



little can be achieved in terms of improvement of open spaces.

Since the organizations which constitute the organisational model have their several problems which affect the demand and use of open spaces, it means that the organizational model has to be rectified if we have to achieve better results in our future use of recreational open spaces.

#### **2.4. Summary of the Findings of the Background**

##### **Information.**

The Town and Country Planning Act has covered all types of open spaces. Though there has not been a comprehensive development plan apart from the 1963 Master Plan, detailed layout plans and structure plans have provided various open spaces in the city for outdoor public recreation. Refer to Map 3 which illustrates one of the detailed layout which in Gaborone West.

The reason why recreational open spaces are not recognised on the ground is because they look like any other open land that are reserved for future development structures.

The problem exists with the development planning because planners they have failed to provide or to designate open spaces for other important land use

activities like driving schools, so they encroach into recreational open spaces. Another observation is that existing market places are not fully utilized and instead some recreational open spaces are utilized by kiosks as markets.

In the Development Control Code, the provision and development of open spaces is covered only at a smaller scale. It has failed to implement the goals of the Town and Country Planning Act, the objectives of the Master Plan and the Partial Plans which were designed after the Master Plan in that it does not have any provision for the development of large scale open spaces.

Undeveloped open spaces is partially attributed to by lack of insufficient professional and technical staff in Parks Section to carry out the stipulated tasks. In practice lack of adequate development control staff make it difficult for the code to achieve its objectives. Lack of co-ordination between the local government, T.C.P.B and central government agencies such as Town Planning Department, Department of transport and Surveys and Lands Department. This is particularly illustrated by C.T.O. which seems not to be liaising with any agency, apart from issuing licences. Such problems also affect open space environment.

The Town and Country Planning Board and the physical

planning committee which could take proper action by designating some open spaces for driving schools seem not to be aware of what is happening. However Council is trying to resolve the problem of self allocation of the kiosks in open spaces.

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  13. **Development Control Code**, Botswana Government Printers, Gaborone, 1978. page 1.
  14. **Development Control Code**, Botswana Government Printers, Gaborone, 1978. page 2.
  15. **Development Control Code**, Botswana Government Printers, Gaborone, 1978. page 11.
  16. **Development Control Code**, Botswana Government Printers, Gaborone, 1978. page 15.
  17. **Proposed Planning Design Criteria for Application in Upgrading Villages**. page 8-9.
- Key Informants: ... included: ... lecturers, City Council and Central Government employees. Questions relating to the legislation and the efficiency in the use of the recreational open space were asked.

## CHAPTER 3.

### 3.0 DATA ANALYSIS

#### 3.1 Type of Survey

Three types of surveys were conducted, namely the Households survey, the key Informants and the Park/Play ground visitors surveys.

The households survey was carried by conducting 70 interviews and the technique adopted to select households was stratified systematic sampling. Four areas representing different income groups or densities were chosen. Thus forming four different stratum in Gaborone. An interview was to be carried out in every fourth house but this was not strictly followed because many people had gone to work since most parts of the survey was carried out during working hours. Questions were asked as to whether people visit parks and play grounds; How often they visit parks and play grounds; When they visit parks and play grounds; What mode of transport they use to visit parks and play grounds and why they visit parks and play grounds. Their general opinion was solicited about the status of recreational open spaces.

Density type	No. of households
High	18
Medium/Low	12

Key Informants sample included councillors, Lecturers, City Council and Central Government employees. Questions relating to the legislation and the efficiency on the use of the recreational open spaces were asked.

Parks and play grounds interviews were conducted in two Parks and two play grounds. Questionnaires were administered to 30 Park/Ground visitors. The questionnaire content was similar to that of the households interview surveys.

### 3.2 Households Interview Survey

#### 3.2.1 Characteristics of the Households Respondents and Findings.

Within the four areas which were selected, almost the same number of households were interviewed from the same area. See the table below:-

Table 3: Number of Interviewees in four Sampled Areas.

Name of area	Density type	No. of Households
Selemelela	High	18
Gaborone West Block IV	Medium	18
Taung	Medium/low	18
Tsholofelo	Low	16

Source: Field Survey, (1992).

The plot numbers ranged from 35 to 23971 which reflect a fair coverage of both the old part and the new part of the city. Selemelela represents the old part of the city, Taung and Tsholofelo are not very old nor very new and Gaborone West Block IV represents the newly developed areas.

The people interviewed were the head of the family.

In cases where the head was not available the wife, son, daughter and others with unspecified relation to the head were interviewed. Among these 21.4% were males and 78.6% were females. This was so, because most men had gone to work. This is confirmed by the fact that the highest number of respondents were wives since their husbands had gone to work. Though the trend is changing, men are still the main bread winners in our African society.

The number of single people who responded is high because of the following reasons; It has been observed that young people in Botswana tend to marry relatively at a later stage than in other African societies. For instance most men in Botswana marry around the age of 29 years, while women marry around the age of 26 years.

Surveys have revealed that the educational level of the community positively affects the visit of open spaces, therefore it was necessary to find out from the respondents how far they had gone to school. The responses were as follows:-

The number of people employed was 38 and those who were not employed were 31. The number of people who remained at home are the ones who responded. In which case, they were either house wives, unemployed people staying with their parents or relatives. The categories of the employed people is stated below.



**Table 4: Households Educational Level.**

Educational Level	Percentage
Never went to school	4.3
Standard seven and below	24.3
Junior certificate	24.3
Cambridge	15.7
Certificate and Diploma	22.9
Junior degree and above	8.6

Source: Field Survey, (1992).

It is assumed that people who have done at least Cambridge (form V), are enlightened enough, and therefore would be in a position to understand what an open space is meant for. These people would supposedly be more likely to visit open spaces than those who have done junior certificate ( form III ) and below. If they chose not to visit open spaces, it would be because of the low value they give to open spaces.

The number of people employed was 39 and those who were not employed were 31. The number of people unemployed seem to be high because most of the interviews were conducted when some people had gone to work. People who remained at home are the ones who responded. In which case, they were either house wives, unemployed people staying with their parents or relatives. The categories of the employed people is stated below.

Table 5: Households Occupation.

Occupation	Percentage
Businessman	12.9
Artisan	4.3
Casual Labourer	12.9
Civil Servant	7.7
Private Sector Employee	8.6
Self Employed Professional	14.3
Others	4.3

Source: Field Survey, (1992).

Others included any type of work that was not specified above but earns someone income like traditional healing and prophesising. Self employed professionals included medical doctors, engineers, Teachers, scientists etc. Among people interviewed, 2 were 13 years or below; 61 were between 14 years and 44 years, where else 7 people were 45 years and above. This shows that Gaborone population is composed of young people. Old people are rural based because they engage in agricultural production. The necessity to provide recreational open spaces in Gaborone can not be underestimated. This need is emphasised by the fact that 68.6% of the respondents had visited open spaces at one point in time, out of which 40.3% visited recreational open spaces at least once a month as reflected on the table below.

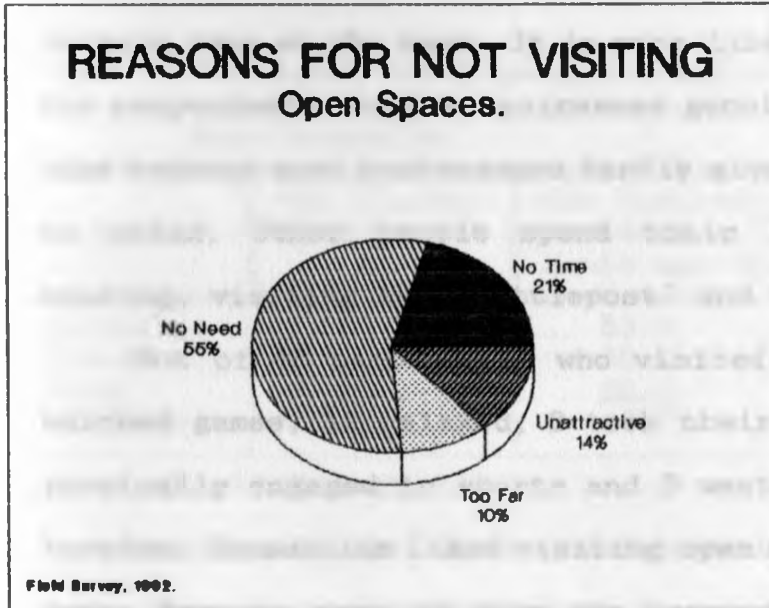
**Table 6: Households Frequency of Visits.**

No. of Visits	No. of people (%)
At least once a month	40.3
At least once in 4 months	14.0
At least once in 5 months	10.0
At least once in 7-12 months	4.3
Never	31.4

Source: Field Survey, (1992).

22 respondents who did not visit open spaces gave the following reasons for not visiting open spaces. See the Chart below.

Chart No. 1.



One is bound to believe that 21% who indicated that they do not have time to visit open spaces, fall in the same category as the 55% people who do not see the need because this shows that these people do not understand the use of open spaces. Normally people who do not see the benefits derived from say open spaces, would not find time to visit them. A person who is aware of the role played by open spaces, would definitely find time for them. Especially when you consider that 47% of the respondents who do not visit open spaces pass their leisure time at the bars. It is more likely that 12.9% of the respondents who run businesses genuinely do not have time because most businessmen hardly give themselves time to relax. Other people spend their leisure time by reading, visiting the 'cattlepost' and the 'lands'.

Out of 48 respondents who visited open spaces, 20 watched games, 12 relaxed, 8 took their children out, 5 physically engaged in sports and 3 went there to remove boredom. Households liked visiting open spaces from their homes because most of them are housewives. 40% of the respondents indicated that children play within the compound and 25% indicated that children play on the streets and this exposes children to traffic accidents. Only 5% had their children playing on the nearby park. This shows that most of the residential neighbourhood

residential open spaces are not developed. One of the hypothesis was to find out whether income, the level of education and distance influence park/playground visits. So the sample of the households were chosen from four areas of different densities. These are: Tsholofelo, a site and service area; Taung, a low income area; Gaborone West Block IV, a medium income area; and Selemela, a high income area. The table below shows us how many people visit open spaces within each group and the frequency of their visits.

**Table 7: Frequency of Households Visits According to Area Densities.**

Area	Who Visited Open Space %	Who Visited At least a Month Ago %	Who Visited at Least 2-4 Months Ago %
Selemela	84.0	53.0	30.8
G.West	70.0	50.0	10.0
Taung	<u>57.1</u>	<u>38.1</u>	<u>14.3</u>
Tsholofelo	68.8	43.8	6.3

Source: Field Survey, (1992).

Conclusions can be drawn from the above frequency table that the proportion of the people who visited open space has a positive relationship with the income of the people. It is appropriate to say that the number of people who have visited recreational open spaces is directly related to the level of income. That is, in the high income area many people tend to visit open spaces

than from other areas with lower incomes, as you see in the above table. This agrees with the hypothesis that visiting of open spaces is positively related to the level of income. Further analysis was done by running cross tabulations to find the strength of the relationship at .05 significance level or 95% confidence limit. The hypothesis ( $H_1$ ) tested was that 'There is significance relationship between the income levels and the number of visit to open spaces.' Conversely the null hypothesis ( $H_0$ ) is that 'There is no significance relationship between the income levels and the number of visit to open spaces.' The results were such that Chi-Square value observed ( $X_o$ ) equals 3.635 and Chi-Square value expected ( $X_e$ ) equals 12.592. When  $X_o$  is greater than  $X_e$ , the Null hypothesis is rejected and therefore the Hypothesis is accepted. In short the results are as follows:-

$X_o$  is less than  $X_e$  because 3.635 is less than 12.592.

Therefore the null hypothesis is accepted.

The results of the survey analysis is that 'There is **no significant relationship between the income levels and the number of visit to open spaces.**'

The null hypothesis is rejected because the confidence limit set of (95%) is too high to see the

relationship. Another issue which makes the hypothesis not to be valid is that the rate at which this income groups differ in visiting open spaces is very minimal. Moreover, at times, the lower income groups exceed the higher income groups in the rate at which they visit open spaces. This is reflected in columns 2, 3 and 4. This is ~~not~~ This lead us to look into the adequacy and the distribution of open spaces. Spatially open spaces are well distributed because there is at least one open space in a residential block. The problem is that there are undeveloped. Gaborone proposed Development Plan (1992-2012) has also observed lack of developed open spaces. It states; 'Although a number of open spaces of various sizes exist within Gaborone, there is a shortage of developed parks which could be used by residents for leisure activities such as walking, jogging and informal games.' So you find out that people travel on average a distance of 2.75 kilometres to the nearest open space. As such the deficit is not caused by lack of recreational open spaces per se but it is a result of lack of their development. The plan has therefore proposes that 'areas be identified in each of the extensions for the development of neighbourhood parks during the plan period.<sup>1</sup> Detailed layouts of new development areas will also provide for similar fully developed parks. The open

area along Segoditshane River Valley will be developed into scenic resort for picnics and other forms of passive recreation.

From this survey it has been found that education does not always influence the number of visits to open spaces, as is reflected in table 7 above. This is confirmed further by Chi-Square test which was computed through cross tabulations. The hypothesis ( $H_0$ ) to be tested was that there is a significance relationship between the number of visits to open spaces and the level of education. The null hypothesis ( $H_0$ ) is therefore that 'There is no significant relationship between the number of visit to open spaces and the level of education.' The observed Chi-Square value ( $X_0$ ) is 7.525 and the expected value ( $X_e$ ) is 12.6. Since  $X_e$  is less than  $X_0$ , the null hypothesis is accepted. **Therefore the hypothesis ( $H_0$ ) that there is a significance relationship between the number of visit to open spaces and the level of education does not hold.** This is further illustrated by the table No. 8 below.



**Table 8: Frequency of Households Visits and According to Educational Level.**

	Never	7 to J.C	Form 5 to Diploma	Degree and Above
At least once a month	2%	24%	35%	4%
At least once in 4 months	2%	7%	4%	6%
At least once 5-12 months	0	8%	6%	2%
Total	4%	39%	45%	12%

Source: Field Survey, (1992).

This can be explained by the cross tabulation table number 11 above. The highest educated people and the illiterate people have the lowest frequencies in visiting open spaces as shown by 12% and 4% respectively. So education does not influence the visit to open spaces in Gaborone community. The reason could be that the illiterate people do not see the benefit of visiting open spaces while the educated people are discouraged by the poor status of Gaborone open spaces. Distance has not influenced the visit to recreational open spaces since the high density areas (Tsholofelo and Taung) which have the least number of people who visited open spaces, gave reasons for not visiting open spaces as being 'No Time' and they also 'Do Not See The Need'. Only 20% of the

households stated that they disliked some open spaces because they were far. This hypothesis was further tested using oneway ANOVA. The null hypothesis ( $H_0$ ) is that there is no significance relationship between the distance travelled to open spaces and the number of visit to open spaces. If  $F_0$  is greater than  $F_e$ , the null hypothesis is rejected, and therefore the hypothesis ( $H_e$ ) is accepted. In this case the results were as follow:-

$F_0$  is less than  $F_e$ .

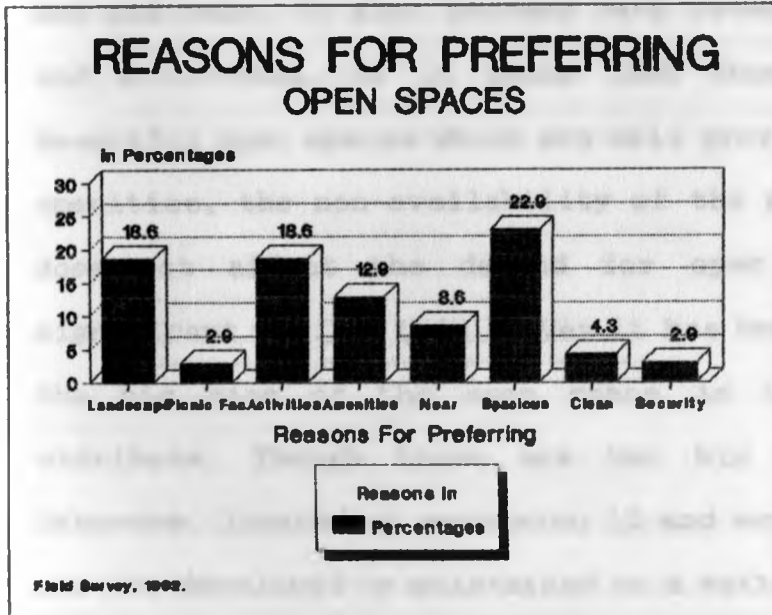
.713 is less than 3.23.

As such the null hypothesis is accepted and therefore the hypothesis that there is a relationship between distance travelled and the number of visit to open spaces is null in void

This is because the average distance travelled to open spaces is 2.25 kilometres.

Other issues to be investigated were to find out whether the provision of social amenities and landscaping affect the demand of open spaces. People were asked which three open spaces they preferred most and the reason why they prefer them. The most popular open spaces were Tsholofelo, at a frequency of 38.6%, the National Stadium at 30%, Extension 11 park at 24.3% and Lion park at 7.1%. The reasons for preferring them are given below in a bar chart.

Chart 2.



The results show that people like spacious open spaces most. The beautiful landscape and open spaces which provide games and activities is the second valued attribute and the availability of social amenities is the third valued attribute. Although landscaping and the availability of social amenities are valued attributes in recreational open spaces, they do not totally influence the visit to open spaces by themselves. This is reflected by the fact that the four most preferred open spaces do not possess the above two qualities. For instance the

stands at the National Stadium are not sheltered from the sun and rain. It also becomes very crowded during games and activities. So it means that though people like beautiful open spaces which are well provided with social amenities, the non-availability of the above attributes does not affect the demand for open spaces in any significant way. In this survey it has been revealed that the big size of the open space is the most valued attribute. Though there are two big open spaces in Gaborone, located at extension 12 and extension 27, they are not developed or maintained to a satisfying standard. So the situation is just like there are no big open spaces in Gaborone. People also value watching games as much as they value beautifully landscaped recreational open spaces. However, none of the above attributes affect the demand of open spaces. Refer to table 9.

**Table 9: Open Spaces not Liked by Households.**

Name of Open Spaces which are liked	Percentage
Tsholofelo Park	38.6
G.S.S Ground	2.9
Lion Park	7.1
Extension 5. Park	1.4
Children's Parks	2.9
Extension 11 Park	24.3
Game Reserve	1.4
Village Park	2.9
Stadium	5.7

Source: Field Survey, (1992).

given in the table below.

**Table 10: Households Reasons for Disliking Open Spaces.**

Reasons	Percentage
Far	10.0
Dirty	25.0
No Security	7.1
Lack of Children's Facilities	1.4
Lack of Maintenance	7.1
No Social Amenities	15.0
Poor Landscaping	20.0
Lack of Sporting Facilities	4.3

Source: Field Survey, (1992).

25% of the respondents complained about dirty open spaces and Tsholofelo park has been found to be one of the most untidy parks demonstrated by plate number 3.

**Plate 3.**

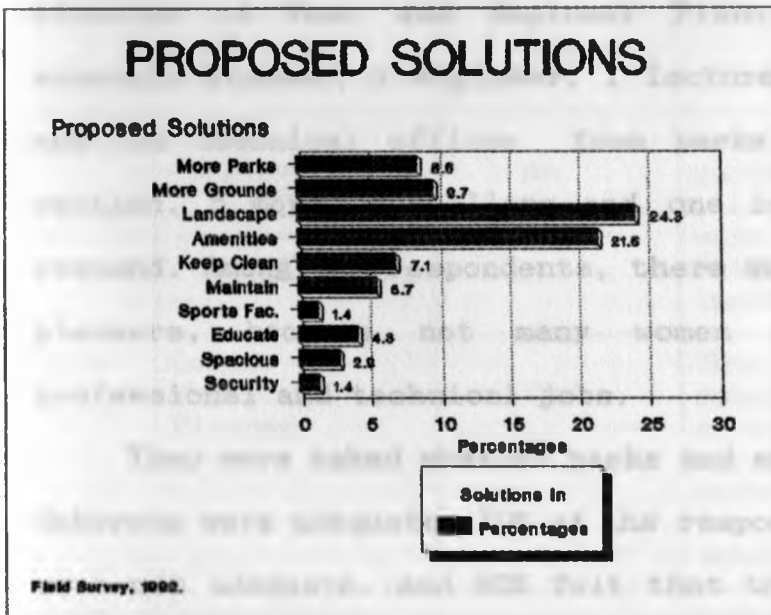


Untidy open space (Tholofelo Park).

Source: Field Survey, 1992.

Due to the problems experienced respondents were asked to propose how the government should improve the situation. The solutions are illustrated by the bar chart No. 3 below.

Chart 3.



### 3.3 Key Respondents Interview Survey

#### 3.3.1 The Characteristics of Respondents and Findings.

This interview was meant to solicit ideas from the local politicians, urban planners and experts from other disciplines. Being the implementors and also aware of the

legislations which guide the planning and the use of open spaces they would be in a better position to bring out the problems and possibly suggest alternative solutions.

The following respondents were interviewed. These are 5 urban planners which were interviewed including the director of Town and Regional Planning himself, 1 economic planner, 1 engineer, 1 lecturer, 1 councillor and one technical officer from parks and recreation section. 5 more councillors and one lecturer did not respond. Among the respondents, there were only 2 women planners, because not many women opt for these professional and technical jobs.

They were asked whether parks and sports grounds in Gaborone were adequate. 70% of the respondents said they were not adequate, and 30% felt that they were enough. Those who said that open spaces were not enough, gave at least one probable solution. The table below summarises their responses.

Regional	Urban Planner	No	Sports ground for clubs should be increased. Another stadium should be provided.
Regional	Urban Planner	Yes	
Regional	Urban Planner	No	Provide more parks to cater for the deficit.

Table 11: Key Informants Responses.

Name of Organisation	Position	Adequacy of Parks & play Grounds	Capacity Improvement ( Solutions )
Gaborone City Council	Economic Planner	No	Develop idling open spaces into parks. Amenities
Gaborone City Council	Technical officer Horticulture	Yes	Develop more open spaces into bigger parks.
Gaborone City Council	City Engineer	No	Develop policy guidelines on planning, development & operation of Parks and grounds & implement them.
Gaborone City Council	Senior Physical Planner	No	The concept of Open spaces should be reviewed at planning stage to ensure appropriate size, present sizes are small.
Gaborone City Council	Councillor	No	Government should give council more funds to develop parks and grounds.
Department of Town & Regional Planning	Director	No	Sports ground for clubs should be increased. Another stadium should be provided.
Department of Town & Regional Planning	Urban Planner	Yes	
Department of Town & Regional Planning	Urban Planner	No	Provide more parks to cater for the deficit.



Continuation.

Name of Organisation	Position	Adequacy of Parks & play Grounds	Capacity Improvement ( Solutions )
Department of Town & Regional Planning	Urban Planner	Yes	
University of Botswana	Lecturer ( Professor )	No	Develop open spaces into bigger parks.

Source: Field Survey, (1992).

What is coming out from this analysis is that the deficit which seem to prevail, is a result of undeveloped open spaces. Since they are not developed, they could not be utilized. The deficit is more apparent in newly developed areas like Gaborone West, where currently there is no developed park nor sports ground. The problem of undevelopment of outdoor public open spaces should be addressed seriously if Gaborone city has to function as a complete urban system in the future. Most of the play fields which are being used, have been simply cleared by specific clubs and they are rarely gravelled. Over and above that they are not adequate. In households survey, some respondents confessed that they either use open spaces illegally and some use school grounds for practice. It was also suggested that a site for mini-stadium should be identified. This is because activities and games always compete to use the stadium especially

during the week-ends.

Another critical problem is lack of big developed parks. So the availability of small developed parks does not, provide alternative atmosphere to the confined small residential plots. From the household survey it was obvious that people prefer spacious parks like lion park and are well looked after. Within those mostly small open spaces which are developed, basic amenities such as dust bins, toilets and watering points are hardly provided.

Respondents were also asked whether the use of open spaces for driving schools was appropriate. Note that, only one person out of 10 respondents felt that the use of open spaces for driving lessons is quite fine, and the reason he gave was that there are no alternative sites provided for driving schools. 90% of the respondents felt that the use for driving lessons makes open spaces unsafe for users and secondly it destroys the vegetation. Thirdly the noise from these cars disturb the peace and quietness that is supposed to be achieved from these outdoor recreational open spaces. Last, but not least, it brings dirt to the open space environs. This problem is demonstrated well by plate number 4 and 5 which were taken at extension 12 and extension 5 respectively.

Plate 4.



Driving school at Extension 12.  
Source: Field Survey, (1992).  
Plate No. 5.



Driving school at Extension 5.  
Source: Field Survey, (1992).

The perceived solutions to the stated problems by all the respondents is that specific sites for driving lessons should be identified.

Another question which was posed to them, is whether the use of open spaces for vending is appropriate. 40% agreed that the use of open spaces for vending was ideal, if only it could be coupled with proper landscaping and provision of facilities like toilets and rubbish bins which also need to be emptied regularly. The argument which was brought about to this regard, was that open space users need to buy snacks and drinks from the kiosks. 50% of the interviewees do not want the operation of the kiosks because they create dirt. The expressed opinion is that people are not particularly opposed to the operation of the kiosks within open spaces per se, but they are against the dirt which is accumulated as a result of the selling activity.

It is stated in the previous chapter, that the markets are not strategically located. That is why it kiosk's owners allocates themselves on sites set aside for outdoor recreational open spaces. Some of the respondents suggested that the provision of a market square could reduce the number of kiosks in these open spaces and other informal sector operations like watch and shoe repairs.

All the respondents felt that the provision of social amenities within the open spaces leaves much more to be desired. They suggested that toilets, dust bins and benches should be provided. Landscaping should be done in terms of planting trees and lawns. Facilities should be varied to cater for the interest of all age groups.

Regular maintenance of these recreational open spaces need to be carried out as well as guarding against vandalism. Or else fencing should be done to ensure security. All these boils to poor management of Gaborone public open spaces. Of course the problem of sufficient lack of funds exists, but it can not be over emphasised because the way priorities are set, and the way funds are distributed among various sectors in an organisation, reflects on the way that organisation manage its meagre resources. However one of the respondents suggested that enough funds need to be committed to the development of open spaces.

The respondents were further asked as to whether there were any legislation relating to the development and the use of open spaces. All the interviewees indicated that there are no legislations which specifically address the development and the operation of open spaces. It was generally felt that the policy guidelines should be formulated to this regard and funds

should be made available for the implementation of the policy.

### 3.4 Park and Play Ground Visitors Survey.

#### 3.4.1 Characteristics of the respondents and Findings.

In the park and play ground visitors survey, respondents came from all over Gaborone and out of 30 people 3 came from outside Gaborone (Mogoditshane Village). These were the supporters of Tswapong United football team. The survey covered Extension 11 park (Borakalalo park); Extension 27 park (Tsholofelo park); Tswapong united football ground and Gaborone West football ground. Among the respondents 8 were women and

22 were men. This observation reveals that men tend to visit open spaces more than women. This is partly so because most men physically participate in games especially football. While women would go occasionally on weekends to watch games. So men often go for practice on regular basis.

27 interviewees were between the age of 14 and 44 years. This is not surprising since this is the group which is actively engaged in recreation. Only 3 people were 45 years and above. 63.3% of the park/ground visitors were single, 23.3% were married, 6.5% were divorced and 6.7% were either widows or widowers. One

reason why there were many single people is that most of the interviewees were too young to get married or to marry. Secondly most single people do not have too many commitments which would tie them at home. So they have a lot of spare time which they can spend at the open spaces.

The level of education in this survey is negatively related to the visiting of open spaces. 63.3% of the visitors had done junior certificate or less. See table number 12 below:-

**Table 12. Educational Level for Park/Ground Visitors.**

Level of Education	Percentage
Never went to school	6.7
Standard 7 and below	43.3
Junior Certificate	13.3
Cambridge	20.0
Certificate and Diplomas	13.3
Junior Degree and above	3.3

Source: Field Survey, (1992).

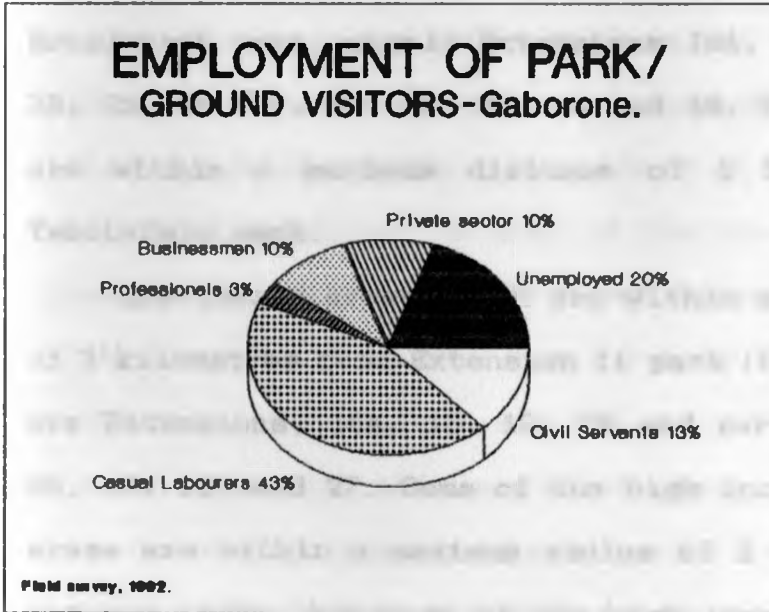
In the households survey, unlike in other outdoor recreational surveys, it was found that the level of education is not positively related to the visit of open spaces. Even the park/ground visitors survey has also not confirmed this general observation. As you see from the above table, most of the uneducated people who hold junior certificate and below, were found in the open

spaces and interviewed. This could be because parks within the city are not appealing to the educated people because of their low level of development and poor maintenance. From the household survey both the educated and the uneducated people equally visited the football grounds. The difference is only found when it comes to visits made to the parks, the uneducated people visit the nearest parks, while the educated people visit open spaces in the periphery of the city. These, are the people who have their own means of transport. This means that during the time of the interviews, these people had probably gone to the peripheral recreational open spaces like Gaborone Game Reserve and the Lion Park.

24 respondents were employed and 6 were not. Their occupations are categorised in the bar chart No. 4.



Chart 4.



This bar chart shows that 63.3% of the people who were found at the recreational open spaces did not get regular income or else they were paid wages. It can therefore be concluded that many people who were interviewed are of low income group. This does not agree with the general findings of outdoor recreational studies but it does agree with the households survey analysis of Gaborone city. This could imply that the sampled parks within the city are not developed to a level that they would attract the high income class. The reason why they are visited by the low income group is that Tsholofelo

park in particular, is within a walking distance from a number of low income residential areas. These are all in Broadhurst area, namely Extensions 16A, 18, 19, 20, 22, 23, 25, 26, 27, 31, 32, 33, 34 and 46. These Extensions are within a maximum distance of 2 kilometres from Tsholofelo park.

Low income areas which are within a maximum radius of 2 kilometres from Extension 11 park (Borakalalo park) are Extensions, 16A, 18, 19, 28 and part of Extensions 20, 22, 23, and 27. Some of the high income residential areas are within a maximum radius of 2 kilometres from the two parks, but most of the high income group people do not visit these parks even if they are near because they prefer Lion park, Gaborone Game Reserve and the Village Park because they satisfy their interests better. The play grounds themselves are equally visited by both the low and the high income group people.

14 visitors stayed at the park/ground for 1 hour or less and 16 stayed for more than an hour. The park visitors were not interested in staying for a long time, while those who visited play grounds either to physically participate or to watch games, stayed for a longer period.

36.7% of the respondents visited open spaces from their homes, 53.3% from their place of work and 10% came

from their friends and relatives' places. The fact that many people came straight from their place of work, reflect that work is very tiring and at times so boring that one needs to relax first before reaching home, where life can also be too demanding. Life at home and at work can be very strenuous, so most of the visitors go to open spaces to escape temporarily from binding tasks. This is further explained by the fact that 66.7% of the people visit open spaces alone and 20% go with other adults. Only 13.3% go with children which means that people feel more relaxed if they do not have the responsibility of looking after children. People visit open spaces for the following reasons:-

Table 13: Visitor's Reasons for Visiting Open Spaces.

How people spend time	Percentage
Relaxing	43.3
Physical Participation	30.0
Watching Games	26.6

Source: Field Survey, (1992).

This shows us that people at times need to refresh their minds and body by visiting recreational open spaces which provide an antidote to their usual environment. 76.7% of the interviewees visit recreational open spaces more than 10 times a year. This indicates that Gaborone people like visiting open spaces and this

analysis also agrees with the households survey findings.

40% of the respondents found open spaces very convenient, while 13.3% found them to be fairly convenient and 46.7% found them not convenient. Those who found open spaces convenient gave the following reasons on the table below.

**Table 14: Reasons Given for Convenient Open Spaces Visitors.**

In what way is it convenient	Percentage
Quiet place	13.3
Near	40.0
Not convenient	46.7

Those who found them not convenient gave the following reasons:-

**Table 15: Reasons Given for Non-Convenient Open Spaces Visitors..**

In what way is it convenient	Percentage
Far	13.3
Not formally allocated	20.0
No social amenities	20.0

Source: Field Survey, (1992).

Lack of social amenities has been reflected significantly in both households and key informants analysis as well. This could be the reason why the high income group people visit specific open spaces like Lion park, Gaborone game reserve and Village park.

Most of the local teams do not have play grounds and

the deficit was revealed clearly from the key informants and households survey analysis. Football clubs, particularly have illegally allocated land for themselves. This state of affair, though not acceptable, is being tolerated because there is shortage of play fields for clubs. Those teams which are illegally allocated or those which use school grounds, do not consider themselves to have playgrounds. This can be demoralizing and members of the team could be discouraged from going for practices.

In order to cope up with the current demand, Gaborone City Council is also allowing football clubs to use Segoditshane River valley as play field. These clubs which are using the river valley as playgrounds do not have any other alternative playgrounds.

Distances to open spaces seems not to be a big problem even for low income people who do not have their own means of transport. However footballers tend to travel long distances not because there are no play fields near by but because their interests lie with their teams which are not necessarily locally based. This is supported by the fact that 56.6% of the people travel a maximum distance of 2 kilometres and 6.7% travel for 2.1 to 3 kilometres. 36.7% travel for more than 3 kilometres and this does not mean that these people do not have

easily accessible open spaces, since only one person out of 30 people indicated that there is no nearby open space. Players or even supporters who are committed to their teams would usually attend practice and matches regardless of the distance travelled.

Respondents were specifically asked how they travel to get to open spaces. 63% of the people walk to open spaces. This could only be the case with local parks and play fields. If people travel long distances, of more than 3 kilometres, they use their vehicles or public means of transport.

The percentage of people who walk to recreational open spaces is very high because most of the people who were found in the open spaces and interviewed are of low income group and are less educated. So very few would afford to buy a car. 6.7% of the visitors use public transport and 30% use their own cars. Almost all the people who were found at the football grounds travelled by vehicles because those who do not have cars were given lifts. This shows that play grounds within the city are visited by anyone regardless of their social status. Among 30% visitors who were driving, 10% did not have difficulty in parking where else 20% had a problem. The following reasons were given for not visiting the nearest open space.

**Table 16: Visitors' Reasons for not Visiting the Nearest Open Spaces.**

Reasons for not visiting the nearest open space.	Percentage
Too expensive	3.3
No toilets	20.0
Not clean	20.0
Unattractive	20.0
Too crowded	3.3
To practise with team	16.6
school ground/illegally allocated	16.6

Source: Field Survey, (1992).

The cost of visiting open spaces is generally very low. People are only charged minimal entrance fee at Lion park and Gaborone game reserve. The only place where fees are high is the Village park because it provides varied amenities including children's play facilities which are in good conditions and swimming pool. It is also a private recreational park. People pay for watching games at the national stadium and the charges depend on whether it is a local or an international game. In the case of an international game, entrance fees are higher. People also pay at trade fair ground during trade fair exhibitions and the charges are very minimal also.

Toilets fall under social amenities and these are virtually non existent in some cases. Cleanliness is a major concern in most open spaces. Tsholofelo park is a good example of an untidy open space. Lack of

cleanliness, social amenities and poor landscaping make the open spaces unattractive. Most open spaces are under-utilized and the issue of crowding hardly arise. Crowding is experienced only when games are played at the national stadium or if there is an important occasion going on.

Another question which was asked is whether visitors brought something to eat or drink. 63.3% of the interviewees had carried drinks and/or food, and 36.7% did not intend to have anything. This shows that at least some refreshment facilities are required within outdoor public recreational open spaces. That is why most of the respondents in the key informants questionnaire are not against the operation of kiosks within the recreational open spaces. Their main concern is the dirt which they

bring about. The need for refreshment facilities or restaurant is supported by the fact that 33.3% of the people brought drinks and 30.3% brought food to have at the open spaces.

They were further asked about what they like about the park/playground which they visited and the responses are tabled below.

For maintenance	23.3
Recreative	18.3
For children	13.3
For family	5.3

of parks and playgrounds has been mentioned before in the questionnaire. There is too much littering within open spaces. Lack of regular cleaning and rubbish collection



**Table 17: Visitor's Reasons for liking Park/Ground.**

What one like about the ground/park	Percentage
Near	46.7
Clean	6.6
Well landscaped	10.0
Nothing	36.7

Source: Field Survey, (1992).

Most respondents visited those open spaces which they thought were near their place. Otherwise the level of cleanliness and landscaping in these open spaces has not been appreciated by many. A specific question was posed on what people did not like about the ground/park they visited and they responded as follows:

**Table 18: Aspects not Liked about the Visited Park/Ground.**

Something not liked about park/ground	Percentage
Dirty	26.7
Poor maintenance	23.3
Lack of social amenities	13.3
Unattractive	13.3
Small	13.3
Poorly located	3.3
No response	6.7

Source: Field Survey, (1992).

The dirty of parks and playgrounds has been mentioned before in the households and key informants questionnaires. There is too much littering within open spaces. Lack of regular cleaning and dustbins makes these

places look very unhealthy and untidy. Actually some of the undeveloped open spaces are used as dumping grounds of solid waste. Besides lack of regular cleaning, poor maintenance is also attributed to by non-repairs of children's facilities and lack of watering, in case of places where trees are planted and lawns. Amenities like toilets, dust bins and benches are very basic to human needs. They must be provided no matter how restrained the budget is. Without proper maintenance, cleaning and lack of social amenities, recreational open spaces would obviously be unattractive and they would not appeal to their users. The issue of small open spaces was raised as well by the households and key informants. Actually households interviewees stated categorically that they prefer spacious open spaces. In Parks/Playgrounds' visitors surveys, 2.7% of the people thought that open spaces were poorly located. Location in this case could mean the sites were far from the users or sites located on the topographically unsuitable areas. Observations have proved that open spaces were located within peoples reach. The main problem is that in most areas, open spaces are not developed and people might not realise that the open land lying around them is meant for recreation. The topography does not differ significantly in the whole of Gaborone. So open spaces are provided in

the appropriate sites.

The outlined problems above were coupled with probable solutions.

**Table 19: Visitors' Suggested Solutions.**

Possible Solutions	Percentage
Provide Refreshments	30.0
Provide Restaurant	20.0
Provide Toilets	23.3
Provide Dust Bins	6.7
Provide Parking Space	3.3
Provide Spacious Parks	6.7
Landscape	20.0

Source: Field Survey, (1992).

The solutions suggested are that open spaces should be landscaped and be provided with refreshment facilities, restaurants, parking spaces, social amenities such as toilets and rubbish bins. Over and above these solutions, people wanted more sporting facilities to be provided. The most popular facilities opted for were softball pitches, tennis courts, netball grounds and slug machines. They are ranked in order of priority.

### 3.5 Summary of the Survey findings

The issue which strongly emanates from the above three studies and field observations is that recreational open spaces are well provided for at the moment in land use planning and the proposed development plan for Gaborone, adequately provide for open spaces for future

recreational activities. So the question of their distribution does not arise. The distribution of recreational open spaces is illustrated by Map 3.

The fundamental problem facing suppliers and the users of Gaborone outdoor public open spaces is that open spaces are not developed. Consequently local demand has outstripped supply in many parts of Gaborone. Therefore development of open spaces remains the greatest challenge to the government of Botswana, Gaborone City councillors, City administrators and City planners as well as the Parks and Recreation section of the City.

Another problem is that grounds and especially developed parks are small and from the three surveys, people have indicated that above all things, they prefer spacious open spaces.

Shortage of pitches force footballers to use school grounds and allocate land for themselves.

Spectators and participants in international, national as well as local games and activities normally suffer because almost all stands at the National stadium are not sheltered. So there is a tendency of crowding in those stands which are meant for V.I.Ps.

Another problem revealed is that more often than not, the National Stadium is usually fully booked. This could be because sports has been allocated little land

3  
DISTRIBUTION OF RECREATIONAL  
SPACES.



GABORONE DEVELOPMENT PLAN  
DEPARTMENT OF TOWN & REGIONAL PLANNING

SCALE 1:20,000

GABORONE LAND USE MAP 1987

- LEGEND
- [Pattern: Dotted] 10% (MEDIUM COST (HOUSING))
  - [Pattern: Horizontal lines] LOW COST
  - [Pattern: Diagonal lines /] SITE & SERVICE
  - [Pattern: Diagonal lines \] CIVIC & COMPANYY
  - [Pattern: Vertical lines] COMMERCIAL
  - [Pattern: Cross-hatch] INDUSTRIAL
  - [Pattern: White] OPEN SPACE

SCALE 1:45,000

relative to land allocated to parks.

Educated and the high income group residents of Gaborone are discouraged to visit open spaces because of their poor status.

There is generally lack of staff to implement the developments required in open spaces. There is a complaint that funds allocated to develop outdoor public recreational open spaces inadequate. However funds alone, without proper planning and prioritization and both local and central government level will not alleviate the existing problems which face Gaborone dwellers.

Social amenities such as toilets, dust bins, benches and play facilities, are inadequate and sometimes are not provided at all. Those few open spaces which are developed are not well maintained.

**3.6 REFERENCES.**

- 1. Department of Town and Regional Planning and Gaborone City Council, Gaborone Development Plan 1992-2012 (1992-2012). Botswana Government Printers, page 90.**

**CHAPTER 4.****4.0 RECOMMENDATIONS.**

This chapter interprets problems which were raised in the earlier chapters and suggests recommendations in relation to stated objectives. Issues to be considered in five main categories and a time dimension in terms of short run and long run perspective will be attached to each recommendation. The categories are as follows: adequacy and distribution of recreational open spaces; the use of recreational open spaces by other land use activities; supply, demand and use of open spaces; the effectiveness of the management structure and the likely future demand.

**4.1 Adequacy and Distribution of Recreational Open Spaces.**

From the spatial point of view it was found that open spaces are evenly distributed through out the City. Presently they are adequate since in every neighbourhood there is at least one local open space. This is further supported by the fact that people do not complain about distance to open spaces and this shows that open spaces are easily accessible. However residents chose to travel to far or near open spaces in order to satisfy their interests. On the other hand this can still be viewed as



a problem if you consider that these open spaces ought to be designed in such a way that they should meet the demand of different age groups and different tastes. Actually the problem of lack of developed open spaces is so serious that it came out very prominently in the analysis of all three questionnaire surveys that were carried out in this study.

In the very short run measures need to be taken to develop open spaces so as to meet the demand of different interests and age groups.

Inadequacy of the provision of a variety of recreational open spaces is partly attributed to the fact that the allocation of recreational open spaces to different recreational activities has not been rational. This has greatly affected sports clubs. There is generally shortage of play grounds and this has forced clubs to self-allocate land and use Primary School grounds. This could cause conflicts between Primary School authorities and club members. Immediate measures need to be taken by the Department of Town and Regional Planning in consultation with National Sports Council to designate sports grounds within the already existing open spaces particularly for football clubs.

In the long run, future plans should provide adequate sports grounds for clubs.

The Development Control Code and the Development Planning Standards have also not given adequate attention to the provision of large open spaces which are preferred by the urban community. This problem is magnified by the fact that the few big open spaces that have been identified are not developed at all or they are not developed to a satisfactory standard.

The immediate measure which needs to be taken is to develop Tsholofelo park, Borakalalo park and Segoditshane river valley. It is assumed that the development of these open spaces will accommodate this demand for big open spaces to a larger extent.

However, if the demand has not been met, future planning should also provide for large open spaces which are not less than 4 hectares.

This now leads us to consider other economic activities which use recreational open spaces

#### **4.2. Other activities which use Recreational Open Spaces.**

Currently driving schools have no specific sites, they operate within recreational open spaces. For the time being Department of Town and Regional Planning, should identify specific sites which could formally be allocated to driving schools. Department Transport should

DEPARTMENT OF TOWN AND REGIONAL PLANNING  
COPY

also satisfy itself before they issue, a licence that the applicant has a site to operate on.

In the long run Transport Department should be able to establish how many driving schools it will require at various stages of the City's growth, so that they could be in a position to take precautions against over-provision of driving schools. Moreover they would be able to provide accurate information to the planning authority as to how much land they need for driving schools sites, so that land can formally be allocated for driving lessons.

It was found out that markets which cater for kiosks are not strategically located, as a result their owners self-allocate themselves land within open spaces. In the short run, the department of parks in liaison with Town Planning Department, should under-take a study to establish the number of kiosks needed to offer services in open spaces and the type of service they would provide should be taken into consideration. The study could ascertain whether the markets are sufficient and if there is a shortfall the study could help in selecting strategic sites for those kiosks which do not prefer other sites but which could not be accommodated in the open spaces.

The immediate measure is that the Ministry of

#### 4.3. Demand, Supply and Use of Recreational Open Spaces.

There is high competition for local, national and international games and activities. As a result the activities and/or games have to be rescheduled or postponed to other days.

In the short run an additional mini-stadium should be identified, probably in the north of Gaborone. This would be used for activities which do not necessarily need the National Stadium. It will also be used for other major games and activities once the stadium is fully booked. That is, it will serve as a supplement to the main Stadium. This view is also shared by the Director of the Department of Town and Regional Planning who indicated it in the questionnaire and through informal discussions with his subordinates, they suggested an identification of a site for another stadium.

The stands at the National Stadium are mostly not covered, and people are normally exposed to the harsh weather. At times it becomes crowded during national and international games as well as other important occasions such as Botswana Defence Force day and music festivals as people fight for shelter to protect themselves against the scorching sun or rain storm.

The immediate measure is that the Ministry of

Finance and Development Planning should make funds available for the provision of shelter for all the stands at the National Stadium in this National Development Plan period (1991-97). facilities should be provided because

It was also observed that recreational open spaces are generally under-utilized, particularly parks. They are less utilized than sports grounds. This was very apparent when the park/ground visitors survey was carried out. At times only five people (just enough to be interviewed) were found in a park. This is partly, if not wholly attributed to the lack of social amenities, poor landscaping and poor maintenance of recreational facilities. Not to mention lack of adult facilities and other facilities for informal games which are not necessarily required by adults such as snookers and dart boards just to mention a few. significant has to be

Poor status of recreational open spaces has significantly discouraged high income group people and the educated members of the society from visiting local open spaces. Instead they visit open spaces in the periphery of the city. Landscaping and social amenities like toilets, dust bins and restaurants are non-existence in most open spaces. Open spaces need to be landscaped the same way as the round-about or even better than the round about because that is where people relax and become

intimate to the natural environment. Toilets and dust bins are essential facilities and should be provided because they help to keep open spaces clean. Restaurants and/or refreshment facilities should be provided because they can save visitors from the trouble of carrying drinks and snacks to the open spaces. Though benches are normally provided, they are usually not enough for people.

This problem needs urgent attention. For these improvements to be possible, two major issues need to be sorted out immediately. These are issues concerning availability of funds and shortage of manpower particularly for the Section of parks. The Section of parks needs to be given priority in terms of funds and manpower. It also needs both administration and political support, if at all something significant has to be achieved. Once open spaces are developed and well maintained, they will not be useful to Gaborone residents only, but they will also attract tourists thereby enhancing the tourism sector of the economy.

#### **4.4. Effectiveness of the Management Structure.**

The negligence of these open spaces reflects lack of policy guidelines and enforcement authority to protect open spaces from damage and their encroachment of by

other land use activities. In the short run, it is recommended that the government should adopt a policy on conservation on outdoor recreational public open spaces so that they are not used for any other activity apart from recreation and those activities auxiliary to it. This can further be articulated in the Town and Country Planning Act. (T.C.P.B.). Alternatively, the local authority can formulate by-law(s) which will prohibit the use of recreational open spaces for any other activity apart from those auxiliary to it. In future, change of use of recreational open spaces should not be accepted by the Town and Country Planning Board. However the implementation of these recommendations can only be possible if sites for kiosks and driving schools have been identified.

The conservation of outdoor public recreational open spaces can be enforced the same way as private gardens and other private open land areas are protected by section 26 of the T.C.P.A. This section states that, 'If the amenity of any area is seriously injured, the Minister may serve on the owner occupier of the land a notice requiring such steps for abating the injury as may be required.'<sup>1</sup> In the case of public recreational open spaces, the Minister shall transfer planning functions concerning the conservation of open spaces to 'the

responsible authorities.<sup>2</sup>

The management of recreational open spaces is the responsibility of the Section of Parks, Cemeteries and other open spaces. This Section is under Engineering Department of the City Council.

The technical and professional staff in the section of Parks, Cemetery and other recreational open spaces are not adequate to handle all the development activities required of them. For example the Senior technical officer (Horticulture) can not cope up with the duties outlined in his job description. Moreover, he has gone for further training. The post of the superintendent of Parks, and the posts of his subordinates like two existing posts of technical officers (Horticulture) have been vacant for a very long time.

The short term solution is to fill all the vacant posts as soon as possible. Over and above the Senior Technical officer's post, another post of a Senior Technical officer is required. This would help the head of this section to carry out research in matters pertaining to open spaces, so that he can inject his innovative ideas in designing and implementation of recreational open spaces. The two Senior Technical officers could assist him in his research as well as planning and administration issues.



If supervision is adequate, the casual labourers are likely to work harder to develop and maintain these open spaces. It is already stated that this section has a lot of responsibility in that it does not only cater for recreational open spaces, it also caters for other open spaces and looking after horticultural nurseries. This partly explains why recreational open spaces are not developed.

In order to achieve better results in the long run, this work load needs to be reduced by involving voluntary organizations and development committees to develop and manage some of the recreational open spaces. If these organisations charge minimum charges, they will be able to further improve these open spaces and re-invest in other undeveloped ones. Their activities should be co-ordinated by the Local Authority itself.

The local authority will be expected to give priority to the Section of Parks as far as allocation of funds and other resources are concerned. It should give a hand to the organisations formed in terms of money. This will improve the social amenities and the landscaping of various open spaces. It was reflected in the surveys that some people do not appreciate the role of recreational open spaces, so education campaigns need to be conducted by these organisations in order to

sensitize the urban community about the importance of outdoor recreational public open spaces.

The stated recommendations require a high level of commitment and co-ordination between the local authority and Central Government as well as among central governments departments particularly Department of Town and Regional Planning, Surveys and Lands and Department of Transport.

Once the problems underlying the development of open spaces are sorted out, development of recreational open spaces and their maintenance should be implemented at the earliest possible opportunity. This should be undertaken together with the development of major and minor pedestrian routes so that they can link open spaces to form a complete open space system.

#### **4.5. Future Demands.**

Since water based activities are rapidly increasing in popularity,<sup>3</sup> it is advised that the development of Segoditshane River Valley should exploit the existing water based sport and recreation potential of the valley to provide services such as sailing, canoeing, boating and canal cruising. This can be in juxtaposition with play fields for clubs which are already permitted to operate along the valley.

In the long run, further research needs to be carried out by the Parks Section in close collaboration with Department of Town and Regional Planning (D.T.R.P.) to establish whether there is need for the provision of big open spaces than it is currently provided. The results of such a study might help in improving the legislation and the planning standards as regards the provision of open spaces.

In view of the fact that the society is dynamic, the current demands of the society might change, it is recommended that in future provision should be made for bridle paths, cycling and longer walks by constructing suitable segregated network of routes on the peripheral areas of the city. These routes should be linked to other routes in the countryside.

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## CHAPTER FIVE.

## 5.0. SUMMARY AND CONCLUSIONS.

## 5.1. Summary.

This study set out to examine the planning, management and use of outdoor recreational public open spaces. The approach in assessing these factors were based on Lancaster's suggested policy plan model of 1983. This model suggested that recreational open space planning should be carried in isolation from other land use types. It was also found that the model does not justify the need to provide recreational open spaces because quite a number of people do not see the role of open spaces. It left out the management aspect of recreational open spaces. Therefore, the model was modified in such a way that it should be included in the integrated land use planning. In the modified model the management aspect was emphasised to suit this study. Justification for the provision of recreational open space was included in the model.

Using the model as a guide, some important issues were brought to the surface. From the planning point of view, it was clear that open spaces were adequately provided for and the main town planning legislation T.C.P.A. gives elaborate guidelines on their provision. The only shortfall observed is that it does not cover the

conservation of recreational open spaces.

Looking at the adequacy in the provision of recreational open spaces, it was also observed that though there is plenty of recreational open spaces, sports clubs do not have grounds of their own. They either illegally allocate themselves any open space they come across or else they use primary school grounds. These make the club members feel insecure about their future stand as far as those grounds are concerned.

It was found that planning has not taken into account the designation of specific open spaces for driving schools, hence they operate on recreational open spaces, thereby disturbing the vegetation and the visitors as well as making them unsafe. The unstrategic location of open air markets, has resulted in the operation of the kiosks in recreational open spaces. Though the services of providing snacks and drinks to the park and grounds visitors is very essential, the kiosks bring dirt along with them. More so that basic requirements like toilets and dust bins are not provided.

The fundamental problem of non-development of these open spaces is strongly tied to management problems. This is an area of concern because it seems to be propelling other problems such as the operation of driving schools within the open spaces. If these open spaces were

developed, no single driving school teacher would dare carry out his driving lessons in them. Very few open spaces are developed and even then, they are not developed to the satisfactory standard nor are they maintained. They are generally bare and lack social amenities such as benches, refreshment facilities as well as sporting facilities. This probably explains why the majority of the high income group and the educated members of the society shy away from them and they travel to find comfort in the peripheral open spaces especially Lion Park and Gaborone Game Reserve. In fact open spaces are generally under-utilized.

The source of this problem of undevelopment of open spaces emanate from two basic factors. Firstly, the Section of Parks has been found not only to be too small, but it also lacks technical and professional capacity to handle all the required tasks. Secondly, there is general lack of political and administrative will to develop and maintain recreational open spaces within the local government authority.

In the light of these findings, a number of recommendations were put forward in order to remedy the problem. These included the immediate development and proper maintenance of these recreational open spaces to be under taken. Some of the undeveloped open spaces

should be designated specifically for driving schools and sports clubs.

A further study should be carried out to consider whether indeed market areas are adequate and if they are not, strategic areas should be identified for them. Another study should be done to establish the extent to which spacious open spaces are required. This is based on the presumption that future development and regular maintenance of big parks like Borakalalo, Tsholofelo and the Segoditshane river valley might meet the current demand of spacious open spaces.

There is need for close co-ordination between Department Transport, Department of Town Regional Planning, Surveys and Lands Department and the local authority, in planning, land allocation and management for driving schools, informal sector (kiosks) and most importantly recreational open spaces.

The Section of Parks needs to be given priority in terms of finance and manpower. The management of recreational open spaces should not be the responsibility of the Section of Parks alone. The management should be extended to the voluntary organizations and groups of individuals. Co-ordination of their tasks should fall within Parks portfolio responsibility.

For these recommendations to be effected, a lot of



commitment is required from the local authority in terms of giving maximum support to the Section of Parks in so far as funds and manpower is concerned. The community can be motivated to participate in development and maintenance of recreational open spaces, if it is fully consulted on this regard. Central government is urged to give the local authority the financial support because generally local authorities in Botswana are unable to raise enough funds for developments. They need to be supplemented in terms of revenue.

## 5.2. Conclusions.

Lack of undeveloped parks and poor maintenance of outdoor recreational public open spaces reflect the level of attention given by central and local governments to outdoor recreational public open spaces. Indeed this problem experienced in Gaborone is not unique to most urban centres in Botswana. Even those towns where recreational open spaces have been developed, there is room for improvement. The neglect of recreational open spaces in Botswana leaves much more to be desired. If the round-about can be developed to an appreciable standard, why can't we develop recreational open spaces the same way?

This calls for priority to be given to development

and proper maintenance of these open spaces. The attractiveness of these open spaces would hopefully evoke the interest of the high income group and the educated people of Gaborone and the attitudes of the general public towards open spaces as dumping grounds and driving schools could change.

Open spaces also help in conserving the environment. The quality of the environment is a vital aspect of urban life, and together with social and economic aspects, forms an integral part of it. Chapin S.F, and Kaizer J.E, (1979).<sup>1</sup> Properly located, developed and managed open spaces can contribute to reduction of runoff as well as improving aesthetics of the urban environment. As such, green areas can be viewed as an integral part of the storm water drainage system, potentially reducing the need for, and cost of, expensive engineered drainage systems.

Recommendations that have been put forward concerning the improvements of open spaces, would not only provide this essential service of outdoor recreation to the urban population but would also ensure attractive urban environment, balanced ecological system as well as to ensure the tourism sector of the economy. A certain level of commitment from the politicians, planners, departments concerned, the private sector and the

community at large will be required to improve the current situation.

### 5.3. Future Research.

This study has only covered aspects as outlined by the topic, however there are other areas which can contribute to the formulation of a more comprehensive policy on open spaces for Botswana.

1. Research is required which will specifically and sufficiently cover recreational open space standards because the standards which were evaluated in this study are for urban areas but they have been modified to a certain extent to suit villages. So they do not precisely tell us about the actual situation, but rather they give a general picture.
2. Future research is required to include all types of open spaces which the Section of Parks is responsible for such as cemeteries and round about. So that ways of assisting this section could be formulated.
3. This kind of research is required for other urban areas of Botswana.

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## Appendices.

## Appendix 1.

## GABORONE OPEN SPACES SURVEYS.

Household Questionnaire.

- Q1. Questionnaire Number \_\_\_\_\_
- Q2. Name of the Area 1. \_\_\_\_\_  
 2. \_\_\_\_\_  
 3. \_\_\_\_\_  
 4. \_\_\_\_\_
- Q3. Plot Number \_\_\_\_\_
- Q4. Respondent's relation to head of the family.  
 1. Head  
 2. Wife  
 3. son  
 4. Daughter  
 5. Others
- Q5. Respondent's sex  
 1. Male  
 2. Female
- Q6. How old are you?  
 1. 0 > 13  
 2. 14 - 44  
 3. 45 and over
- Q7. Marital Status  
 1. Single  
 2. Married  
 3. divorced  
 4. Widow/Widower
- Q8. Your level of education  
 1. Never went to school  
 2. Standard 7 and below  
 3. J.C.  
 4. Cambridge  
 5. Certificate and Diploma  
 6. Junior Degree and above
- Q9. Are you employed?  
 1. Yes  
 2. No
- Q10. If employed, what is your occupation?  
 1. Farmer  
 2. Businessman  
 3. Artisan  
 4. Casual labourer  
 5. Civil servant  
 6. Private sector

7. Professional  
8. Others (specify)
- Q11. Do you ever visit any open space?  
1. Yes  
2. No
- Q12. If no, what is the reason for not visiting open spaces?  
1. No time  
2. Do not see the need  
3. Too far  
4. No transport  
5. Too crowded  
6. expensive  
7. Unattractive  
8. No of children's facilities  
9. Lack of social amenities
- Q13. If no, how do you spend your leisure time?  
1. Visit the home/lands/cattle post  
2. visit the bar  
3. Any other (specify)  
(i)  
(ii)  
(iii)
- Q14. If yes, why do you visit open spaces?  
1.  
2.  
3.  
4.  
5.  
6.  
7.
- Q15. When do you normally visit open spaces?  
1. From place of work  
2. From home  
3. Any other place (specify)  
(i)  
(ii)  
(iii)
- Q16. Where do your children play?  
1. In the compound  
2. In the street  
3. At the nearby open space  
999. Not applicable
- Q17. Do you normally go alone or with someone?  
1. Alone  
2. Accompanied  
999. Not applicable
- Q18. If accompanied, who normally go with you?

- Q19. When have you visited an open space last?
1. With 1 - 2 children
  2. With 3 - 6 children
  3. With 7 - 10 children
  4. With adults
  999. Not applicable

Q20. If you do visit open spaces, which ones do you visit and list them.

Type of open space	Name	Distance	How many times a month
1.	(a)	(a)	
2.	(b)	(b)	
3.	(c)	(c)	
4.			
5.			
6.			

Q20. Which three open spaces do you prefer most and why?

Name of open space	reasons for preferring it
1.	(a) (b) (c)
2.	(a) (b) (c)
3.	(a) (b) (c)

Q21. Which three open spaces do you dislike most and why?

Name of open space	Why you dislike it	Solutions
1.	(a) (b) (c)	(a) (b) (c)
2.	(a) (b) (c)	(a) (b) (c)
3.	(a) (b) (c)	(a) (b) (c)

Q22. What projects and programmes do you think the government could undertake to improve the current situation?

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_



## Appendix 3.

Questionnaire for Parks and Play Grounds Visitors

- Q1. Name of park or play ground \_\_\_\_\_  
 Q2. Tick the day.

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
1.	2.	3.	4.	5.	6.	7.

- Q3. Where do you live?  
 1. Sekgwa  
 2. Bosele  
 3. City centre  
 4. Gaborone South East  
 5. Twogang  
 6. Gaborone North East  
 7. Village  
 8. Outside Gaborone
- Q4. Sex  
 1. Male  
 2. Female
- Q5. Age  
 1. 0 - 13  
 2. 14 - 44  
 3. 45 <
- Q6. Marital Status  
 1. Single  
 2. Married  
 3. Divorced  
 4. Widow/widower
- Q7. What is your level of education?  
 1. Never went to school  
 2. Standard 7 and below  
 3. J.C.  
 4. Cambridge  
 5. Certificate and Diploma  
 6. Junior degree and above
- Q8. Are you employed?  
 1. Yes  
 2. No
- Q9. If yes, what is your occupation?  
 1. Farmer  
 2. Businessman  
 3. Artisan  
 4. Casual labourer  
 5. Civil Servant  
 6. Private Sector employee  
 7. Self employed professional



8. Others
- Q10. Have you just come or you are just living the park/ground?
1. I just came
  2. I am leaving
  3. Neither (write comment)
- Q11. How much time have you spent here or how long do you intend to be here?
1. > 15 min
  2. 15 - 30 min
  3. 31 - 60 min
  4. 61 - 120 min
  5. 120 <
- Q12. Are you here by yourself or with someone?
1. Alone
  2. 1 - 2 children
  3. 3 - 6 children
  4. 7 < children
  5. Adults
- Q13. Did you come here from your work of place, home or where?
1. Home
  2. Place of work
  3. Other (specify)
- Q14. How much distance have you travelled to the park/ground.
1. < .5 km
  2. .6 - 1.0 km
  3. 1.1 - 2.0 km
  4. 2.1 - 3.0 km
  5. 3.1 <
- Q15. Which is the nearest park/ground to you place?
- 
- Q16. Is there any reason why you came here rather than there?
1. Too expensive
  2. No toilets
  3. Not clean
  4. Unattractive
  5. Too crowded
  6. Availability of children's facilities
  999. Not applicable
- Q17. How did you come here?
1. Walked
  2. Bus/Taxi
  3. Car
  4. Motor cycle
  5. Bicycle
- Q18. If you came by private transport, where did you

park?

1. Street
  2. Car parking for the ground/park
  3. Car parking outside ground/park
  4. Garage
  5. Other (specify)
  999. Not applicable
- Q19. Did you find any difficulty in parking?
1. Yes
  2. No
  999. Not applicable
- Q20. How many minutes did it take you to walk from where you parked to the ground/park entrance?
1. < 2 minutes
  2. 2 - 4 minutes
  3. 5 - 9 minutes
  4. 10 >
- Q21. How have you spent or are you planning to spend your time here? \_\_\_\_\_
- 
- Q22. About how often have you been here this year?
1. Once
  2. 2 - 4
  3. 5 - 9
  4. 10 <
- Q23. Do you find it convenient to come here?
1. Very convenient
  2. Fairly convenient
  3. Not convenient
- Q24. If convenient, in what way?
- 1.
  - 2.
  999. Not applicable
- Q25. If not, in what way?
- 1.
  - 2.
  999. Not applicable
- Q26. Are you planning something to drink or eat?
1. Yes
  2. No
- Q27. If yes, did you bring it with you or you bought or you will buy it from here?
1. Brought food
  2. Brought drink
  3. Purchased food
  4. Purchased drink
  999. Not applicable
- Q28. What do you like about this ground/park
1. Near

- 2. Clean
- 3. Have toilets
- 4. Cheap
- 5. Availbility of rubbish bins
- 6. Availability of parking space
- 7. Availability of refreshments facilities
- 8. Availability of restaurant(s)
- 9. Well landscaped
- 10. Others (specify) (i) \_\_\_\_\_  
(ii) \_\_\_\_\_
- 11. Nothing

Q29. Is there anything you do not like about this park/ground?

- 1.
- 2.
- 3.
- 4.

Q30. What do you think could be done to improve the situation?

- 1. Provide refreshments facility
- 2. Provide restuarant
- 3. Provide a pub
- 4. Provide toilets
- 5. Provide rubbish bins
- 6. Provide Flood lighting
- 7. Provide Parking place
- 8. Provide Changing room
- 9. Provide Landscaping
- 10. Any others (specify) (i) \_\_\_\_\_  
(ii) \_\_\_\_\_

Q31. Would you like more sporting facilities to be provided in this park/ground?

- 1. Yes
- 2. No

Q32. If yes, for which sports would you like more facilities?

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.

Q33. Can you comment about Gaborone open spaces in general?

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